

TITLE:
**CURRICULUM AND PRACTICE TO DEVELOP CRITICAL THINKING
COMPETENCIES IN FIRST-YEAR STUDENTS**

by

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I declare that **Curriculum and practice to Develop Critical Thinking Competencies in First-Year Students** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

I further declare that I submitted the thesis to originality checking software and that it falls within the accepted requirements for originality.

I further declare that I have not previously submitted this work, or part of it, for examination at Unisa for another qualification or at any other higher education institution.



SIGNATURE

31 January 2020

DATE

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In memory of my father, David, who was an ardent supporter of my education and professional development and modelled lifelong learning for me.

This dissertation is dedicated to those who still walk the journey of professional development, continue to learn and are passionate about developing others

ABSTRACT

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Title of Thesis:

**CURRICULUM AND PRACTICE TO DEVELOP CRITICAL THINKING
COMPETENCIES IN FIRST-YEAR STUDENTS**

Critical thinking competencies are not only seen as crucial for success in higher education, but also for future personal and workplace success. These competencies are commonly cited as a graduate attribute or goal of higher education, and resulting research has tended to focus on exploring and measuring the development of critical thinking competencies in students within higher education. However, few researchers have explored the curriculum and practice of academic staff within higher education in relation to their influence on developing critical thinking competencies in students, or how they theorise about the development of these competencies as part of their professional practice.

Within the South African context, there is a perception of a decline in the development of critical thinking competencies within the secondary school system. This has informed policy imperatives to improve access and success in South African higher education through additional support for students, as well as through research into the first-year experience.

Within a constructivist paradigm, and adopting a qualitative approach, this study takes the first year of higher education as its context in order to explore the curriculum, assessment, pedagogical and andragogical practices of academic staff designed to develop critical thinking competencies in first-year students. The aim is to explore how academic staff construct their theory and practice in order to contribute to the Scholarship of Teaching and Learning in South African Higher Education. Phenomenological case study research methods, which draw on data collection through semi-structured interviews and document analysis, enabled a better understanding of the lived experience of academic staff within private higher

education. Academic staff, as research participants, were able to describe deliberate actions taken in their teaching practices to facilitate the development and assessment of critical thinking competencies. The findings revealed that academic staff – while having no coherent, well-articulated construction of critical thinking competencies – feel that such competencies are essential for academic and future life success. This not only affirmed previous research reviewed, but aligned to the inclusion of explicit and implicit references to critical thinking competencies found in the curriculum and assessment documents. Recommendations for professional development responded specifically to these findings.

KEY TERMS

Academic Staff, Assessment, Critical Thinking, Curriculum, Higher Education, First-year Experience, Professional Development, Professional Learning, Scholarship of Teaching and Learning, University Teaching

ABSTRAK

Titel van die Thesis:

KURRIKULUM EN PRAKTYK OM KRITIESE DENKE IN EERSTJAARSTUDENTE TE ONTWIKKEL

Kritiese denkvaardighede word nie net as wesentlik vir sukses in hoër onderwys beskou nie, maar ook vir toekomstige sukses, op persoonlike vlak en in die werkplek. Hierdie bevoegdhede word algemeen aanvaar as dié van 'n gegradueerde of as oogmerk in hoër onderwys. Gevolglik was ondersoek geneig om te fokus op die verkenning en meting van die ontwikkeling van kritiekedenkbevoegdhede by studente binne die hoër onderwys. Min navorsers het egter die kurrikulum en praktyk van akademiese personeel binne die hoër onderwys met betrekking tot hul invloed op die ontwikkeling van kritiekedenkbevoegdhede in studente verken nie, of hoe hulle teoretiseer oor die ontwikkeling van hierdie bevoegdhede as deel van hul professionele praktyk.

Binne die Suid-Afrikaanse konteks is die persepsie dat die ontwikkeling van kritiekedenkbevoegdheids binne die sekondêreskoolstelsel afneem. Dit het bygedra tot beleidsimperatiewe om toegang en sukses in die Suid-Afrikaanse hoër onderwys te verbeter deur bykomende ondersteuning aan studente te gee, asook deur die eerstejaarervaring te ondersoek.

Binne 'n konstruktivistiese paradigma, en deur gebruik te maak van 'n kwalitatiewe benadering, neem hierdie studie die eerste jaar van hoër onderwys as konteks ten einde die kurrikulum, assessering, pedagogiese en andragogiese praktyke van akademiese personeel wat ontwerp is om kritiekedenkbevoegdheids by eerstejaarstudente te verken. Die doel is om na te volg hoe akademiese personeel hul teorie en praktyk saamstel ten einde by te dra tot die Kundigheid in Onderrig en Leer in Suid-Afrika se Hoër Onderwys. Fenomenologiese gevallestudienavorsingsmetodes wat steun op die inwin van data deur middel van semigestruktureerde onderhoude en dokumentontleding, het gelei tot beter begrip van die geleefde ervaring van akademiese personeel binne privaat hoër onderwys. Akademiese personeel, as navorsingsgenote, kon optrede beskryf wat doelbewus in hul onderrigpraktyke geneem word om die ontwikkeling en assessering van kritiekedenkbevoegdheids te fasiliteer. Die bevindinge het getoon dat akademiese personeel – sonder koherente, goed geartikuleerde konstruksie van kritiekedenkbevoegdheids – voel dat sulke vaardigheds wesentlik is vir akademiese en toekomstige sukses in die lewe. Dit het nie net vorige navorsing bevestig nie, maar gestrook met die insluiting van eksplisiete en implisiete verwysings na kritiekedenkbevoegdheids binne die kurrikulum- en assesseringsdokumente. Aanbevelings vir professionele ontwikkeling het spesifiek op hierdie bevindinge reageer.

SLEUTELTERME

Akademiese personeel, Assessering, Kritieke denke, Kurrikulum, Hoër Onderwys, Eerstejaarervaring, Professionele Ontwikkeling, Professionele Leer, Kundigheid in Onderrig en Leer, Universiteitsonderrig

ISISHWANKATHELO

Isihloko sengxelo yophando:

UKUSEBENZISA IKHAYITYHULAM NGENJONGO YOKUPHUHLISA UKUCINGA NZULU KUBAFUNDI BONYAKA WOKUQALA

Ubuchule bokucinga nzulu abubonwa kuphela njengecebo elibalulekileyo lokuphumelela kwimfundo ephakamileyo, bukwabonwa njengecebo lokuphumelela komntu kwizinto zakhe nakwindawo axelenga kuyo. Obu buchule bukhulisa ukuchazwa njengenjongo yemfundo ephakamileyo, kwaye uphando lweziphumo luthande ukugxininisa ekuqwalaseleni nasekulinganiseleni ukuphuhliseka kwezakhono zokucinga nzulu kubafundi bemfundo ephakamileyo. Noxa kunjalo, bambalwa abaphandi bolwazi abakhe baqwalasela ukusetyenziswa kwekharithulam ngabahlohli bemfundo ephakamileyo malunga nefuthe ekuphuhliseni izakhono zokucinga nzulu kubafundi, okanye iingcingane zophuhliso lokuphuhliseka kwezi zakhono njengenxalenye yomsebenzi wabo.

Kwimeko yoMzantsi Afrika kukho imbono yokuba ziyaphelelwa izakhono zokucinga nzulu kwinkqubo yemfundo yezikolo zeesekondari. Oku kukhokelele ekusekeni iinkqubo zempumelelo kwimfundo ephakamileyo ngokunika inkxaso eyongezelekileyo kubafundi, nangokuphanda ngamava abafundi abakunyaka wokuqala.

Ngokujonga kwinkalo ethi imfundo yinkqubo yokusebenza, nangokusebenzisa indlela yophando lomgangatho, esi sifundo sithatha unyaka wokuqala wemfundo ephakamileyo njengemeko nendawo yokuqwalasela ukusetyenziswa kwekharithulam, uhlobo, ukufundiswa kolutsha nasebekhulile ngabahlohli ekuphuhliseni izakhono zokucinga nzulu kubafundi bonyaka wokuqala. Injongo kukuqwalasela ukuba abahlohli bayiqulunqa njani ingcingane nokusebenza ukuze kuncediswe kubungcali bokufundisa nokufunda kwimfundo ephakamileyo yoMzantsi Afrika. Iindlela zophando zeemeko ezithile, ezifumana iinkcukacha zolwazi ngokuqhuba udliwano ndlebe oluphantse lwangqongqo, nangokuphengulula imibhalo,

kwanceda ukuba kuqondakale ngcono amava abahlohli bemfundo ephakamileyo yabucala. Abahlohli abangabathathi nxaxheba kuphando baye bakwazi ukuchaza izezo ezingqalileyo ezenzelwe ukuphuhlisa nokuhlola izakhono zokucinga nzulu. Okufunyanisiweyo kwadulisa ukuba abahlohli – lo gama bengenasakhelo sibambekayo nesinokuchazwa gca sezakhono zokucinga nzulu – bayaqonda ukuba ezi zakhono zingundoqo kwimpumelelo kwezemfundo nakubomi obuzayo. Oku akwanelanga nje ukungqina okuvezwe luphando lwangaphambili, koko kongeze kosele kuthethwa ngqo okanye mayana, kwimibhalo yekharithulam nohlolo, malunga nezakhono zokucinga nzulu. Iingcebiso zophuhliso zisabele ngqo koko kufunyanisiweyo.

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LIST OF ABBREVIATIONS AND ACRONYMS

ABET	Adult Basic Education and Training
CAPS	Curriculum and Assessment Policy Statement
CESM	Classification of Educational Subject Matter
CHE	Council on Higher Education
CPD	Continuous Professional Development
DBE	Department of Basic Education ¹
DHET	Department of Higher Education and Training ¹
DOE	Department of Education, South Africa ¹
DOJ	Department of Justice
HEI	Higher Education Institution
HELTASA	Higher Education Learning and Teaching Association of Southern Africa
HEMIS	Higher education management information system
HEQSF	Higher education qualification sub-framework
LMS	Learning Management System
NDP	National Development Plan
NQF	National Qualification Framework
OBE	Outcomes-based Education
OER	Open education resource
OECD	Organisation for Economic Co-operation and Development
PGCE	Post-Graduate Certificate in Education
PGCHE	Post-Graduate Certificate in Higher Education
PSET	Post-School Education and Training
QEP	Quality Enhancement Project
RPL	Recognition of Prior Learning
SAQA	South African Qualifications Authority
SoTL	Scholarship of Teaching and Learning
UCDP	University Capacity Building Project
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNISA	University of South Africa
USAf	Universities of South Africa Association

¹ Previously in South Africa, both the DBE and the DHET were one department, that is the Department of Education (DOE) which was split in 2009

CHAPTER 1

ORIENTATION AND BACKGROUND

1.1. INTRODUCTION

The field of curriculum studies is a diverse, wide-ranging field of research and is related to an expanding range of practical, policy, social and political matters. This chapter provides the context, positioning and purpose of this study, and describes the research problem, rationale and theoretical context. In orientating the study, an explanation of the research design and methodologies applied in completing this research are also included.

1.2. ORIENTATION AND BACKGROUND OF THIS STUDY

Curriculum studies is often considered to be an interdisciplinary field that focuses on the theory and practice of teaching and learning: both concerning curriculum design and evaluation, and evaluating curriculum objectives. A curriculum is shaped by philosophical, sociological, practical and contextual concerns with a wide array of stakeholders (see, for example, Connelly, He & Phillion, 2008; Lawton, 1983; Wyse, Hayward & Pandya, 2016). The origins of the word 'curriculum' include its literal meaning 'course', and associated figurative meaning 'career' from the Latin, as in *curriculum vitae* (Oxford Dictionaries, 2019; Wyse, Hayward & Pandya, 2016:2). Bernstein (1975:199) identified curriculum, pedagogy and assessment as three message systems that make education "an agency of socialisation and allocation": curriculum representing valid knowledge; pedagogy indicating the valid transmission of knowledge; and assessment being the measurement of the valid realisation of knowledge. More recently, curriculum practice is seen as referring to linking these three aspects adapted to specific contexts and learners as a means of promoting student success.² In the official South African *Classification of Educational Subject Matter (CESM)* categories, curriculum studies is defined as "[a]n area of study that focuses on the curriculum and related instructional processes and tools, and that may prepare individuals to serve as professional curriculum specialists" (DHET, 2014b:9).

² See for example Morton, Wells & Cox (2019); the Curriculum Journal (Editorial,2019);

This definition further describes the inclusion of “instruction in curriculum theory, curriculum design and planning, instructional material design and evaluation, curriculum evaluation and applications to the specific subject matter, programmes or educational levels” (ibid.).

As academic staff are strategising to achieve student success, in line with policy and strategic initiatives, it is worthwhile to consider what academic staff describe as student success. Many discussions on student success include aspects like completing a degree; progression within a programme; academic achievement; employability; and good citizenship or holistic development of a person (see for example CHE, 2010; Cuseo, n.d.; HETS, 2007; Lewin, 2014; Maree, 2015; Miller, 2015). In considering student success, using authors like Maree (2015), and including both academic and future life success, the decisions students make about their studies, such as to persist or drop-out, would seem to benefit from critical thinking competencies including decision-making and problem-solving. Since critical thinking competencies enhance personal and academic success in every level of higher education and would enhance students’ good decision making (Franco, 2016:114) and problem-solving, embedding the development of these competencies within first-year or foundation programmes³ or academic development programmes could be key to improving retention and throughput. More unambiguously, if the first-year curriculum includes the building of competencies required for sound academic progression and further success, then achieving the purposes of higher education, and in particular the development of student success, would be facilitated.

From the above, we can then utilise Cuseo’s work (n.d.:1-2), in exploring student success in higher education, as he asks, “What constitutes ‘evidence’ that student success has been realized and that certain experiences during the first year are responsible for its realization?”. From such an approach, when academic staff in higher education are able to clearly respond to this question, then they are better able to refine curriculum, enhance learning opportunities and experiences, and create

³ In South Africa, Foundation programmes are designed as developmental access path opportunities for students who fail to meet entry requirements for degrees or those who have the incorrect secondary school subject combinations for a desired degree or who are underprepared for higher education in the language of teaching and learning.

interventions like orientation, academic support initiatives and academic staff professional development. Consequently, they are also better able to support a broader definition of student success, and, in this case, facilitate the fostering of critical thinking competencies.

In South Africa, several higher education institutions (HEIs) and associations have indicated that they are committed to student success as part of their strategic planning (See for example Stellenbosch University, 2012; University of Kwa-Zulu Natal, 2012; University of the Orange Free State, 2015; University of Pretoria, 2011; UNISA, 2011; Universities South Africa, 2014). This is consistent with national initiatives to improve student success in higher education, such as the Council on Higher Education's (CHE's) Quality Enhancement Project (2013b); and the Department of Higher Education and Training's (DHET) earmarked grants, which include, for example, the Teaching Development Grant and the Foundation Provision Grant (DHET, 2014a). Cosgrove (2011:7) points out that the concept of critical thinking is increasingly embedded in education policy, education mission statements, curriculum, outcomes and similar documents. Furthermore, at the Second National Higher Education Transformation Summit (DHET, 2016:15) in reviewing challenges related to access and success, the recommendation was made that "the transition from school to university needs significant attention, particularly for first-year students...".

In higher education, many curriculum and pedagogical decisions are made within the constraints of policy and programme objectives by academic staff. They are responsible for contributing towards curriculum activities in designing curricula at both the programme and course levels, utilising learning materials, creating learning opportunities, and developing assessments. Academic staff seek to develop competencies and transmit discipline knowledge for the future careers of their students. In South Africa, there has been research conducted to examine the challenges which students experience in transitioning into higher education and which persist through their studies in higher education (see, for example: Adebajji, Goode & Gumbo, 2014; Boughey, 2005; Butler, 2013; Frith & Prince, 2016; Leibowitz, Van der Merwe & Van Schalkwyk, 2009; Levy & Earl, 2012; McKay, 2016). Much of this work has been done to explore 'gaps' or deficiencies in competency which students demonstrate or obstacles they face in forging their academic success. Some research

focuses on competencies or characteristics that contribute to students' academic success, such as student engagement and grit.

Present research reveals that there is a perception that there is a decline in the development of critical thinking competencies within the current South African secondary school system (see for example Balwanz & Ngcwangu, 2016:46-47; Commission of Enquiry into Higher Education and Training, 2017:63; DBE, 2013; Lombard & Grossler, 2008:575; Mouton, Louw & Strydom, 2012), and many academic staff are lamenting the lack of critical thinking competencies and related problem-solving skills in students to enable them to succeed in higher education and solve practical issues (see, for example, Sheffield, 2018). Some research has explored the efficacy of academic development programmes, foundation programmes or extended degrees (Bouhey, 2005; CHE, 2010; Leibowitz, Van der Merwe & Van Schalkwyk, 2009; McKay, 2016; Shay, Wolff & Clarence-Fincham, 2016). The implicit assumption is that a significant portion of academic staff are actively seeking to address these deficiencies through their curriculum and pedagogic practice, either openly or indirectly. Research has explored and measured the development of critical thinking competencies in students in higher education, both abroad and in South Africa (see, for example, Facione, 2015; Frith & Prince, 2016; Ghanizadeh, 2017; Korbin, 2015).⁴ Based on this research, there seems to be a consensus that, between enrolment and graduation, critical thinking competencies are developed in students. However, it is less clear when and how this occurs.

Furthermore, some research has been done in exploring the development of critical thinking competencies, sometimes by discipline (such as Wentworth & Whitmarsh, 2017; Whiley, Witt, Colvin & Sap, 2017),⁵ or profession (such as Barac & Du Plessis, 2014; Klopper & Grosser, 2010; Terblanche & De Clercq, 2019; Veliz & Veliz-Campos, 2018).⁶ However, this study highlights that little of this research explores what academic staff do to develop these competencies or how they theorise about the development of these competencies as part of their pedagogy. While authors like

⁴ Additional examples can be seen in Behar-Horenstein & Niu, 2011; Cosgrove, 2011; Dawit, Verburgh & Elen, 2014; Liu, Frankel & Roohr, 2014; Saiz, Rivas & Olivares, 2015; Wald, Borkan, Taylor, Anthony & Reis, 2012

⁵ Additional examples include Wald, et al., 2012; Yang, Gamble, Hung & Lin, 2014

⁶ Additional examples Brandon & All, 2010;

Brown (2014:4) have investigated how students in the United Kingdom (UK) make sense of critical thinking and made recommendations for lecturers, little has been done in examining academic staff perspectives. Within the context of the United States of America (USA), Cosgrove (2011:7) comments that there is little empirical understanding of how best to improve teaching and learning for critical thinking (as discussed further in Chapter 3. Though Brown (2014) and Cosgrove (2011) offer insight in relation to education within the developed world, such insights are also applicable to education in South Africa in that critical thinking is a universal competency, as will be highlighted in subsequent chapters of this thesis. The lack of empirical understanding of strategies to develop critical thinking as highlighted by Cosgrove (2011:7) is part of the gap this research seeks to address in the South African higher education context.

There is a substantial amount of research investigating the first-year experience (see for example, Frith & Prince, 2016; Murray, 2014),⁷ and exploring critical thinking competencies necessary for success in higher education (Facione, 2011:23; Lombard & Grossler, 2008). Recently in Australia, Ambler, Solomonides, Smallridge, McCluskey and Hannah (2019:8) position professional learning as “an essential component of the institutional conditions required for a high-quality first-year student experience”. In South African government policy, the importance of developing, recognising and rewarding academic staff in achieving effective undergraduate and postgraduate student learning is clearly promoted (see, for example, DHET 2018b), research focusing on how this impacts the first-year student success seems to be less frequently undertaken. Furthermore, there seems to be a gap in investigating how academic staff strategise enhancing critical thinking competencies in their students in higher education, and in particular how they engage with these aspects in relation to first-year students. If these strategies are effective, then successful activities and strategies can be shared through professional development interventions to better equip academic staff in developing critical thinking competencies and improving student success, particularly during the first-year transition into higher education.

⁷ Additional examples include, Boughey, 2005; Boughey, 2009; Fundani Centre for Higher Education and Training, 2017; Leibowitz, Van der Merwe & Van Schalkwyk, 2009; Levy & Earl, 2012;

While the competencies of critical thinking have been explored in various ways, less research has been conducted into the exploration of what the academic staff who facilitate these students' learning opportunities conceive of as essential in developing critical thinking competencies: that is, their constructed theory and evidence which informs their practice. In addition, while there is well-documented research showing a high drop-out rate of first-year students in South Africa (CHE, 2013a; 2010; DHET, 2015a, 2015b; Mouton, Louw & Strydom, 2012; and Murray, 2014), what academic staff are doing in their first-year classrooms to combat this, and the efficacy of this strategy, is less explored. These opportunities in research, therefore, constitute the focus of this study.

1.3. PROBLEM FORMULATION

Ashwin, Boud, Coate, Hallet, Keane, Krause, Leibowitz, MacLaren, McArthur, McCune and Tooher (2015:vii, 415) comment that it is now possible to identify teaching strategies which are more effective than others in most circumstances and therefore as educators, we need to develop our expertise by drawing on such evidence and theory. Such evidence needs to be explored within new contexts and applications validated. Wyse, Hayward and Pandya (2016:4) propose that empirical evidence and robust theory is looked-for to address anecdotal, ideological and rhetorical accounts of curriculum, assessment and pedagogy. This is relevant in South Africa where deliberations around curriculum can be politicised, and where recent protests, the 'fees must fall' movement and related 'decolonisation' or 'Africanisation' debates have created contested spaces in South African higher education (see for example Carstens, 2016; Case, 2017a; CHE, 2016; Jansen, 2015; Le Grange, 2016; Leibowitz, 2016; Lockett, 2016). This research, therefore, explores how academic staff strategise in designing curriculum and approach pedagogy to develop critical thinking competencies in first-year students within this sociopolitical context, and the findings will be used to develop a professional development intervention to assist academic staff in facilitating the development of these competencies.

Despite the more recent explorations of professional development mentioned above, in their survey of research areas in Adult and Continuing Education, Zawacki-Richter,

Röbken, Ehrenspeck-Kolasa and von Ossietzky (2014:82) still identify 'professional development of instructors' as a neglected research area at the meso level. In South Africa, the Council on Higher Education (CHE) attempted to address this through their first phase of the quality Enhancement Project (QEP) and a recent *Higher Education Monitor 14: Learning to Teach in Higher Education in South Africa* (CHE, 2017). In their recommendations, the authors of this publication state that "the study affirms the need for further conceptual and empirically-based research into professional learning in South Africa" (CHE, 2017:75) and recommend that not only does South African higher education need to improve the status of teaching and learning, but that good practice guides should be commissioned. This could provide resources for academic staff in professional development. In their conclusions, the authors state that it is appropriate to explore how we adapt theories to advance contextually appropriate knowledge for improving higher education teaching (CHE, 2017:81, 82). Therefore, this research is positioned in response to this as contributing to these South African higher education challenges, and focuses on the academic staff who teach the first-year subjects in higher education, design the relevant curriculum and seek to explore the South African context in this regard.

While the first-year level of higher (tertiary) education provides the context of the study, this enquiry is directed towards the perception and practices of academic staff with respect to curriculum and pedagogy, and not towards measuring the experiences of first-year students as was prevalent in previous research. This research is aligned to utilising professional development, through adopting educational learning theory and encouraging critical reflection by academic staff on their existing educational practices as a means of improving their practice. The students and their competencies are, therefore, not the focus of this research, but remain positioned as beneficiaries through the ongoing improvement of teaching and learning practices of academic staff.

1.4. THE RESEARCH QUESTIONS

The intention of this research is to explore what academic staff do to develop critical thinking competencies in first-year students. Therefore, using a qualitative constructivist approach, the principal research question is:

1. How do academic staff perceive their curriculum and practices as developing critical thinking competencies in first-year students?

In order to clarify and explore the main research question, the research proposes the following subordinate questions:

- 1.1. How do academic staff perceive critical thinking competencies?
- 1.2. How do academic staff construct curriculum and learning opportunities to develop critical thinking competencies in first-year students?
- 1.3. How do academic staff evaluate the development of critical thinking competencies in first-year students?
- 1.4. How do academic staff perceive their environment and their institutional policies as impacting on their practices?
- 1.5. What are the implications for professional development and practice?

These questions establish the scope of the research and direct the exploration of literature, related constructs and research data. The specific questions served as a point of departure for the research design, research methods and appropriate instruments for collecting relevant data.

1.5. THE AIMS OF THE RESEARCH

The aim of this research is centred on exploring pedagogical and andragogical strategies of academic staff that are employed to develop critical thinking competencies in first-year students. Therefore, this research aims to:

- i. establish how do academic staff perceive critical thinking competencies and from this,
- ii. explore if the implicit assumption that a significant portion of academic staff are actively seeking to address these critical thinking competencies through their curriculum and pedagogic practice is valid at the first-year level.
- iii. explore how these academic staff construct curriculum and learning opportunities to develop critical thinking competencies, and
- iv. explore how academic staff evaluate and assess the development of critical thinking competencies in first-year students,

- v. explore how academic staff perceive institutional policies and their environment as impacting on their practices,

As greater clarity emerges regarding what academic staff theorise and put into practice in order to enable the development of critical thinking competencies in first-year students, there are implications for professional development and how to support academic staff in improving their approaches to developing critical thinking competencies. This further impacts the mentoring of new staff and for professional development programmes. The research undertaken here may consequently expose related avenues of research in the development of critical thinking competencies of students, if, theories held by academic staff have not been grounded in research.

1.6. RESEARCH DESIGN

The overarching research design falls within a qualitative approach. Qualitative research is concerned with a description of events and the interpretation of meaning (Schunk, 2012:12). As clarified by Creswell (2007:46, 2015), qualitative research in an educational context is “research in which the researcher relies on the views of the participants, asks broad generalised questions, collects data largely consisting of words and describes and analyses these words for themes”. Such research is, therefore, conducted within “a real-life situation and not in an experimental situation” (Nieuwenhuis, 2007:79), and seeks to treat participants and their contexts as a whole (Taylor, DeVault & Bogdan, 2016:9).

As the qualitative research approach emphasises the participants’ views and the meaning held by them, this aligns well with a constructivist paradigm. This qualitative approach calls for the research to report participants’ personal values and assumptions; explore the context of the participants and to collaborate actively with participants where applicable (Creswell, 2007:50; 2015). This research seeks to explore the perceptions, practice and theory (constructed meaning) of academic staff with respect to developing critical thinking competencies in first-year students in higher education in South Africa. This is within a specific context. From an epistemological perspective, this follows a ‘knowledge by description’ or ‘knowledge by acquaintance’.

Following Taylor, DeVault and Bogdan's (2016:3) approach to methodology as the way in which problems are approached and how research is conducted, this research follows from a qualitative theoretical perspective in incorporating a phenomenological approach, where the perspectives and perceptions of the participants are prioritised. This type of research results in descriptive data that informs an understanding of the beliefs and theory of participant action (Taylor, DeVault & Bogdan, 2016:5), and is inductive in that it seeks to develop concepts, insights and understanding from the data rather than test data against hypotheses. Inductive reasoning seeks to establish a relationship between observations and theory in order to inform insights and theory "intended to apply beyond the sample of participants interviewed" (Given, 2008:429). The research undertaken here consequently follows an emerging process in allowing the research questions to become more clearly defined during the process of research based on feedback and participant views at each stage of the research (Creswell, 2007:639). As the research context and participants' views are explored, additional data is collected to clarify or verify insights.

In addition, the qualitative approach adopted here is informed by a constructivist paradigm. The constructivist paradigm, as first used by Piaget (1952, 1970), emphasises the importance of the participants' views and illuminates the meaning personally held within participant views (Creswell, 2007:50). Constructivism seeks to record how participants construct their realities building on different experiences, learning meanings and different interpretations of each context (Taylor, DeVault & Bogdan, 2016:12-13). As derived from Tribe's (2001:442) discussion regarding paradigms in curriculum design, following a scientific-positivist approach has only limited application in this type of research because it lacks attention to meaning and values. A constructivist paradigm allows a review of methodology as incorporating methods of critical reflection, specifically reflexivity in research, on why the methods are appropriate to the nature of the research and the research question, and allowing the educational curriculum to be interpreted through a dialogue with participants (Tribe, 2001:443). Therefore, unanticipated findings emerge more transparently during research, allowing for a complex or 'rich' description within a specific context to be revealed.

Li and Guo (2015:3) observe that constructivism is well adopted in the educational domain, as this encourages experimental learning, hands-on learning and collaborative learning. While academic staff are responsible for curriculum, they often assume that students in higher education take responsibility for their own learning. This study focuses on the construction of knowledge by academic staff, and assumes a student-centred approach in that students collaborate with academic staff to construct the knowledge and competencies needed to succeed in higher education, and that this is enabled through learning opportunities and curriculum provided by academic staff.

A detailed view of participants in the form of words through semi-structured interviews and document analysis using a phenomenological case study is presented here (and discussed in more depth in Chapter 4, section 4.3.2). Adopting a case study approach develops an in-depth analysis of the lived experiences of a few individuals in relation to the phenomenon, namely how academic staff develop critical thinking competencies in first-year students. Marshall (2010:723) defines such an approach as practice-orientated case study research which, involves inquiry into the methods of professional practice in relation to an aspect of the practice. The goal of this type of research is to utilise researched knowledge to enhance the development and implementation of policy and practice. In addition, Marshall (2010:723) reports that there have been calls for more practice-based research to address concerns relating to the impact of research for policy or as applicable to multiple contexts. This challenge to educational research can be characterised as a problem of knowledge transfer, where practitioners need to consider how research findings and theories are transferred into current practice and adopted by education practitioners. The negotiation between research, theory and practice creates a role for professional development to facilitate this transfer of knowledge and changes to practice in a specific practice. Therefore, this study investigates the lived experiences of academic staff as lecturers who work with first-year students at a private HEI as a phenomenological case study (refer to Chapter 4, section 4.3.3.).

1.7. RESEARCH METHODS

In order to research how academic staff develop critical thinking competencies in first-year students, the research undertaken here has followed qualitative research strategies, as outlined below and in Chapter 4.

1.7.1. Selection of participants

The population is selected from higher education academic staff lecturing students in their first year of study at a private Higher Education Institute (HEI) in South Africa. The proposed sample group are academic staff who are lecturing first-year students either in degree studies or within a foundation programme. As this is a significant proportion of academic staff at many institutions, a limited contextual scope of a single institution was suggested based on the criteria that there are sufficient participants and a strong representation of various subject disciplines as course modules available. This limit is consistent with the qualitative research approach (Nieuwenhuis, 2007:79) as this type of research is more focused on purpose, context or practice.

This research explores the development of critical thinking competencies and does so across a range of disciplines. Therefore, a range of disciplines is included, and ten participants were utilised. The sampling of first-year lecturers is, therefore, purposive. The criteria used to determine the suitability of participants will include that they are academic staff who lecture first-year students and develop curricula and assessments for these students. Part of the criteria will be to include insights from multiple disciplines (refer to chapter 4, section 4.4.2. for more detail), in order to achieve a focus on developing critical thinking competencies as opposed to disciplinary approaches. According to Neuman (2003:211), qualitative research leans towards using a non-probability or a non-random sample, which means that such research can rarely determine the sample size in advance. Qualitative sampling requires a flexible, pragmatic approach, and so the sample size should not be fixed, but should be sufficient to answer the research questions. The above realisation, therefore, required a flexible research design and, as Marshall (1996) states, a cyclical approach to sampling, data collection and interpretation.

1.7.2. Literature Review

The role of a literature review in relation to the focus of this study is to provide a theoretical overview of critical thinking competencies and how these develop within an educational context to guide the research process. The literature review, as presented in chapters 2 and 3, seeks to explore related research, identify gaps, contextualise data in exploring the South African context, and thereby describe the underlying constructs and assumptions of the research question. The development of the theoretical framework supports the interpretation of the empirical research and credibility of the findings. The literature review thus assists in demonstrating the need for this research and the contribution of the findings to existing knowledge (Creswell, 2007:89, 116), as it can both contextualise research and enhance generalisability (Silverman, 2005:295) as well as affirm the evolving nature of the discourse regarding what critical thinking is.

1.7.3. Data collection and procedure of collection

In this investigation, data was collected through semi-structured interviews and document analysis.

To explore participant views, the current study used semi-structured interviews to collect data in the form of spoken words. Siedmann (2013:9) writes that the purpose of an interview is to “understand the lived experience of other people and the meaning that they make of that experience. If a researcher’s goal, however, is to understand the meaning people involved in education make of their experience then interviewing provides a necessary, if not always sufficient, avenue of inquiry”. From a constructivist paradigm, this makes interviewing an appropriate part of the research design in facilitating the exploration of academic staff’s perceptions of developing critical thinking competencies in first-year students through their practice. Semi-structured interviews are consistent with the phenomenological case-study approach as used by Sanders (1982:357) and Theodoridis (2014:9) and are used to support other data through administering prepared questions to participants. Following the qualitative design, this interview approach seeks to model a more conversational style than a

fixed formal question-and-answer exchange (Taylor, DeVault & Bogdan, 2016:9). As the interview progresses, a participant's answers are probed and clarified, allowing new lines of enquiry to emerge. This does mean that there is some expected variation in interview structure between the different research participants. Data emerges in the form of verbal feedback. Such a conversational interview style was adopted for this study, and a semi-structured interview question guide was used as a starting point, with participants' answers probed in a conversational style. Interviews were recorded using a digital recorder and then transcribed for analysis.

In order to ensure adequate recording of data, the researcher took notes and, with the permission of participants, made an audio recording of the interviews via an audio recording device to allow transcription and checking of transcriptions. From the transcriptions, the researcher sought to identify and compare the themes and activities of the interviews.

Furthermore, the related course module (subject) outcomes and assessments documents were evaluated to determine if these outcomes and assessments show evidence of developing and accessing critical thinking competencies. This document analysis was expanded to include related institutional policy documents such as the teaching and learning policies, assessment policies and curriculum design policies, as these both inform and constrain the curriculum development at an institution. These policy documents have been considered as secondary data through document analysis. The abovementioned document sources have been explored for evidence of theory in practice and, as such, revealed perceptions, discrepancies or correlations, as entrenched within such documents, can be identified. Tribe (2001:447) suggests that a curriculum is socially constructed as the product of human thought and negotiation. Consequently, investigating the documents that describe curriculum offers a means of exploring, and of understanding, how academic staff strategise developing relevant critical thinking competencies as objectives of their curriculum and in relation to their conceptions of their students. These curriculum documents are conceived of as revealing theory in practice, as a documented artefact.

1.7.4. Data analysis

Data collection and analysis may occur concurrently as qualitative research is not a completely linear process and follows an emergent process. Data analysis was undertaken through reorganising and analysing the information so that patterns and themes could be identified, as described in Chapter 4 (see section 4.7). This process was initiated by transcribing the interviews and coding these. An inductive approach was followed, as described by Creswell (2007:244). This included reviewing the detail of data and specific transcripts and directing these to more general themes. Coding was used as a means of exploring themes and patterns within data and were informed by the research questions, literature, and interview protocols (Given, 2008: 105). The Institutional policy, curriculum and assessment documents were then analysed in a similarly inductive way. These three sets of data were then used to corroborate insights and to allow links and themes to be explored, as documented in Chapter 5 (see sections 5.3 and 5.4).

Recommendations regarding professional development strategies were developed based on the evidence of the literature review, and the process of data collection and analysis. These were then used to develop a professional development intervention to support the development of and critical reflection on learning activities directed towards activating critical thinking competencies in first-year students. From the data analysed and the findings reported, such recommendations point towards the implementation of an intervention directed towards the design of a professional development learning opportunity curriculum, or a process to support academic staff in developing critical thinking competencies within their curricula. This intervention can be regarded as emancipatory in taking appropriate action to positively impact academic staff's ability to facilitate student development. Drawing on Lawton's approach to curriculum design (Lawton, 1983; Tribe, 2001:447), this approach allows the exploration of both philosophical questions and sociological questions – those relating to the aims of education and the type of society or context respectively – as informing curriculum design.

1.8. ETHICAL CONSIDERATIONS

As a researcher, I adhered to the general guidelines for ethical research as stated in UNISA's Policy on Research Ethics and Guidelines for Ethics Review (UNISA, 2007a; 2007b). Ethical clearance was obtained from the College of Education at UNISA (see Annexure A). Additional ethical clearance was obtained from the Research Site HEI through the appropriate research Committee (see Annexure B).

Research ethics are important in a qualitative study as a researcher interacts with people as participants (Creswell, 2007:12). Participants' right to privacy, anonymity and confidentiality, to participate voluntarily in this study and to full disclosure have been upheld throughout the research process. Each participant was invited to sign a letter of informed consent (refer to annexure D: Written invitation to participants to participate in research) after discussions regarding ethical and research issues had been undertaken. The letter includes permission to incorporate the evidence obtained in research for this thesis, as well as for possible publication, and a description of the purpose of the research, the methods to be used, and identification of any perceived risks or benefits in line with research guidelines as proposed by Taylor, DeVault and Bogdan (2016:35). In addition, the letter confirmed that there was no financial benefit or any other academic benefit from participating voluntarily in this research. Participants were informed of their right to withdraw at any point during the research, as determined by their conscience. In this type of study, it is appropriate to improve confidentiality through both anonymising the institutions from which academic staff are drawn and anonymising the identity of the involved academic staff. As such, each participant has been anonymised through the use of pseudonyms to allow for confidentiality. The private HEI where the research was conducted has been anonymised to 'Private Institution' in all quotes, transcriptions and references.

This research will not directly affect or involve first-year students (who may be construed as vulnerable if they are under 18 or inexperienced), as the study is not experimental in nature. However, reflection on practice tends to result in participating academic staff reconceptualising some of their theory and practice related to developing critical thinking competencies in first-year students. If this results in changes in the practice of these academic staff, this may affect the learning

experiences of future students. The expectation in this regard is that critical reflection on practice and research tends to results in improvements in theory and practice.

1.9. TRUSTWORTHINESS (RELIABILITY AND VALIDITY)

Like other forms of qualitative research, this study will be conducted within a specific context and is cognisant of the differences in subject content between academic disciplines as delivered by the participants. This impacts the study in that the findings may not be generalisable for all contexts, and some findings may be discipline-specific. The purpose of this study is not to provide a complete model for developing critical thinking competencies in first-year students, but to explore how academic staff in a South African context navigate this in their pedagogical approaches. Therefore, this research seeks to achieve trustworthiness through addressing the criteria for educational research as suggested by Guba ([1981] in Anney, 2014; Johnson, Adkins & Chauvin, 2020; and Shenton, 2004): credibility, transferability, dependability and confirmability.

In addressing credibility, the research methodology will attempt to show that an empirically accurate picture of the research is being presented. Johnson, Adkins and Chauvin (2020:141) describe this as “ensuring that the results accurately represent what was studied. This will be supported by member checks, reflexivity, and triangulation of interview data with supporting documents (Anney, 2014: 276-278). To allow transferability, sufficient detail of the context of the research will be provided in order to decide whether the specific context is similar to other higher education contexts, specifically through the provision of a ‘thick description’ (Anney, 2014:278) and whether the findings can justifiably be applied to the other setting (Shenton, 2004:69-70; Kala & Bwala, 2017:50). The dependability criterion will be addressed through the research design and methods, as discussed in Chapter 4, to at least enable a future investigator to repeat the study and the application of overlapping methods (Shenton, 2004:73). Dependability is also thought of as stability of findings over time (Anney, 2014:278), and will be further supported by member checking. Finally, to achieve confirmability, researchers must take steps to demonstrate that findings emerge from the data and not their own predispositions (Shenton, 2004:73;

Kala & Bwala, 2017:51). Therefore, in planning for the reporting of findings in this dissertation, the provisional chapters and sub-sections will include descriptions of the research design and its implementation with a reflective appraisal of the research (Shenton, 2004:72).

This research utilised self-reported data from academic staff, as well as data from the curriculum and assessment documents. The data reveals participants' relationship to existing institutional policies, and their interpretations of critical thinking and is, therefore, not necessarily evidence to support a theoretical construct, because participants may not have explicitly researched their constructed theory or interpretations systematically.

Reliability is enhanced by using more than one data collection source (Nieuwenhuis, 2007:80, Fendler, 2016), in this case, semi-structured interviews and document analysis. Additional credibility is explored in allowing participants to review research and provide feedback.

This research design cannot describe causal effects on the development of students' critical thinking competencies, but focuses on the academic staff's perceptions of what they do to facilitate the development of such competencies. Therefore, this enquiry does not include how factors outside of the curriculum and academic staff's practices contribute to changes in critical thinking competencies of students: for example, maturation or out-of-classroom experiences. However, the exploration of relevant literature, and the establishment of variations between literature and academic staff's perceptions, may provide insight into existing evidence.

1.10. CLARIFICATION OF CONCEPTS

In order to construct a common understanding of the concepts used in this thesis, this section seeks to clarify concepts as used in this research enquiry.

1.10.1. Academic Staff

In this study, academic staff are the staff members⁸ of a higher educational institution who are responsible for the teaching and learning, assessment and curriculum, and research activities at these institutions. While these roles include various types of lecturers, academic development staff, and academic managers, this investigation focuses on university teachers or lecturers as academic staff. The lecturer plays a central role in guiding the first-year student into the discipline and a student-lecturer relationship is at the heart of effective and good higher education 'teaching' (Leibowitz, Van der Merwe & Van Schalkwyk, 2009:7, 256). This role is further discussed in Chapter 2, section 2.8. In this study, academic staff are learners in terms of their professional learning. It is noted that some literature refers to this role as an educator.

1.10.2. Assessment

'Assessment' refers to the process used to identify, gather and interpret information and evidence against the required competencies in a qualification, part-qualification, or professional designation, in order to make a judgement about a learner's achievement (South African Qualifications Authority (SAQA), 2014:4). Assessment can be formal, non-formal or informal; can be of learning already done; or can contribute towards learning to inform and shape teaching and learning still to be done.

1.10.3. Competency

Competency is the ability to do something successfully or efficiently (Oxford Dictionaries, 2019). Within the context of higher education, competence is achieved when a student is able to meet the required outcomes of a course module or programme and is often described in terms of the specialist field and expectations of student achievement. Competency indicates a sufficiency of knowledge and proficiency and can be clarified as a cluster of related abilities, knowledge, experience

⁸ These may be full-time employees, full-time fixed-term or part-time contractors

and expertise (skill) that enable a person to act effectively in order to achieve an outcome or solve a problem.

1.10.4. Critical thinking

UNESCO (2019) defines critical thinking as a process involving “asking appropriate questions, gathering and creatively sorting through relevant information, relating new information to existing knowledge, re-examining beliefs and assumptions, reasoning logically, and drawing reliable and trustworthy conclusions”. While many variations in definitions persist (as discussed in Chapter 3, section 3.1.1), many align to this definition. For example, authors like Korbin (2015) define critical thinking as “purposeful and goal-directed thinking used to define and solve problems, make decisions, and form judgments related to a particular situation or set of circumstances”.

1.10.5. Curriculum

Curriculum refers to the learning opportunities, assessments and materials with which a student interacts for the purpose of achieving educational outcomes or competencies. The curriculum can also refer to the set of subjects that are taught, and includes the wider set of materials, required experiences, competencies and assessment thereof. Earlier definitions of curriculum explain it as being “planned human activity intended to achieve learning in formal educational settings” (Wyse, Hayward & Pandya, 2016:4). A working definition of curriculum often used is that of the description of “a plan for learning” and includes the purpose, content, organization and evaluation as well as what is to be learnt (Toombs & Tierney, 1993:177). Therefore, drawing on the above definitions and for the purposes of this study, the concept of curriculum as an intentional design for learning negotiated by faculty in light of their specialized knowledge and in the context of social expectations and students' needs (Toombs & Tierney, 1993:181) will be utilised. Curriculum as intended, implicit, assessed and attained are discussed in more detail in Chapter 2, section 2.8 and 2.9.

1.10.6. Evaluation

Evaluation, in higher education, refers to determining the worth, value or effectiveness of something (Denison & Secolsky, 2012: xviii): in this case the evaluation of higher education programmes or teaching and learning interventions. Evaluation is differentiated from assessment in that evaluation is used to improve a programme, service or policy by determining the impact thereof (Grayson, 2012:455). Where assessment focuses on the level of student (learner) achievement, an evaluation may incorporate an assessment initiative as one of the sources for making a judgement about programme or teaching and learning quality.

1.10.7. First-year students

In South Africa, a 'student' is a person who is studying at an institution of higher education, such as a university, and is distinguished from 'learner' in that the term 'learner' is generally used for those who are in primary, secondary schooling or adult basic education and training (ABET). Since this study is about those who are pursuing their university or higher education, the key term chosen is students. In defining what constitutes the first-year experience, this relates specifically to the first year of enrolment in an institution of higher education: such as year one of a degree; or first enrolment through a foundation programme, higher certificate or diploma to access a degree.

1.10.8. Higher education

Higher education is education that takes place at universities or similar educational establishments, especially at degree level (Oxford Dictionaries, 2019), and refers to further education beyond secondary schooling. In South Africa, higher education is provided by a Higher Education Institution (HEI) towards qualifications such as higher certificates, diplomas, degrees and others, offered at NQF 5 to 10 levels on the Higher Education Qualification Sub-Framework (HEQSF).

1.10.9. Higher Education Institution (HEI)

Higher Education Institution (HEI) refers to an educational institution that is established, declared or registered by law. In South Africa, an HEI is established in terms of Higher Education Act No. 101 of 1997 to operate as a public or a private institution of higher education and is permitted to award higher education qualifications.

1.10.10. Pedagogy and Andragogy

Pedagogy refers to the method and practice of teaching, especially as an academic subject or theoretical concept (Oxford Dictionaries, 2019) as well as the approach to pedagogy informed by learning theory. Current definitions include “the art, occupation, or practice of teaching”, the theory or principles of education, and “a method of teaching based on such a theory” (Wyse, Hayward & Pandya, 2016: 3). Accordingly, in education, this concerns the study of how best to teach in order to achieve a set of outcomes or competencies within a specific context. As a specified context, when referring to adult learners, the term andragogy is often referred to instead of pedagogy and as seen as the methods and practices of teaching are adapted to adult learners (Oxford Dictionaries, 2019).

1.10.11. Professional development

Professional development refers to the development of a person within his or her professional role (Villegas-Reimers, 2003). Professional development is often defined as a continuing process of activities that enhance professional competency and understanding (Imel, 1990). Professional development can be intentional or unintentional, formal or informal in nature. Professional development includes professional learning and development of practice through reflection where the professional practitioner is positioned as a learner.

1.11. DIVISION OF CHAPTERS

This thesis is organised into chapters, which align to how the research programme was followed.

The first chapter provides the introduction and background to this research, and presents the orientation and contextualisation of the problem from which the research question, the research paradigm, aims, research design and methodology and intended analysis are discussed. The motivation for undertaking this research and the potential value of the research is also presented, and a brief clarification of concepts included.

Chapter 2 provides a theoretical basis and conceptual framework for this research in exploring existing literature related to the research focus. This study followed a qualitative approach in reviewing literature from a constructivist paradigm. The literature presented in this chapter is considerate of and pertinent to the research questions, and contextualised the investigation within the wider study of curriculum studies, learning theory, pedagogical and andragogic approaches to higher education. Topics discussed include: the South African and international contexts; the debate regarding the purpose of higher education; relevant policy contexts; the first-year experience; professional development; and the role of academic staff as educators in higher education

Chapter 3 explores how literature positions the academic practice of staff in developing critical thinking, assessing these competencies, the specific context of the first-year experience and the value of such critical thinking competencies for academic success and within future workplaces. As such, it focuses on the academic staff's curriculum strategies for developing critical thinking competencies in students with a focus on first-year students, and links the previous chapter's discussion of learning theory to clarify what critical thinking competencies are.

The fourth chapter outlines the research design and methods⁹ applied in this study. The chapter begins by describing the rationale for empirical research. The qualitative approach, research design and methods of a phenomenological case study are explored. The methodology is described in greater detail as it relates to the research site, the sampling techniques, ethical considerations and data analysis approaches used. This chapter further describes how the criteria of trustworthiness, validity and reliability were sought and considered within the methodology.

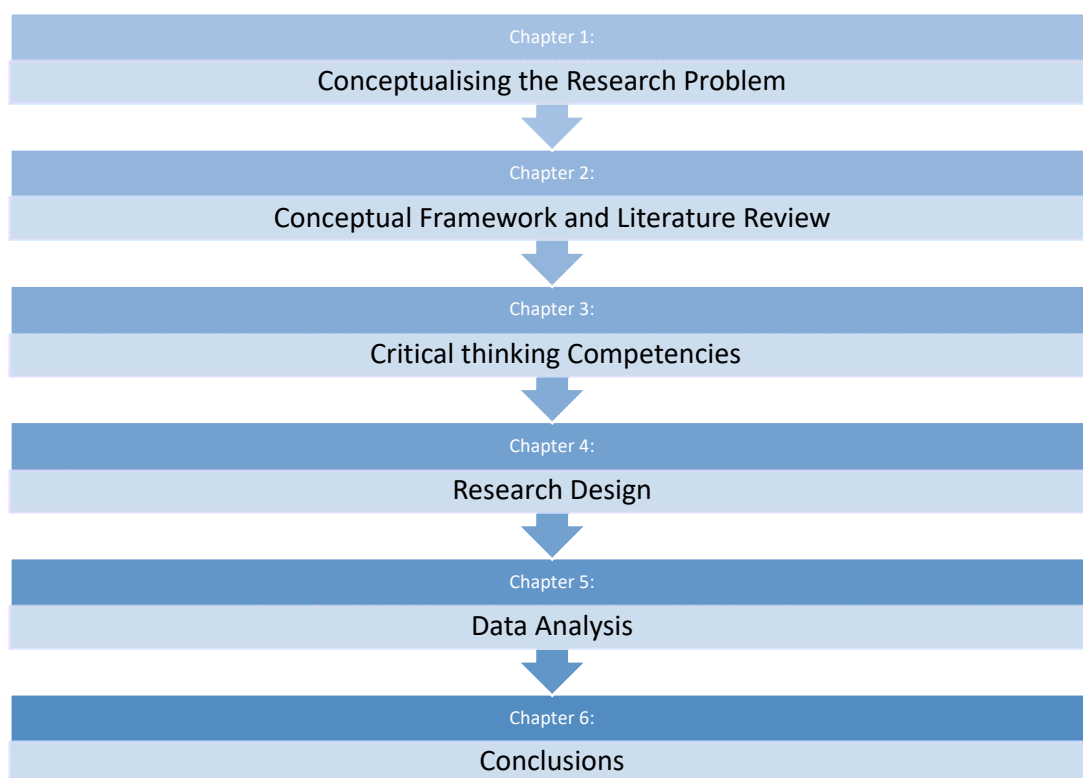
Chapter 5 reports the data collected and the analysis of the empirical research data. The findings of the research are reported and discussed in light of the conceptual framework and literature review of the study, as reported in chapters 2 and 3. The discussion of the interrelatedness of themes, and tri-angulation of types of data as research results, form the basis of the research recommendations.

In the final chapter, the conclusions, recommendations and limitations of the study are presented within the context of a summary of the research. The implications of theoretical and empirical research are summarised. The implications for a professional development intervention are explored and a possible intervention is proposed. The limitations of the study are stated and recommendations for further research are suggested. This chapter aims to answer the research questions with the view of informing professional development interventions.

The figure below gives an outline of this thesis and reflects the process of study in the six chapters.

⁹ In this study, the research design refers to the framework that informs the approaches to the study in order to answer the research questions. The term methodology refers to the plan of collection and analysis, while the term methods refers to the specific procedures or techniques used to identify, select, process, and analyse information about a topic.

Figure 1.1: Overview of thesis chapters



From the figure above, this research hopes to contribute to the debate of what constitutes good educational theory and academic staff practice in curriculum studies with a focus on how critical thinking competencies are developed and enhance the first-year transition for academic success within the South African context. Successful activities and strategies possess the potential to be shared through professional development in order to better equip academic staff to develop critical thinking competencies and improve student success, particularly during the first-year transition into higher education. In addition, the development of professional development resources to facilitate such improvements may, in turn, enhance the relevant professional development of participants. This has implications for professional development and on-boarding of academic staff by relevant managers or academic developers.

1.12. CONCLUSION

This study provides an opportunity to explore the constructed theories of academic staff in their practices with respect to developing critical thinking competencies in first-year students. This chapter reviewed the orientation and background of the study to inform the consideration of the research questions. The research design and methodology were introduced.

The next chapter constitutes the literature review and explores the context and theoretical framework of this enquiry into higher education practices of academic staff in South Africa. The literature review is informed by a qualitative approach within a constructivist paradigm.

CHAPTER 2

LEARNING THEORIES AND THE PURPOSE AND CONTEXT OF HIGHER EDUCATION

2.1. INTRODUCTION

The second chapter presents a study of theory and literature which has framed and informed this investigation. This study falls under the field of curriculum studies as part of the scholarship of teaching and learning (SoTL) applied within adult education. Pinar (2011:ix) fundamentally defines curriculum studies as an “interdisciplinary academic field devoted to understanding curriculum”. Developing from this, curriculum studies may more precisely be defined as a field of educational research exploring curriculum, pedagogy and assessment matters, and is understood as both a disciplinary and an interdisciplinary field of study with its own distinctive history, conceptions, and modes of inquiry. More recently, Deng (2018:691) defined curriculum studies as a distinctive field centrally concerned with practice for the advancement of education. Deng continued by positioning educational practice and the inner work of educational institutions as embedded within social, cultural and institutional contexts (ibid.:705). From these definitions, curriculum theorising requires the use of theories across a wide range of critical and creative approaches to allow for practical applications in varied contexts (Deng, 2018:705; Schwab, [1970] 2013).

Based on the above, this chapter explores the research literature, research context and national education policies that constitute the various frameworks informing academic staff’s educational approaches in South Africa. This literature review starts with establishing a theoretical framework which is used to inform the research study and further clarifies the conceptualisation of the research question, the basis for this study as well as for previous research. Within the SoTL, theory is needed to inform practice. The theoretical framework underpinning this study is constructivism which has informed the approaches to various definitions and theories relating to learning, pedagogy and development of critical thinking competencies which will be discussed. This study further narrowed down relevant concepts and theories to those pertaining to adult learning, professional development, formal and non-formal professional

learning, self-regulated professional learning, professional collaborative learning, meta-learning and learning style theories. This chapter articulates the literature relevant to the abovementioned scope of interest and explores some gaps in the literature.

Based on understanding constructivism as a theory of learning, and the limitations outlined above, the next section will explore the underlying assumptions and contributing authors of this approach as a research paradigm.

2.2. CONSTRUCTIVISM AS A RESEARCH PARADIGM

Being a qualitative enquiry, the use of the constructivist paradigm allows the views, values, beliefs, feelings, assumptions and ideologies of participants to be explored (Creswell, 2007:439). The expression 'constructivist epistemology' was first used by Jean Piaget (1952; 1970) as a theory of cognitive development, and developed by Vygotsky in 1962 as a socio-cultural theory (Schunk, 2012:240). Given (2008:116) argues that this research paradigm moved away from just observing and explaining phenomena, transforming this approach to being more interpretive with an emphasis on understanding the meaning people give to their experiences. Given (2008:116-117) affirms that the work of Wilhelm Dilthey, Edmund Husserl, Max Weber, John Dewey, and Lev Vygotsky influenced the development of this paradigm. Given (2008:117) further draws on the work of Egon Guba and Yvonna Lincoln, to describe that, within the constructivist paradigm and from an ontological perspective, "reality is relative, multiple, socially constructed and ungoverned by natural laws". Given (ibid), therefore, positions the resulting epistemology, where knowledge is constructed between the researcher and participant through the research process and research, as being achieved through a hermeneutic practice. While this does lead to a need for criteria to judge the resulting knowledge claims, the work of Guba and Lincoln ([1981] in Anney, 2014; Johnson, Adkins & Chauvin, 2020; and Shenton, 2004), and later Denzin and Lincoln (2003b, 2003c) position trustworthiness as a key criterion for educational research measured through credibility, transferability, dependability and confirmability. Given (2008:118) additionally describes authenticity as requiring a balanced presentation of multiple perspectives related to the research. In relation to the scope

of this enquiry, both trustworthiness and authenticity are seen to inform a more holistic appraisal of meaning, as well as validate the qualitative nature of the enquiry, the design of which is discussed in more detail in Chapter 4, section 4.9.

Within constructivism, there are differences reflecting the extent to which knowledge is believed to be socially constructed. Given (2008: 116, 118) describes this as social constructivism, as informed by Vygotsky's (1962, 1978) work, psychological constructivism, as informed by Dewey and Piaget, and radical constructivism as described by von Glaserfeld's work. Furthermore, the constructivist paradigm has been applied by many researchers in diverse contexts, such as Boghossian (2012) researching student critical thinking in higher education; Brandon and All (2010) regarding nursing curricula, Blunt and Conolly (2006) and Greyling and Du Toit (2008) in researching mentoring of academic staff in higher education; Kafai, Desai, Pepler, Chiu & Moya (2008) researching mentoring in community service; Krahenbuhl (2016) in American K12 education, Larkin and Richardson (2013) in providing academic support for students in higher education; Parker-Katz and Bay (2008) in the context of preparing special educators to mentor preservice teachers; and Schrader (2015) in the context of social media and learning communities. This means constructivism is applied both as a pedagogic or andragogic approach and a learning theory (as described by authors like Krahenbuhl, 2016; and Schrader, 2015).

Given (2008:117) describes the influence of Max Weber on the constructivist paradigm in utilising his description of "action as guided by meaning and values". This is contrasted with behaviour which is styled as "biological and instinctive" (ibid.), and such a meaning and value-driven research paradigm is significant in attempting to explain why an action occurs and the meaning motivating that action. In this case, the constructivist paradigm relates to the theory behind the praxis and action of academic staff.

2.3. THEORETICAL FRAMEWORK: LEARNING THEORIES

Developing from the constructivist approach taken, and in understanding the opportunities that present themselves in adopting such an approach, the theoretical

framework included an exploration of various learning theories. These both informed and guided the research process. The notion of a theoretical framework is used as described by Green (2014:35) as distinct from a conceptual framework, where a theoretical framework draws from a single theory and a conceptual framework utilised concepts from various theories to guide research. Hence this section incorporates a discussion of the various relevant theories applicable to the scope of study in order to build towards a conceptual framework. Du Preez and Simmonds (2014:1) comment that theoretical ambiguities in the field of curriculum studies have resulted in conceptual confusion within this dynamic field. Accordingly, it is pertinent to clarify these aspects and the research context which has informed the research questions.

Knowles, Holton and Swanson, (2005:10) define a theory as “a comprehensive coherent, and internally consistent system of ideas about a set of phenomena”. They further comment that to understand a particular author’s thinking, a reader needs to accept that author’s definitions – a constructivist approach (ibid.). This builds from Gagne’s comment that he does not think learning is a phenomenon which can be explained by simple theories, despite the appeal of such theories ([1965:v] in Knowles, Holton and Swanson, 2005:10).

While educational research has often been criticised as either too theoretical or too practice-based, the literature review prefers the views of John Dewey¹⁰ and William James that indicate the function of theory as guiding intelligent practice and problem-solving, thereby removing the dichotomy between theory and practice (Phillips & Siegel, 2015). Based on this preference, learning theory informs the research design, methods and analysis. Relevant learning theories are explored below as frameworks describing how knowledge is absorbed, processed, and retained during learning.

Dewey held that knowledge arises from reflection upon our actions and that the worth of an item of knowledge is directly correlated with the problem-solving success of its

¹⁰ Dewey’s work is regarded as seminal within the field of education, and is therefore referred to extensively within learning theories. Current authors still apply core concepts derived from his work and so the relevance of his work is still applicable. It is noted that Dewey was influenced by and built on the work of William James, see for example Dewey (1910) Friedman (2016), Reck (1984) and Schunck (2012:9-10), However as James’s principal work was, *The Principles of Psychology* (1890,1892), this is beyond the scope of the study and has not been examined in detail.

guidance ([1916] in Phillips & Siegel, 2015). Accordingly, Dewey [1916] regarded knowing as an active rather than passive activity, where the educator facilitates the growth of an individual enabling the student to navigate the stock of knowledge and competencies available, and, in response, construct their own knowledge (in Phillips & Siegel, 2015). Friedman (2006) argues that “Dewey borrows from James”, the concept of “experience” to bridge a gap between rationalism and empiricism. Schunk (2012:9) describes that “James believed experience is the starting point for examining thought”, to which Dewey added reflection on experience and argued for considering stimulus and response as a more holistic interaction (ibid.10). In light of this, Given (2008:117) argues that Dewey’s work can be considered constructivist in his recognition that knowledge is constructed in social contexts. Du Toit (2011:71) describes Dewey’s view of knowledge as hypothetical, conjectural and undergoing continuous change, modification and evolution, as well as his emphasis on the importance of experiences and reflection in building knowledge, resulting in “knowledge that is personal and subjective”. Critical thinking, for Dewey, was something people needed to employ consistently, and that the role of the philosopher was not to propose and conceptualise truths, but rather to provide a systematic critique of the beliefs generated through critical thinking (Abrami, Bernard, Borokhovski, Waddington, Wade & Persson; 2015:275-6).

While there are several learning theories or schools of thought, most learning theories agree that learners¹¹ (including students and educators as professional learners) progress through stages or phases of learning that can be distinguished in various ways, such as progressive skill levels (Schunk, 2012:19). As can be seen regarding learning theory, much of what is written concerning applying this theoretical approach to education falls not only within tertiary and adult learning contexts but also within the developmental periods of primary and secondary phases. Yet, in all stages, these learning theories tend to agree that material should be organised and presented in small steps; that learners require practice feedback and review; that social models facilitate learning and motivation; and that motivational and contextual factors

¹¹ While several learning theories only mention learners, in some cases this is differentiated into learners (children), students (within higher education), adult learners or professional learners (with reference to academic staff). In this study, the term ‘learners’ is used when the discussion can refer to both students and professional learners.

influence learning (Schunk, 2012:19). These social models and the relationships during learning were further developed in social constructivism as a learning theory, which is not the focus of this study. Embedded within these theories is the idea that, to improve current performance levels, the development of competencies requires time, effort and energy. Schunk (2012:20) points out that research shows deliberate practice as improving performance, and reducing memory constraints and cognitive processing limitations. Several learning theories now include the concept of metacognition or meta-learning to improve learning and performance levels¹². The inclusion broadens the agency of learning to explicitly include the learner. This additionally allows for incorporating self-awareness and critical reflection on learning, greater cognitive complexity and construction of personal knowledge described in the preceding paragraph.

2.3.1. Learning

Authors like Killen (2010:3) explore various definitions of learning and describe it as a process of exploring knowledge and experience, making connections, and organising information that results in changes in understanding. Therefore, changes in understanding are a direct result of learners' experiences and their reflection on those experiences, and these changes in understanding enable learners to change their behaviour and conceptualisation of knowledge. While from a Behaviourist perspective, one of the more useful definitions of learning for both students and the professional development of academic staff is that by Crow and Crow (cited in Knowles, Holton & Swanson, 2005:11):

“Learning involves change. It is concerned with the acquisition of habits, knowledge and attitudes. It enables the individual to make both personal and social adjustments. Since the concept of change is inherent in the concept of learning, any change in behaviour implies that learning is taking place or has taken place. Learning that occurs during the process of change can be referred to as the learning process.”

¹² For example, theories that draw on Vygotsky's work, constructivism, information processing theory (Schunk, 2012:245,279,415), and experiential learning theory (Kolb, & Kolb, 2009)

Schunk (2012:3) supports this when he defines learning as “an enduring change in behaviour, or in the capacity to behave in a given fashion which results from practice or other forms of experience”. As behaviourist approaches externalise learning, these two definitions allow learning to be measured through assessment and observation. The changes in behaviour were explored extensively by behaviourist theorists and influenced the development of constructivism. However, constructivism acknowledges the influence of external experiences and incorporates the internal processes of creating meaning from experience.

Knowles, Holton and Swanson (2005:10) further describe education as the activity undertaken by one or more agents designed to effect changes in the knowledge, skills and attitudes of an individual or group/s. Within this definition, the educator is the agent of change. Knowles, Holton and Swanson (2005:10) define and contrast learning as emphasising the person in whom change happens through “the act or process by which behaviour change, knowledge, skills and attitudes are attained”. Knowles, Holton and Swanson (2005:12) comment that, while definitions of learning are contested, what can be inferred is, essentially, a change through experiences, which describes *learning as a product* in reference to an outcome, and *learning as a process* in referring to what happens during learning experiences. Many learning theorists distinguish between learning as a planned activity and as a product of natural growth (Knowles, Holton & Swanson, 2005:12). Knowles, Holton and Swanson (2005:14) draw on the work of Carl Rogers [1969], in the field of humanist psychology, to describe elements of learning as including personal involvement (the involvement of the whole person); self-initiation (the sense of discovery comes from within); pervasiveness (learning makes a difference in the behaviour and attitudes of a learner); and evaluation by the learner that results in meaning (for the learner).

From these definitions, learning can be defined as including changes in understanding which result in changes in behaviour that become transformational, but only if these changes endure over time through the acquisition and organising of knowledge and experience to result in meaning. Schunk (2012:4) points out that learning is inferential: that we cannot observe it directly, but that learning has occurred through its effects and changes. Consequently, learning can be discreet, cumulative, and the resulting knowledge and behavioural changes are observable, assessable, or can be

articulated as evidence of learning. Young (2015b:17) takes this further and argues that all learning is “epistemic” or “knowledge building” whilst being unavoidably social as this occurs within a societal context and through interactions with others. Young continues to note that, as learning is dependent on what is learned, this means that it cannot be treated as “a generic phenomenon”, and from this what is learned must be linked to the relationships “between how and what individuals can learn in different contexts” (2015b:17).

2.3.2. Constructivism as a theory of learning

Constructivism, as a theory of learning, builds on the theories of Jean Piaget, which assert that knowledge is not simply “transmitted from teacher to student”, but is actively constructed in the mind of the learner (Kafai & Resnick, 1996:1). This informs a strategy for education, as proposed by Piaget ([1952] in Stewart, 2013:7), that children as learners develop through a sequence of cognitive levels, which suggests maturation is necessary for reaching certain levels of complexity, reasoning or abstraction. Of further significance is Piaget’s notion that the maturing brain develops concepts: flexible networks into which learners assimilate knowledge and experience. Piaget referred to these conceptual networks as ‘schemas’, which grow and restructure as a person assimilates new information or experiences ([1952] in Stewart, 2013:7). Brandon and All (2010:89, 90) describe constructivism as a theory where learning is an active process in which learners construct new ideas or concepts based on their current (past) knowledge. Piaget’s understanding of the learning process, as being a dynamic restructuring of knowledge that continues, is entrenched in constructivist approaches and theory. Bloom (1956) and Krawthol (2002) responded to constructivist theory, and its promotion of learning as an active process, by developing a taxonomy of cognitive competencies for assessment purposes, where these competencies are structured in a hierarchy of increasing cognitive demand (as described by, for example, Lai, 2011; Stewart, 2013:8). Stewart (2013:10) argues that a major contribution of this theory is the view that learners are not passive, uniform or ‘empty vessels’; effective learning occurs when the learner is actively involved in the construction of knowledge. Thus, pedagogies that arise from constructivist approaches emphasise student-centred, active learning where the educators’ roles

are described as that of facilitators: where educators act as a 'guide' to provide scaffolding to learning and to prompt the student through questioning and modelling (Stewart, 2013:11).

A constructivist approach, therefore, assumes the idea that new learning and meaning are constructed by an individual in response to learning opportunities. Constructivism further assumes that such individuals are active learners, as agents, and that they develop knowledge (or understanding) for themselves with a key aspect being the interaction of learners and their situations in a process of acquisition and refinement of knowledge and competence (Schunk, 2012:231). This more personal approach requires an acknowledgement that learning journeys are unique, may be specific to a context and time, and that defining the attributes of a typical learner may be elusive. Such an approach is supported by Mascolo and Fischer (2015:114) who highlight that there is no such thing as an average person, and from a psychological point of view, an individual's actions and learning involves some integration of cognitive, motivational, affective, evaluative and motoric processes within a context. Building on this, Mascolo and Fischer (2015:114) describe that individuals are flexible and inventive in their thought and action, "adapting old ideas to new situations, inventing concepts, formulating plans, and constructing hypotheses' while participating in a variety of practices, social interactions and contexts". The overarching idea of such an observation points to the student's capacity for learning and continuous construction of knowledge. Mascolo and Fischer (ibid.) describe such a learning capacity as a "relational, constructive, self-organizing, self-regulating, and culturally contextualised" image of psychological and learning processes held by educators and psychologists.

In addition to the above observations made by Mascolo and Fischer (2015), a significant characteristic of the individual's learning capacity is that cognitive processes (such as thinking and learning) are located in specific social and physical contexts (Schunk, 2012:18, 233), which is why participants' perceptions and the specific context are explored in this research. This constructivist approach to learning is characterised by participants making sense and meaning as they take action within a context (Parker-Katz & Bay, 2008). As such, insights from participants' perceptions and context are valuable only if they lead to further action and innovation (Harrison, Lawson & Wortley, 2005). In response to this relationship between learner and context

of learning, Brandon and All (2010:90) re-position the educator as being an active dialoguer with the student, and describe that the educator moves from focusing on what they want to teach, towards what the student needs to learn.

Constructivism is about learning as an active, contextualised process of constructing knowledge rather than acquiring it (Gravells & Simpson, 2014:91). The learner brings past experiences and cultural factors to a current situation and each person has a different interpretation and construction of the knowledge process. This aligns with the notions of andragogy by Knowles, Holton and Swanson, (2005) where the learner is defined as a self-directing organism (Brandon & All, 2010: 90).

Criticism of both constructivism and behaviourist approaches lead to the acknowledgement that learning does not occur in isolation but in social and cultural contexts. From this criticism emerged the theories related to social constructivism, which originates from the work of Vygotsky [1978] who highlighted the social origins of thinking (in Stewart, 2013:12). Vygotsky explored the influence of language, culture and the interventions of others as we construct meaning, and thus the role of educator in extending the potential of individual learning. Therefore Vygotsky's [1978] theory is often referred to as one of the foundations of social constructivism (Stewart, 2013:12). Criticism of both constructivism and behaviourist approaches lead to the acknowledgement that learning does not occur in isolation, but in relation and response to social and cultural contexts. This critical engagement with constructivist theory gave rise to theories related to social constructivism, and originate from the work of Vygotsky [1978], who highlighted the social origins of thinking (in Stewart, 2013:12). Vygotsky explored the influence of language, culture and the interventions of others as constructing meaning, and thus the role of the educator is directed towards extending the potential of individual learning. Vygotsky's [1978] theory is often referred to as one of the foundations of social constructivism (Stewart, 2013:12).

The understanding of human cognition and learning as social and cultural, rather than as individual phenomena, is central to Vygotsky's theory (Kozulin, Gindis, Ageyev & Miller, 2003:1). Kozulin et al. (2003:1, 2) suggest that Vygotsky prompts the inquiry into the nature of knowledge used in the classroom and the ideal of an educator. While it seems obvious that an individual learner constitutes a natural agency of learning,

the Vygotskian approach emphasises the importance of sociocultural forces in shaping the situation of a learner's development and learning both in referring to multiple roles, mediation and culture (Kozulin et al., 2003:3). Vygotsky (1978:57) was of the opinion that social learning precedes development and stated that "every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (interpsychological) and then inside the child (intrapsychological)". As described earlier, much of what is known about constructivist learning theory being applied to education has been initiated within the developmental periods of primary and secondary education. This theory asserts three major themes of: social interaction, a *More Knowledgeable Other* (MKO) and the *Zone of Proximal Development* (ZPD) (Stewart, 2013). The MKO refers to anyone who has a better understanding or a higher ability level than the learner with respect to a particular task, process or concept (Stewart, 2013:12). The ZPD is the gap between a learner's ability to perform a task under the guidance and/or with peer collaboration, and their ability to solve the problem independently (Vygotsky, 1962, 1978). According to Vygotsky (1978), learning occurs in this zone. The conceptualisation of the educator as the MKO increases an extended zone of potential Vygotsky describes as the ZPD (1978; Stewart, 2013:12). The conceptualisation of the ZPD is regarded as a significant contribution in a framework for understanding teaching and learning, as described by Kozulin, et al. (2003:8). Kozulin, et al. (2003:4,8), therefore, position Vygotsky's [1978] work as distinguishing between everyday concepts (i.e. empirical or practical) and scientific (i.e. academic or theoretical) concepts and learning. This seems to align with Polanyi (1966:7), who describes knowing as including both practical and intellectual knowledge. If knowledge is considered as one of the outcomes of learning, then exploring the nature of knowledge or knowing seems pertinent.

Drawing on the notion of conceptual change, a pedagogical approach to this would be to utilise sequenced instructional activity as a means of developing students' deep disciplinary understandings (Kozulin, Gindis, Ageyev & Miller, 2003:8). Stewart (2013:10-11) comments that pedagogies that arise from constructivist approaches emphasise: new knowledge and its assimilation with prior understanding; the use of analogies and metaphors to help attach meaning; attempts to activate prior learning; attempts to cater for different cognitive preferences; and attempts to build spaces by

breaking teaching sessions into parts to manage assimilation and cognitive loads. The approaches to making knowledge construction or thinking more visible – such as lists, concept maps, or flow diagrams – can be directed towards ‘externalising’ the construction of schemas or making these more visible. These scaffolding activities are often embedded in curricula or assessments through the use of step-by-step instructions, question prompting, demonstrations, peer collaboration, cues, and analogies which can make the purpose and context of tasks clearer (Stewart, 2013:12).

Stewart (2013:11) observes that these constructivist approaches lead to the problem- and enquiry-based learning methods with project work or research-based learning. Such pedagogies often include creating awareness of the learning process through the use of reflective learning activities, self-assessment and evaluation of learning (ibid.), which results in greater opportunities for self-regulation and metacognition.

From Vygotsky’s conceptualisation of child development and learning processes, development is marked by periods of stability which transition into qualitative transformations (‘crises’), which encompass both integration and disintegration of mental functions and structures (Kozulin, Gindis, Ageyev & Miller, 2003:5). These complex meaning negotiation thresholds are further informed by the changing social circumstances that typically accompany such child development milestones as, for example, the transition to formal schooling or secondary schooling: which parallels many of the phenomena described within the context of tertiary studies at the first-year level.

As stated previously, constructivism is a theory of learning that builds on the theories of Jean Piaget and asserts that knowledge is not simply “transmitted from teacher to student”, but is actively constructed in the mind of the learner (Kafai & Resnick, 1996:1). Such a mode of engagement in the learning process informs a viable strategy for education. Freire (2004:15) avers that “education makes sense because women and men learn that through learning they can make and remake themselves as women and men are able to take responsibility for themselves as beings capable of knowing—of knowing that they know and knowing that they don't.”

As constructivism has evolved in the late twenty-first century, Given (2008:119) points out that there is a trend towards promoting social justice that emerges from a transformative paradigm. In the view of Cloete (2018:482), a constructivist approach to teaching and learning has become an integrated part of the South African higher education system since the dismantling of apartheid. She argues that life-long learning, learner-centeredness, participative teaching and problem-based learning as constructivist approaches have been institutionalised by organisations like SAQA (ibid.). When the policy imperatives of transformation and social justice are explored, the constructivist learning theoretical influences can be seen in South African Education Policy, as reviewed in Chapter 2, section 2.7.1.

2.3.3. Social learning theory

Additional responses to the acknowledgement of social contexts led to Social Learning theory, where Bandura (1977 in Stewart 2013:13) demonstrated that learning occurs by observing and imitating the behaviours of people around the learner and assimilating their experiences into the learners own developing understandings. In exploring the social context and relational nature of learning described above, this research draws on Vygotsky's work and the contribution of Bandura's Social Learning Theory. Bandura's Social Learning Theory posits that people learn from one another, via observation, imitation, and modelling. The theory has often been called a bridge between behaviourist and cognitive learning theories (J L, 2015). Social learning theory explains human behaviour in terms of continuous reciprocal interaction between cognitive, behavioural and environmental influences. In introducing learning by observation, Bandura (1977a:22) is often quoted as saying "Learning would be exceedingly laborious, not to mention hazardous, if people had to rely solely on the effects of their own actions to inform them what they do." Additional responses to the acknowledgement of social contexts led to the development of the Social Learning theory. In exploring the social context and relational nature of learning as described above, this research again draws on Vygotsky's work, and couples this with the contribution of Bandura's Social Learning Theory.

2.3.4. Situated learning theory

Where Social Learning Theory emphasised the impact that context and relationships have on learning, other significant learning theories developed a similar understanding of what contributes to learning. Researchers like Brown, Collins and Duguid (1989) and Lave and Wegner (1990) contributed to developing Situated Learning Theory. Situated Learning Theory postulates that learning is situated within an authentic activity, context, and culture. Lave and Wegner (1990:29) argue that learners inevitably participate in communities of practitioners, and that mastery of knowledge and skill requires learners to participate in the sociocultural practices of a community while repositioning apprenticeship within learning. Stewart (2013:13) maintains what Lave and Wenger suggest in that success in a context is a function of how well a learner fits into that setting. Brown, Collins and Duguid (1989:32, 40) agree with such assertion is developing the idea of cognitive apprenticeship that supports learning in a domain by enabling students to acquire, develop and use cognitive tools in authentic domain activity. This, they argue, enables learning to advance through collaborative social interaction and the social construction of knowledge (ibid.).

Stewart (2013:14) describes Social Learning Theory and Situated Learning Theory as significant for higher education, as they broaden appreciation of the complex contexts in which learning takes place. Stewart (2013:14) describes that pedagogies which arise from these theories emphasise the value of social interaction in transferring learning across contexts, and in expanding understanding. This includes identifying what students already know and supporting learning in the zone of proximal development, with an emphasis on community formation and collaborative learning as well as on role models.

2.3.5. Types of learning

Within the learning theories discussed above, there is further differentiation about types of learning: such as formal, non-formal, informal, self-directed and meta-learning. As these aspects are often differentiated within higher education and

professional development or professional learning, they are clarified below as informing the discussions that follow in subsequent sections and chapters.

In both higher education and within a professional environment, learning is not always formal or directed. The literature consulted particularly distinguishes between the concepts of formal, non-formal learning and informal. Formal learning is organised, structured, and has learning objectives. The CHE (2017:4) distinguishes formal learning as “professional learning that takes place through organised workshops and programmes, lunch hour seminars, teaching conferences, short courses and qualifications”. From the learner’s standpoint, formal modes of learning are always intentional: that is to say, the learner’s explicit objective is to gain knowledge, skills and/or competencies (OECD, 2010). Typical examples include: learning that takes place in the initial Institutional induction; and/or the institution’s professional development or workplace training arranged by the employer. The abovementioned examples are often distinguished as formal education and/or training, or, more accurately, education and/or training within a formal setting: the level of formality implying the consent and intent of the learner.

Non-formal learning is learning that is not provided by an education or training institution, and typically does not lead to certification (Jyväskylä University of Applied Sciences, Teacher Education College, 2007). It is, however, structured in terms of learning objectives, learning time or learning support. Non-formal learning is intentional from the learner’s perspective. This includes learning activities like mentoring or on-the-job-training. In this aspect of intention, the non-formal and formal modes of learning are aligned from the learner’s perspective, as both formal and non-formal forms of learning are directed by the learner’s intent in achieving their learning objectives.

In contrast, informal learning is never organised, has no set objective in terms of learning outcomes and is not intentional from the learner’s standpoint. Informal learning is sometimes simply defined as any learning that is not formal learning (Epic, 2010) and, therefore, would exclude where learning is planned or managed by a learning professional or learning institution. It is often referred to as learning by experience or just as ‘experience’ (OECD, 2010). Young (2015a:17) describes all work

as embodying some form of “learning from experience” or what can be referred to as ‘on-the-job learning’. The CHE (2017:4) describes informal learning as “learning that happens through day-to-day interactions with colleagues and peers in their work contexts” where learners learn by doing, continued practice and experimentation. This definition would be applicable where students new to higher education gain epistemological access to their HEI community and academic programmes. An implication of these ideas is that simply existing will consistently expose the individual to learning situations at work, at home or during leisure time. This type of learning, consequently, has less predictable outcomes. Young (2015a:17) explores these limitations arising from ‘learning from experience’ as arising from such learning being context-dependent and, consequently, comments that experience alone seldom provides learners with concepts that can take them from one context to another or enable them to imagine other courses of action. Learning from such interactions may be more intentional and more fruitful when regular reflection or sense-making is undertaken by the learner or under the guidance of a mentor. However, such opportunities are not guaranteed, as is the case with formal and non-formal learning.

As learning and knowledge have become more context-independent, Young (2015b:18) traces the development of learning towards becoming ‘knowledge-building’, and the application of knowledge in changing the context (or physical world) as forming the basis for education directed towards equipping learners for a specific profession, as well as the development of specialist educators and learning institutions. Such context-independent learning can be directed by others or can be self-regulated. The deliberate transmission of knowledge as a learning process depends on clarifying what to learn, for what purpose, how to organise it (curriculum), and how to learn (pedagogy/andragogy) (Young, 2015b:18).

In order to weigh how self-regulated learning and meta-learning feed into the requirements of the first-year NQF 5 level descriptors (SAQA, 2012; as listed in Annexure G), the constructs of self-regulated learning and meta-learning need to be clarified. Self-regulated learning occurs when learners use strategies that enable them to act autonomously and take initiative and tend to encourage learners to take responsibility for their learning (Killen, 2010:28, 41). Self-regulated learners are described by Zimmermann (1998:1) as learners who “are distinguished by their view

of academic learning as something they do for themselves, rather than something that is done to or for them". This can be extended to professional and other contexts where the learner deliberately takes initiative to learn, non-formally or informally. Such self-regulated learning would draw on strategies which include goal setting, deliberating about learning strategies, asking for input, and research. When considering adult and continuing education, in both higher education and professional contexts, it is often assumed that learners are encouraged to be self-regulated and have developed meta-learning strategies. However, authors like Ganda and Boruchovitch (2018:1) and Schunk and Zimmerman (2008:79) specifically refer to research that many students do not demonstrate this skill, and perform below par academically when they enter university. They continue to indicate that this poor academic performance may be due to their inability to self-regulate their learning (Ganda & Boruchovitch, 2018; Schunk & Zimmerman, 2008). However, both of their descriptions of the abovementioned deficit in student ability suggest that directed and self-regulated learning still occurs within a social context, within a social context: that personal responsibility or autonomy is facilitated or encouraged through student interaction with an 'other'.

Metacognition is described in simplest terms as "thinking about your own thinking" (Lai, 2011:18), while the definition refers to "awareness and understanding of one's own thought processes" (Oxford Dictionaries, 2019). The root 'meta' means 'beyond,' so the term refers to 'beyond thinking.' Specifically, metacognition encompasses the processes of planning, tracking, and assessing that are indicative of a student measuring their own understanding or performance. The phrase was first used by developmental psychologist Flavell in his 1979 article. Lai (2011:18) describes three types of metacognitive knowledge: declarative, procedural and strategy knowledge as derived from the work of Flavell (1979) and later Kuhn (1999). Lai (2011:19) argues that Flavell (1979), and Schraw, Crippen and Hartley (2006) perceive critical thinking as forming part of the construct of metacognition, but points out that other researchers see metacognition as part of critical thinking. Others argue that the link between critical thinking and metacognition is self-regulation, and thus self-regulated learning, that is "our ability to understand and control our learning environments", is seen as requiring three components: critical thinking or cognition, metacognition and motivation (i.e. the motivation to regulate) (Schraw, Crippen & Hartley, 2006:111).

Meta-learning is used by Biggs (1985) to describe the state of “being aware of and taking control of one’s own learning”. Biggs (1985) describes effective learning as encompassing learners exerting control over their own cognitive resources, and drawing on a kind of metacognition, here called meta-learning. Therefore, meta-learning is an awareness and understanding of the phenomenon of learning itself, as well as the content of learning. The underlying implication is that meta-learning can become self-directed learning when the learner deliberately uses meta-learning to redirect strategies to improve learning. The concept of meta-learning includes the learner’s perception of the learning context, which includes knowing what the expectations and the demands of a given task are (Killen, 2010). Meta-learning uses the learner’s experiences to change approaches to their learning; for example, through reflection, so that the learner improves learning from additional experiences. Meta-learning skills are often a requirement for independent learning (Epic, 2010).

Isaacson and Fujita (2006:39) describe self-regulated learning as a complicated process, but self-regulated learners are adept at monitoring their learning and conception, or metacognitive knowledge, which has a direct effect on each step in the self-regulation process. This includes knowing *how* and *when* to use certain competencies and helps learners to control their learning or reflect on their work. Furthermore, linking the role of academic staff as learning facilitators with the concept of social metacognition (as described by Chiu & Kuo, 2009;¹³ Jost, Kruglanski, & Nelson, 1998) where self-regulation and metacognition as personal competencies forms the basis for an educator to assist in developing metacognition competencies in students, where students are the social *other*, and the educators the MKO in relation to students. Social metacognition brings in assessment as making a judgement about a student’s learning and metacognition competencies. If we conceive of academic staff as both self-regulated learners and practitioners, learning theories inform their

¹³ Social metacognition is an extension of metacognition into group interactions, and within education where learning occurs within a social interaction between an educator and students, “*social metacognition* consists of *group members’* monitoring and control of *one another’s* knowledge, emotions, and actions” (Chiu & Kuo, 2009:1, original emphasis). While in higher education and adult education the aspects of control would be reconstructed into facilitating others self-directed learning, the construct of social metacognition where an educator monitors and stimulates metacognitive competencies in students can apply.

educational practice, which allows educators to build related pedagogy or andragogy practices.

2.4. CONCEPTUAL FRAMEWORK: PEDAGOGICAL AND ANDRAGOGICAL THEORIES

Building on learning theories that describe how knowledge is absorbed, processed and retained during learning, pedagogy explores the theory and practice of teaching. Pedagogy is derived from the Greek words for 'child' and 'to lead', combined to create the overarching meaning of 'to lead a child' (Halupa, 2015; Knowles, Holton, & Swanson, 2005; Saevi 2017:1792), and consequently points to the idea that the responsibility of teaching is on the educator as a leader. Pedagogy informs teaching strategies and actions, and teacher judgments and decisions while bearing in mind theories of learning, the understanding of students and their needs, and the diversity of backgrounds and interests of individual students. Ashwin, et al. (2015:ix) articulates this in stating that the ways academic staff teach are influenced by who they teach, what they teach, and where they teach. Pedagogy includes how the educator interacts with students, and the social and intellectual environment the teacher seeks to establish.

Based on the above definition, some authors, like Gravells and Simpson (2014), describe formal teaching as pedagogy, where the teacher directs all the learning; and contrast informal teaching is as andragogy, where the learner is the focus. However, this distinction is problematic, as, for example, Knowles, Holten and Swanson (2005:1-3) initially defined andragogy as the art and science of helping adults learn. As andragogy is derived from the Greek words for 'man'[sic]¹⁴ and 'to lead', meaning 'leader of man' (Knowles, 1970:55), the distinction between pedagogy and andragogy seems less obvious in that both are directed towards the positioning of a leader figure as the more knowledgeable partner. In addition, within the context of higher education, pedagogy and andragogy are often used interchangeably, probably because many

¹⁴ It is generally assumed that man is used generically to include all genders, as in mankind. The author is cognisant of the misogynistic undertones, but in order to align with the etymological origins of the term, 'man' is used.

students are young adults (18 to 21 years) transitioning from childhood into adulthood and its related responsibility. In either approach, the educator sees their responsibility as 'leading' learning, as set within the objectives of the curriculum. While some authors refer to pedagogy and andragogy interchangeably, others (see, for example, Gilstrap, 2013:503), see a significant difference in the theoretical constructs.

As a result authors like Halx (2010:519) argue that many undergraduates are in fact adults, either due to their age or experiential maturity. He expands this to suggest that, while there are undergraduates who have not yet transitioned into 'adults', treating them as adults would benefit them through accentuating "the learning process along with the course content (ibid.:520), and specifically, that this would stimulate critical thinking in younger students (Halx, 2010:519). While Halx (2010) can be regarded as idealistic, due to factors such as students struggling with self-regulated learning as stated previously, this approach emphasizes the transitional nature of first-year students as well as allowing for mature adult learners who are a growing proportion in higher education. Still, it must be noted that andragogy in higher education builds on common ideas and theories held in pedagogy, such as the learner/student building on prior knowledge, with an emphasis on relevance for the adult learner to apply this learning content to their contexts, with the assistance of a MKO.

Andragogy may thus be seen as informed by pedagogy in being described as a set of core adult learning principles that apply to all learning situations (Knowles, Holton & Swanson, 2005:3), which includes the learner's need/purpose to learn (why, what, how); self-perception of the learner's role (as independent and self-directed); prior experience of the learner (resource, theory); readiness to learn; orientation to learning (problem-centred, contextual); and motivation to learn. These suggest a learning process within formal learning opportunities and may not fully take into account multiple learning strategies and aspects of learning from reflection.

While some authors, like Halupa (2015:143), and Hase and Kenyon (2000), continue to build theories like heutagogy, which promotes "truly self-determined learning" (Hase and Kenyon, 2000), this does not seem relevant in first-year higher education where the curriculum is accredited on a national framework and, therefore, partly-determined by learning outcomes as opposed to being directed by the learners as

students. The development of academagogy is more specific to higher education, as it builds on pedagogy, andragogy and heautagogy, while allowing for flexibility within a social constructivist approach (McAuliffe & Winter, 2014:167). Academagogy assumes that an informed academic selects the most appropriate style of learning and evaluation for a given learning experience and assesses whether the learning outcomes have been attained (Winter, McAuliffe, Hargreaves, & Chadwick, 2009:3). Whilst this does bring a focus on teaching and learning, and allows adaptive flexibility in methods of teaching, the theory assumes that students are capable of self-directed learning (Murthy, 2011:290) which again seems problematic in respect of first-year students.

In considering the scope of learners that will be investigated in this study, the focus falls on academic staff as learners and reflective practitioners in their professional development and practice, and their students as learners in the classroom. As both sets of learners are positioned within the learning context of higher education, this study prefers adult learning theories (andragogic approaches) especially in regard to the professional learning of academic staff. Like Zawacki-Richter, Röbbken, Ehrenspeck-Kolasa and von Ossietzky (2014:69), this research explores adult education as a field of practice, as well as a field of study. Adult education is defined as a field of study in which people from different disciplines and professions focus on the education of adults, where the term ‘adult’ typically includes persons beyond the school leaving age of eighteen (Zawacki-Richter, Röbbken, Ehrenspeck-Kolasa & von Ossietzky, 2014:69). For academic staff, adult education is also a field of practice as they apply adult learning principles in higher education. For example, in considering the need to reconceptualise university teaching to improve developing critical thinking in students, Halx (2010:523) argues for adult learning approaches, where undergraduates are seen as ‘adults’, as addressing previous shortcomings in higher education teaching.

In various approaches to andragogy, ‘learning’ is described as a *product*, *process*, or *function*. One approach is that of Knowles, Holton and Swanson (2005:175) who use a multidisciplinary theoretical foundation of adult learning, including psychology, systems and economic theory and therefore define adult learning as “the process of adults gaining knowledge and expertise”. The gravitas of learning as being process-

driven tends to be strongly emphasised across the board. The planning of adult learning further affirms this, and commonly refers to four phases:

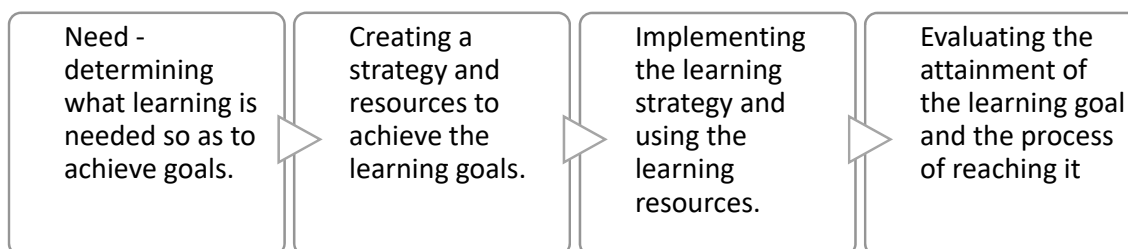


Figure 2.1: The four phases planning of adult learning (Knowles, Holton and Swanson, 2005:175)

This four-phase process assumes that learning is always formal and planned. However, an alternative construction, as discussed in the types of learning in section 2.3.5., is that learning can be informal and unplanned, but equally intentional. Therefore, the steps in the planning formal or unplanned learning may not be as explicit or articulated as within formal or planned learning.

Knowles, Holton and Swanson (2005:3) use the figure below to describe that andragogy in practice works best when adapted to fit the uniqueness of the learners (*individual learner*) and the learning situation (*situational differences*).

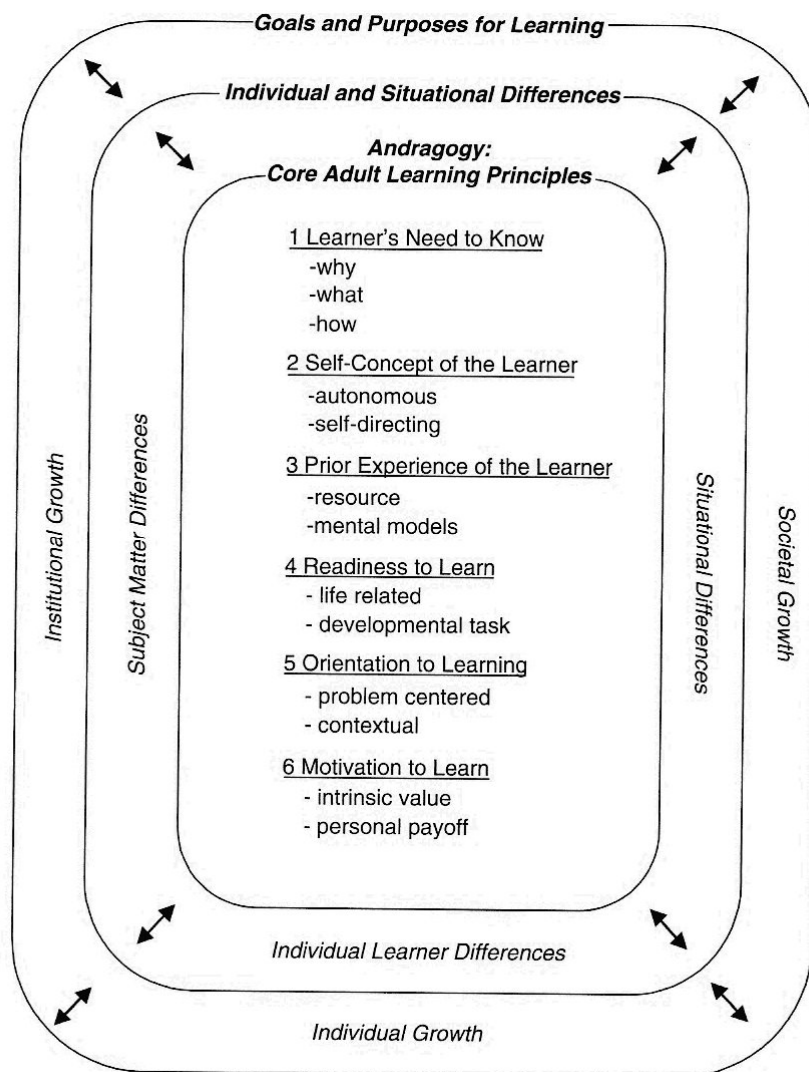


Figure 2.42: *Andragogy in practice* - Knowles, Holton and Swanson, (2005:4)

As illustrated in the figure above, Knowles, Holton and Swanson (2005:3) see this contextual adaption as a strength of the principles, not as a weakness, and that the adaption to multiple learners and situations developed robust principles. The implication is that the educator has an increased challenge to adapt to multiple adult learners and the relevant situational differences, leading many to adopt a more facilitative approach. Applying this as an andragogic approach places more emphasis on what the adult learner is doing (Gravells & Simpson, 2014). This allows educators to include learners' experiences, knowledge, and build on what learners already know and what interests them. Learners can also learn from their peers' knowledge and experiences, as well as from their educators in the role of an MKO.

These approaches to learning theories are similar to Lieb (1991), who comments on the characteristics of adults as learners that need to be taken into account in designing learning opportunities. He states that adults have accumulated a foundation of life experiences and knowledge such as work-related activities, family responsibilities and previous education. Therefore, adults have a need to connect their learning to this knowledge/experience base. Lieb (1991) is explicit in elaborating that adults want learning to be *relevant*. Adults, particularly in a professional development context, learn better when they see a reason for learning something. Learning that is applicable to their work, goals or other responsibilities is perceived as more valuable. This valuing of learning is similar to the principles expressed in problem-based learning (Killen, 2010:249), where learning is activated through problem-solving.

A key idea is that approaches to adult learning work best when they are adapted to fit the uniqueness of the learners and the learning situation or context. Such approaches to adult learning take into account that adult learners will commence with a learning opportunity, not as empty vessels, but with prior knowledge and experiences and their own resources. Adult learners learn differently from young learners in the same learning programmes, and grow uniquely in response to such learning opportunities, depending on how each programme links to prior knowledge, theory and interpretation or reflection on prior experiences. Knowles, Holton and Swanson (2005:37, 179) describe several ramifications for professional learning from adult learning theory: first is that the needs and interests of the adult learner are applicable starting points for designing appropriate tasks from which adults can learn through performing these tasks (*ibid.*:179). The second is that linkages for organising adult learning are real-life situations and problem-solving, not disciplines (*ibid.*:179), suggesting a reorganisation of the curriculum to account for this. Thirdly, that a key aspect of adult education requires the analysis of experience, specifically through reflection (*ibid.*:179), which motivates the inclusion of critical reflection as a learning opportunity. The fourth ramification is that the role of the facilitator is to engage in a process of mutual inquiry with adults rather than to transmit knowledge (*ibid.*:179), which repositions the role of the educator. Lastly, that adult education should take into consideration differences in style, time, place and pace of learning (*ibid.*:179), suggesting a flexibility which might be achievable within a learning outcome paradigm.

Ashwin, et al. (2015:60) draws on international research, and the UK Teaching and Learning Research Programme, to describe ten principles of effective learning, teaching and assessment in higher education. Notably, these authors argue that effective teaching and learning in higher education depends on the research and learning of all educators who teach and research to support the professional learning of other academic staff and they, therefore, argue for the methodical use of evidence to inform judgements as reflective pedagogues in higher education. Stewart (2013:20) argues that teaching and curriculum design that is informed by how students learn will optimise effective learning.

2.5. THE PURPOSE OF HIGHER EDUCATION

Why educate? What for? One of the reasons is precisely to develop the ability to ask good questions, and to refute false answers.'

Paulo Freire (1992:2)

While the debate of what higher education is, and what the core business of HEIs is, continues, in South Africa, various policy and DHET reports describe that higher education in South Africa performs “a fundamental and critical role in giving expression to the rights and values in the South African Constitution and Bill of Rights” (DHET, 2016:1). At the *Second Higher Education Summit* in 2015, the then-Deputy President of South Africa, Cyril Ramaphosa¹⁵ noted that investment in education was a priority for the South African government, as quality higher education contributed to economic development, motivated social development, and facilitated the transformation of South African society (DHET, 2016:2). More recently, the previous Minister of Higher Education and Training, Grace Naledi Pandor¹⁶ described universities in South Africa as “play[ing] a pivotal role in giving expression to the rights and values in the country’s Constitution and Bill of Rights, which include improving student access and success and developing contextually-responsive curricula that promote transformative values, attitudes and actions in higher education” (DHET, 2018b:2).

¹⁵ In 2018 Cyril Ramaphosa was elected unopposed as President of South Africa by the National Assembly on 15 February 2018, and re-elected during the national election of 2019.

¹⁶ Grace Naledi Mandisa Pandor was the South African Minister of Higher Education, from 28 February 2018 to May 2019, having previously held the post from 2009-2012.

Blitzer (2009:xii) condenses the core aims of academic work to two aspects within the South African context: “to teach in such a way that students benefit maximally from their higher educational experiences by increasing the sensitivity towards historical, contemporary and future issues, and to assist students in becoming independent, intrinsically motivated and self-monitoring lifelong learners”, and “to extend the publically accessible body of knowledge through conceptual, theoretical and empirical research, scholarship and publication”. While these two aims are presented somewhat idealistically, the aspirations presented within seem relevant and refined. The alignment of these aims with policy imperatives, for example, to develop lifelong learners, pertains to both professional learning of academic staff (see, for example, CHE, 2017:15) and to students (see, for example, CHE, 2014:1; 2016:4). In the same book, *Higher Education in South Africa – A scholarly look behind the scenes*, Lategan (2009:53) argues that new knowledge development (research) and knowledge transmission (teaching) are historically core to the HEI (or university) and that the greatest change to higher education is the way in which these two core activities are now performed. These ideas have their origins in older texts, such as John Henry Newman’s *The Idea of a University* ([1852] cited in Van der Zwaan, 2017:20), where Newman promoted the concept of the university that was completely orientated towards teaching and described “the transfer of knowledge as the ultimate goal”. This positioned the university as a teaching institution and a “guardian of knowledge” (ibid.:21). Where Lategan (2009) indicates that HEIs do not exist in isolation, but are parts of communities, Waghid (2009:71) proposes that the public mission of modern higher education in addressing social problems is one of the most significant contributions, which seems particularly relevant in the South African context.

In many countries, such as the USA, South Africa, the United Kingdom and those in Europe Union, higher education is currently undergoing a transformation. Internationally and locally, the public, policymakers and academics are debating the purposes and, more particularly, the funding of higher education. In the Netherlands, Van Der Zwaan (2017:5-6) describes these as ‘turbulent times’ where universities are being criticised from many sides, with increasing student activism, as well as the advent of rapid changes in technology, research, the labour market, privatisation and funding constraints. Botman (2012:xii-xiv) comments that HEIs should fulfil a useful

role by serving the needs of society, and that society should hold institutions accountable for their contribution to the public good. In South Africa, challenges faced in higher education include poverty, transformation, the demand for the massification of higher education, improving graduation rates, the levels of secondary education, technology, budgetary constraints, decolonising the curriculum, and internationalisation (see, for example, CHE, 2013a; Case, 2017a; Pandor, 2019 Ramchander & Naude, 2018; Swartz, Ivancheva, Czerniewicz & Morris, 2018; Van Broekhuizen, Van der Berg and Hofmeyer, 2016).¹⁷

The belief that universities contribute to the public good, both through teaching and research, persists despite the abovementioned challenges (Botman, 2012:xiv; Commission of Enquiry into Higher Education and Training, 2017:33; Enders & Jongbloed, 2007:11,16; Franco, 2016:115-8; Labaree, 1997), especially insofar as both graduates and research outputs contribute to economic growth. Facione (2011:1) suggests that, after years of viewing higher education as a private good, higher education has returned to being described as a public good which also benefits society. At the *Second Higher Education Summit* in 2015, the then-Minister of Higher Education and Training Blade Nzimande described higher education as a public good with an emphasis on the social, cultural and scientific values of higher education (DHET, 2016:2). In their presentation to the Commission of Inquiry into Higher Education and Training on the feasibility of fee-free higher education in South Africa, the CHE (2016) collates both views by arguing that it is recognised (and contested) that higher education is both a private and public good as higher education accrues benefits to both the individual and the broader society. For the individual, it leads to greater opportunities and earning power; for society, it contributes to socio-economic, cultural and other forms of development that society benefits from. From reviewing the literature, the conception that higher education contributes to both public and private benefits is more strongly established in recent research and policy.

The CHE (2016) further refers to a correlation between levels of investment in higher education and economic development. In 2017, The Commission of Enquiry into

¹⁷ Additional examples can be found in example CHE, 2010; Leibowitz, Van der Merwe & Van Schalkwyk, 2009; Maree, 2015; Mabalebele, 2015;

Higher Education and Training in South Africa found that there are both public and private benefits to higher education despite wide variances in individual comparisons (2017:56). The Commission further noted that the public benefits increase as the individual private benefits increase and that there are beneficiaries beyond the state and the individual students such as the private business sector. This dual public and private benefit is supported by Hanushek and Woessmann, (2008:66), who found that there is strong evidence that the cognitive competencies of the population are powerfully related to individual earnings, to the distribution of income, and economic growth. These public benefits partially accrue from an educated workforce able to make good decisions and tax payments. This is also perceived as a private and public benefit for democratic societies, for the development of individuals able to participate in society, and for the economy. Phillips and Siegel (2015) describe the debate between private and public benefits as a dichotomy between the value of education as the transmission of knowledge, and education as the fostering of inquiry and reasoning competencies that are conducive to the development of autonomy of the individual.

In evaluating the purpose of a University, some authors suggest that “producing thinkers” is a key purpose of higher education (see, for example, Huber & Kuncel, 2016; Korbin, 2015). Alternative perspectives emphasise the importance of employable educated graduates in enabling various states to become knowledge-based societies and economies – *“higher education has to be relevant and relevance is increasingly defined in terms of the employability of graduates and the direct contributions by the higher education institutions to the economic competitiveness of states”* (Enders & Jongbloed, 2007:28, emphasis added). In clarifying the UNESCO General Education Quality Diagnosis Framework, UNESCO conceptualises a quality general education system as “one that is effective for the purpose, has enduring/sustained development relevance or responsiveness, is equitable, is resource-efficient and translates into substantive rather than symbolic access” (UNESCO, 2016). Botman (2012:xii) approves Freire (2004), from *Pedagogy of Hope: Reliving Pedagogy of the Oppressed*, where Freire argues that education should play a role in changing the world for the better by stimulating critical thinking and empowering people. Young (2014:196) provides a simpler commentary on the above in stating that educational institutions all assert and assume that they have knowledge

which others are entitled to access. In South Africa, The Commission of Enquiry into Higher Education and Training in South Africa (2017:33) quoted the submission and presentation to the Commission by the University of Mpumalanga, on the 22 August 2016, who argued that “Higher Education must reach far beyond the creation of skilled human resources for the economy and will include the promotion of socially conscious, critically thinking graduates who will find innovative answers to old and new questions”. These discussions reveal a growing consensus on the importance of developing critical thinking competencies in students through higher education qualifications.

Ashwin (2016b:21) reasons that what makes higher education a higher form of education is that students develop relations to knowledge through the study of particular bodies of disciplinary and professional knowledge. The transformational nature of higher education lies in the access which students gain to a body of disciplinary knowledge that changes their sense of both who they are and the nature of the wider world (Ashwin, 2016b:26). There are strong arguments for the measurement of how students benefit from education to ensure more equitable higher education for all students regardless of which institution they study through. The legitimacy of these demands needs to be recognised as governments, students and societies invest considerable resources in higher education (Ashwin, 2016b:26). From Chile, Veliz and Veliz-Campos (2018:48) advocate that “critical thinking is a defining condition of higher education which allows for the development and promotion of skills for evaluation, inquiring and judging statements and unstated judgements”. This suggests that part of the benefit of higher education can be the development of critical thinking competencies.

Higher education is often tasked with achieving social and political objectives, such as achieving social justice or economic growth (Balwanz & Ngcwangu, 2016). In South Africa, this mandate has been described under narratives of “undoing the damage of apartheid” or “historical redress” (see, for example, Pandor, 2019; Department of Higher Education and Training (DHET), 2016; 2014), and is echoed in the White paper (DHET, 2013a), the Report on the *Second Higher Education Summit* in 2015 (DHET, 2016:1-2) and in the later report of the Commission of Enquiry into Higher Education and Training in South Africa (2017:36). Yet, many of the problems ascribed to

historically disadvantage are echoed in other countries' challenges. For example, in 2003, Georgia State University in the USA had a 30% graduation rate with a disproportionate gap between the success rate of white students and those of other ethnicities – African-American, Latino and Asian – as well as between students from higher-income brackets versus those from lower-income households (Jenvey, 2016). In addition, Balwanz and Ngcwangu, (2016:32) point out that in South Africa, “the ‘scarce skills’ discourse offers an explicit challenge to tertiary institutions: it seeks to influence higher education funding, programming and mission so that it is oriented around market demands” and employable graduates. The use of ‘skills shortages’ as an explanation for unemployment and sluggish economic growth in South Africa is prevalent, in that major government policy documents and initiatives make addressing “acute skills shortages” a core goal of education policy (DHET, 2013a:12). Authors like Balwanz and Ngcwangu (2016:41-2) point out the inconsistency in describing occupations as ‘scarce skills’, in that an occupation often requires a competency (skill) as well as professional certifications. Additionally, Balwanz and Ngcwangu (2016:42, 47) suggest that the ‘skills development’ activities expected of HEIs must come from a much broader conceptualisation of competencies, including foundational/basic, cognitive, non-cognitive, life and field-specific competencies.

This demand for HEIs to *produce* (in a manufacturing sense) employable graduates arises from both national government policy and potential employers. In policy, Redding (2017:5) refers to the pressure on higher education to balance the development of students in being able to think for themselves, and the competitive pressure of certifying pragmatic ‘know-how’. The debate is often contained within a neoliberal approach or market-responsive approach. In South Africa, authors like Coetzee (2014:887) reveal that many academic staff members realise the importance of imparting the competencies and attributes graduates need, not just for employability, but also to make sustained positive contributions to society, their professions and workplaces. The growth in publications exploring more recent notions of gradueness and graduate attributes (see, for example, Coetzee, 2014; Desai, Berger & Higgs, 2016; Flores, Matkin, Burbach, Quinn & Harding, 2012; Leibowitz, 2011), tend to specifically highlight employability: either as employable graduates fulfilling government or public mandates, or as a response to student or sponsor mandates. If for the purposes of this study, employability is defined as the set of

personal competencies associated with gaining employment and succeeding in the workplace, then the HEI's role is to offer learning opportunities directed towards developing the necessary qualifications, competencies and attributes that enable a student to gain employment and succeed within in their chosen fields in an evolving work milieu (CHE, 2017; Pool & Sewell, 2007). Similarly, Coetzee (2014:888) defines graduateness as "the quality of personal growth and intellectual development of the graduates produced by a higher education institution and the relevance of the graduateness skills and attributes they bring to the workplace". The definition of employability seems to be a subset of graduateness, and therefore it can be suggested that higher education seeks to achieve more than employability in students. This is affirmed by the CHE (2017:31), who specifically describe graduate attributes as including employability.

Some authors (see, for example, Barac & Du Plessis, 2014; Desai, Berger & Higgs, 2016) confirm the perception "that employers expect universities to produce market-ready graduates who require the minimum of additional investment before fulfilling their work commitments" (Barac & Du Plessis, 2014:75). Balwanz and Ngcwangu, (2016:32) agree that one of the roles of higher education is to enable youth to develop "marketable skills" as well as broader skill development. Yet, in their research, Barac and Du Plessis (2014:74) point out the disparity that several heads of academic departments of Accounting in South Africa feel that some pervasive competencies like personal attributes and professional competencies (including critical thinking and problem solving) are best developed in the workplace.

Several authors (Barac & Du Plessis, 2014; Desai, Berger & Higgs, 2016; Franco, 2016:115; Eberly & Trand, 2010:9; Redding, 2017:5; Stassen, Herrington & Henderson, 2011;) use research that shows employers or professional bodies want higher education to develop critical thinking competencies and indicate that HEIs describe critical thinking competencies as an objective of learning programmes. Franco (2016:108) further comments that critical thinking needs explicit instruction and inclusion in the curriculum to prepare individuals to become active citizens, who are able to regulate thinking and behaviour and be guided by ethics and evidence in decision making. Franco's position is supported by Lai, (2011:2, 33-34) who urges educators to "provide explicit instruction in critical thinking, to teach how to transfer to

new contexts”, and to use co-operative or collaborative learning methods. The expectation to include critical thinking competencies as a graduate attribute affirms that critical thinking needs to be addressed within the curriculum in order to achieve the aspirations of good citizenship and employability as described.

Within the scope of the literature reviewed, several scholars have articulated the term ‘twenty-first-century skills to describe competencies believed to be critical for future academic and workplace success. Authors such as Drake and Reid (2018:31), Chu, Reynolds, Tavares, Notari and Lee (2017:18), and Silva (2009:631) have described these competencies as ‘vital capabilities. While these are not new concepts, the relative importance of these capabilities has been growing and has resulted in increased inclusion in educational curricula. This prioritisation has lead authors, such as Chu et al. (2017:22), to assert that soft skills “[including] critical thinking and problem-solving skills, communication, and collaboration skills, and creativity and innovation” are an essential part of learning. These competencies are reiterated within several educational frameworks: for instance, the World Economic Forum Future of Jobs Report (2016) and the 21st Century framework (Partnership for 21st Century Skills, 2009), both of which include critical thinking as part of its four C’s of competencies. Yet Drake and Reid (2018:32) comment that, while there is consensus on the importance of developing these 21st Century competencies, educators are uncertain about the definitions of the relevant capabilities and how to teach and assess these.

It was Dewey (cited in Fesmire, 2015:176) who said that, if he were asked to name the most needed of all reforms in the essence of education, he would say: “cease conceiving of education as mere preparation for later life, and make it the full meaning of the present life.” In addition to this, he argued that only in this case does it become truly a preparation for later life: “An activity which does not have worth enough to be carried on for its own sake cannot be very effective as a preparation for something else” (ibid.). In this regard, it is proposed here that critical thinking competencies, and proposed related 21st Century skills, are considered as valued, both in education and for future success.

2.6. CURRICULUM DESIGN FOR ACHIEVING THE PURPOSES OF HIGHER EDUCATION

“But the humanist, revolutionary educator’s...efforts must coincide with those of the students to engage in critical thinking and the quest for mutual humanization.”

Paulo Freire (2005: 75)

Given the purposes of higher education as complex and aspirational objectives within a modernising context, as discussed above, how then can curriculum design support an HEI and its students to achieve these? Kader Asmal in the preface to the *Revised National Curriculum Statement Grades R -9* (DOE, 2002:1), suggests the following:

“At its broadest level, our education system and its curriculum express our idea of ourselves as a society and our vision as to how we see the new form of society being realised through our children and learners. Through its selection of what is to be in the curriculum, it represents our priorities and assumptions of what constitutes a ‘good education’ at its deepest level.”

As HEIs integrate the mandates given by the government, and particularly the CHE, DHET and SAQA, then their activities should be informed by these policies: such as the Higher Education Act No. 101 of 1997, and related Higher Education Amendment Acts including 9 of 2016; the White Paper for Post-School Education and Training (DHET, 2013a); the proposal for undergraduate curriculum reform in South Africa (CHE, 2013a); Criteria and guidelines for the assessment of NQF-registered unit standards and qualifications (SAQA, 2001); National Qualifications Framework Act (Act 67 of 2008); and Criteria for institutional audits and programme accreditation (CHE, 2004). Therefore, curriculum design reflects the aspirations expressed in the purpose of higher education, as entrenched in educational policy, and reveals the priorities and assumptions of those who design curriculum.

The origins of the word curriculum include its literal meaning ‘course’ and associated figurative meaning ‘career’ from the Latin, as in *curriculum vitae* (Wyse, Hayward & Pandya, 2016:2; Oxford Dictionaries, 2019). A curriculum is often referred to as a planned sequence of learning experiences. Bernstein identified curriculum, pedagogy

and evaluation (assessment) as three message systems that make education “an agency of socialisation and allocation” (Bernstein, 1975:199). ‘Curriculum’ represents valid knowledge, ‘pedagogy’ is the valid transmission of knowledge, and ‘assessment’ is the measurement of the valid realisation of knowledge (Bernstein, 1975). More recently, curriculum practice has been seen as referring to linking the three aspects as adapted and applied to context and learners. Curriculum, therefore, encompasses the learning opportunities, assessments and materials with which a student interacts for the purpose of achieving educational outcomes or competencies, based on this integrative approach. Other definitions also persist.

Curriculum as syllabus (Du Preez & Simmonds, 2014:11) can refer to the set of subjects that are taught and includes the wider set of materials, required experiences, competencies and assessment thereof. Young (2014: 192) asserts that “there is no more critical educational issue today than curriculum”, and that we need to be able to answer the question – ‘what should all students know by the time they leave school?’. Young (2014:196) continues describing education as a practical activity and as specialised, where education is about doing things “to and with others” to bridge the gap between what the student and what the educator knows. Therefore, by drawing on Vygotsky’s ‘Zone of Proximal Development’, Young (2014:196) contends that education, and therefore curriculum, is concerned with enabling students to acquire knowledge that is further than what they knew or had experienced without participating in higher education. Consequently, Young (2014:193,196) contends that curriculum specialists cannot work without a theory of knowledge as well as a curriculum theory to guide their pedagogical and/or andragogical approaches.

Derived from the learning theory discussed in section 2.3., Bernstein’s work [1970, 2000] examines the role of curriculum in how students learn. His description of the ‘pedagogic device’ offers an influential conceptualisation of the ways in which knowledge is transformed as it moves from the outcomes of research to a curriculum that is designed for students, and then to the understandings that students construct from that curriculum (Bernstein [2000], cited in Ashwin, 2016a). Bernstein emphasises that, at each of these junctures, there are power struggles over what is defined as ‘legitimate knowledge’ (ibid.). The outcomes of these struggles mean that, as knowledge-as-research moves to knowledge-as-curriculum, the logic changes so that

the curriculum is based on a different logic to that of research knowledge. A similar, yet more individual, transformation happens when students engage with the curriculum and relate it to their previous understandings and experiences. This understanding can explain differences between intended and attained curriculum. Therefore, Ashwin (2016a) describes this relationship as follows, represented in Figure 2.3. below:

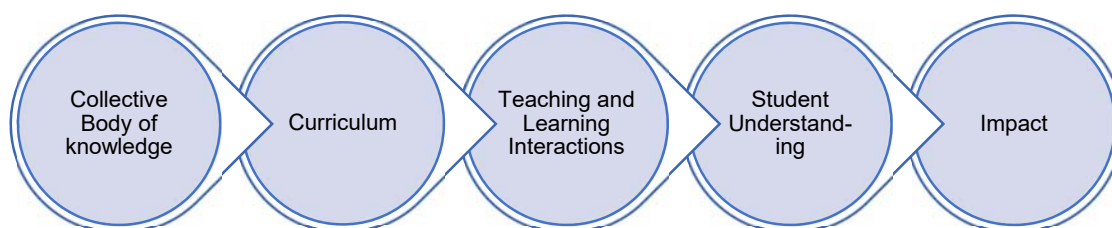


Figure 2.3: Ashwin (2016a) drawing on Bernstein concepts of the curriculum for teaching and learning impact

The figure above illustrates that Bernstein sees education as a linear process, with the impact being determined by a singular trajectory. The outcome of this process is the curriculum as a product.

Curriculum, as a policy artefact, is the term used for policy documents enacted by official authorities such as the Department of Basic Education (Du Preez & Simmonds, 2014:3). These documents represent an ‘official curriculum’ and include the explicit curriculum, the formal curriculum, the syllabus and the subjects taught. This can also refer to a written text developed by an educator to communicate what will be taught and the minimum knowledge, competencies and values as standards to be attained. For example, the DHET (2018a: 284) defined curriculum as “a statement which encompasses three components: intended curriculum, enacted curriculum and assessed curriculum; curriculum framework, and means the same as programme”. Such artefacts can be dated and analysed as a technical product that describes content and guidelines for what needs to be taught, or what was taught. Many of these published policy documents describe learning within a curriculum subject or level in

the form of learning outcomes and associated assessment criteria. In South Africa, learning outcomes are defined by SAQA as “the contextually demonstrated end-products of specific learning processes, which include knowledge, skills and values” (SAQA, 2014).

Assessment criteria refer to “the standards used to guide learning and assess learner achievement and/ or evaluate and certify competence” (ibid.). In their programme accreditation criteria, the CHE differentiate exit-level learning outcomes as “the outcomes to be achieved by a qualifying learner at the point at which he or she leaves the programme, leading to a qualification” (2004:35). Therefore, a course module has learning outcomes, which when combined with other course modules build to enable a student to achieve programme exit-level outcomes. Brumwell, Deller and MacFarlane (2017:6) describe that a learning outcomes approach has enabled a “common language” from which it has been possible to align post-secondary programmes in the European Union during the Bologna process and enabled some quality assurance processes in Canada and Europe. This philosophy is evident in the South African context, where qualifications are accredited against the NQF and the relevant learning outcomes documented.

An ideal approach to such descriptions of learning through learning outcomes is aspiring to align learning outcomes, learning opportunities, experiences and processes, with assessment criteria and assessment tasks. Authors like Brumwell, Deller and MacFarlane (2017:5) argue that learning outcome evaluation can be a means of improving educational quality and accountability. Within the learning outcomes approach, assessment is integrated as collecting evidence to demonstrate or measure student learning against the learning outcomes. This has led some authors, like Du Preez and Simmonds (2014) and official institutions like UNESCO (2019), to evaluate the differences between the intended curriculum, the enacted curriculum and the assessed curriculum.

The intended curriculum, or the explicit or official curriculum, is the curriculum that is acknowledged in policy statements as the curriculum which educational institutions or arrangements plan to realise or implement (Kridel, 2010:488). UNESCO (2019) defines the intended curriculum as “a set of formal documents which specify what the

relevant national education authorities and society expect that students will learn at school in terms of knowledge, understanding, skills, values, and attitudes to be acquired and developed, and how the outcomes of the teaching and learning process will be assessed". The intended curriculum is often referred to as the 'official curriculum' or the 'planned curriculum', and occasionally the term 'written curriculum' is used. Therefore, the curriculum artefacts of a curriculum framework(s), national policy and guides, syllabi, textbooks, teacher's guides, regulations and other official documents demarcate the intended curriculum.

In contrast, the enacted or implemented curriculum, can be explained as "the actual teaching and learning activities taking place... through interaction between learners and teachers as well as among learners" (UNESCO, 2019). This can be understood as how the intended curriculum is transformed into practice and delivered. Some authors (see, for example, UNESCO, 2019, Blom, 2016; and Burch, et al., 2016) refer to this as the 'taught curriculum'. Moreover, the enacted curriculum can differ from the achieved or attained curriculum which can be defined as "curriculum which indicates the knowledge, understanding, skills and attitudes that learners actually acquire as a result of teaching and learning, assessed through different means and/or demonstrated in practice" (UNESCO, 2019). While the attained curriculum is often measured through assessment processes, the attained curriculum can differ from the assessed curriculum in two ways: firstly, the attained curriculum may be less than the assessed curriculum in that the student did not achieve all that was assessed. Secondly, the attained curriculum may differ from the assessed curriculum in that what is assessed may not assess all that is attained. The attained curriculum thus focuses on what students actually achieve or attain. From this, we can describe the assessed curriculum as the knowledge, competencies and attitudinal aspects that are assessed through assessment instruments.

Given that the official or intended curriculum is explicit, and noting that this can differ from the implemented and/or assessed curriculum, part of the gap between the intended and implemented or assessed curriculum can be ascribed to the implicit curriculum. It is worth considering that the implicit curriculum differs from what is often referred to as the hidden curriculum. UNESCO (2019) defines the hidden curriculum as follows:

“[it is] the unofficial norms, behaviours and values that teachers teach and students learn at school, or that are directly/indirectly transferred by the school culture or ethos, and which are not necessarily a product of conscious intention. The hidden curriculum acknowledges that schooling takes place in a broad social and cultural environment that has an influence on learning.”

While the hidden curriculum is not limited to a schooling context, the hidden curriculum is described as ‘hidden’ because it is usually unacknowledged or unexamined by students, educators, and the wider community (UNESCO, 2019). Similarly, authors like Burton (1998:4) speaks of the implicit curriculum as “one that is crafted within the thinking processes of individual teachers but not written down or published, and therefore not able to be replicated by others”. Yet, authors like Morton, Wells and Cox (2019:153) in social work education, utilise the term ‘implicit curriculum’ differently to refer to a student’s learning environment, which they argue is an essential part of the curriculum. They recognise that the context for the delivery of the explicit curriculum, as content, substantively assists in achieving the learning objectives of social work, including a ‘professionalising’ of students, where academic staff model the values and behaviours of professional social workers. In this description, academic staff assist in constructing the learning environment as part of the implicit curriculum, which enables students to achieve learning outcomes. In several fields, professionalism is seen as an attribute of employability and part of graduate outcomes which can be developed explicitly and implicitly.

In her review, *The Conceptualisation and Use of Learning Outcomes in South Africa*, Lloyd (2019:12, 36) goes further to distinguish between the intended, taught and attained learning outcomes in the curriculum. The intended learning outcomes link to the concept of intended curriculum, and Lloyd quotes Çil and Çepni (2014:3) who view the intended learning outcomes as those which “reflect the social visions, educational plans and formal and national documents certified for educational goals”. Lloyd (2019:13) then contrasts these with the implemented or assessed learning outcomes, which may differ from context to context, but refer to the implemented or enacted curriculum which results due to the interpretation of outcomes by teachers as users of learning outcomes during the process of teaching and assessing. Lastly, Lloyd

(2019:13, 40) describes the attained learning outcomes, which are those outcomes achieved by learners through the teaching and learning process, which aligns to the concept of attained curriculum.

The curriculum is often described as organised within course modules and/or programmes or qualifications. Academic staff often view their course modules as the fundamental unit of practice in the teaching-learning domain and the basic building block of the curriculum (Toombs & Tierney, 1993:186). Arrangements of related course modules constitute the collective level, in that groups of course modules can be related to each other by affinities of knowledge, competencies and methodology: either by discipline or related courses of knowledge within a field of study. Interdependence among courses has long been recognised informally and put into practice in programme or qualification design. This interdependence leads programmes to be viewed as a collective set directed by an aligned purpose. Collections of course modules that lead to certification or credentials lie at the heart of institutional accountability, and therefore the CHE (2004:36) defines a programme as a “purposeful and structured set of learning experiences that leads to a qualification” and a qualification as the “formal recognition and certification of learning achievement awarded by an accredited institution” (CHE, 2004:36).

The knowledge and competencies achieved within a qualification are often articulated in programme learning outcomes and graduate attributes. While some academic staff may work independently on their course modules or these modules may be offered in more than one qualification, especially at the first-year level, several HEI have developed a role for academic staff, where such staff are appointed as a programme coordinator. This aligns to how the DHET defines these in that it utilises the CESM categories as a classification system: it confines itself to the various knowledge components (courses, also called modules) which appear within an academic programme, and not to academic programmes, which are defined in HEMIS as “ordered sets of teaching/learning activities which eventually lead to the award of a qualification in one or more major fields of study” (DOE 2008:8).

Toombs and Tierney, (1993:177) explore a definition of curriculum as a description of “a plan for learning” and includes the purpose, content, organisation and evaluation,

as well as what is to be learnt. Therefore, “the curriculum is an intentional design for learning negotiated by faculty in light of their specialized knowledge and in the context of social expectations and students' needs” (ibid.:181). Young (2014:198) argues that curriculum knowledge is specialised in relation to its disciplinary sources and in relation to different groups of learners. Toombs and Tierney (1993:187) comment that one of the essential features of programmes or qualifications is the requirement for communicability: that there is an expectation that persons certified through an educational programme will hold and be able to act on certain knowledge, competencies and understandings specific to the field of study and level of qualification. According to Young’s approach, which echoes Toombs and Tierney (1993:187), important aspects are that the curriculum is intentionally designed by academic staff within a specific context to achieve a specified outcome for a specific group of students (2014:198). This also illustrates that a curriculum is an artefact, probably documented in written formats, produced by a particular faculty for a cohort of students at a specific institution for a specific time. As an artefact, the curriculum would consider or document many components. A consideration of these components is presented in the Table 2.1 below:

Table 2.1: Toombs and Tierney (1993) Components of curriculum design: An open matrix

1. Context
Social and Cultural Influences How society defines the functions of higher education; expectations Filtering and interpretive influences
Direct Influences, Environmental Factors Legislation, public policy Market forces, labour markets, financial markets Demographic trends and events Value of knowledge-in-use, technology-in-demand
Organizational/Institutional Climate Institutional features Community dimensions
2. Content
Nature of Significant Knowledge: Epistemology Structure of organized knowledge Methods of establishing and verifying knowledge Subsets of related knowledge 'Ideal-typical' role
Nature of Learning: Psychology of Field Learning strategies for apprehending the field at higher cognitive levels Students' capacities and learning styles; preconditions of maturity, experience, schooling
Affective Domain: Values, Attitudes, Beliefs Helpful personality traits, orienting values, attitudes, beliefs
Consequences of Knowledge Holding: Manifest and Latent Cognitive outcomes, 'certain knowledge' of field Patterns of habit and trained behaviours Sensitivities and appreciations Components of skill and technique, competencies
3. Form
Distribution of Learning Resources: Time, Space, Facilities Faculty workload Faculty expertise: matching talent to learning designs Student time distribution, weighting credits Budgetary system, allocation methods, priorities, adjustments Allocation of physical facilities, space, equipment, services
Instructional Strategies and Prevailing Modes of Instruction Calendar and scheduling system; class size, composition, and sorting processes; instructional strategies; alternatives to formal study Integrating learning experiences, applications of knowledge
Proximate Outcomes and Assessments Standardized tests of formal knowledge, external examiners, competency reviews Qualitative assessments Career development and entry experience, formal grading and reporting procedures

From the table above, the components of curriculum can be seen as negotiating an interplay between context, content and form (or structure), which may vary from institution to institution. One of the contested debates is whether academic staff can be considered as solely responsible for curriculum in higher education, as individual academic staff seldom have full independence in developing curricula because of the need to align with existing structures and accredited programmes. Therefore, evaluating curriculum needs to take into account this negotiation. Botman (2012) summarises this as, traditionally, three major pedagogical questions being posed: “Who will be taught?”, “What will be taught?” and “How will it be taught?”. Philosophically, Phillips and Siegel (2015) offer a similar pedagogical approach in distinguishing between what should be taught to students, the curriculum content, technical decisions such as sequencing and methods, and justification for what is included. Young adds to these criteria for evaluating the purpose of a curriculum through asking “how does it promote conceptual progression?” (2014:199). These questions inform the evaluation of curriculum and assist in evaluating the development of cognitive competencies, which include those related to critical thinking.

Toombs and Tierney (1993:185) comment that much of the curriculum operates as a tacit design, accepted but not fully examined. Many academic staff revise curriculum based on their own experience, theory and conception of their students, often on an annual basis. The enquiry reported in this thesis seeks to, therefore, encourage the examination of curriculum and curriculum development by academic staff in higher education with the view of understanding how both encourage a greater comprehension of pedagogic approaches to the development of critical thinking competencies.

Like Wyse, Hayward and Pandya, (2016:4), this research draws on an epistemological assumption that, although it is possible to separate curriculum from pedagogy and assessment, this is not sufficient for the purposes of analysis as curriculum planning includes assessment and is informed by andragogy and pedagogy, context and resources for the delivery of curriculum. Wyse, Hayward and Pandya, (2016:24) comment that curriculum innovation is best designed with pedagogy and assessment as integral to the process. Thus, while curriculum, pedagogy and assessment are explored distinctly, all are useful to reveal the theory and practice of academic staff.

This lead Toombs and Tierney (1993) to include this in their table of curriculum components (refer to Table 2.1).

In some research, the quality of learning outcomes has been evaluated to determine the quality and alignment to a national qualification framework. For instance, in Canada, Brumwell, Deller and MacFarlane (2017) argue that assessing learning outcomes is a valuable tool for improving educational quality. These authors argue that, when learning outcomes, learning experiences and assessment task are aligned, the learning outcome approach can support improvements in teaching and collection of evidence of student learning. Schoepp (2019) evaluated the learning outcomes of ten highly-ranked international universities in the USA and UK. Schoepp (2019:615) argues that learning outcomes are expected to guide the teaching and learning process, assessment and curriculum development. Schoepp (2019:618) further aligns with Lloyd (2019) in describing learning outcomes as a means of evaluating qualifications against national qualification frameworks and within international partnerships like the Bologna agreement. In his research, Schoep found that the quality of learning outcomes is poor when weighed against internationally accepted best practice (2019:625), and describes best practice in writing learning outcomes in the table below.

Table 2.2: Guidelines for learning outcomes (Schoepp, 2019:617)

Begin with a consistent short stem:
• Students will be able to...
• Students can...
• At course completion students...
Avoid needlessly wordy stems:
• Students will be able to demonstrate the ability to calculate...
• Students will be able to demonstrate a capacity to...
Accurately represent the specific contents of a course
Must be set at the appropriate level of cognitive and behavioural level
State the desired student performance/behaviour using concrete action, or operational, verbs such as create, apply, interpret,
describe, identify, categorize
Avoids verbs that are difficult to measure like understand, know, learn, appreciate, become aware of, and experience

Should be limited to one, and very rarely more than two, related verbs
Should number between 4 and 8
Can be effectively measured and assessed

From a meta-study of recent theses completed in South African universities, Du Preez and Simmonds (2014:13) recommend that doctoral candidates pursuing a study should consider exploring curriculum studies in present South Africa and draw on trans-disciplinary approaches to make theoretical contributions. In their work, they note that much research fails to initiate profound change. Therefore, this study responds to this recommendation in seeking to draw on curriculum artefacts, academic staff's practice and revealed theory in specific contexts of higher education, and to initiate changes addressing professional development. This includes analysing descriptive accounts related to context and developing an intervention for professional development.

Curriculum development does not occur in isolation but is informed by the challenges of society and social objectives of education, especially within higher education. As a result, the next section will explore perspectives of challenges and policy objectives which inform curriculum development in higher education and South Africa in particular.

2.7. INTERNATIONAL AND LOCAL PERSPECTIVES OF CHALLENGES IN HIGHER EDUCATION

In the USA, the 6-year graduation rate for first-time, full-time undergraduate students who began a bachelor's degree at a 4-year degree-granting institution in 2009 was 59 percent (Institute of Education Sciences, 2017). From an American perspective, Smith (2013:7) describes the problem of socioeconomic challenges for access and success in higher education. Smith (ibid.) points out that, regardless of socioeconomic background, most parents/guardians have high educational aspirations for their children, yet low income and middle-income families lack the academic cultural capital and resources to access higher education. Smith utilises graduation data to show that, in 2011, there was an additional racial disparity in both access and graduation rates

(ibid.:7). This data, thus, reveals that low-income and black or Latino students in the USA are less likely to access higher education and graduate.

Smith's observations in relation to the American higher education context are similar to challenges in South African patterns of access and success (CHE, 2013a:40-45; DHET, 2015:18). The CHE (2013a) tracked the 2006 entering cohort and reported that between one fifth and one-third of first-year students drop out within their first year in higher education. While there is more recent data, from DHET (2015b:18-19) and the Commission of enquiry into Higher Education and Training (2017), which shows a reduction in the first year drop out rate, the greatest attrition remains in the first year of higher education. The DHET data shows that, after one year of study, 31.5% of the student cohort that entered public universities in 2000 (98 095 students) had dropped out; whereas, for the student cohort that entered in 2012 (150 012 students), this figure had reduced to 19.1% despite an increase in the number of students at public institutions (2015b:19).

Authors, such as Smith (2013:7), explore reasons for these inequalities by examining students' family backgrounds, lack of academic preparation, lack of parental or social support, limited financial resources and lack of institutional support. From a higher education perspective, research has focused on what institutions can do to overcome such barriers to success: with a specific focus on 'at-risk students', academic preparation and the first-year transition, retention and academic support or development initiatives. Only a small proportion of this research focuses on curriculum aspects and even less on addressing curriculum. For example, Smith (2013:8-9) explores mentoring students to grow social and institutional capital to navigate the hidden curriculum challenges: the unwritten norms, values, prior knowledge and expectations. Furthermore, Webb and Cotton (2018:837) explore several studies that show inter-faculty variations in the drop-out rates of students in higher education, suggesting that differences in instructional style, teaching quality and learning culture are causes of drop-out or associate retention with academic-related skills.

Research, such as that conducted by Lombard and Grosser (2008), and Mouton, Louw and Strydom (2012), question the success rates and educational quality of primary and secondary schooling in South Africa. More detailed analysis, like that contained

within the 'General Education System Quality Assessment South African Country Report of 2013' (Department of Basic Education (DBE), 2013) describe the first nine or ten grades of the South African schooling system "as good on access or 'quantity' but poor on quality". More specifically, with reference to critical thinking, associations within the school sectors like Thinking Schools South Africa (2015) comment that "[t]eaching critical thinking is not something that teachers are explicitly trained to do... Nor does the curriculum generally demand it". Therefore, critical thinking skills are often relegated within curricula, though there is evidence to suggest an implicit imperative to draw on critical thinking competencies to complete curriculum-based tasks.

Notably, Sternberg (1990) believes that the learning experiences provided during the formative school years are insufficient in providing learning tools to solve problems and managing the critical thinking tasks that students will eventually face in everyday life. Exemplifying his point, he reports that the predominant use of tasks that demand right answers and truth-telling and the administering of objectively scored tests which are characteristic of formative education, do not contribute to the development of or require the use of critical thinking. If these competencies are not adequately developed in secondary schooling, this suggests that the responsibility for developing critical thinking competencies significantly shifts to first-year students and the academic staff that work with them at the tertiary education level. Such an observation is supported by Mouton, Louw and Strydom (2012:1126-1217) who explore the quality of the National Senior Certificate and standardisation practice regarding Grade 12 results. They report that the resulting quality of the secondary education means that a high number of students enrol at education institutions and do not complete their studies on time (*ibid.*). More recently, Van Broekhuizen, Van der Berg and Hofmeyer (2016:viii) observed that patterns of university access and university success are strongly influenced by school results. The weak school system has a major influence on who reaches matric, how they perform in matric, and provides strong support for the notion that matric performance is extremely important in explaining both university access and success (Van Broekhuizen, Van der Berg & Hofmeyer, 2016:82).

A recent review of undergraduate physics education in South Africa (Council on Higher Education – South African Institute of Physics [CHE-SAIP], 2013) emphasised a

concern about the under-preparedness of students entering first-year physics and determined that more research-based initiatives were required to support student success by developing “more effective ways of teaching under-prepared students” (CHE-SAIP, 2013: 34). This concern, and the resultant recommendation, is supported by Conana (2017:5).). Due to increasing enrolment and the growth of large classes, the impact of large classes in undergraduate courses was explored to see if this negatively influenced student academic achievement at the University of KwaZulu-Natal. However, Ramchander and Naude (2018) found that, despite substantive increases in class size, pass rates remained constant.

2.7.1. South African education policy

In current South African government approaches, policy frames are informed by the National Development Plan (NDP) 2030 (National Planning Commission, 2012) which identifies 9 primary challenges, including poor school education quality (ibid.:15). The National Planning Commission (ibid.) draws extensively on “the notion of capabilities”, assuming the role of a developmental state which “builds the capabilities of people to improve their own lives” (ibid.:17). The NDP 2030 identifies 3 priorities to respond to the challenges identified, specifically: “raising employment through faster economic growth; improving the quality of education, skills development and innovation; and building the capability of the state to play a developmental, transformative role” (ibid.). The NDP 2030 consequently describes an ideal education system with both “quality school education with globally competitive literacy and numeracy standards” and “an expanding higher education section that enables people to fulfil their potential, contribute to raising income and productivity and support the shift to a more knowledge-intensive economy” (ibid.:38). These challenges and priorities have thus informed recent policy development. Furthermore, this study aligns with both improving of the quality of teaching in higher education and overcoming the challenge of increased costs of producing graduates” due to poor school education quality as specifically recommended (ibid.:40).

In South Africa, all registered qualifications are accredited against the National Qualifications Framework (NQF). The NQF is a comprehensive system of 10 distinct

levels and three sub-frameworks (SAQA, 2012) for the classification, registration and publication of articulated and quality-assured national qualifications and part-qualifications. The South African Qualifications Authority (SAQA) was established in 1995 through the South African Qualifications Authority Act (1995), by the then-ministers of Labour and Education, to develop, oversee and implement the NQF and formulate and publish policies and criteria for the bodies responsible for generating an establishing standard. Lloyd (2019:10) reflects that South Africa's NQF was one of the first NQF's "to be designed as a totally integrated NQF, encompassing all of education, training and skills development in one framework".

After revision and evaluation, the NQF Act, No 67 of 2008 promulgated the NQF, as "a single integrated framework for learning achievements". This Act made provision for a ten-level framework, where levels of learning achievement are arranged in ascending order from one to ten (SAQA, 2012:1). Each level has ten level descriptors to describe applied competencies to facilitate articulation of qualifications and comparability of qualifications or part-qualifications. Secondary school leaver certificates, or grade 12 equivalency, are offered at an NQF 4 level. From this, the higher education qualification sub-framework (HEQSF) describes higher education qualification level descriptors from NQF 5 (first year or higher certificate level) to level 10 (doctoral degree). All HEIs are required to apply for accreditation and re-accreditation cycles for each qualification as part of a quality assurance process. Lloyd (2019:10) comments that, from the outset, the NQF was a learning outcomes-based framework and, therefore, the design of qualifications included outcomes statements with related assessment criteria. As the NQF was intended to be "...a universal system of quality assured standards and qualifications embracing all education, training and skills development at all levels" (DOE & DOL, 2007:2), in addition to the level descriptors and learning outcomes, the designers of the South African NQF embedded generic critical cross-field outcomes in each qualification which were intended to ensure that learners would develop holistically with knowledge and competencies beyond a field or sub-field (Lloyd, 2019:11).

The South African education ministry is split into the Department of Basic Education (DBE) and the Department of Higher Education and Training (DHET) since 2009. The DHET builds on the work of the DBE in primary and secondary schools. On their

website, the DBE (2017) posits that the current curriculum in schools from Grade R to Grade 12 as purposed to achieve the following:

- “equip learners, irrespective of their socio-economic background, race, gender, physical ability or intellectual ability, with the knowledge, skills and values necessary for self-fulfilment, and meaningful participation in society as citizens of a free country;
- provide access to higher education;
- facilitate the transition of learners from educational institutions to the workplace; and
- provide employers with a sufficient profile of a learner’s competences”

In designing the CAPS curriculum, the DBE (2017) incorporated active and critical learning as a principle in order to “encourage an active and critical approach to learning, rather than rote and uncritical learning of given truths”. The curriculum set by the DBE can be used by higher education academic staff as knowledge assumed to be in place. However, the experience has been that these objectives are not well implemented or achieved at very diverse levels. This leaves students, who transition into higher education, underprepared for success in higher education and a sense of increased challenge for academic staff who teach these students.

In South Africa, higher education has been mandated to achieve a specific set of purposes. For example, the CHE (2013:15) describes that “South Africa has a pressing need for more graduates of good quality, to take forward all forms of social and economic development”, whilst also providing a new generation of educators and academics. This aligns with the proposed purposes of higher education described above (refer to Chapter 2, section 2.5.). The *Green paper For Post-School Education and Training* (DHET, 2012) states its intention as being “to provide a high-quality university education for increasing numbers of South Africans, and for all graduates to be empowered to address the needs of the economy and the country; it is to ensure that those emerging from colleges and universities, as well as those already employed, are provided with the skills they need to be productive, flexible, innovative and able to earn sustainable livelihoods in a fast-changing economy.” This seems to tie the aspirations of policy tightly to the goals of employability and economic growth.

In 1997, the Department of Education (1997:7-8) published the *Education White Paper 3: A programme for the transformation of Higher Education*, in which it expanded the brief of the higher education sector by cataloguing its purposes as being: to meet the learning needs and aspirations of individuals through the development of their intellectual abilities and aptitudes throughout their lives; to address the development needs of society and provide the labour market with the competencies and expertise necessary for the growth and prosperity of a modern economy; to contribute to the socialisation of enlightened, responsible and constructively critical citizens; and to contribute to the creation, sharing and evaluation of knowledge.

Statements, like these, position higher education as fulfilling a role in achieving public mandates such as providing skilled graduates useful for economic growth, which had not in the past been a dominant concern for traditional public universities. In its report, 'A proposal for undergraduate curriculum reform in South Africa' (CHE, 2013a), the authors describe "South Africa's current undergraduate curriculum structure as a key element of the teaching and learning process, and to consider the desirability and feasibility of amending it as a means of substantially improving graduate output and outcomes". Curriculum design in South African higher education is, therefore, positioned as a means of achieving public and private benefits in line with the proposed purposes of higher education.

Participation in higher education in South Africa is perceived as lower than international averages, where several authors refer to a participation rate of 17% in 2009 (Leibowitz, 2012:xix). *The National Plan for Higher Education* (DOE, 2001: 5. 23) set the target for a 20% participation rate by 2016 from a rate of 15% at the time: the CHE noting that the benchmark that was set drew on a World Bank report which indicated that the average participation rate for middle-income countries was at 20% (CHE, 2018c:1).

More recent data from the CHE, for 2016 (CHE, 2018c:2), shows only an 18% participation rate, despite the absolute increase in headcount enrolment. In 2015, the then-Minister of DHET, Blade Mzimande, pointed out that the participation rate for African students remained lower than the national average at 15% (DHET, 2016:3). The review suggested that the growth in headcount enrolment was undermined by the

growing youth population, which reduced the overall participation rates (CHE, 2018c:2). Consequently, the participation rate is criticised as not having been achieved. The official data does lag the current experience due to the timing of data collection as HEIs submit their data for a year in the subsequent year: when records are completed and subsequently audited, this results in an almost 2-year lag (CHE, 2018c:1). In reviewing the literature, the participation rate used often only takes public institutions' enrolment into account,¹⁸ and, when the enrolment in private HEIs is taken into account, this figure increases. For example, while more recent HEMIS data is less available,¹⁹ in 2013 the DHET reported that an additional 119 941 students were enrolled in private HEI, approximately 10.8% of total enrolments in higher education. This statistic is both an absolute and proportional increase from 8.4% in 2009 (DHET, 2015:5), and the number of enrolments continued to increase in 2016 to 167 408 of 1 143 245 students, or 14.6% of total enrolments (DHET, 2018c:9). The CHE (2018c:11) points out that the growing youth population has led to rising demand for access to higher education, and as the public sector is unable to accommodate this, this increased demand has led to an expanded private higher education sector. Challenges cited in increasing the participation rate often include the quality of secondary schooling and the resourcing needed by students (Commission of Enquiry into Higher Education and Training, 2017; DHET, 2016:3; Leibowitz, 2012:xix; Department of Education, 2001:23). Regrettably, these challenges further affect the first-year academic success and retention of students which ultimately reduces the related graduation rates.

Much of the research and reporting in higher education, especially in South Africa, is focused on public institutions, who have larger research budgets, capacity and research imperatives (see, for example, CHE annual reports, DHET, 2016 and CHE, 2016; 2010). Yet, in 2018, enrolments in private HEI represented approximately 14.6% of total enrolments in higher education (DHET, 2018c:9). The NDP 2030 describes private providers as "important partners in the delivery of education and

¹⁸ Compare the figures published by DHET (2018c:3, 23), which states that public HEIs enrolled 975 837 students and private HEIs 167 408 students in 2016, with those of the CHE (2018c:2), which only refers to 975 837 students to calculate the participation rates.

¹⁹ See, for example, comments made by the CHE in South Africa on their website at www.che.ac.za, which describes a verification and analysis lag in data, as well as a lack of standardisation in private HEI data.

training at all levels” (National Planning Commission, 2012b:295, 320). The NDP 2030 report, however, cautions that ensuring the quality of private provision in higher education requires quality assurance as well as the monitoring and evaluations of qualifications awarded by such providers (ibid.:320). In 2017, the Commission of Enquiry into Higher Education and Training (2017:101) reported that there were 114 private HEIs and estimated between 10% to 15% of total enrolments in these HEI. This Commission described these HEI as equal in the provision of undergraduate education, and part of the solution to increasing the capacity of the higher education sector in order to expand access and capacity in South Africa (ibid.:104). While the DHET (2015:5) reported on the numbers enrolled in private HEIs, much of the analysis done in this and similar reports focuses on the public HEIs. Therefore, locating this research study within the private HEI sector will contribute to understanding both higher education teaching and learning, and an underreported higher education sector in South Africa.

Prior to these reports, *The National Plan for Higher Education* (DOE, 2001:5,32) proposed that a key issue is “to ensure that all graduates are equipped with the skills and competencies necessary to function in modern society, in particular, computer literacy, information management, communication and analytical skills”, later expounding to include “knowledge reconfiguration skills” and “problem-solving in the context of application” (ibid.:32). Though, as stated previously graduation rates are not the focus of this study, the quality of critical thinking skills that students are equipped with and carry from their first-year experience into subsequent undergraduate years and into professional contexts is.

At the second Higher Education Summit (DHET, 2016), ‘access and success’ was one of four key focus areas, where the Summit focused on the perceived low student success rates and low throughput rates, and identified recommendations to improve these. The DHET report (2016:13) acknowledged that “schooling does not currently equip learners with the skills to cope with the higher education context, particularly the skills of critical engagement”, and considered how this impacted first-year access and success. The submissions to the commission noted that, while access has improved and there have been improvements in the success rates, these were still relatively low. For example, a cited cohort study based on the 2010 cohort that showed that 20%

of students dropped out by their second year, and while there was improvement towards 2012 where only 19.1% dropped out by second-year (DHET, 2016:68). The submissions to the Summit (ibid.:69) pointed out that, the higher education system is now better at retaining students, but “needs to more effectively convert retention into graduation in regulation time”. As part of the discussions in this area, Wilson-Strydom (DHET, 2016:175) described seven capabilities for university readiness as distinct from eligibility for access (that is, meeting admission criteria). These are: decision-making; knowledge and imagination; approach to learning; social relations and social networks; respect dignity and recognition; emotional health; and language competence and confidence (ibid.). The DHET report (2016:13) did acknowledge that “schooling does not currently equip learners with the skills to cope with the higher education context, particularly the skills of critical engagement”.

2.8. THE ROLE OF THE EDUCATOR IN HIGHER EDUCATION

In higher education, academic staff can fulfil research or educator roles, or some combination of the two. Within South African Education policy, ‘educator’ is defined as “an inclusive term referring to teachers, lecturers, facilitators, assessors, moderators and other teaching educating, training, facilitating, assessing, or enabling learning in learning contexts” (SAQA, 2014:4). This definition is seen as applying broadly within schooling, adult education and training, and higher education contexts.

Many views on the roles of educators, including lecturers as academic staff, are culturally and socially embedded. Young (2014:196) remarks that educational institutions all affirm that they have knowledge which others are entitled to access and, therefore, employ specialists (educators) who can make this knowledge available. Thus, the educator is tasked, by national and institutional policy, with determining what knowledge forms part of the curriculum and how this should be organised for transmission to students. However, Young (2014:201) argues that educators, in their role as curriculum theorists, need to balance dual specialisations of curriculum theory and discipline knowledge. Previously, the Department of Education (DoE) of South Africa, described seven roles of an educator (South Africa, 2000) as: learning mediator; interpreter and designer of learning programmes and materials; leader,

administrator and manager; scholar, researcher and lifelong learner; community, citizenship and pastoral role; assessor and learning area/subject discipline/phase specialist. While these roles are less prominent in recent policy documents, the applied competencies in these roles are still included in professional development documents, such as *The National Policy Framework for Teacher Education and Development* (South Africa, 2007). In more recent policy, the roles of academic staff as researchers and teachers seem prioritised, where other roles, such as administrator, enable the teaching role. This is reflected both in the NDP 2030 (National Planning Commission, 2012:40) and the *National Framework for Enhancing Academics as University Teachers* (DHET: 2018b) which suggest a simultaneous focus on research and teaching by academic staff. For the purposes of the research undertaken here, the roles of educator as a teacher, designer of learning materials and assessor warrant closer scrutiny in relation to how South African educational policy defines these.

In the context of this research, the role of teaching is a core focus. The CHE describes the role of teaching in higher education as “engagement with learners to enable their understanding and application of knowledge, concepts and processes, including design, content selection, delivery, assessment and reflection” (CHE, 2017: 4). More recently, the *National Framework for Enhancing Academics as University Teachers* (DHET, 2018b:5) stated, as a principle, that “good teaching is a vital contributor to student learning and success”. This principle is clarified further in describing “good teaching” as responsive to specific students, specific contexts and relates to a discipline (ibid.). Despite the National Framework emphasising the role of teaching, in describing the work of the academic as “being a teacher and researcher” (ibid.), the framework does indicate that research should have equal importance to teaching and, further, that research should inform best teaching practice.

The role of the assessor is described by SAQA as “a person able to conduct high-quality internal and external assessment for specific qualifications, part-qualifications or professional designations” (SAQA, 2014:4). Assessors apply their professional judgement during a process of assessment to measure student competency against assessment criteria associated with learning outcomes. Of particular interest is that the policy also differentiates the term ‘examiner’, which is demarcated as “a qualified

and competent person appointed to develop, administer, and oversee a formal assessment, including a person appointed to develop assessment instruments (such as examination papers, marking guidelines, etcetera)” (SAQA, 2014:5).

Sambell, Brown and Graham (2017:2-3) suggest that higher education educators are expected to be able to teach their subject, support and engage students whilst fostering a range of academic skills as well as embody shared professional values. As a result, educators are required to balance supporting wider participation in higher education, respecting increasing diversity and maintaining standards of qualification, while also being knowledgeable about a range of teaching methods, effective assessment and innovations in digital pedagogies when designing courses (ibid.:3). This is often in addition to continuing their own research, publication and community engagement priorities. Therefore, the role of academic staff as educators are, in practice, informed by a diversity of functions which are adapted within specific contexts to specific students.

In his review of quality teaching in higher education for the OECD, Hénard (2010:10) finds that teaching matters in HEI, and Ashwin, et al. (2015:vii) describe teaching in Higher Education as “a creative and intellectually demanding process”. Ashwin et al. (ibid.) promote a reflective approach to teaching in higher education, as this provides a pathway for learning and professional development, improving teaching, enhancing student learning and further developing the quality of higher education.

Ashwin (2016a) comments that one of the most vexed questions about teaching and learning in higher education is ‘how does teaching lead to student learning’? The research has shown that there is a discrepancy between what is taught and what students learn from particular teaching and learning opportunities. What students actually learn from teaching and learning opportunities can be described as the attained curriculum (as discussed in section 2.6.). The attained curriculum is particularly significant from a constructivist perspective, where students construct their knowledge within individual experiences and existing knowledge. Moon (2004:4) comments that “the support of good-quality learning is a principal attribute of good teaching”. These perceptions imply that the attained curriculum is substantively

affected by the academic staff's working relationship with students in facilitating learning through the enacted curriculum and their theory of practice.

Luckett (2016:422), in exploring South African curriculum contestation in higher education, draws on the work of Bernstein to describe the role of the educator as a lecturer who not only makes selections of content from his/her discipline, but also determines the particular 'gaze' that students must acquire. The concept of the intended curriculum is therefore applicable to this educator role, as described in section 2.6. Furthermore, the educator holds in mind an 'imaginary student' for whom the curriculum is intended. Luckett (2016:422) points out that, in South Africa, educators need to accommodate a spectrum of students from the well-prepared and the under-prepared students. In South Africa, the student body additionally includes a wide range of language competencies. The challenges of a diverse curriculum audience in a South African context require planning and forethought. Luckett (2016:425) suggests that curriculum reform needs to include a pedagogic level, where students should be provided not only with expanded content beyond 'colonial' norms, but also with the analytical and methodological tools for debating, challenging and deconstructing inherited canons of knowledge. Academic staff thus carry a responsibility to adapt pedagogy in equipping students to learn intended curriculum, as well as developing the capacity to self-regulate their learning.

From the discussions above, the research undertaken here is able to link learning theory to the roles and practice of the educator in higher education, as indicated in figure 2.4 below:

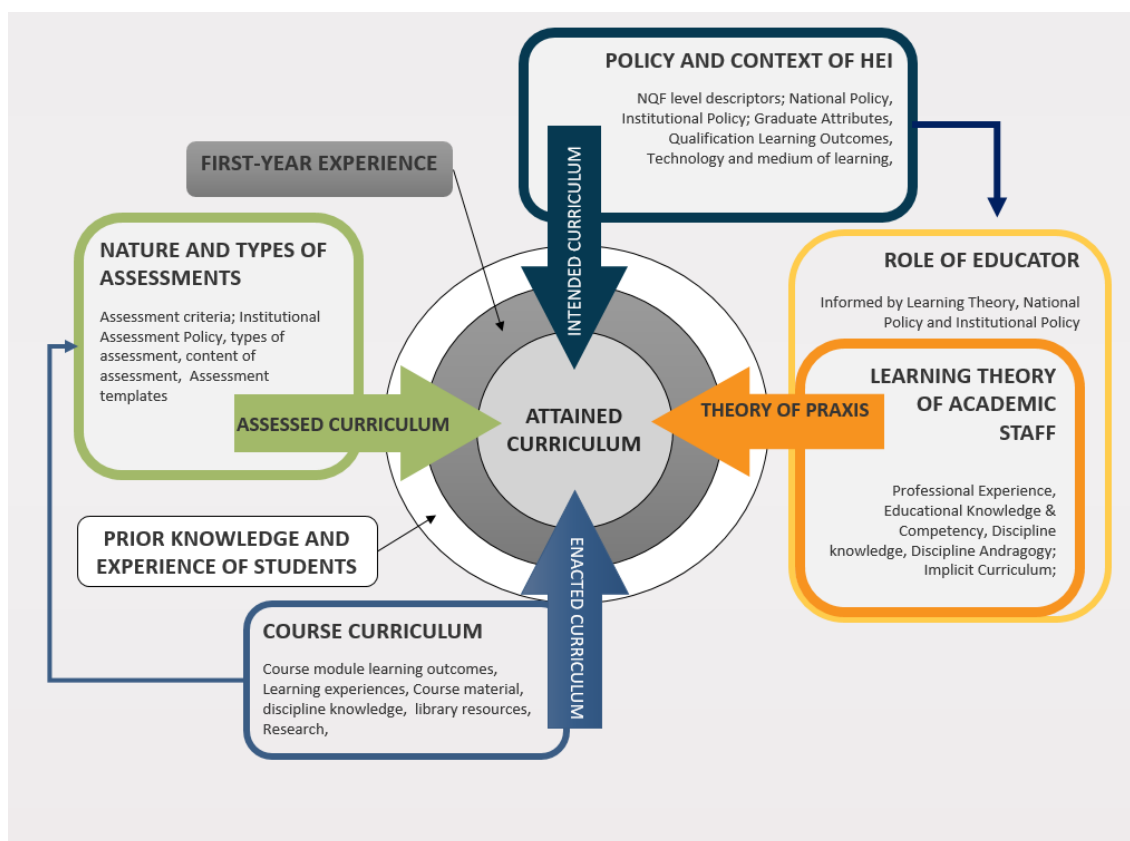


Figure 2.4: Conceptual Frame for intended, enacted, assessed and achieved curriculum for first-year students in relation to the praxis of academic staff (Source: Researcher's own construct conceptualised from literature)

Starting at the top of the figure, the policy, context and registered curriculum of qualifications of the HEI, give rise to the intended (or official) curriculum which includes the relevant level descriptors. Moving in a circular fashion to the right, National and Institutional policy inform the role of academic staff as educators, through job descriptions and course modules for which the academic staff member is hired to offer within the registered qualifications. The academic staff member develops a learning theory of practice in relation to their context, experiences and personal constructions of knowledge, disciplines, andragogy, epistemology and ontology. This theory of praxis informs how the academic staff member develops the course module curriculum, relevant learning material and assessment decisions within a set of resource constraints with a set of assumptions about the students as the curriculum audience. The course curriculum actually offered to a particular group of students in a particular context is the enacted curriculum. Students interpret the enacted curriculum from personal constructions of prior knowledge and experience during their first-year

experience. The assessed curriculum informs students' learning approaches, as suggested by Biggs (1989), while the outcomes of assessment and related feedback may cause students to adapt learning approaches to improve achievement and align to the higher education context. The applications of the students' lenses and experiences during the course module within the first-year experience leads to the actually attained curriculum. The attained curriculum may vary by student.

Therefore, academic staff's perception of their role, the roles and anticipated responses of students, and their available leverage or agency, inform their curriculum design and strategies. These strategies are further informed by learning theory, disciplinary contexts, their theory of practice, and understanding of critical thinking competencies. The theory is brought into the situation, is applied when needed within the context, and builds from further reflective experiences of the learner (Lindeman, 1926), or, in this case, the educator as a professional learner. This study seeks to develop Lindeman's approach by highlighting the opportunities for professional development in relation to the development of critical thinking competencies in students.

In South Africa, the 2013 White Paper noted that the expansion of HEI in terms of enrolments had not been complemented by an increase in the academic staff numbers, resulting in increased teaching loads and high student-to-staff ratios (DHET, 2013a: 35). DHET argues that it considers the academic staff and their development as "a crucial factor" in improving the quality and developing the HEI sector (DHET, 2013a: 34). In 2016, Prof. Vally et al. submitted to the Commission of Enquiry into Higher Education and Training (2017:358) that one of the ways poor student success can be improved is by increasing the quantity and quality of contact time between lecturers and students, and specifically distinguished "underprepared students" and first-year classes. It is, however, less clear how the "quality of contact time" (ibid.) can be measured or improved upon in these submissions, as this is not described in the submission and measures of quality vary.

2.9. PROFESSIONAL DEVELOPMENT OF ACADEMIC STAFF IN HIGHER EDUCATION

In this section, the focus moves towards the role of academic staff in developing their professional educational practice as a life-long learner and professional. While this focus builds on the roles academic staff play as the facilitator of other's (mostly students as learners) learning, it draws on the implied "professionalism" of academic staff in being accountable for their practice and meta-learning as adults. Several authors comment that there is an array of terms used to refer to the processes intended to improve the professional practices of academic staff, with particular reference to the teaching, andragogic and curriculum practices. For example, Saroyan and Trigwell (2015:93) point to the terms "faculty development"; "academic development"; "instructional development" "professional development" and "professional learning" in relation to such practices.

In South Africa, there seems to be a preference for the terms 'professional development' and 'professional learning', as can be seen in the CHE's Higher Education Monitor 14: Learning to Teach in Higher Education in South Africa (2017) and, more recently, in the *National Framework for Enhancing Academics as University Teachers* (DHET, 2018b). Previously, the CHE defined the professional development of academic staff within the context of Academic development (CHE, 2004:33), and described academic development as encompassing four interlinked areas of work: student development, staff development, curriculum development and institutional development. However, this description has evolved and the more recent official publications tend to refer to 'professional development' and 'professional learning'. A case in point, is the *Higher Education Monitor 14: Learning to Teach in Higher Education in South Africa*, where the CHE defines academic development as including "all aspects of support for higher education learning and teaching, including professional learning and student learning" (CHE, 2017:5). Nevertheless, it must be noted that professional development of academic staff is linked to the influence of academic staff on students' learning, is affected by institutional context and includes curriculum development, and therefore, each of these aspects is reflected, both implicitly and explicitly, in Figure 2.4: the Conceptual Frame. For example, institutional

context is mentioned within the 'Policy and Context of HEI', and curriculum development leads to the 'Course Curriculum' block.

Before proceeding to relate the specific legislation and policy regarding professional development, it is first necessary to distinguish between 'professional development', 'professional learning' and 'professional knowledge' in order to better understand how these terms relate to each other in the literature reviewed. In its broadest sense professional development refers to the development of a person within his or her professional role (Villegas-Reimers, 2003). Professional development is often defined as a continuing process of activities that enhance professional competency and understanding (Imel, 1990), and a continuing independent solving of real-life problems through acquiring relevant competencies and quality meaning-making with the purpose of career advancement. Professional development can be intentional from both the organisational and staff member's viewpoint through utilising formal learning to obtain qualifications, prove knowledge or enhance competency, or it can be intentional through utilising non-formal learning, such as through workshops, observations, mentorship, reflection, conferences and work-based learning opportunities situated in practice (Steinert, 2008; Villegas-Reimers, 2003). Professional development may also be unplanned (from the organisational perspective), utilising experiences and feedback on professional practice in an unstructured and/or unanticipated way.

Similarly, professional learning is, thus, learning that relates to the profession being practised: in this case, educational practice. Burton ([1963] in Knowles, Holton and Swanson, 2005:12) is of the opinion that learning indicates a transformation in an individual due to the interaction of that individual with his or her organisational context, which fills a need and builds capacity to engage more adequately within that organisational context. While the terms 'professional development' and 'professional learning' are often used interchangeably in higher education, authors like Saroyan and Trigwell (2015: 93) advocate for the use of 'professional learning' in reference to activities that result in enhancing teaching and learning and, therefore, use this term to describe "activities and processes that academics engage in to ameliorate their academic performance and the impact of their performance on student learning". In their report, the CHE (2017:15) claim that 'professional learning' is broader than

professional development. Other authors such as Labone and Long (2016:55) advocate that professional development implied a more passive role, where professional development 'happened' to academic staff, and "the responsibility was on the developer to improve the teacher". They contrast professional learning as implying a more internal focus, consistent with a constructivist approach, where the "teacher becomes an active participant" who is responsible for their own learning and constructing change within their own contexts. Labone and Long further contend that the concept of professional learning now recognises "the interaction between individual and institutional goals for professional learning" as part of the trend for greater institutional accountability (ibid.).

Professional knowledge includes a set of "scarce and critical skills, key knowledge and experience, intrinsic or learned behavioural competencies, intuition and insights, heuristics and rules of thumb, contacts and professional networks, ideas and opinions, core capabilities and natural talents, specialist techniques and methodologies, and any other form of knowledge capital that defines and differentiates a professional" (Marsh, 2011:59). This includes the application and understanding of relevant theory and related practice. For example, Marsh (2011:58) describes the misconception in engineering professional development, there can be the view that "knowledge, experience and wisdom are tradable commodities, which can be bought, sold, transferred or instantly acquired, for a price". This view is problematic as similar information or experiences may have different meanings in different contexts. These incomplete perspectives are clearly problematic when knowledge and experience need to be applied in specific contexts or to prevent problems. In this professional development context working with a more experienced 'other' who can question, enable critical reflection and assist in the application of knowledge and experience to prevent problems is valuable.

Within the context of professional development, it is often assumed that some sort of learning must occur. From an andragogic approach, Lindeman's (1926; 1956) conception of adult education is relevant to professional learning. He describes adult education as follows:

“a process by which the adult learns to become aware of and evaluate his experience. To do this he cannot begin by studying ‘subjects’ in the hope that someday this information will be useful. On the contrary, he begins by giving attention to situations in which he (she) finds himself, to problems which include obstacles to his self-fulfilment. Facts and information from the differentiated spheres of knowledge are used, not for the purpose of accumulation, but because of need in solving problems” (Lindeman, 1926).

This conception of professional learning is linked to the concept of *reflective practice* as used by Schön in Ferraro (2000), where a practitioner reflects on his or her experiences to apply knowledge to practice while being mentored by a MKO, as conceived by Vygotsky (in Blunt & Conolly, 2006). Ferraro (2000) links reflective practice to Action Research, in utilising continuous feedback within a specific context in order to solve a specific problem, although she limits the use to curriculum development and teaching practice. Within the constructivist approach, these ideas are incorporated into academic professional development, where reflective practice is linked to a learner’s conceptual framework and real-life context to construct meaning.

The discussions of professional learning often relate to a perception that educator professional learning is often seen as learning which only takes place in organised, formalised settings. However, Koffeman and Snoek (2019:456) conceptualise the idea that professional learning can also develop as the result of the educators’ “confrontations and interactions with and within their professional contexts”. In an autobiographical account of his work in the field of curriculum studies whilst reflecting on his own professional learning, Young (2015a:824) comments that “while one needs experience to learn, we cannot learn from experience alone”. Thus, the context of reflective practice can function as a source for learning. Young (2015a:823-5) makes the case for knowledge as a source of freedom, describing a notion of “powerful knowledge” within the curriculum, which aligns with the descriptions of meta-learning and meta-cognition through critical reflection. From the above discussion, this study asserts that, while the more formalised strategies of professional development in education tend to be mandated through policy, less formalised reflective practices

should not be disregarded as relevant to professional development and professional learning.

In transferring the above understanding of the relationship between professional development, professional learning and professional knowledge to the context of this study, several interesting insights emerge with regards to how these are entrenched within policy. In 2017, The Commission of Enquiry into Higher Education and Training in South Africa (2017:545) recommended that academic staff development is required across the PSET sector. This Commission furthermore utilised the 2013 White Paper (DHET, 2013a), which sets out strategies to improve the capacity, quality and diversity of the PSET system, to investigate a lack of student success and listed “weak support for professional development and recognition of academic staff in the area of undergraduate teaching” (ibid. 2017: 354). This was identified as a key area of the University Capacity Development Framework (UCDP) and, in November 2018, DHET released *A National Framework for Enhancing Academics as University Teachers* (DHET, 2018b). While this is a guiding rather than a prescriptive document, the importance of developing, recognising and rewarding academic staff as a means of achieving effective undergraduate and postgraduate student learning is clearly promoted in South African government policy. This aligns to international practice. More recently in Australia, for example, Ambler, Solomonides, Smallridge, McCluskey and Hannah (2019:1), position professional learning as “an essential component of the institutional conditions required for a high-quality first-year student experience”.

In universities or HEI, both internationally and locally, educators have more pressure placed on them to undertake qualifications and professional development programmes in order to prepare for their teaching roles (Chalmers & Hunt, 2013:xxi). This promotes the educator’s increasing professionalism and often results in a dual educator role as both a discipline specialist and as an educational specialist.

The previous minister of Higher Education and Training, Naledi Pandor, notes that “academics are appointed primarily for their disciplinary expertise and research capacity and it is not reasonable to assume that they will automatically be well-equipped”, especially in relation to being university teachers (DHET, 2018b:2). The assumption of academic professionalism where the large range of roles and

responsibilities undertaken support the assertion that it is unlikely that academic staff will be appointed with all the competencies in place. Professionalism is often viewed in the context of appropriate behaviour, quality assurance, efficiency or effectiveness for a given role and context. Yet this is an approach which suggests professionalism and professional competency as a static level, that once attained, can be assumed to be in place. This perception is problematic, especially when considering a dynamic environment. The professional development needs of academic staff, along with ongoing developments in their disciplines, education and technology have meant that HEI need to plan for the provision and prioritisation of ongoing professional learning and development. Quinn (2012:3) reflects that professionalism is, therefore, a contested concept and refers to an alternative view, where “the professional is seen as an agent who is empowered to define her own conditions of work, who has agency to construct her own meaning and identity”. Building this agency and the related competencies in academic staff, as well as on-going reflection on their practices, should, therefore, be on-going and responsive to the needs of specific academic staff.

Quinn (2012:3) describes professional development as “a range of formal, non-formal and informal activities aimed at contributing towards academic staff’s capacities as scholarly educators”. Ambler et al. (2019:8) describe engagement in professional learning as essential to the teaching role and to encourage high-quality teaching and learning academics need to:

“Examine their practice through engagement in scholarship, inquiry and research; work collaboratively in study groups; participate in coaching and mentoring; develop partnerships, engage with communities of practice and professional networks; and participate in workshops, conferences, courses and seminars and undertake formal teaching qualifications”.

Pollard describes education as having moral purposes and social consequences with the capacity to affect the ‘life-chances’ of students (in Ashwin, et al., 2015:415). Within higher education, professional practice requires that an educational practitioner should maintain accountability for impact on learners, and endeavour to develop the capacity to improve students’ experiences and results. In this kind of professional practice, the value of professional development is not only the transformation of an educator’s

practice, beliefs and theory but that this development can result in the improvement of student learning. Villegas-Reimers (2003) cites a number of studies that indicate that the more professional knowledge an educator has, the higher the levels of student achievement.

Within the constructivist paradigm, a professional practitioner constructs his or her own pedagogy, based on his or her study of scholarly work, reflexive experience in practice and scholarly discourse (De Boer, Du Toit, Scepers & Bothma, 2013). An international review of *Pedagogy, Curriculum, Teaching Practices and Teacher Education in Developing Countries* (Westbrook et al., 2013) identified that pedagogic practice is developed through interaction between educators' thinking or attitudes, what they do in the classroom, and what they see as the outcome of their practice. This suggests that students benefit from the professional development activities of academic staff. This perception builds on work of authors like Biggs (1989:23) who maintain that "teacher characteristics are important but they cannot usefully be enhanced in isolation from student learning on the one hand, and institutional reality on the other". However, if a professional must apply theory within a specific context, it seems appropriate to clarify professional development and evaluate it in a particular context.

It is first important to understand that professional development may appear and be different in different contexts. Ideally, this means that professional development should include strategies for self-regulated professional learning. If self-regulated learning occurs when learners use strategies that enable them to act autonomously, take initiative and take responsibility for their learning (Killen, 2010), then the self-regulated professional learner applies these learning strategies for professional development and directs these within a specific context. Schunk (2012:272) proposes that professional development within the educational context requires that educators reflect on their beliefs and theories about students, content, context, and learning, and check the validity of these beliefs and theories against reality, specifically within their contexts. Villegas-Reimers (2003) comments that the most effective form of professional development is that which is based in the context of practice and linked to the daily activities of educators and learners, and, therefore, agrees with other authors such as Schunk (2012:246) who observe that the most successful

developmental opportunities are on-the-job activities, such as the executing of action learning and the development of portfolios. Most strategies for self-regulated professional learning include some form of reflective practice, a form of metacognition and, therefore, of critical thinking competencies.

When linking professional development to practice, Coles (1996) writes that professional development “is concerned with growth” and is an interactive process whereby professionals learn to practice as they learn about their practice. The aspiration is not to adopt contemporary practices unthinkingly, but to explore these critically, deliberately and reflectively. Professional development is thus practice-focused and practice-based. Coles (1996) elaborates that professional development needs guidance and support from both mentors and colleagues. Coles (1996) concludes that professional development involves transformation, resulting in insights into a practitioner's self and engagement with good practice. The scope of application, therefore, broadens professional development to include peer-assisted professional learning, mentoring and scholarly reflection.

Boughey and McKenna (cited in Quinn, 2012) propose an understanding of teaching and learning as socially embedded, and therefore describe learning as “students constructing knowledge, and teachers and students are seen as co-constructors of knowledge ...”. Villegas-Reimers (2003) describes the construction of professional development as collaborative in that it is most effective when there are meaningful interactions with colleagues, peers and other community members. From the above description, a reflective practitioner can construct three types of knowledge, as described by Cochran-Smith and Lytle (cited in Villegas-Reimers, 2003; Awaya, McEwan, Heyler, Linsky, Lum & Wakukawa, 2003):

- Knowledge-for-practice – which assumes that academic staff members generate formal knowledge and theory for themselves and others to use in order to improve practice.
- Knowledge-in-practice – this is the knowledge embedded in practice or application of knowledge within practice.
- Knowledge-of-practice – this is the knowledge gained through reflection and theory construction.

Since professional development seems to benefit the career prospects of an individual, it is often viewed as the responsibility of the professional (Imel, 1990) to engage in a self-regulated professional learning process. However, insofar as professional development can transform the quality of practice and improve student learning, it is also viewed as an institutional or academic manager's responsibility to initiate or validate a process of professional development. Increasing pressure on HEIs to report on and improve student results supports the institutional co-responsibility. Shava (2016:56) argues that effective professional training in higher education has emerged as a major strategy for enhancing learner achievement in fluctuating higher education environments. Villegas-Reimers (2003), in discussing teacher professional development, comments that, in order to achieve the improvement of education, educators must become both subjects and objects of change. This mandate means that educator professional development not only professionalises the profession, but enables educators to act as change agents to improve education.

Within education, professional development has been described as an organised effort to change educators with the anticipated effect of improving teaching practice and student learning. Regrettably, Feist (2003:30) points out that professional development initiatives have been criticised for their failure to produce significant improvements in either practice or student success. In some research, where changes in practice are mentioned (see, for example, Haynes, Lisic, Goltz, Stein and Harris, 2016:56), the research did not measure any improvements in student learning. Feist (2003:31) explored the efficacy of professional development in interviews and notes that, while professional development opportunities were available to educators, they often did not make use of the opportunities. Based on this finding, Feist (2003:31) recommends that educators are more likely to participate in wanted professional development opportunities that they could use immediately or those which were related to a current problem (active learning), and that included follow-up procedures. In addition, educators are more likely to choose professional development activities related to their content area, and preferred session with faculty from the same discipline so that they could discuss students, curriculum and technology (ibid.). This reinforces what was described by Knowles, Holton and Swanson (2005:3, 37, 179) in their theory of the adult learner (see section 2.4). Time was also a significant

consideration in terms of Feist's research. He further argued that available time was cited as the biggest barrier, both into attending professional development activities, or taking the time to practice using different technologies (2003:31), and found that there was a general belief that full-time academic staff had more time available or opportunities to access professional development activities than part-time educators (ibid.).

In order to attempt to address the constraints of time and teaching commitments whilst meeting the need to develop digital or online learning competencies, several institutions have explored online professional learning and development. In Australia, these were reviewed by Quinn, Charteris, Adlington, Rizk, Fletcher, Reyes and Parkes (2019:1) who measured online professional learning and development for teachers as effective when it is relevant, collaborative and future-focused. Quinn et al. (2019:1,2) note a wide array of tools used, such as webinars, teleconferenced courses, online coaching, blogs, online feedback and critique, videos, virtual classrooms, social media and support groups. These tools allow a combination of synchronous and asynchronous applications for the progression of learning.

A key competency in professional development is the concept of reflective practice, which means conceiving of academic staff as a reflective practitioner who demonstrate an ability to integrate experiences and decision making with understanding, meaning-making, adapting practice to context, and are able to substantiate actions taken, adaption, decisions or outcomes. In South Africa, the 'Norms and Standards for Educators' (South Africa, 2000) indicates that educators, in general – lecturers included – need to be willing and able to reflect on practice. Villegas-Reimers (2003) describes a reflective practitioner as someone who enters the profession with a certain knowledge base and who will construct new knowledge and meaning based on that prior knowledge, new learning and experiences. To apply aspects of being a reflective teacher in a higher educational context, a reflective practitioner must have personal knowledge, professional knowledge, planning competencies and competence in assessing learning (Schunk, 2012:273, 275). Academic staff who reflect on their curriculum efficacy and pedagogical practice regularly, are more likely to identify deficiencies and transform these, and are more able to identify sufficiencies or assets and are able to articulate these while exploring the reasons for these sufficiencies or

successful aspects. Moon (2004:4) found that reflective learning enhances the effect of short courses on workplace development and used reflective writing to study student learning. This process can be facilitated through professional development programmes or formal qualifications offered at HEIs.

Despite the more recent explorations of professional development in their survey of research areas in adult and continuing education, Zawacki-Richter, Röbbken, Ehrenspeck-Kolasa and von Ossietzky (2014:82) still identify “professional development of instructors” as a neglected research area at the meso level. In South Africa, the CHE attempted to address this through a recent *Higher Education Monitor 14: Learning to Teach in Higher Education in South Africa* (CHE, 2017). In their recommendations, the authors of this publication state “the study affirms the need for further conceptual and empirically-based research into professional learning in South Africa” (CHE, 2017:75), and recommend that not only does South African higher education need to improve the status of teaching and learning, but that good practice guides should be commissioned which could improve resources for academic staff in their professional development. In their conclusions, the authors conclude that it is appropriate to explore how we adapt theories to advance contextually appropriate knowledge for improving higher education teaching (CHE, 2017:81, 82). Therefore, this study is positioned as responding to these South African higher education challenges.

The CHE, in the same publication, explores professional development in South African public higher education, and remarks that:

“Given that South African aspirations for social and economic transformation are, to some degree, vested in the work and role of academic staff, it could be argued that academic staff developers have an important role to play in helping universities create enabling conditions and building capacity for teaching and learning” (CHE, 2017:12).

This CHE research project (2017:21) further explores the staffing of public HEIs and notes that the increasing student numbers and the relatively small percentage of academics who could take on the full range of teaching responsibilities (those with

doctorates). The authors of this research project contend that the implication is that the need for staff to develop in their roles as educators is challenged by capacity constraints, and the multiple roles of academic staff as researchers, subject experts and teachers. However, most recent initiatives to explore improving the quality of teaching in higher education have focused on public institutions, with little consideration of private institution contexts. For example, in 2017, the CHE and the DHET, jointly convened a national workshop in Port Elizabeth on strengthening university teaching, but only included delegates from public universities (DHET, 2018b:3). Additionally, the CHE and HELTASA's Teaching Excellence Awards focus exclusively on teaching at public universities (CHE, 2017; 2012). This results in a need to explore and align the private HEI's teaching quality to national imperatives. While some private HEI promotes their own teaching excellence awards, the private HEI sector is relatively under-researched in measuring teaching quality. This suggests a need to explore this area as private HEI serves an increasing proportion of students.

The CHE quality assurance publication *Criteria for Programme Accreditation* (CHE, 2004:12) indicates that the third criterion requires that the HEI provides opportunities for academic staff to enhance their "competences and to support their professional growth and development professional development". More specific aspects are identified in the publication content: for example, Criterion 3 (iii) requires that "[t]here is ongoing professional development and training of staff as assessors in line with SAQA requirements" (ibid.:9); which is also repeated in Criterion 6 (ibid.:12).

Whiley, Witt, Colvin and Sap, (2017:178) admit that few academic staff within discipline fields (referring to their personal accounts) have the direct pedagogical expertise in developing critical thinking competencies, and conclude that courses developed to build such competencies need to be grounded in sound pedagogy and planned curriculum, and further recommend that academic staff plan continued linkages that reinforce the key interventions staged at the first-year level. This suggests that professional development is directed to inform academic staff's learning theory aligned disciplinary knowledge as in the image below.

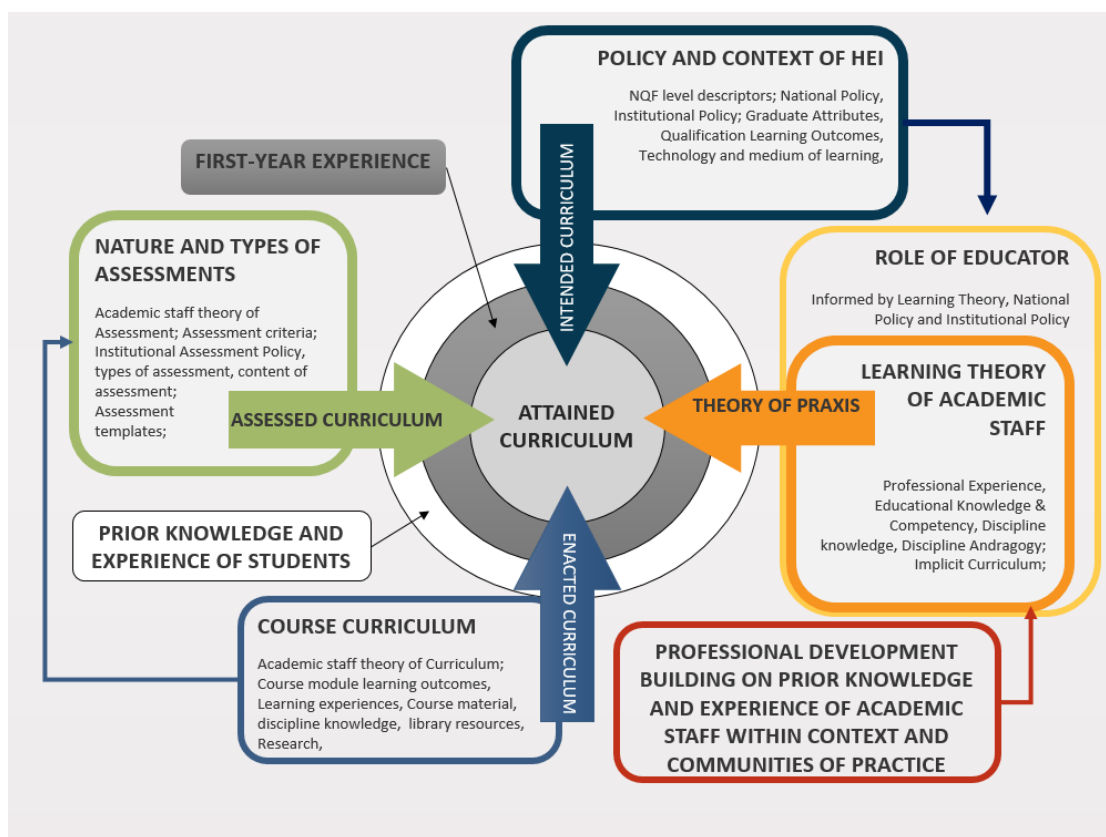


Figure 2.5: Conceptual Frame for intended, enacted, assessed and achieved curriculum for first-year students in relation to praxis and professional development of academic staff (Source: Researcher's own construct conceptualised from literature)

From the discussion above, professional development is now added to the conceptual frame. In figure 2.5 above, professional development is conceived of as building on the prior knowledge and experience of academic staff. Such professional development needs to occur within the context of practice and related communities of practice in order to directly impact such staff's theory of practice and enacted practice and overcome challenges experienced by these staff. Communities of practice are conceived of as spaces where academic staff discuss and reflect on their 'day-to-day' practice in exchanges between other academic staff, both as individuals and in groups. Such exchanges allow insights to develop and possible changes in practice, as described by Ambler, et al. (2019:7) and Lave and Wegner (1990), to emerge. Changes in practice, therefore, affect the attained curriculum through the enacted curriculum and impact on student success.

In considering the planning and evaluation of professional development, authors like Quinn, et al. (2019) draw on the work of Guskey (2014:13) to describe five levels of evidence when evaluating professional development activities, arranged in order of increasing complexity: “(1) participants’ reactions to the activities, (2) participants’ learning of new knowledge and skills, (3) organizational support and change, (4) participants’ use of new knowledge and skills, and (5) student learning outcomes”. However, Guskey (2014:13) recommends that, when planning professional development, the order of these levels should be reversed in order to prioritise the goal of improving student learning outcomes. In reviewing professional development, Guskey (2014:14) points out that, if professional development increases academic staff’s knowledge and skills but fails to change education practice or improve student learning outcomes, this would not be regarded as a successful development. Indeed, if professional development activities designed to improve teaching and learning fail to improve educational practice, it is unlikely that the intervention would be considered successful. An exception might be if an educator had developed a strong effective practice, in which case the processes of critical reflection and regular evaluations would provide evidence of successful practice, even if the academic staff did not further change their practice. Therefore, in this study, research participants were asked what types of professional development would help them improve their educational practice and if they felt their practices were effective at developing critical thinking competencies or had impacted student success (refer to Annexure C and I).

2.10. CONCLUSION

This second chapter reviewed theory and literature which has framed and informed the research questions and research design and identifies gaps in knowledge relevant to the scope of this study. The research context and national education policy were explored as they frame educational approaches in South Africa. Various definitions and theories relating to learning, pedagogy and development of critical thinking competencies were discussed within a constructivist paradigm. Some relevant concepts and theories are those pertaining to adult learning, professional development, formal and non-formal professional learning, self-regulated professional learning, professional collaborative learning, meta-learning and learning style

theories. The current local and global context of higher education, as impacting on first-year success and academic staff, was explored in terms of how such contexts, as focused in on previous research, present both opportunities and limitations for the development of critical thinking skills.

From the discussion above, the outcome of learning is identified as transformation through the acquisition of knowledge and competencies directed towards an increase in wisdom. Legislation and policy support the need to develop critical thinking competencies, as well as the need to improve first-year success in higher education, and are key to academic success and future success of students. The findings of the literature review inform the approaches in the methodology and research design as articulated in Chapter 4. However, because of the constructivist approach taken, this review was not centred within a specific timeframe but evolved as primary research revealed opportunities for deeper enquiry. As such, the next chapter develops from this approach in offering additional literature consulted in exploring critical thinking and how academic staff strategise to develop, assess and design curriculum with critical thinking competencies in mind.

CHAPTER 3

CRITICAL THINKING AND ACADEMIC STAFF'S CURRICULUM STRATEGIES

3.1. INTRODUCTION

The previous chapter reviewed the theory and literature which has framed and informed the research questions and design. The research context and national education policy were explored as framing educational approaches in South Africa. Various definitions and theories relating to learning theory, pedagogy, andragogy and development of critical thinking competencies were discussed within a constructivist paradigm. Therefore, the second chapter provided the conceptual framework and articulated the context that informed this study. This third chapter builds on this discussion in specifically considering critical thinking, and how academic staff strategise to develop, assess and design curriculum with critical thinking competencies in mind, particularly as this informs the phenomenon being explored. The value of developing critical thinking competencies for academic success and future workplace success is included.

3.1.1. Clarifying critical thinking and critical thinking competencies

In the twentieth century, the ability to engage in careful, reflective thought has been viewed in various ways: as a fundamental characteristic of an educated person, as a requirement for responsible citizenship in a democratic society, and, more recently, as an employability skill for an increasingly wide range of jobs.

—Kathleen Cotton (1991:1)

Critical thinking is most simply defined as “the objective analysis and evaluation of an issue in order to form a judgement” (Oxford Dictionaries, 2019). Critical thinking has been described as ‘good thinking’ (Franco, 2016:110), but this is too vague a definition to consider without drawing on other definitions to explore or evaluate critical thinking practice. Such definitions may include, for example, those provided by Macat International (2017) and UNESCO (2019).

Macat International (2017) simplifies most definitions to state that “Critical thinking is the ability to think clearly and rationally, understanding the logical connection between ideas”. They further clarify this by describing critical thinkers as those who seldom accept ideas and assumptions, rigorously question premises, seeking to determine whether the conclusions represent fact or opinions. In their discussion, Macat International (2017) points out that critical thinking should not be confused with “being critical”, as these critical thinking competencies are about more than finding flaws in arguments. This can be compared with UNESCO (2019) who define critical thinking as a process involving “asking appropriate questions, gathering and creatively sorting through relevant information, relating new information to existing knowledge, re-examining beliefs and assumptions, reasoning logically, and drawing reliable and trustworthy conclusions”. Furthermore, UNESCO (2019) implies dispositional aspects when they contend that “critical thinking calls for persistent effort to apply theoretical constructs to understanding the problem, consider evidence, and evaluate methods or techniques for forming a judgement”.

Exemplars of critical thinking as a purposeful process include Korbin (2015), who defines critical thinking as “purposeful and goal-directed thinking used to define and solve problems, make decisions, and form judgments related to a particular situation or set of circumstances”. In addition, it is defined by Salmon (2013) as involving cognitive, metacognitive and dispositional components which include analysing the meaning of information; checking for accuracy and completeness; synthesising; problem-solving; judging relevancy; evaluating arguments and making decisions (Salmon, 2013). This has evolved from Glaser (1942, as cited in Behar-Horenstein & Niu, 2011:26), who defined critical thinking as an attitude and rational application of competencies in problem-solving contexts to a purposeful reflection that requires logic. Critical thinking may also be defined as “purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteria logical or contextual considerations upon which judgment is based” (Boghossian, 2012:77; Facione, 1990:2). In responding to these definitions and descriptions of critical thinking competencies, Cargas (2016:126) feels that by definition critical thinking challenges and stretches the intellect. Behar-Horenstein and Niu (2011:26) describe critical thinking as intellectually engaged, skilful and responsible thinking that facilitates good judgement, and that this

requires the application of assumptions, knowledge, competence and the ability to challenge one's own thinking. Critical thinking competencies, therefore, require self-correction and monitoring to judge the reasonableness of thinking and reflexivity. Facione (2011:2) illustrates this in his comment "teach people to make good decisions and you equip them to improve their own futures and become contributing members of society, rather than burdens on society."

While the above definitions illustrate the diversity of perspectives related to what critical thinking is and how it is exercised, Stassen, Herrington and Henderson (2011:127) point out that academic staff in higher education often have no clear definition or explanation of what constitutes critical thinking. Bonnefon (2018:113) contends that, yes, critical thinking is hard to define, but that this makes it easier for many to agree that critical thinking is an essential skill. His view is that it is problematic to disagree with something that is less clearly defined, and where people assume that the other means what they mean in their construction of meaning.

In reviews of the literature, authors like Lai (2011:4), and Terblanche and De Clercq (2019:2), assert that much of the literature on critical thinking is rooted in two academic disciplines: philosophy and psychology. There is associated literature within the education fields of educational philosophy and educational psychology that supports the application of critical thinking predominantly within these fields. Critical thinking definitions can range from the thinker's dispositions to descriptions of metacognition, a set of thinking processes or specific competencies (Stassen, Herrington & Henderson, 2011:127). In applying the scope of what critical thinking encompasses to education, and more specifically to higher education, these perceptions of critical thinking can also be influenced by the disciplines of academic staff: the dominant competencies relevant to a discipline may be emphasised by academic staff of that discipline. This disciplinary contextual influence suggests that critical thinking competencies are not only presented from an educator's construction of critical thinking, shaped by the educator's own experiences and theory but are also directed towards the purpose of academic success within a specific discipline. Thus, the dominant competencies relevant to a discipline would be emphasised by the educator. Consequently, it seems unlikely that academic staff would present critical thinking

competencies in its full range of philosophical and psychological competencies, and some prioritisation is made, shaped by the disciplinary context and purpose.

From a philosophical perspective, the focus falls on the hypothetical critical thinker and catalogues the characteristics of such a person rather than the behaviours or actions such a thinker can perform. Facione (1990), for example, refers to the American Philosophical Association's portrait of the ideal critical thinker as a person who is inquisitive, open-minded, flexible, fair-minded, well-informed, understands diverse viewpoints and is willing to consider other perspectives. Definitions of critical thinking emerging from the philosophical tradition tend to additionally emphasise qualities or standards of thought. Lai (2011:5) comments that by emphasising the ideal critical thinking and what people may have the capacity to do, this approach may have less to contribute to discussions about how people actually think.

Lai (2011:7) then contrasts the cognitive psychological approach as focussing on how people actually think rather than how they could think under ideal conditions, which then tends to define critical thinking by the types of actions or behaviours that critical thinkers can do. This can result in a list of competencies or procedures performed by critical thinkers (see, for example, Lewis, King, Pitt, Getachew & Shamburger, 2010: 125), who lists ten elements of critical thinking competencies). Authors, like Sternberg (1986:3), state that critical thinking comprises "the mental processes, strategies, and representations people use to solve problems, make decisions, and learn new concepts". The psychological approach to critical thinking is often criticised by more philosophical authors who argue that this approach stems from the need to define constructs in directly observable ways or the products of such thought. Other philosophers like Facione (1990) caution against confusing the activities of critical thinking with its component competencies, such as defining terms and making judgements, as will be presented in more detail in the table below. Such philosophical proponents argue that critical thinking is more than the sum of its parts.

From the above review of the various definitions of critical thinking, it seems that critical thinking is seldom defined or referred to without some description of competencies associated with or utilised during critical thinking. From a dictionary perspective, competence is described as "the ability to do something successfully or efficiently"

(Oxford Dictionaries, 2019). In the European Union (EU), competence is defined “as a combination of knowledge, skills and attitudes appropriate to the context” (UNESCO, 2019). From an education curriculum view, UNESCO (2019) clarifies competency as including the ability to apply learning outcomes adequately in a defined context and as well as both cognitive elements (involving the use of theory, concepts or tacit knowledge), functional aspects (involving technical skills), interpersonal attributes and ethical values.

In exploring critical thinking competencies, there emerges the concept that critical thinking includes abilities that can be used contextually – clearly strategically adapted to the characteristics of a specific context (Franco, 2016:110) – as well as an attitude or disposition (Facione, 1990; 2011; Lai, 2011). Facione’s work (2011; 2015) is of particular interest in this regard, as his research has undertaken to describe various competencies within critical thinking, and is, therefore, one of the more comprehensive discussions offered in this regard. For the purposes of this discussion, Facione’s descriptions are presented and then compared to other authors, the comparison presented in Table 3.1. During the course of the literature review, it emerged that Facione’s work is cited by several articles, such as Akshir Ab Kadir (2018), Cloete (2018), Lai (2011), Ghanizadeh (2017), and others.

In exploring components of critical thinking, Facione (2015:5; 2011:5) refers to critical thinking competencies within six core cognitive competencies: interpretation, analysis, evaluation, inference, explanation, and self-regulation. Facione (2015:10) further differentiates this from a “disposition towards critical thinking” in which an individual is inclined to utilise critical thinking competencies regularly. For instance, Facione (2011:5) describes interpretation as “to comprehend and express the meaning or significance of a wide variety of experiences, situations, data, events, judgements, conventions, beliefs, rules, procedures or criteria”; this includes the related competencies of “categorization, decoding significance and clarifying meaning.” In contrast, Goff et al. (2015:30) describes interpretation as insight which “requires interpreting complex information” and thereby deriving meaning.

Facione (2011:5) defines analysis as “to identify the intended and actual inferential relationships among statements, questions, concepts, descriptions or other forms of

representations intended to express belief, judgement, experiences, reasons, information or opinions”; this includes “examining ideas, detecting arguments, and analysing arguments”. Facione (2011:5) delineates evaluation as “to assess the credibility of statements or other representations which are accounts or descriptions of a person’s perception, experience, situation, judgement, belief or opinion; and to assess the logical strength of the actual or intended inferential relationships among statements, descriptions, questions or other forms of representation”. Facione (2015:6) defines inference as to “identify and secure elements need to draw reasonable conclusions; to form conjectures and hypotheses; to consider relevant information and to deduce the consequences flowing from data, statements, principles, evidence, judgements, beliefs, opinions, concepts, descriptions, questions, or other forms of representations”; this includes the related competencies “of querying evidence, conjecturing alternatives and drawing conclusions”.

Facione (2015:6) then adds that strong critical thinkers can explain what they think (explanation) and how they arrived at that judgement (self-regulation) and defines explanation as “being able to present in a cogent and coherent way the results of one’s reasoning ... in terms of the evidential, conceptual, methodological criteriological and contextual considerations upon which one’s results were based and to present one’s reasoning in the form of cogent arguments”. In Facione’s description of ‘explanation’, he draws on the related competencies of “describing methods and results, justifying procedures, proposing and defending with good reasons one’s causal and conceptual explanations of events or points of view and presenting full and well-reasoned arguments” (ibid.:6). Facione (2015:7) defines ‘self-regulation’ to mean “self-consciously to monitor one’s cognitive activities, the elements used in those activities, and the results educed, particularly by applying skills in analysis, and evaluation to one’s own inferential judgments with a view toward questioning, confirming, validating, or correcting either one’s reasoning or one’s results.” The two competencies that are associated with self-regulation are self-examination and self-correction. Boghossian (2012:77) describes these related competencies and supports that there needs that to be a corrective mechanism for thinking critically, in that there needs to be some way for a student (or adult learner) to correct or modify their thoughts, cognitions and propositions. In their work, Behar-Horenstein and Niu (2011:26) described critical thinking as intellectually engaged, skilful and responsible thinking that facilitates good

judgement, and that this requires the application of assumptions, knowledge, competence and the ability to challenge one's own thinking. Several authors thus agree that critical thinking competencies, require self-correction and monitoring to judge the reasonableness of thinking and reflexivity.

While some authors, like Facione (2015), seem to describe critical thinking competencies as discrete competencies, the application of critical thinking seems to draw on these competencies as interrelated, as seen in the discussion regarding self-regulation where self-regulation is used to verify the use of other critical thinking competencies. However, as can be seen above, in reviewing the literature, there seems to be some consensus regarding which abilities are included as attribute competencies of critical thinking. A comparison can be drawn as to key competencies of critical thinking, as indicated in Table 3.1 below:

Table 3.1.1: Correlating agreement of critical thinking competency descriptions, developed by Researcher

Description of competencies	Authors who refer to this competency:
Analysing arguments, claims or evidence	Boghossian (2012); Ennis (2018); Ennis (1989, in Behar-Horenstein & Niu, 2011:25); Facione (2015, 2011, 1990); Goff et al. (2015: 30); Haynes, et al. (2016:48); Lai (2011); Macat International (2017); Partnership for 21st Century Skills (2009); Wallace & Jefferson (2013); UNESCO (2019)
Asking and answering questions for clarification	Boghossian (2012); Ennis (2018); Lai (2011); Partnership for 21st Century Skills (2009); Wallace & Jefferson (2013);
Defining terms	Ennis (2018); Ennis (1989 in Behar-Horenstein & Niu, 2011:25); Wallace & Jefferson (2013);
Identifying assumptions	Brookfield (2012); Ennis (2018); Ennis (1989 in Behar-Horenstein & Niu, 2011:25);
Interpreting and explaining	Boghossian, 2012; Facione (2015, 2011, 1990); Goff et al. (2015: 30); ²⁰ Haynes et al. (2016:48); Lai, (2011); Macat International (2017); Partnership for 21st Century Skills (2009); Wallace & Jefferson (2013);

²⁰ Note: Goff et al. (2015: 30) describes interpretation as insight which “requires interpreting complex information” and deriving meaning

Judging or evaluating	Brookfield (2012); Boghossian, 2012; Ennis (2018); Facione (2015, 2011, 1990); Goff et al. (2015: 30); Lai (2011); Macat International (2017); Moore (2013); Partnership for 21st Century Skills (2009); Wallace & Jefferson (2013); UNESCO (2019)
Making interferences using inductive or deductive reasoning (includes drawing conclusions)	Boghossian, 2012; Ennis (2018); Ennis (1989 in Behar-Horenstein & Niu, 2011:25); Facione (2015, 2011, 1990); Goff et al. (2015: 30); ²¹ Haynes, et al. (2016:48); Lai (2011); Macat International (2017); Partnership for 21st Century Skills (2009); Wallace & Jefferson (2013); UNESCO (2019)
Making decisions or solving problems	Brookfield (2012); ²² Ennis (1989 in Behar-Horenstein & Niu, 2011:25); Haynes, et al. (2016:48); Lai (2011); Macat International (2017); Partnership for 21st Century Skills (2009); ²³ Wallace & Jefferson (2013);
Predicting	Facione (2015; 2011); Haynes, Lisic, Goltz, Stein & Harris (2016:48); Lai (2011)
Seeing multiple perspectives	Brookfield (2012); Ennis (2018); Ennis (1989 in Behar-Horenstein & Niu, 2011:25); Lai (2011); Partnership for 21st Century Skills (2009);
Synthesising information	Ennis (2018); Goff et al. (2015: 30); Partnership for 21st Century Skills (2009); Wallace & Jefferson (2013);
Self-regulation	Boghossian, 2012; Ennis (2018); Facione (2015; 2011); Partnership for 21st Century Skills (2009); ²⁴ Moore (2013); ²⁵ UNESCO (2019)
Creative thinking	Macat International Limited (2017)

The descriptions of the constituent competencies of critical thinking could enable academic staff to develop evaluation criteria and learning activities in line with specific items. Behar-Horenstein and Niu (2011:25) point out that building critical thinking competencies relate to higher education's goal of building responsible citizens, as an increasingly complex society requires individuals to base their judgements and

²¹ Note: Goff et al. (2015: 30) describes this as augmentation

²² Note: Brookfield (2012: 12) describes solving problems or making decisions as "taking informed action"

²³ Partnership for 21st Century Skills (2009) describe seeing multiple perspectives as "Analyze and evaluate major alternative points of view"

²⁴ Partnership for 21st Century Skills (2009) describe this as "reflect critically on learning experiences and processes"

²⁵ Moore (2013) describes "self-reflexivity" in relation to self-regulation

decisions on careful evaluation of evidence. Additionally, Korbin (2015) writes, “critical thinking is a competency that is included in nearly all frameworks for 21st Century skills”.

Huber and Kuncel (2016:431) review research on gains in critical thinking over various time frames in college in the USA. In their research, which finds that academic staff selected teaching critical thinking as the most important goal of undergraduate education and that they view critical thinking as an essential component of many medium- and high-complexity jobs. This is supported by Good and Boyd (2020), Liu, Frankel and Roohr (2014), Mihaila-Lica, (2012:138) and Stassen, Herrington and Henderson, (2011:127). However, Stassen, Herrington and Henderson (2011:127) also point out that few academic staff in higher education have been specifically trained to develop critical thinking (see, for example, Franco, 2016:116). In her work in secondary schools in London, Cosgrove (2017) found that teachers reported that, though critical thinking had been given lip service in their teacher training courses, they did not understand how to teach competencies associated with critical thinking. Furthermore, she found that students’ concepts of critical thinking were found to rely on the extent to which their teachers had introduced critical thinking in an explicit, systematic and sustained manner in the classroom. The student reliance on teachers’ ability to facilitate the development of critical thinking competencies may be carried over into experiences of the higher education teaching and learning experience, as expanded on in the research undertaken here.

Lai (2011:11) points out that most researchers working with critical thinking agree that there is an important role for background knowledge. Specifically, many researchers see background knowledge as essential if students are to demonstrate critical thinking competencies. This approach, as described by Facione (1990: 10), for example, seems to apply concepts of Situated Learning Theory (see Chapter 2, section 2.3.4.). Lai (2011:12, 13) does point out that, while some researchers see critical thinking as generalisable across different contexts, the transfer of critical thinking competencies across domains seems unlikely unless students are explicitly taught to transfer and have sufficient opportunities to practice critical thinking competencies.

There is growing research into critical thinking competencies (see, for example, Korbin, 2015; Huber & Kuncel, 2016).²⁶ However, there seems to be little that explores academic staff's perceptions and theory of practice. In their survey of research areas in Adult and Continuing Education, Zawacki-Richter, Röbbken, Ehrenspeck-Kolasa, and von Ossietzky, (2014:82) identify both "professional development in instructors" and "teaching reasoning" as neglected research areas. Furthermore, several authors (Gul, Khan, Ahmed, Cassum, Saeed, Parpio, Schopflocher & Profetto-McGrath, 2014:37), explore that educators find it challenging to foster critical thinking in their students if they have not learned how to use critical thinking in their educational system or training. Since many higher education academic staff members are appointed based on discipline rather than educational expertise, this suggests that not all academic staff deliberately foster critical thinking competencies. Academic staff's practices and design of learning opportunities are affected by their perceptions and theory, and so this enquiry intends to take up the mantle in further addressing and exploring the alignment between existing research and perceptions and theories of academic staff in South Africa who facilitate first-year students' learning.

If critical thinking competencies can be developed (or taught), and these are desirable competencies to develop in students, there is a problem with regards to what instructional strategies can best be used to develop these competencies. Franco (2016:116) comments that the lack of clarity in the role of academic staff to develop critical thinking competencies is partially reflected in the complex nature of critical thinking because it involves individual competencies and dispositions, as well as knowledge, strategies and context. The awareness of this complex engagement leads Golding (2011) to state that it is hard to find pedagogical approaches that ensure that all these aspects are considered. Most educators seem to take the approach where critical thinking competencies are "taught as a combination of the general approach with infusion or immersion" (Ennis, 1989:4). Behar-Horenstein and Niu (2011:29) differentiate instructional approaches using Ennis's (1989) typology, which describes a 'general' approach; an 'infusion' approach and the 'immersion' approach. Within this

²⁶ Additional examples include Bahr, 2010; Liu, Frankel & Roohr, 2014; Lombard & Grosser, 2008; Behar-Horenstein & Niu, 2011; Wald et al., 2012; Byrnes & Dunbar, 2014; Facione, 2011

typology, critical thinking can be “taught ‘*separately*’ which aims to teach critical thinking abilities and dispositions and it does not involve subject matter”.

Alternatively, critical thinking can be “*infused* in instruction in existing subject matter areas” (the ‘infusion’ approach), where the principles of critical thinking are being taught explicitly or critical thinking can result from a student’s *immersion* in the subject matter (the ‘immersion’ approach)” (ibid., emphasis added). This infused approach to teaching critical thinking competencies would describe learning opportunities where the principles of critical thinking are being taught implicitly, and, consequently, students are not aware that they are being trained to think critically (Behar-Horenstein & Niu, 2011). Lawrence, Thomas and Visentin, (2006:305) describe this as learning in “an osmotic manner” or “as an emergent property of their (students) degree studies”. What these authors suggest is that teaching critical thinking as implicit to the curriculum is a more comfortable mode of engagement for academic staff. However, there is a growing call for teaching critical thinking to become more explicit within the curriculum.

Franco (2016:116) concurs with Behar-Horenstein and Niu (2011:36), who conclude that changes in students’ critical thinking are more likely where these competencies are explicitly taught. This is supported by Bensley, Crowe, Bernhardt, Buckner and Allman (2010:91), who find that student groups receiving explicit critical thinking instruction show significantly greater gains in their argument analysis competencies than the groups receiving no explicit critical thinking instruction. This approach was adopted by Lawrence, Thomas and Visentin, (2006:305) in proposing that there needs to be clearly stated intent towards developing critical thinkers within relevant learning units in engineering education. However, they feel that students will consider critical thinking competencies more relevant if they are integrated within a discipline content (ibid.:306). Cargas (2016:126-7) supports the view that faculty need to be explicit in articulating the goal of critical thinking as a learning outcome and prescribing texts that define and exercise critical thinking competencies. Drawing on the notion of conceptual change, a pedagogical approach would be to utilise sequenced instructional activity as a means of developing students’ deep disciplinary understandings (Kozulin, Gindis, Agseyev & Miller, 2003:8).

Several researchers describe creating learning opportunities, or environments that foster critical thinking (Alt, 2015; Golding, 2011; Facione, 1990). Lipman (1988) recommends that educators should adopt a model that: defines and clarifies information; asks appropriate questions; clarifies or challenges statements or beliefs; judges the credibility of sources; and solves problems by predicting probable outcomes logically or through deducing.

Research with regards to how to strategise the development of critical thinking competencies in students is wide-ranging. For example, Golding (2011) explores the critical role of questioning as a tool within the strategies used to develop critical thinking competencies in students and emphasises a thinking-encouraging approach where academic staff scaffold critical thinking development through explicit questioning. Ng`ambi and Johnstone (2006) explored the use of questioning as a learning activity to teach critical thinking, while, more recently, Mihaila-Lica (2012:141) considers questioning as an essential component for developing critical thinking competencies. She cautions that questioning varies in quality and value and should, therefore, be strategically utilised (*ibid.*). Saiz, Rivas and Olivares (2015) propose collaborative learning and the use of rubrics to both develop and assess critical thinking competencies, while Kerkman and Johnson (2014:92) explored techniques for engaging critical thinking on multiple-choice questions during assessments. Eberly and Trand (2010:9) look at teaching critical thinking through the foundational competencies of analytical reading and writing, whereas Mihaila-Lica (2012:140), in the context of developing English fluency, proposes the use of debating and writing essays using lines of arguments with editing and redrafting exercises. These and other authors verify the use of academic literacy as important in developing critical thinking competencies. Other instructional strategies that may develop critical thinking competencies include concept mapping and problem-based learning (Behar-Horenstein & Niu, 2011). Cargas (2016:125-6) explores using controversy and real-world problems in an honours course as analysing controversy is often interdisciplinary and pushes students out of their comfort zone.

Other researchers (such as Ng`ambi & Johnstone, 2006; Yang, Gamble, Hung & Lin, 2014) have also explored the opportunities presented by new technology to develop critical thinking. Lamentably, a large body of pilot studies and trials in the use of

technology for enhancement of teaching and learning experiences and outcomes are without explicit educational foundations (Kukulka-Hulme et al., in Nouri et al., 2014). The use of technology does not automatically result in effective teaching practices and deeply meaningful learning unless effective pedagogical use of the technology is practised (Brown & Mbat, 2015:117; Ng'ambi, 2013).

Assuming that academic staff are working towards enhancing or enabling student success, how this is measured or achieved influences what these staff members do to facilitate development towards this goal. Many discussions on student success include aspects like: completion of a degree; improved academic achievement (good marks); effective integration with the academic community (epistemological access); retention rates; graduation rate or the completion of qualification rates (throughput rates); employability and good citizenship or holistic development of the person (see, for example, HETS, 2007; Miller, 2015; Cuseo, n.d.:1-3; CHE, 2010:35). Maree (2015:408) describes student success in higher education as follows:

“...[E]ducation is about enabling learners to choose a career, construct themselves (realise their potential), design successful lives and make meaningful social contributions.”

This more holistic approach to student success, as used to evaluate critical thinking competencies, is useful as these competencies are not just used in learning or later professional employment. These competencies also point to better decision making in all facets of the definition of student success as proposed by Maree (2015) and aligns to what Brookfield (2012:24) describes when he argues that ‘informed action’ is the desired outcome of critical thinking. He clarifies that such action is grounded in evidence, can be explained to others, and is likely to achieve the desired results (ibid.).

Therefore, it seems that critical thinking competencies are essential to student success, in general, and academic success and employability, more particular. Several authors draw on research that shows employers want higher education to develop critical thinking competencies and indicate that HEIs describe critical thinking competencies as an objective of learning programmes (see, for example, Stassen, Herrington & Henderson, 2011; Eberly & Trand, 2010:9). Franco (2016:108) further comments that critical thinking needs explicit instruction and inclusion in the curriculum

to prepare individuals to become active citizens, who are able to regulate thinking and behaviour and be guided by ethics and evidence.

Within the context of education in South Africa, as part of the NQF, SAQA developed and described several critical cross-field outcomes deemed critical for life-long learning to include (but are not limited to): Identify and solve problems in which responses display that responsible decisions using critical and creative thinking have been made; Organise and manage oneself and one's activities responsibly and effectively; Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation; In order to contribute to the full personal development of each learner and the social and economic development of the society at large, it must be the intention underlying any programme of learning to make an individual aware of the importance of reflecting on and exploring a variety of strategies to learn more effectively, participating as responsible citizens in the life of local, national and global communities, being culturally and aesthetically sensitive across a range of social contexts, exploring education and career opportunities, and developing entrepreneurial opportunities (SAQA, 2000:18).

From these critical cross-field outcomes, SAQA updated the NQF level descriptors in 2012, referring to evaluating an 'applied competence' in students, which is defined as having "three constituent elements: *foundational competence* embraces the intellectual/academic competencies of knowledge together with analysis, synthesis and evaluation, which includes information processing and problem-solving; *practical competence* includes the concept of operational context; and *reflexive competence* incorporates learner autonomy" (SAQA, 2012:3, emphasis added). Within a higher education context, these level descriptors seem to align well with the constructs of critical thinking competencies, which require the application of these competencies. For example, self-regulation, as a critical thinking competency, aligns with reflexive competence.

In their review of teaching critical thinking competencies in higher education, Behar-Horenstein and Niu (2011:25) cite most educators as agreeing that students need to develop critical thinking competencies, because these competencies enable students

to engage in purposeful, self-regulated judgement, evaluate the arguments of others and their own, resolve conflicts, and develop well-reasoned resolutions to complex problems. However, Behar-Horenstein and Niu, (2011:25) point out that there is a debate as to whether such competencies can be developed through instruction. This seems to be supported by Huber and Kuncel (2016:459), who find that several prior research efforts often do not distinguish between the effects of higher education and the maturation effects. One of the exceptions to this is the work of Pascarella and Terenzi (2005), as explored by Huber and Kuncel (2016:458). Pascarella and Terenzi (2005) conclude that there is a positive impact of higher education on critical thinking. Therefore, within higher education, it would be relevant to explore how educators are professionally developed to engage in such debates, and how they contribute to the development of critical thinking competencies, both in themselves and in their students.

An additional facet of applying critical thinking is described by several authors as critical thinking dispositions. In her review of the literature concerning critical thinking in education, Lai (2011:2) states that critical thinking involves both cognitive competencies and dispositions, the latter she clarifies as being attitudes or habits of mind. Ennis ([1989] in Behar-Horenstein & Niu, 2011:25) suggests that “critical thinkers demonstrate particular attributes that distinguish them from others who do not demonstrate critical thinking”. He explores this to clarify that such thinkers tend to be capable of taking a position or changing a position based on evidence, remain relevant, and seek information and use credible sources, whilst being open-minded in taking into account the entire situation. These individuals keep the original problem in mind while dealing with and ordering the components of a complex problem: seek a clear statement of the problem, look for options, and exhibit sensitivity to others’ feelings and depth of knowledge.

Therefore, in this study, the construct of ‘critical thinking competencies’ is used as the cognitive abilities utilised during a critical thinking process. This allows for an exploration of the development of competencies, and the related assessment thereof. Within the field of education, Lai (2011:8) selects Bloom (1956) and his taxonomy of cognitive competencies as the most widely cited sources for educational practitioners when it comes to teaching and assessing higher-order thinking competencies.

However, as this field includes both educational psychologists and educational philosophers, as utilised in defining and discussing critical thinking above, the clarity of a third distinct approach, differentiated from philosophy and psychology, is often missing, as most literature focuses on the experiences of educators or observations of student learning.

Consequentially it is worth clarifying that this proposed research does not include how factors outside the curriculum and academic staff's practices contribute to changes in critical thinking competencies of students – for example, maturation or out of classroom experiences. As the emphasis is on the development of critical thinking competencies in students, through the curriculum, this literature review now moves toward exploring the focus of the development of critical thinking competencies in higher education.

3.1.2. Development of critical thinking

I cannot teach anybody anything, I can only make them think.
Socrates (469-399 BCE)

The development of critical thinking is reviewed from both international and South African perspectives, as discussed below.

3.1.2.1. International perspectives

In the USA, authors like Haynes, Lisic, Goltz, Stein and Harris (2016:44, 45) argue that research shows a consensus in the need for students to develop critical thinking competencies. They quote the Higher Education Research Institute amongst others, to show that over 90% of faculty feel that teaching critical thinking is essential in higher education (Haynes et al., 2016). Haynes et al. (2016:45) further draw on Bok (2006) in citing additional USA studies that position the development of critical thinking as “the most important goal of an undergraduate education”. Such a claim is supported by Huber and Kuncel (2016:431) in their meta-analysis which substantiates the belief that educators view critical thinking as an essential competency. In non-western HEI,

authors like Ghanizadeh (2017:111), from Iran, affirms the assertion made by Hong Kong academic Ku (2009:70), that “teaching for critical thinking is an important goal of modern education, as it equips students with the competency necessary to reason about social affairs in a rapidly changing world”. Bonnefon (2018:113) makes the point that, due to the uncertainty of what critical thinking is, there is no consensus on how it should be developed or measured.

Freire (2005:79, 80) suggests that, in order to develop a liberating educational experience, the practice of problem-posing education that engages educators and students in a dialogue should be developed. This would avoid, what he later articulated as, the eroding of curiosity where children stop asking questions after starting school (Freire, 1992:2). Lai (2011:2, 29) concludes, that people can begin developing critical thinking competencies at a young age, and, while some adults may be deficient in some critical thinking competencies, research suggests that all people can be taught to think critically. This research, therefore, adopts the position that critical thinking competencies can be taught, and, further, that academic staff deliberately and strategically design curriculum from pedagogical and andragogical approaches in order to develop critical thinking competencies.

Still, while some research has been done in exploring the development of critical thinking competencies, sometimes by discipline (Bensley et al. 2010; Wald et al., 2012; Yang, Gamble, Hung & Lin, 2014), or profession (Barac & Du Plessis, 2014; Lawrence, Thomas & Visentin, 2006; Lewis et al., 2010), several authors focus on higher developmental levels of students, such as final-year students (such as Cargas, 2016: 123) or graduates (Veliz & Veliz-Campos, 2018). This leads authors like Hammer and Green, (2011:303) to assert that, while there is broad acceptance that university graduates must have the capacity to think critically, there remains a gap between aspiration and teaching practice in many faculties. In South Africa, this led Barac and Du Plessis (2014:53) to research whether relevant department heads had identified teaching “pervasive skills”, including critical thinking competencies, as a responsibility of their HEI. Part of the gap is exploring how first-year students initiate their journey of critical thinking development and how academic staff support or teach towards these competencies. Furthermore, few of the perspectives explored critical

thinking within the contexts of other African countries (other than South Africa) which is an additional gap.

Within the context of higher education in the USA, Cosgrove (2011:7-8) further comments that there is little empirical understanding of how best to improve teaching and learning for the development of critical thinking, and argues for a deeper and more integrated approach to the study of critical thinking in higher education. Likewise, Chile, Veliz and Veliz-Campos (2018:13) argue that critical thinking is perceived as a highly valued and necessary competency, but their paper finds that critical thinking is poorly developed at the teacher education (post-degree) level. Their research suggests that, as critical thinking is a cross-curricular competency, no single educator takes responsibility for the development of these competencies (ibid.:13). More interestingly, in Chilean universities, Veliz and Veliz-Campos (2018:13) found that their participants conceived of critical thinking as a meta-cognitive competency.

Still, within a largely American context, Brookfield (2012:xii, 54-55) explored what students say are the teaching methods that most help them to learn to think critically, utilising a “Critical Incident Questionnaire”. His research found that critical thinking is best experienced as a social learning process, recommends that educators need to model the process for students and that critical thinking is best understood when grounded in specific events or experiences. Brookfield (2012:xii) further commented that the student-participants in his study report that some of the most effective triggers to critical thinking are having to deal with a disorientating dilemma (or unexpected event), and that learning critical thinking needs to be incrementally sequenced. Brookfield (2012:xii) argued that students like to learn to apply critical thinking processes to relatively impersonal contexts or data and then, over time, the application should be adjusted to align the competency more to their own thinking. While Brookfield (2012:27) writes for a professional development context and purpose, and his study explored commonalities of critical thinking across disciplines in a generalised way, he describes his personal lived experiences of developing critical thinking, rather than those experiences of the academic staff he developed. This continues to contribute to the gap in the lived experiences of academic staff.

Similarly, in the UK, authors like Brown (2014:4) investigated students' perspectives on how they make sense of critical thinking competencies and their experiences. Brown (2014:4) suggests that, while there is literature exploring pedagogies that develop critical thinking competencies, there is a gap in the evidence. She found evidence that supported the view that students experience difficulties in acquiring such competencies (ibid.:14), and that the students she interviewed used analogies and metaphors when providing their own definitions of what critical thinking competencies were (ibid.:4). Though the small sample size of seven students resulted in lack of generalisability, the content of student responses has determined this study to be valuable in validating the need for equipping academic staff with a greater capacity to build student confidence in their own understanding of critical thinking competencies.

In reviewing international literature on critical thinking development, Lai (2011:2, 33-34) recommends that educators use cooperative and collaborative learning methods, as well as constructivist approaches that place students at the centre of the learning process. In the USA, authors like Haynes et al. (2016:45) point to the high impact educational practices that involve students in active learning, and that can contribute to gains in critical thinking such as: real-world problem solving; involving students in original research; and the use of case studies, simulations, service learning, and team-based learning.

In his book, *Teaching Critical Thinking*, which outlines professional development for academic staff, Brookfield (2012:xi) comments that working with academic staff in diverse disciplines about how to improve students' critical thinking exposes that educators of each diverse discipline have different conceptualisations of critical thinking. This would result in academic staff working towards diverse objectives and a lack of alignment in assessing critical thinking.

In research conducted within a first-year management course in Australia, Hammer and Green, (2011:303) argue that there is a need for academic staff to consider the link between critical thinking and academic literacy, as well as the relationship between the capacity for critical thinking, student learning and the development of disciplinary knowledge. Similarly, Whiley, Witt, Colvin and Sap (2017:166) record the experience of Australian academic staff in developing a course to enhance the critical

thinking competencies of undergraduates within the first year of a bachelors degree in environmental management. Whiley et al. (2017:173) verify the need to include this type of deliberate development, in that students who participated in the study, agreed that they did not have the necessary competencies in critical thinking that they regarded as necessary to their studies and future careers. Their paper provides a sound example of a reflective learning process grounded within the theory and their discipline, and is, therefore, an account for others to utilise in informing their professional practice. However, while Whiley et al. (2017:178) provide a professional account of their learning as academic staff, and link their curriculum to appropriate pedagogy, there are no recommendations for professional development offered.

Lawrence, Thomas and Visentin (2006:306) comment that it is difficult to teach critical thinking without a willingness, on the part of the student, to engage with ideas and a carefully designed setting within which to solve appropriately levelled problems. These authors argue that student investment relies on them being presented and engaging with real problems instead of artificial problems or situations they are overly familiar with. The use of real problems seems to increase the perception of relevance and value in solving the problems. Where students are overly familiar with problems or situations, they tend to revert to assumptions or existing knowledge, instead of applying critical thinking competencies to construct fresh connections and insights. Cargas (2016:125) takes this further in her use of controversial real-world problems.

A review of the literature points to a variety of methods used to engage students in the development of critical thinking competencies, with varying degrees of success noted. For example, Lawrence, Thomas and Visentin (2006:307) underpin their curriculum with the belief that critical thinking can be fostered in providing a rich learning environment, where students are encouraged to read, discuss and use discipline concepts in a variety of challenging projects. Whiley et al. (2017:171) explore an application of this through the use of tutorials as collaborative learning environments and scaffolded assessments. Whilst planned practical or laboratory work can be resource-intensive in disciplines like Science and Engineering, Lawrence, Thomas and Visentin (2006:308) comment that the benefits include the acquiring of: competence in using real equipment; measurement competencies; insight into the processes related; experiential knowledge; an appreciation of experimental errors,

opportunities to explore assumptions; and the ability to analyse and explain their results in reaching conclusions. This builds from the work of Feisel and Rosa (2005:5), who comment that, when students go to an instructional laboratory, they go to learn something that practising engineers are assumed to already know. In South Africa, Swart (2010:190) explored curriculum design for professional competencies in engineering, and commented that engineering students should merge theoretical and practical instruction into a single body of knowledge and practical competencies, enabling them to demonstrate their knowledge, their capacity 'to do', and their capacity to solve problems.

Whilst planned practical or laboratory work can be resource-intensive in disciplines like Science and Engineering, Lawrence, Thomas and Visentin (2006:308) comment that the benefits include the acquiring of: competence in using real equipment; measurement competencies; insight into the processes related; experiential knowledge; an appreciation of experimental errors, opportunities to explore assumptions; and the ability to analyse and explain their results in reaching conclusions. This builds from the work of Feisel and Rosa (2005:5), who comment that, when students go to an instructional laboratory, they go to learn something that practising engineers are assumed to already know. In South Africa, Swart (2010:190) explored curriculum design for professional competencies in engineering, and commented that engineering students should merge theoretical and practical instruction into a single body of knowledge and practical competencies, enabling them to demonstrate their knowledge, their capacity 'to do', and their capacity to solve problems.

Within the field of psychology, Wentworth and Whitmarsh (2017: 335) explored using writing assignments which were developed to teach students to think like a psychologist, thereby enhancing critical thinking, applying research concepts, and resisting plagiarism. Wentworth and Whitmarsh (2017:335) sought to align with the mandate from the American Psychological Association's *Guidelines for the Undergraduate Psychology Major* (American Psychological Association, 2013), that includes critical thinking competencies as an essential objective for undergraduate students. While Wentworth and Whitmarsh's research showed that these types of assignments did improve students critical thinking competencies, they also found that

students may need more than one assignment to begin to enhance their critical thinking competencies (2017).

Park (2014:392) draws on reflective learning as a pedagogical method to improve students' critical thinking and deep learning in a first-year course delivered through a learning management system within the context of Australian higher education. Park's aim was to study self-reflection as well as collaboration in an online course environment. Park (2014:403) found that student participation in online learning has a significant impact on the quality of learning outcomes, while the most important aspect of encouraging students to be active is the lecturer's intervention to help students engage in the learning community. Therefore, the lecturer's ability in developing crucial competencies extends beyond the physical classroom to encompass virtual environments, and that the interaction between lecturer and student is important in extending the learning experience.

In Iran, Ghanizadeh (2017:101) explored the interactions between reflective thinking, critical thinking and self-monitoring and how these contribute towards academic achievement among university students. In this study, Ghanizadeh (2017:101) demonstrated that critical thinking positively, and significantly, predicted achievement. She further found that self-monitoring indirectly exerted a positive influence on achievement, and further that self-monitoring contributed to the development of critical thinking.

Cargas (2016:125) cites research in commenting that several academic staff reveal faulty perceptions of critical thinking and assume that critical thinking is being taught: suggesting that few deliberately teach or assess such competencies. This may also relate to the discussion in section 3.1.1. where the diversity of definitions of critical thinking describe critical thinking competencies as integrated, but possibly indistinguishable which may complicate the development of critical thinking competencies in the theory and practice of academic staff. Nevertheless, it must be noted that little of this research explores what academic staff do to develop these competencies in first-year students, or how they theorise the development of these competencies as part of their pedagogy. Exceptions to this include Whiley et al. (2017) in their reflection on and account of their practice within Australian higher education

as discussed in chapter 2, section 2.9. This is part of the gap this study seeks to address in the South African higher education context (as described in Chapter 1).

3.1.2.2. South African perspectives

Explorations within the first year context in South Africa are seldom linked to professional development or the role of the Academic Staff. For instance, while De Jager (2012:1374-1381) explores *Can First Year Student's Critical Thinking Skills develop in a Space of Three Months* in a South African higher education context, she only documents the various learning activities and assessments used in a first-year course, and assesses whether students' critical thinking competencies improved as a case to show that these can improve within an academic semester. De Jager (2012:1375) does articulate her understanding of critical thinking and links her assessment criteria to literature, but her conclusions (ibid.:1379) are not linked to generalisable professional development, nor are her conclusions linked to her role as an educator. Furthermore, the author does not explore whether these competencies were transferable into other courses or linked to further academic success.

Similarly, Zulu (2011) explored incorporating a research experience in the context of an English and Academic Skills course for first-year students at a public university. Zulu (2011:451) utilised collaborative groups as an empowering strategy to build research competencies. She takes a scaffolded approach, where students receive a learning guide, and then describes "assigning small manageable tasks for the students to do each week" (ibid.:451). In her research, Zulu (2011:448) takes a dual role as lecturer and researcher into her own classroom. However, her focus is on the experiences of the students, and, consequently, she neither documents changes in practice for her role as an educator, nor does she make recommendations for other lecturers in terms of professional development. While these are interesting and relevant case studies, the lack of similar or repeated cases suggests areas for further research and opportunities to strategise professional development: with both studies suggesting future tracking of the students for academic success, but requiring greater proactivity in articulating the recommendations for professional development.

More recently, Cloete (2018:479) explored whether integrated assessments impacted on the development of the critical thinking skills of first-year students within an accounting course. This study administered a pre-test and post-test of the Watson-Glaser Critical Appraisal to students, within a quantitative approach incorporating two groups of students: a control group and an experimental group (Cloete, 2018: 479). Cloete (2018:482) argues that the development of critical thinking skills will assist underprepared students in, firstly, coping with subsequent levels of studies and, secondly, coping with workplace demands. Cloete (2018:484, 487) positions integrated assessments in this course as requiring students to solve a real-world problem as a member of a team, and positioned this approach as contributing to the authenticity of assessment and transferability of learning to the future workplace.

Cloete (2018:491) expected to find a significant difference between pre-test and post-test scores after a five-month (one semester) period in higher education for both the control group and the experimental group. While her study showed an improvement for both groups, with a substantial increase in the dimension of 'evaluation of arguments' for the experimental group, the improvement was smaller than expected leading her to suggest that a longer time period of evaluation was needed (2018:492). Based on these results, Cloete (2018:492) recommended contextualised integrated assessments to improve both critical thinking and workplace readiness. She notes that traditional assessments dominate South African higher education, and suggests that a change in staff perceptions is needed. However, she also makes no recommendations for professional development. Cloete (2018:492) does provide a point of interest in contending that integrated assessments in first-year subjects socialise students to higher education requirements and develop critical thinking competencies and that this gain would be further developed if such integrated assessments are utilised in subsequent years.

The South African CHE has published several good practice guides for higher education. In their recommendations, the authors note that, due to the nature of technologies utilised for communication and collaboration in distance or blended higher education, the development and refining of students' critical thinking skills is possible, as the asynchronous context allows students to reflect and contribute more meaningfully in online interchanges (CHE, 2014:39). This online context would

additionally allow for students to see exemplars of other students' application of critical thinking competencies, which can serve as prompts for their own learning. Elsewhere in the good practice guide, the CHE (2014:49) describes what they refer to as activities which build critical thinking and include online research, case studies, problem-based learning, decision-making trees and WebQuests as possibilities in their lists.

As some authors include 'seeing multiple perspectives' as a critical thinking competency, exploring diversity as a contributor to critical thinking has also been researched. Pacarella, Palmer, Moye and Pierson (2001:1) found that a diversity of experiences in college had significant positive effects on students' scores in an objective, standardised measure of critical thinking competencies. However, they found that various diversity experiences influenced critical thinking at different points in the college experience, depending on gender and ethnic identity. In South Africa, the activities measured in the *South African Survey of Student Engagement (SASSE)* included diversity in enriching educational experiences as a substantive area to explore and, in 2009, the SASSE survey found that first-year students reported significantly more interactions with diverse peers than senior students (Strydom & Mentz, 2010:21).

Lawrence, Thomas and Visentin (2006:306, 310) explored the necessity of developing critical thinking competencies from the first year of studying towards an engineering degree, as students come to engineering courses with a variety of experiences and competencies. While they conclude that providing an earlier focus on critical thinking within meaningful or relevant contexts is valuable in allowing students to progress with more confidence, and approach further studies with problem-solving tools, they also admit that further work needs to be done in establishing the effectiveness of such approaches (ibid.:310). Several authors seem to assume that first-year competencies are transferable to more advanced years of study, but a few, like Cargas (2016:130) explore whether learning to think critically about one topic ensures application in other problems or courses. This author suggests that this can be encouraged by repeating critical thinking exercises on multiple topics of research, and exploring multiple points of view on these topics, and argues for the necessity of teaching the related capability of transferring competencies into other courses (Cargas, 2016:131).

3.1.3. Assessment of critical thinking

“But the humanist, revolutionary educator’s...efforts must coincide with those of the students to engage in critical thinking and the quest for mutual humanization.”

Paulo Freire (2005:75)

The South African Qualifications Authority (SAQA) (2014:9) describes “assessment as integral to curriculum”, and “curriculum with assessment is integral to the quality of qualifications.” Consequently, a curriculum designed to develop critical thinking competencies needs to plan for the assessment of these competencies. Yet authors like Haynes et al. (2016:45) comment that there is often a lack of alignment between what competencies academic staff want to develop and the way students are assessed in higher education, even when high impact educational practices are utilised. Both in the literature (Booyse & Du Plessis, 2018:4) and in policy (see, for example, DHET, 2018a), there is the description of ‘assessed curriculum’ as referring to that content portion of the intended curriculum which is included in the assessments related to that course and programme. Therefore, the lack of alignment between curriculum and assessment, as noted by Haynes et al. (2016:45) problematises the relationship between assessed and intended curriculum and could create confusion in the minds of both academic staff and students as to how to accurately measure the attainment of outcomes.

As academic staff strategise to develop critical thinking competencies, they additionally seek to verify that students have these competencies or develop these competencies further by way of competency-specific assessment. As learning is inferential (Schunk, 2012:14), in that we measure learning through its products and outcomes, academic staff may believe students have learned. However, to have tangible evidence that they have learnt requires assessment.

According to SAQA (2014:4), “[a]ssessment refers to the process used to identify, gather and interpret information and evidence against the required competencies in a qualification, part-qualification, or professional designation in order to make a judgement about a learner’s achievement”. Assessment may occur through direct observations, written responses, oral responses, ratings by others, and self-reporting

through instruments such as questionnaires, interviews or dialogues. While direct observations can be valid to ascertain whether a student is able to complete a prescribed task in a prescribed manner, or progress in a skill, a problem with such a mode of assessment is that academic staff can only focus on what can be observed and, therefore, bypass the cognitive and affective processes that underlie actions (Schunk, 2012:15).

In addition, Schunk (2012:15) points out that learning is not the same as performance and, consequently, a lack of performance is not conclusive that students have not learnt. More often, in higher education, learning is assessed based on students' written responses on tests, examinations, assignments, and similar assessments. Based on the level of mastery displayed, the assessor makes judgements about whether adequate learning has taken place (Schunk, 2012:15). However, this is not conclusive that learning has taken place as a result of the activities within learning opportunities.

Activities like pre- and post-testing can increase the probability that a learning opportunity or process contributed to an increase in student's knowledge. However, such testing may not assign causality to such sources. Schunk (2012:15) points out that oral responses are often used within classrooms as an integral part of education culture, and many lecturers will adjust their pace or depth in providing feedback to oral responses to questions or questioning by students.

Curriculum designed to build critical thinking competencies needs to plan for the assessment of these competencies. Lawrence, Thomas and Visentin (2006:309-310) comment that evaluating critical thinking is challenging when students focus on content instead of incorporating the application of content into their examination preparations. They point out that this application of critical thinking seems less problematic within practical tutorials or problem-solving assignments, but also identify that a challenge may be a factor of the pressure of an examination situation (ibid.:310). De Jager (2012) seems to illustrate how this might be applied in articulating the assessments and criteria used in her course.

In considering strategies for assessing critical thinking competencies, Lai (2011:2, 36) endorses using open-ended tasks, real-world or authentic problem contexts, and ill-

structured problems that require students to go beyond recall or restating prior knowledge. Lai (2011:2, 40) further recommends that assessment tasks which have more than one solution, and require the utilisation of collateral materials to develop multiple perspectives, are more successful. Such assessment tasks may be most useful in assessing critical reasoning competencies because these make student reasoning visible in requiring the provision of evidence or logical arguments to support conclusions, judgements, choices or assertions (Lai, 2011:2, 40).

Harlen (in Wyse, Hayward & Pandya, 2016:18) describes three main purposes of assessment: formative, summative and evaluative. However, within the context of South African educational policy, SAQA (2014:14,15) recognises four purposes of assessment – formative, summative, integrated and diagnostic – and distinguishes evaluation as a process to gather evidence and make an informed judgement about “the worth, merit or impact of learning or a programme of learning” (ibid.:5). In the CHE publication ‘Criteria for Programme Accreditation’ (CHE, 2004), criterion 3 (iii) requires that:

“[a]cademic staff are competent to apply the assessment policies of the institution. Some of the academic staff responsible for the programme have at least two years’ experience of student assessment at the exit level of the programme. There is ongoing professional development and training of staff as assessors in line with SAQA requirements.”

Criterion 6 refers to the explicitness, validity and reliability of assessment practices (CHE, 2004:12), while Criterion 13 describes how a programme will be evaluated for effective assessment practices and calls for assessment to be “an integral part of the teaching and learning process and is systematically and purposefully used ... for providing timely feedback to inform teaching and learning and to improve the curriculum” (CHE, 2004:19). Criterion 13 additionally requires that “[a]cademic staff who teach a course/module are responsible for designing, implementing and marking both formative and summative student assessments, for recording results and for feedback to students” (CHE, 2004:19-20). These criteria further require that assessments need to be aligned to learning outcomes and related assessment criteria at the modular and programme levels, and that these are clearly stated and communicated to students and that a range of appropriate assessment tasks is utilised

(CHE, 2004:19-20). These criteria position academic staff as agent-intermediaries who enable policy to find active application in curriculum and assessment design in order to realise all four purposes of assessment.

Sadler (1989) claims that recognising the gap between what a learner currently knows and what they need to know forms the focus of formative assessment. Sadler (1989:119) highlights a key premise being that, for students to be able to improve, they must develop the capacity to monitor the quality of their own work. Since critical thinking includes the capacity to self-regulate and make evaluative judgements, a link between formative assessment and critical thinking as a core competency may be formed to improve learning and determine student success.

Gittens (2016:10) offers a suggestion to assess critical thinking in higher education students as requiring students to apply a central theory from the relevant discipline to a real-life decision-making situation". This aligns with the work of authors like Haynes et al. (2016:45), who suggest high impact educational practices should be utilised to develop critical thinking. However, Haynes et al. (ibid.) points out that higher education is frequently criticised for the assessment of rote learning. They specifically comment that one reason may be that it is easier to construct an assessment that measures retention of factual information than evaluating critical thinking competencies (ibid.). As discussed in sub-section 3.1.2., Cloete (2018:492) argued that contextualised integrated assessments develop critical thinking skills in a first-year South African higher education context. Haynes et al. (2016: 46) cite studies by Anderson and Sosniack (1994) that evaluate the assessment questions used against Bloom's taxonomy: the results showing that as many as 60 percent of test questions were at the knowledge level, 20 percent at the comprehension level, and 15 percent at the application level. While such studies are seldom published, many institutions use a similar analysis to examine assessments as part of professional development (see discussion regarding Bloom's taxonomy in section 3.2. and Chapter 4, section 4.7.3).

In higher education globally, the focus on the cognitive, affective and psychomotor domains, as promoted by Bloom (1956) remains, and are entrenched in the descriptions that outcomes are written to describe what a student (or learner) "knows, understands, and can do" (see for example Lloyd, 2019:19). Outcomes can also be

evaluated to assess what knowledge domains are applicable. However, in the revised Bloom's taxonomy (Anderson et al., 2001), the knowledge dimension was expanded with the inclusion of 'metacognitive knowledge' as a fourth category. Each category represents the range and types of knowledge a student could be expected to acquire or construct during learning. The addition of 'metacognitive knowledge' includes two aspects of "(1) knowledge about cognition and (2) control monitoring and regulation of cognitive processes" (Anderson et al., 2001:43). The second aspect relates to self-regulation and the critical thinking competency as described in Table 3.1. The knowledge dimension is often described by SoTL practitioners²⁷ as a continuum ranging from concrete (factual) knowledge to abstract knowledge as seen in Table 3.2 below.

Table 3.2: Knowledge Dimension types and sub-types (adapted from Anderson et al., 2001: 46)

Concrete knowledge		Abstract knowledge	
Factual	Conceptual	Procedural	Metacognitive
<ul style="list-style-type: none"> • Knowledge of terminology • Knowledge of specific details and elements 	<ul style="list-style-type: none"> • Knowledge of classifications and categories • Knowledge of principles and generalizations • Knowledge of theories, models and structures 	<ul style="list-style-type: none"> • Knowledge of subject-specific skills and algorithms • Knowledge of subject-specific techniques and methods • Knowledge of criteria for determining when to use appropriate procedures 	<ul style="list-style-type: none"> • Strategic knowledge • Knowledge of cognitive tasks, including appropriate contextual and conditional knowledge • Self-knowledge

²⁷ See for example Iowa State University at <http://www.celt.iastate.edu/teaching/effective-teaching-practices/revised-blooms-taxonomy-flash-version/>; or Vanderbilt University at <https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/>

In an outcomes-based approach to education, assessment becomes more aligned to explicit standards against which each student, or rather their work or performance, is evaluated. Yet Boud (2018:2) comments that some of the challenges in this type of approach relate to where marks are awarded for a given course module, and may, therefore, not be indicative of learning outcomes. Based on this approach, students could be assessed as competent on a module on average, and yet, not meet threshold learning outcomes against all criteria. Boud (2018:2) affirms this assertion by pointing out that “students who do well on some learning outcomes may be compensated for poor performance on others”.

In evaluating assessment of programme level learning outcomes, Goff et al. (2015:30) explore the assessment of critical thinking, and remark that due to the diverse meanings of critical thinking in higher education, “in order to be effectively assessed, learning outcomes must define critical thinking in relation to the context of the programme”. They, therefore, recommend case studies, modified essay questions, debates, mock court sessions, simulated problem-solving or argumentative experiences, and open problems as valuable tools to assess critical thinking and problem-solving competencies (Goff et al., 2015:30).

A cautionary note is made by Webb and Cotton (2018:849), however, who found that excessive assessment, or a perception of overwhelming demand by assessment processes, contributed to withdrawal by students from higher education in the UK.

3.1.4. Critical thinking for first-year academic success

"The value of a college education is not the learning of many facts, but the training of the mind to think."
Albert Einstein (1921)

While this chapter initially explored what critical thinking competencies are, and how they are developed and assessed in higher education, the focus now shifts to students' first year in higher education. There is a vast body of literature regarding first-year success and the transition into higher education (Leibowitz, Van der Merwe & Van Schalkwyk, 2009; Levy & Earl, 2012). Ramchander and Naude (2018:139) comment

that course module pass rates, or throughput (that is, the percentage of students passing a course), are used as a measure for student performance and these figures are used to report on student success within faculties at South African HEIs. Ramchander and Naude (2018:139) note that this means that academic success is likened to the student's attainment thereof. There is a perception that there is a decline in the development of critical thinking competencies within the current South African secondary school system (Thinking Schools South Africa, 2015), and many academic staff are lamenting the lack of critical thinking competencies and related problem-solving competencies in students (De Jager, 2012; Frith & Prince, 2016; Lombard & Grosser, 2008; Weimer, 2008). Authors like De Jager (2012:1374) comment that "[m]any first-year students enter higher education without the ability to use higher-order thinking skills".

The change from secondary schooling (high school) to higher education is a substantial transition, and Schunk (2012:464) highlights that transitions are important because they can produce disruptions in routines and ways of thinking, and students have varying developmental levels at times of transition. From Vygotsky's [1962] conceptualisation of child development and learning processes, development is marked by periods of stability (Kozulin, Gindis, Ageyev & Miller, 2003:5). These transition into qualitative transformations ('crises'), in which there are both integration and disintegration of mental functions and structures (ibid.). This complex process is further transitioned by the changing social context of development accompanying such personal developmental milestones in a child – for example, in the transition to formal schooling or secondary schooling – which parallels many of the phenomena described in first-year transitions. Authors like Cloete (2018:480) draws on the work of Swanepoel (1998) in arguing that critical thinking is an enabling factor equipping individuals to manage change, and, from this, argues that critical thinking enables students to adapt to workplaces once they have graduated.

In South Africa, there seems to be a substantive challenge to success and persistence in the first year of tertiary studies, with the highest rates of undergraduate drop-out at first-year level (CHE, 2010; 2013a; Murray, 2014;). Ng`ambi and Johnstone, (2006:244) point out that, in South Africa, increased intake or access to higher education did not translate into increased throughput. While several studies reveal

deficiencies at the secondary education level, the Education White Paper 3 (DOE, 1997:29) states that the higher education system is required to respond to the articulation gap between school attainment and the intellectual demands of higher education programmes as an issue of transformation and admission, with a reasonable chance to succeed. Wilson-Strydom (DHET, 2016:175) described seven capabilities for university readiness as: decision-making; knowledge and imagination; approach to learning; social relations and social networks; respect dignity and recognition; emotional health; and language competence and confidence. Of these, three capabilities explicitly refer to critical thinking competencies: decision-making which Wilson-Strydom (DHET, 2016:175) defines as “being able to make well-reasoned, informed, critical, independent and reflective choices about post-school study”; knowledge and imagination, which includes “... being able to develop and apply methods of critical thinking and imagination to identify and comprehend multiple perspectives and complex problems”; and approach to learning, which is described as “having curiosity and a desire for learning, having the learning skills required for university study and being an active inquirer” (ibid.). Wilson-Strydom (DHET, 2016:175, 177) recommends that multiple opportunities to develop these competencies should be intentionally created at the first-year level if this is insufficient in secondary schooling.

More recently, Mason (2018:119) draws from several sources in concluding that the notion of the underachieving student has become part of the discourse of higher education in South Africa. He describes this underachievement as characterised by an inability to apply problem-solving competencies, negative attitudes, poor concentration, low engagement and low motivation. Based on this admission regarding South Africa HEIs not achieving throughput because students are ill-equipped to navigate their studies at this level, the need for a professional development strategy to enable academic staff to develop critical thinking competencies in first-year students is given significant justification.

The approach taken by the DHET in responding to the deficits noted as first-year students enter higher education, has remained a consistent approach since 1997, despite revisions to primary and secondary schooling curricula. Butler (2013:72) describes how Higher Education South Africa (HESA) developed the National

Benchmark Tests (NBT) with the specific aim of making testing instruments available that would provide “an accurate assessment of entry levels” and how these would inform how HEIs understand and respond to the nature of entry cohorts, including the varying levels of ‘preparedness’ that must responsibly be addressed in first-year curricula and foundation courses, in particular (Griesel, 2006:5).

In response to the lack of student preparedness in entering the first year of their studies, many institutions have set up bridging programmes, such as Academic Development Programmes (ADP) or foundation programmes,²⁸ as a means of increasing academic support to students, with an inadvertent aim of increasing student throughput (Ng`ambi & Johnstone, 2006:244). Ng`ambi and Johnstone, (2006:244) comment that universities in South Africa are faced with the challenge of how to teach critical thinking competencies to students whose preparation for higher education was based on teachers as transmitters of knowledge as opposed to facilitators of learning. Franco (2016:116) points out this is common in higher education globally, where students are comfortable in a passive role towards learning, as developed in secondary schooling, and where expectations in higher education position academic staff as knowledge disseminators. Ramchander and Naude (2018:138) comment that in higher education, where large classes are often more the norm for first-year classes, the mode of delivery tends towards a traditional lecture method that maintains the passive role of students and reduces the development of cognitive skills in this large class context.

Given that a well-designed curriculum would scaffold knowledge, so that it is anticipated that the competencies acquired at the first-year level are foundational for the second-year and third-year success, both in terms of competencies, attitudes and discipline-specific knowledge thus acquired, Wilson (2009:1; also cited in Levy & Earl, 2012:xiii) suggest that expediting effective transitions into and through higher education has become increasingly recognised as part of the core business of HEIs. Levy and Earl (2012:xiii) build on this in saying that the factors which support successful transition include nurturing student motivations and learning routines,

²⁸ See, for example, University of the Orange Free State, University of Cape Town, University of Pretoria, and private HEIs such as Monash University and Pearson Institute (formally Midrand Graduate Institute)

cultivation of supportive learning networks, supporting students to balance study and other life commitments, enabling students to appreciate what successful higher education study entails, and supporting the development of the appropriate competencies. Butler (2013:73) points out that student under-preparedness in academic literacy as disseminated in the languages of teaching and learning is a substantive obstacle to academic success. Therefore, in many HEI interventions, academic literacy development is included as a precursor to developing more advanced academic competencies. More interestingly, for those considering first-year experiences and curriculum design, Cuseo (n.d.:1) asks, “What constitutes ‘evidence’ that student success has been realized and that certain experiences during the first year are responsible for its realization?” This challenges HEIs to evaluate student success against clear, rich definitions of student success and assess how teaching and learning practices are supporting first-year students. While some academics may still refer to a ‘sink or swim’ approach, current South African policy (see, for example, CHE, 2013a; DHET, 2015b) requires greater accountability and evidence collection to improve student success.

Wilson (2009:15) argues that “successful transition to university depends upon their capacity to master the meta-skill of self-management”. This would include the development of self-regulated learning and critical thinking undergirded by meta-learning, and would also be prescribed as an outcome by the South African National Qualification Framework (NQF) level 5 descriptors which inform the required levels of most first-year courses. These level 5 descriptors include the criteria of ‘*management of learning*’, and requires that “a learner is able to demonstrate the ability to evaluate his or her performance or the performance of others, and to take appropriate action where necessary; to take responsibility for his or her learning within a structured learning process; and to promote the learning of others” (SAQA, 2012:8). These perspectives align with researchers such as Ng`ambi and Johnstone (2006:244) who previously reasoned that academic development or academic support initiatives “are only as successful as they are able to create independent learners and instil critical mindedness”. Alt (2015:47-48) found that the extent to which high-order meta-learning functions are stimulated is a positive predictor of academic self-efficacy, is a determinant of students’ level of motivation, and is positively associated with academic success and persistence. Cuseo (n.d.:4) states that student success is more probable

when students find meaning and purpose in their higher education through connections between what they are learning and their future goals. He points out that this often occurs when students are given relevant contexts for new concepts. While there is some research that explicitly supports the development of critical thinking competencies in first-year courses.²⁹

Though well-documented research exists that further points to the high drop-out rate of first-year students in South Africa (CHE, 2013a; 2010; DHET, 2015; Mouton, Louw & Strydom, 2012; and Murray, 2014), what academic staff are doing in their first-year classrooms to combat this high dropout rate, and the efficacy of their efforts is less explored. Lewin (2014:2) feels that a central issue requiring attention within the higher education system, given the numbers of students that are not succeeding in South African HEIs, is the quality and status of teaching and learning. This includes ensuring adequate staffing, resourcing and intellectual development of teaching and learning work; supporting the scholarship of teaching and learning; improving curriculum development competencies and teaching practice competencies; using technology to support teaching; and improving teaching infrastructure. Huber and Kuncel (2016:431-2) show that the academic community has explored whether certain interventions have increased critical thinking competencies and the disposition towards critical thinking. The research reviewed shows modest improvements in teaching generic field critical thinking competencies. However, Huber and Kuncel (2016:460) contend that basic competencies such as reading and mathematics contribute to improvement in critical thinking and, more specifically, that critical thinking in major-related domains are a more practical target for instruction rather than general domains. This suggests both a need to ensure that modules related to reading and mathematics are included in first-year development, and that context informs critical thinking competencies.

Huber and Kuncel (2016:459) suggest that the reason why critical thinking competencies improve when tethered to major-related domains may be due to these competencies being more likely to be retained if they are practised, which is more likely in the major field of study of an academic programme and additionally, that

²⁹ See, for example, Cloete (2018), De Jager (2012), Eberly & Trand (2010) and Thomas (2011). Research often focuses on higher levels or is discipline-specific (see, for example, Swart, 2010; Wentworth & Whitmarsh, 2017; Yang, Gamble, Hung & Lin, 2014).

transferability from a generic context to a domain-specific context is unlikely. Wallace and Jefferson (2013:248) support such reasoning and utilise similar research in planning a successful intervention to improve critical thinking competencies for research and information management with first-year students. Whiley, et al. (2017:178) argue that first-year courses developed to build critical thinking competencies needed to be grounded in sound pedagogy and planned curriculum. They further recommend that academic staff plan continued linkages throughout a degree with the curriculum in the first year to avoid students compartmentalising these competencies as exclusively bound to first-year studies, where they often explicitly developed (*ibid.*).

Webb and Cotton (2018:844) found that students who contemplate withdrawing from higher education in the UK are positively associated with low one-to-one staff contact and non-lecturing formats. In exploring this, Webb and Cotton (2018:845-6) postulate that students benefit from direct support, guidance and feedback for assessments, and that this personalised input from academic staff is critical. Of interest here is their exploration of the correlation between contemplating withdrawal and students who struggled in non-lecturing formats, especially given the previous finding. Webb and Cotton (2018:845) suggest that students who enter higher education expect lectures as the dominant format of teaching and learning, and therefore cite evidence around transitions into higher education that promote that accurate expectations of higher education as being critical for success. From this, they argue that strong induction processes can help students set realistic expectations and align to teaching and learning processes (*ibid.*).

For many students, academic success in their first year of study leads to academic success being measured in achieving a whole qualification and graduating. One of the private benefits accruing from graduating with a degree is improved employability. Given that many institutions describe employability as a graduate outcome and seek to align competencies and knowledge within the curriculum of qualifications to the needs of employees (see discussion in section 3.1.5. below), the contribution of critical thinking for employability and further workplace success needs to be explored to confirm how it may be included as a priority in undergraduate curricula.

3.1.5. Critical thinking for future success and employability

“Our educational systems are preparation for life (in society and its cultures), and work is only a part of that. Preparedness for work is better seen as a side-effect of education, not its purpose.”

Dron (2019)

Redding (2017:4, 5) describes a current tension in higher education between fostering critical thinking and pragmatic employability, where the latter is often described as know-how. However, the value of critical thinking competencies was initially conceived by authors like Dewey ([1925] in Abrami et al., 2015:275) and Glaser ([1941] in Abrami et al., 2015:275-6) as essential for citizenship and participation within a democracy, and Maslow (1970:150) sees the goal of learning as self-actualisation.

Balwanz and Ngcwangu, (2016:49) point out a consideration, in pursuing the future success of students, these students are often ill-informed about tertiary education choices, and specifically about further study and career options. Addressing this requires that higher education not only exposes students to different types of knowledge, occupational fields, and competencies development opportunities, but addresses the match between interests, strengths and weaknesses to support students in linking knowledge to careers. Balwanz and Ngcwangu, (2016:49) describe this difference between information dissemination, and authentic exposure and learning, as similar to the difference between studying Biology as a subject and practising to be a Biologist.

Traditionally, the level of education in a country's population or labour force was measured by the average year of schooling that is educational attainment. There is now a recognition that the number of years completed has little relationship to the level of knowledge and competencies or educational achievement (UNESCO, 2016), and has been commented on by journalists who are exploring the debates around the 'fees must fall' protests. For example, Louw (2016) comments that “the second major problem we're not talking about is the question of whether a degree really is a good investment...”. Louw (2016) quotes studies in the UK, which found that the average

male graduate earns less than those who had not been to university at all. He then questions the dynamic nature of higher education, suggesting an inflexibility that undermines some institutions' ability to stay relevant. This leads him to conclude that "employers' hiring decisions in the future will be based primarily on skill, attitude and competence rather than qualification... Education of the future needs to enable *how to do* rather than teach *what to know*" (Louw, 2016).

Similarly, Hanushek and Woessmann (2008) conclude that there is strong evidence that the cognitive competencies of the population – rather than just school attainment – are powerfully related to individual earnings, to the distribution of income, and to economic growth. Yet, Statistics South Africa (2016:44) published statistics from the *Quartley Labour Force Survey* in 2015, which showed that the unemployment rate was lowest among those with tertiary qualifications, and the labour force participation rate as higher for these individuals.

In Europe, Penkauskienė, Railienė and Cruz (2019:804) found that employers tend to describe critical thinking competencies as "the capacity to avoid mistakes and make right decisions; the capacity to correct and regulate oneself; and as a social responsibility". They argue that critical thinking is valued at work, as it contributes to professional success, personal development and the common good (Penkauskienė et al., 2019). However, in the USA, a survey of employers by the Association of American Colleges and Universities found that only 26 percent regarded the critical thinking competencies of their recently hired college graduates excellent (Jaschik, 2015). Disturbingly, only 23 percent of those employers thought that recent graduates were well prepared at "applying knowledge/skills to the real world" (Jaschik, 2015).

Internationally, CEOs, like Fallon (2017), comment that research is important in enabling a greater understanding of how critical thinking inserts itself within the professional context. Fallon (2017) writes:

"...research leads to a more refined understanding of which skills will be in greatest demand in the years ahead. We see a growing importance of cognitive skills such as complex problem solving, originality and fluency of ideas. In the UK, skills related to systems-oriented thinking such as

judgment, decision-making, systems analysis and systems evaluation also feature prominently.”

In Australia, Lawrence, Thomas and Visentin, (2006:306) refer to accreditation requirements of the Institute of Engineers, Australia, who describe desirable attributes for graduates as being incorporated into professional programme and unit outcomes within the Australian Maritime College Engineering degree. These include “the ability to understand problem identification, formulation and solution”, and “the ability to apply knowledge of basic engineering and science fundamentals” (ibid.).

In South Africa, Garraway (2010:211) explored the problem of higher-education-to-work-knowledge transfer, and notes that there are differences between work and academic knowledge – both in relation to the context of learning and the structure of knowledge – and these differences create distinct communities of practice. Garraway (2010:220) conceptualised that, if curriculum development brings together both the workplace and academic staff, then this creates a zone of proximal development (ZPD) for the academic staff. Garraway (2010:220) suggests that, in this ZPD, academic staff act as knowledge brokers during the process of curriculum development. This seems to align with Cloete (2018:483), who posits that authentic contextualised integrated assessments assist in transferring skills to the workplace context. More recently, Terblanche and De Clercq (2019:2) contextualise their research into updating the higher education auditing curriculum for effective critical thinking development, with reference to recommendations made by both South African and international professional associations of auditors and accountants. These associations investigated the changing needs of accounting and auditing professions in the context of the impact of the fourth industrial revolution, and argue that these professions will require critical thinking, as well as analytical and problem-solving skills. Therefore, the South African Institute of Chartered Accountants (SAICA) extended a challenge to HEIs in South Africa to change the current chartered accountancy curriculum in order to meet these changing demands (CFO South Africa, 2017). Interestingly, at a Chartered Accountants Worldwide event held in South Africa, delegates also noted the need for current and future professionals to “learn, relearn and unlearn” competencies (ibid.), which suggests a greater call for self-regulation and reflection competencies required in this and other professional fields.

From the research outlined above, it can be seen that critical thinking and related competencies are regarded as essential for employability and personal future success. However, the successful contribution of higher education in developing sufficient competencies during the course of students' degree studies is less certain. This articulates the need to explore higher education curriculum approaches to develop and assess critical thinking competencies, starting at the first-year level.

3.2. CURRICULUM STRATEGIES TO DEVELOP AND ASSESS CRITICAL THINKING COMPETENCIES

“The parameters of a curriculum constitute a fundamental framework for the whole teaching and learning process. The framework determines the starting point (and thus what level of student preparedness is actually needed for success), how rigid or flexible the pathways of progression through the programme are (and thus the extent to which different educational backgrounds are allowed for), and the exit level (and thus the quality of the qualification). Thus the curriculum structure exerts a powerful influence on who gains access to higher education, who succeeds in it, and what the outcomes are.”

(CHE, 2013a:92)

In adopting the curriculum approach, critical thinking may be developed explicitly or implicitly: critical thinking can be knowledge or competency assumed to be in place or part of the hidden curriculum. Additionally, although critical thinking competencies may not necessarily be taught, they can still be assessed as part of the assessed curriculum (see Chapter 2, section 2.6.).

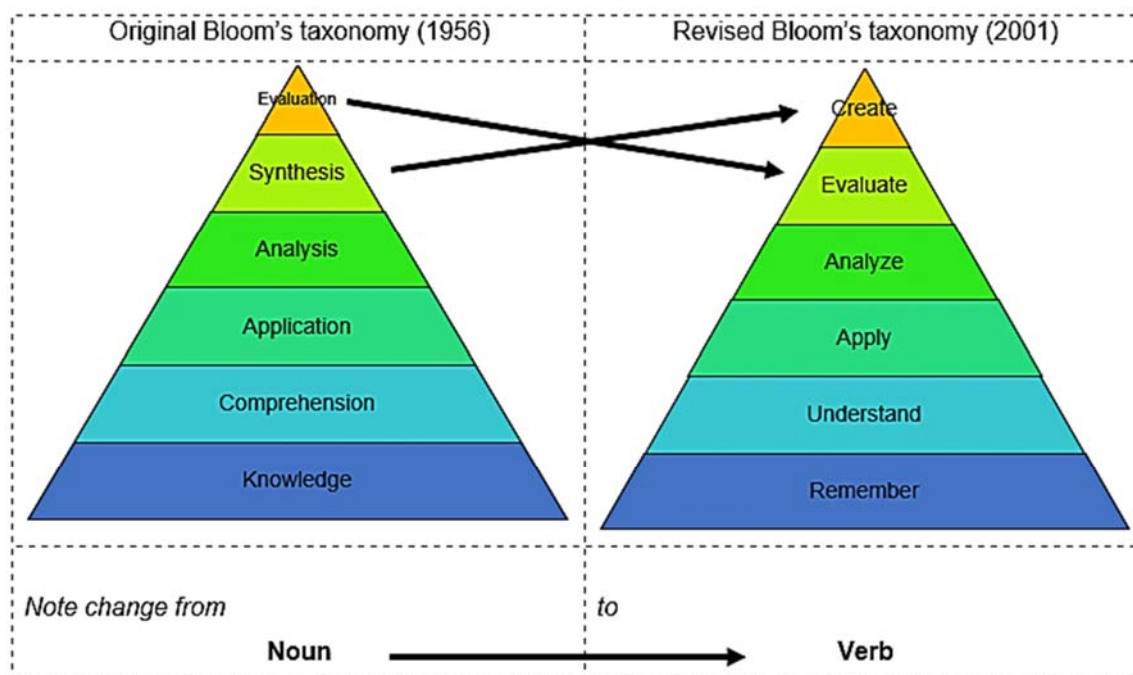
In his review of the field, Deng (2018) builds on the work of Schwab ([1970] 2013), Pinar (1978) and Connelly (2013) to clarify curriculum theorising as including curriculum practice (development, enactment and teaching). He further cites Schubert, Willis and Short's definition of curriculum theorising, where they note this as being “any act of thought about curriculum matters, any phases in construction of a curriculum theory and/or any dimension of analysis of curriculum concepts, practice or principles” ([1984] in Deng, 2018:3). Deng (2018:698) supports Schwab in arguing that curriculum studies is not just a theoretical field, but is a practical discipline aimed at advancing practice through developing theory as “informing doing and decision-making”. From the above distinction, curriculum literature and artefacts of practice

include the exploration of curriculum and assessment documents and the lived experiences of academic staff.

In 2013, the CHE (2013a) published a report of the task team with recommendations for undergraduate curriculum structures. This CHE task team was tasked with investigating possible interventions to address South African challenges in access, success and completion rates by focusing on the undergraduate curriculum structure as “a key element of the teaching and learning process” (ibid.:15). The authors of the report describe systematic obstacles to access and success and the age of the South African curriculum structure as justification for this focus. This report affirms the curriculum as a substantive tool to address teaching and learning practices in developing appropriate competencies. In this report, the task team emphasised that undergraduate curriculum lays the foundation for post-graduate study and employability (ibid.:96, 204), and, in relation to this, positions critical thinking competencies as “strengthening the development of academic competencies and attitudes that underpin advanced study” (ibid.:96).

In the development of the course and programme learning outcomes, and from these related assessments and assessment criteria, Bloom’s taxonomy (or the revised Bloom’s taxonomy) is often utilised to evaluate the cognitive classification of learning outcomes. For example, shortly after the publication of the revised Blooms (Anderson, et al., 2001), co-author Krathwohl (2002:212), in his paper reviewing the revision, described such a taxonomic model as a means of classifying learning outcomes statements of what we expect students to learn as a result of the course’s teaching. This taxonomy has been utilised to benchmark both learning outcomes and assessment questions against the cognitive levels and knowledge dimensions (see, for example, Diab & Sartawi, 2017; Goodwin, Chittle, Dixon & Andrews, 2018; Kozikoğlu, 2018). Bloom’s taxonomy is hierarchical, meaning that learning at the higher levels is dependent on having attained prerequisite knowledge and competencies at a lower level. The figures in the table below gives a brief overview of the levels in the original taxonomy (Bloom, 1956) alongside that of the revision (Anderson, et al., 2001).

Table 3.3: Comparing Bloom's taxonomy (Bloom, 1956) to the Revised Bloom's taxonomy (Anderson et al., 2001), Adapted from Wilson (2016)



In their revision of Bloom's taxonomy, Anderson et al. (2001:30) define 'create' as the highest level, describing this as "putting elements together to form a coherent or functional whole; reorganize elements into a new pattern or structure". When Anderson et al. (2001:84) analyse learning objectives that are classified as 'create', they describe that students would have to make a new artefact by mentally reorganising some elements or parts into a pattern or structure previously not present. Furthermore, Anderson et al. (2001:270) describe that 'problem-solving' and 'critical thinking' are perceived as requiring cognitive processes in several categories of the taxonomy and therefore cannot be confined to one level. However, Potter and Goode (2019:6) note that while the student's ability to create is encouraged during the learning process, the measurement thereof is often shrouded in notions that assessing creativity relies on a more subjective framework, guided by the assessor's own experience.

Given the number of articles and books drawing on Bloom's (1956) taxonomy³⁰, its use in educational research and integration into higher education practice, the influence of the concepts within the model is evident. Authors like Crossley (2016) and Hyder and Bhamani (2016) go so far as contending that while Bloom's taxonomy for learning outcomes is not the only taxonomy, it is the "most influential" within higher education (Hyder and Bhamani, 2016:291).

While critiques of Bloom's taxonomy (Bloom, 1956) and the revised taxonomy's (Anderson, et al., 2001) are evident, these vary in nature from how the model was developed, to the alignment with learning theory, to how it is interpreted and to how it is used in practice. A substantial critique is that while the model is conceptually useful for educators, it devalues the role of 'knowledge' or 'remembering' by placing this at the bottom. For example, Berger (2018) points out that the layered graphic "gives the mistaken impression that these cognitive processes are discrete, that it's possible to perform one of these skills separately from others". More than this, some academics like Flannery (2007) and Lawler (2016) within disciplines like botany and biology, have argued that "recall of information" is essential to complete identification of species, proper documentation of habit changes and achieve insights from observations. However, Krathwohl (2002) was particular in pointing out that the taxonomy levels are "arranged in a *cumulative* hierarchical framework; achievement of the next more complex skill or ability required achievement of the prior one" (ibid.:217; emphasis added). The approach of a cumulative hierarchy is more aligned to Berger's assertion that "[l]earning is not a hierarchy or a linear process" (2018).

Assessment in higher education is, thus, a complex process subject to individual, departmental or discipline approaches and institutional context. Assessment is regarded as critical to student learning, progression and certification, and James (2014:155) endorses the view that the curriculum and knowledge in higher education are visible through (and constructed by) assessment practices. The relative importance of certain topics or competencies can be seen in the assessment design – where assessment design often endorses or prescribes discipline ways of working

³⁰ See, for example, Berger (2018); Bertucio (2017); Crossley (2016); Diab and Sartawi (2017); Hyder and Bhamani (2016); Kozikoğlu (2018); Lai (2011); Lau, Lam, Kam, Nkhoma and Richards (2018); Wilson (2016); Zapalska, McCarty, Young-McLear and White (2018).

and thinking – and assessment practices can reveal explicit or hidden curriculum objectives. James (2014:156) takes this further and states that, for many students (and academic staff), the processes and practices of assessment are the main expressions of the curriculum and valued knowledge. This is often revealed by the frequent student question: “Will this be in the test/exam?”

Assessment design and its associated processes are one of the most critical aspects of assessment practice (Bearman, Dawson, Bennett, Hall, Molloy, Boud & Joughin, 2017:50, Carless, 2015:964-5). Assessment design is defined by Bearman et al. (2017:50) as including all the processes that take place to form specific assessment tasks for a particular course or programme unit within a curriculum, including the selection and timing of tasks, development of memoranda or rubrics, and redevelopment in response to student performance and other feedback. For some educators in higher education, this takes place during curriculum design for the model, where they have autonomy over the curriculum and assessments design; for others, this is part of a plan to achieve curriculum outcomes, as prescribed within an existing curriculum where a standardised exit summative assessment is a professional or national standard (see, for example, accounting, engineering or psychology qualifications which build towards not only academic examination but also professional board examinations). Carless (2015:964) comments that the assessment tasks which students are required to undertake are key drivers of their efforts and learning approaches. While assessment design does not include individual feedback to a student on a task (Bearman, et al., 2017:50), this is a key aspect when an assessment is viewed as part of the learning process.

Bearman et al. (2017:49) comment that there are discords between educators' aspirations for assessment design and actual assessment implementation in higher education. While their research is based in Australia, their findings seem relevant within a South African context. Bearman et al. (2017:63) find that while higher education educators are thoughtful and concerned about student learning and have some degree of control over their assessments, assessment design occurs within both individual and social processes. They find that the assessment design process is subject to environmental influences, professional and personal influences. As a result, Bearman et al. (2017:49) suggest from their research that focussing on relational

forms of professional development that develop strategic approaches to assessment may be beneficial.

Carless (2015:964) argues that effective assessment practice focuses on enhancing student learning processes, but needs to be informed by the awareness that assessments achieve dual purposes, both in the formative assessment for learning, and summative assessment for certification: focussing on the immediate task of learning and equipping students for lifelong learning; and contributing to the learning process whilst covering a substantive content domain. These purposes may compete or conflict with institutional and professional objectives. This lead James (2014) to argue that many educators in higher education perceive that they lack individual autonomy, and find themselves pulled in different directions by assessment purposes other than facilitating student learning.

3.3. CONCLUSION

Chapters 2 and 3 have constituted the literature review, which described the theoretical and conceptual framework, and relevant research, that has informed this study. The conceptual framework drawn on for this research on critical thinking is summarised below:

Chapter 2 presented a constructivist approach in exploring relevant learning theory within a higher education context for both students as adults and academic staff as adult learners and as professional learners. Based on the insight gained in this regard, this chapter considered critical thinking and how academic staff strategise to develop, assess and design curriculum with critical thinking competencies in mind. The value of developing critical thinking competencies for academic success and future workplace success was reviewed. From both the fields of curriculum studies and the SoTL, the strategies of academic staff in conceptualising critical thinking, related competencies, the assessment of critical thinking and the development of critical thinking competencies as theorised in literature were scrutinised. Developing from the literature review, and resulting conceptual framework, Chapter 4 continues to explore

the motivation for this enquiry through a description of the research design, methods and approaches engaged in the study.

CHAPTER 4

RESEARCH DESIGN AND METHODOLOGY

4.1. INTRODUCTION

The previous chapters detailed the existing literature regarding the rationale and pedagogical practices associated with building critical thinking competencies in first-year students. The aim of the literature review was to gain an in-depth understanding of the pedagogical strategies of academic staff to develop critical thinking competencies in first-year students, as currently published. This chapter aims to describe the research methodology used in this study, articulating the research paradigm, the data collection methods, and approach to data analysis within a qualitative approach. The purpose of describing the methodology used, as described by Hart (1998), is to show the appropriateness of the methodological approaches and the techniques employed to gather data. The issues of trustworthiness and ethics are explored in justifying how the research may be accepted as a meaningful contribution.

The research design and methods are reported on in order to contribute to the dependability of the research through allowing the reader to evaluate the research process. The research process adopted for this study comprised two phases and, as stated in Chapter 1, followed a phenomenological case study approach. The first phase involved a detailed literature review, as described in Chapters 2 and 3, though this phase developed in parallel to the second phase as new avenues of enquiry and points of knowledge development were revealed. The second phase involved empirical research and the subsequent data analysis of interviews, curriculum outlines and assessments. This chapter describes the research design and methodology for the empirical research undertaken with the view of such research informing the development of an academic staff development intervention. Qualitative research in education encompasses an array of approaches that are based on inductive reasoning, achieving an in-depth understanding of participant perspectives, exploring specific contexts through thick descriptions of contexts and phenomena, collecting naturally emerging data, often including non-random purposive forms of sampling, emergent and flexible designs and the use of multiple methods of data collection

(Creswell, 2015; Young & Babchuk, 2019) In this study, the context of a qualitative research design is refined to a constructivist approach, and, therefore, the aspects above as well as the roles and responsibilities of the researcher are clearly defined and described.

4.2. RATIONALE FOR EMPIRICAL RESEARCH

As discussed in the preceding chapters (see, for example, Chapter 1, section 1.3. and Chapter 3, section 3.1.2.), few researchers have explored the practice of academic staff in higher education in relation to developing critical thinking competencies in students at HEIs. Additionally, the perceived efficacy of activities for professional development interventions in relation to this is under-researched in South Africa, despite the imperatives of improving teaching in higher education for academic success in South Africa as outlined in, for example, the Council on Higher Education's recent publication on *Learning to Teach in Higher Education In South Africa* (CHE: 2017) and the *National Framework for Enhancing Academics as University Teachers* (DHET,2018b). Both these publications conceptualise the rationale and possible means to address this, but little evidence exists in terms of solid strategical implementation³¹. Exploring this gap will contribute to the scholarship of teaching and learning, through incorporating current theory and practices of academic staff into the conversation regarding how best to ensure professional development that is geared towards strengthening academic staff's curriculum strategies as they should incorporate critical thinking competencies.

The reason for using empirical research in education is to base recommendations on observed and measured phenomena that contribute to an evidence-based approach to developing theory (see for example, Ashwin et al., 2015). Whilst a phenomenological case study within a constructivist qualitative approach is used to explore participant experiences, this study was conceptualised from research reported by authors like Ashwin et al. (2015:vii,415) who assert that there is growing consensus that it is now possible to identify teaching strategies which are more effective than

³¹ For example, the CHE (2017) comments in their review that some aspects are not currently implemented and raise a concern about the limited impact of policy (see for example *ibid.*:30,35,73,78)

others in most circumstances. However, it must be noted that similar expertise and experience does not necessarily result in the same construction of teaching competencies and theory in educators. Therefore, this research could better inform professional development strategies which are based on adaptive approaches to specific educators in their contexts. In the more recent *Framework for Enhancing Academics as University Teachers*, the DHET (2018b:5) notes that “teaching must be research-informed”. McMillan and Schumacher (2010:3) argue that “educators are constantly trying to understand educational processes and must make professional decisions”. This means that empirical research can enable educators to develop their expertise and theory of practice by drawing on such evidence and linkages with theory. Such evidence needs to be explored within new contexts, and the applications validated. Wyse, Hayward and Pandya (2016:4) propose that empirical evidence and robust theory is looked-for in addressing anecdotal, ideological and rhetorical accounts of curriculum, assessment and pedagogy. McMillan and Schumacher (2010:4) agree, commenting that, as research systematically explores phenomena, it becomes a better source of knowledge and as a result, this type of research can be used immediately to improve or justify a practice and build an evidence-based body of knowledge in education.

This empirical research provides an in-depth mode of enquiry within the context of South African higher education and is directed towards informing the practice and professional development of academic staff in order to improve student success in achieving learning outcomes, both academically and in their future workplaces and lives. As such, this study adopts an inductive perspective towards the research participants to explore current experiences of teaching in higher education, their experiences with first-year students, how they perceive critical thinking in higher education, and how they strategise to develop critical thinking competencies. From this, the research moves from the theory of practice to enacted curriculum and considering assessed curriculum practice. In order to approach this from a constructivist perspective, the following section will articulate the research design.

4.3. RESEARCH DESIGN

Within a constructivist paradigm, this research design follows a qualitative approach in order to explore participants' construction of theory and practice within a lived context as academic staff in higher education. Gibson and Hanes (2003:183) comment that qualitative research methods are well-suited to deal with a "messy reality" in which a complex, possibly dynamic, real-world context can be explored. Though education is often perceived as ordered because of the way in which systems are hierarchised and prescribed, the lived experience of academic staff within an HEI, as will be demonstrated in Chapter 5, fits the profile of being complex and dynamic enough to support adopting a qualitative approach within a constructivist paradigm. McMillan and Schumacher (2010:15) particularly describe education as multi-layered and dynamic, and research in this context involves interactions with institutions and with practitioners. As the qualitative approach is well-established as a methodology in educational research, as noted by Silverman (2005:299), this section does not seek to defend qualitative research but justify how this approach has informed the methodology.

Qualitative research attempts to understand and describe participants in terms of their own assumptions and perceptions (Denzin & Lincoln, 2003b; 2003c; Young & Babchuk, 2019) (Denzin & Lincoln, *Strategies of qualitative inquiry*, 2003b). A qualitative approach provides the opportunity to report on the personal experiences of research participants, as qualitative research is concerned with the individual's point of view (Denzin & Lincoln, 2003a:16) of lived experiences. As a research design, it allows the researcher to capture the meaning that participants reveal in the research (Creswell, 2007:15; Creswell, 2015; Young & Babchuk, 2019), thus giving voice to the research participants. This research approach provides a unique opportunity to describe and understand human behaviour from an 'insider perspective' (Mouton, 2001:194). Consequentially, qualitative data is better able to reveal constructed theory that informs practice, as participants may be constrained in implementing their aspirations. Alternatively, research participants may undertake similar actions based on contradictory or conflicting assumptions and theoretical motivations relating to their own teaching practice, and directing these towards either solve new challenges or achieve differing outcomes. Within this study, this characteristic of qualitative research

and phenomenological case studies allows the exploration of the participants' experiences and reflection on those experiences (discussed further in section 4.3.2.). The following characteristics of qualitative research contributed to answering the research question and revealed the theory that informs practice.

As a research strategy, qualitative research focuses on an inductive research process, where the researcher does not go in with preconceived ideas (Merriam & Tisdell, 2016:25; Young & Babchuk, 2019:1). Such a strategy provides an opportunity to understand and describe the academic staff's construction of theory in terms of their own definitions or descriptions, and, therefore, allows for the exploration of context and the research design allows for flexibility. The research undertaken here is concerned with how research participants make sense of their lives and experiences; therefore, the researcher interprets data in terms of how meaning is constructed and how people make sense of their lives in order to uncover and interpret these meanings (Merriam & Tisdell, 2016:25). Additionally, as described by McMillan and Schumacher (2010:15), such educational research does require the participation and cooperation of academic staff as professional practitioners, which was recorded through the consent processes (see Chapter 4, section 4.9. and Annexure D)

This research process was initiated via a literature review. Hart (1998:13) defines a literature review as a selection of documents on the research topic that explore the nature of the topic and how it will be investigated, and the effective evaluation of these documents in relation to the research being proposed. The function of the literature review in chapters 2 and 3, was to provide a theoretical overview of critical thinking competencies and how these develop within an educational context to guide the research process and sought to explore related research, identify gaps, contextualise data in exploring the South African context and thus describe the underlying constructs and assumptions of the research question. The development of such a theoretical framework supports the interpretation of the empirical research and credibility of the findings, and so the literature review assists in demonstrating the need for this study and the contribution of the findings to existing knowledge (Creswell, 2007:89, 116). A literature review can contextualise research and enhance generalisability (Silverman, 2005:295), and was consequently revisited during and after data analysis as a means of informing the interpretation, improving trustworthiness/generalisability, and

maintaining an up-to-date view of new developments in the field. Such an approach to the purpose of revisiting the literature review is in line with recommendations from Silverman (2005:295, 298). As this is a qualitative research design, this enquiry does not include the specific measurement of critical thinking competencies of students or changes in these competencies because these fall beyond the scope of the research questions.

In order to clarify and summarise the research design, the research process 'onion' of Saunders, Lewis and Thornhill (2003:83) was adopted. This onion illustrates the range of choices, paradigms, strategies and steps followed by researchers during the research process (see figure 4.1 below). The different layers of the 'onion' serve as a basis from which to consider the following: the philosophical orientation of the researcher; the research approach adopted; appropriate research strategies; the research timelines that are under review; and the data collection techniques employed.

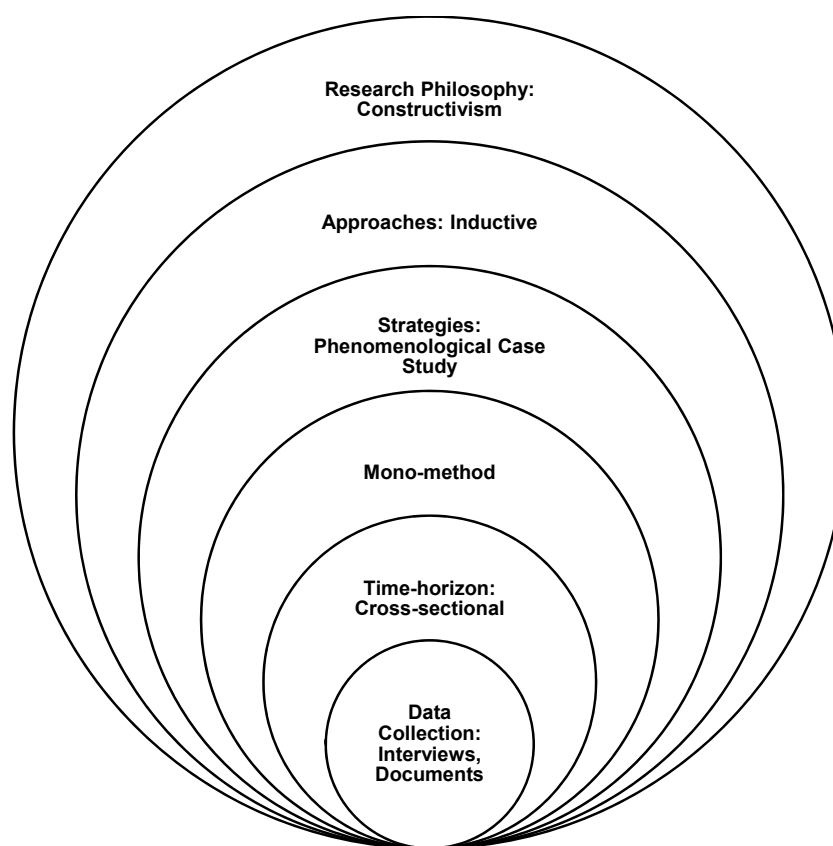


Figure 4.1: Research onion, adapted from Saunders, Lewis and Thornhill (2003)

The research undertaken here falls within the SoTL in that the SoTL investigates classroom practice, using the systematic and intentional methodology, and results in scholarly products that can be built upon by colleagues who practice and engage in SoTL research (Pool & Reitsma, 2017:36). SoTL research is multi-disciplinary in nature (Pool & Reitsma, 2017:40) as educators teach multiple disciplines and apply insights across educational disciplines. Healey et al. (2013:24) state that SoTL “is the process of exploring, researching, developing, refining, reflecting upon, and communicating better ways and means of producing, promoting, and enhancing scholarly learning and teaching in ways that are ethically reasoned and inclusive”. This definition proposes that SoTL research affects institutional practice and educational issues that affect human society (Pool & Reitsma, 2017:37). SoTL is supported by the CHE and is recognised as part of the professional learning of academics in their role as university teachers (CHE, 2017:14, 54, 76).

This kind of SoTL research seeks to explore and evaluate a real-life phenomenon or perceived problem while generating new knowledge (Muir, 2007). The approach, therefore, aligns with applying a phenomenological case study approach. Creswell (2007:4) comments that research is important if it suggests improvements for practice which can enable educators to become more effective professionals. This is achieved by assisting educators to evaluate approaches or offering educators new ideas to consider (Creswell, 2007:5).

4.3.1. Ontological and epistemological assumptions

Given the paradigm and approach chosen to structure the research design adopted here, the assumptions made or implied as a consequence need to be discussed. As authors like Graue (2016:6) note, ontology influences the selection of the research aim and research questions and choices regarding how the research will be implemented. More than this, within this study, ontology contributes to the conceptual framework of the study in that constructions of knowledge and/or learning theory, are informed by beliefs about the nature of knowledge.

In Michael Polanyi's book titled *Personal Knowledge* (Polanyi, 1958), he argues that, for this kind of practice-based study, there is a differentiation between *knowledge-how* and *knowledge-that*. Polanyi gives the example where he argues that, in the act of balancing on a bicycle, the theoretical knowledge of the physics involved in maintaining balance cannot substitute for the practical knowledge of how to ride, and that it is important to understand how both are established and grounded. In this study, the perceptions, practice and theory (constructed meaning) of academic staff with respect to developing critical thinking competencies in first-year students in higher education in South Africa are explored. From an epistemological perspective, this follows a 'knowledge by description' as participants describe both their theory and their practical experience.

In a later work, Polanyi (1966:4) describes that a researcher should start from the fact that "we can know more than we can tell", and terms this pre-logical phase of knowing as 'tacit knowledge'. Polanyi (1966:7) promotes knowing as including both intellectual and practical knowledge; as he refers to the 'knowing what' and 'knowing how' of Gilbert Ryle – both being present in any professional practice. Grant (2007:173) explains that understanding knowing as encompassing intellectual and practical knowledge is relevant in that all knowledge has personal and tacit elements: meaning that knowledge cannot be made fully explicit. Polanyi (1966:13) further distinguishes between the phenomenological, functional, semantic and ontological aspects of tacit knowing. Educational discourse considers different types of knowledge, how to facilitate the learning of these types of knowledge, and how evidence of *knowing*, and therefore *learning*, can be evidenced. Academic staff bring both intellectual knowledge, experience and practical knowledge to their practices. Therefore, in this design, 'what' participants know about their theory and practice is explored both from what they *know* and *tell*, and what they *do*. Interviewing academic staff attempts to reveal their knowledge and understanding. In further reviewing 'visible' artefacts of practice, such as curriculum and assessment documents which are used to achieve the development of critical thinking competencies, more of the articulated knowledge is confirmed and the tacit knowledge revealed.

Moustakas (1994:68-69) asks the following critical questions which have informed this study: "Does language precede meaning or does meaning precede language; does

perceptual experience determine the meaning or is meaning an outcome of concepts and judgments; and is meaning embedded in the experience itself or is it an outgrowth of reflection and afterthought?”. These questions informed this study in choosing a semi-structured interview approach which allows for exploration and clarification. The awareness of the impact of language is noted in chapter 5, section 5.2 and 5.3.1.1. where the languages of the research participants and the impact of students language within the language of teaching and learning are noted. The philosophical approach to the construction of knowledge and how *knowing* is differentiated from *telling* and *doing* informs the collection of multiple types of data to explore a meaningful understanding of what research participants know. Moustakas (1994:68-69) feels that there is general agreement that meaning is at the heart of perceiving, remembering, judging, feeling, and thinking; and that there is further agreement that, in perceiving, one is perceiving something as a phenomenon, (whether this actually exists or not), and that one is remembering something, judging something, feeling something, and thinking something, through a sense-making process. Constructing meaning and sharing that sense-making or perceived meaning requires language. Articulating what research participants do in their practices and enacting their lived practices as educators additionally requires language and meaning-making awareness. *Knowing, telling* and *doing* begins a process of sharing meaning and of construction of meaning in an other. These bring reflection in practice, critical thinking about theory and practice, and possible self-regulation of *knowing, telling* and *doing*.

Smith (1983:12) argues that, within a qualitative approach, researchers need to discuss the epistemological question of what is to count as knowledge. In structuring case study phenomenological research methods, Moustakas (1994:70) draws on Husserl (1931) who differentiates between the object that appears in consciousness and the actual object, between the ideal in perception and the real as it is perceived. Moustakas (1994:70) responds to Husserl’s insight in articulating that “the description of a thing incorporates its meaning”. Thus, a qualitative approach emphasises knowledge that is rooted in meanings and concepts rather than in an analysis of physical objects. Within the context of this study, such insight is useful in determining how a phenomenon is perceived informs how an agent responds to the phenomenon and, therefore, how perception informs theory and practice. In exploring critical thinking competencies and their development in first-year students as a phenomenon,

from the perspectives of academic staff as agents who act to affect first-year students learning, this research seeks to make such perception and conception of this phenomenon more visible through empirical evidence.

4.3.2. Phenomenological case study

Phenomenology is a term that has been described as a philosophy, a research paradigm, a methodology, and is applied within qualitative research approaches (Anosike, Ehrich & Ahmed, 2012:205; Saevi, 2017:1791). Phenomenology has been applied within social sciences, educational and business management research (see for example Dall'Alba, 2017; Gibson & Hanes, 2003; Sanders, 1982; Theodoridis, 2014; Yildaz & Gizir, 2018). This is not a new methodological approach, with, over thirty years ago, authors like Groenewald, (2004:49) and Sanders (1982:3) describing phenomenology as the study of conscious phenomena, and as an analysis of the way in which experiences are lived and explained or theorised, over thirty years ago. Saevi (2017:1792) describes phenomenology as “a way of doing educational (pedagogical) research” to explore questions within the context of educational theory and practice. However, it must be noted that phenomenology and case studies, as qualitative research approaches, are complex and often contested resulting in some scholars identifying different categories of qualitative case studies.

Theodoridis (2014:4) draws on his own research, and on the work of Gibson and Hanes (2003:182), to assert that phenomenology centres on the meanings that participants (or individuals) assign to phenomena rather than raw descriptions of observed behaviours and actions. Theodoridis (2014:4) describes this as a “critical reflection of conscious experience”. Phenomenology may, therefore, be summarised to mean a study of the lived experiences of the participants who are being researched to explore the meaning they construct from their theory and experiences. Given (2008:117) discusses that a phenomenological approach within a constructivist paradigm often utilises interviews as “the researcher asks participants to reflect on their experience of a phenomenon and describe meaning” which allows both the researcher and participant to construct knowledge and gain insight regarding the participant’s experience. Similarly, McMillan and Schumacher (2010:24) describe

phenomenology as “a study which describes the meanings of a lived experience”, rather than only a description of observed behaviours or actions, and that this describing allows for reflection and analysis. These authors align with authors such as Creswell (2015) and Young and Babchuk’s (2019:1) articulation of the characteristics of qualitative research.

More recently, authors like Yildaz and Gizir (2018:312) have described phenomenology as being concerned with “how people perceive a phenomenon, how they remember, how they evaluate it and how it relates to other people... and transfer their experiences to their minds”. Gibson and Hanes (2003:183) comment that the philosophical assumption underlying phenomenology is that people seek meaning from their experiences and the experiences of others, which allows this approach to be well suited within a constructivist paradigm. They (ibid.) further suggest that this meaning leads to a socially constructed reality, which they align with Smith’s description of knowledge as “a matter of agreement within a socially and historically bounded context” (1983:8). Both Gibson and Hanes (2003) and Smith (1983) suggest that the experiences of the research participants reveal a relationship with the phenomenon, in this case, a lived experience of practice, and in this study, a phenomenological case study is applied as a conceptual methodology within a constructivist paradigm, keeping their views in mind.

A case study is an in-depth qualitative research method of a phenomenon or event investigated by engagement in its natural context (Hijmans & Wester, 2010: 178). Case studies are conducted in real-life settings, and, as a result of the boundaries of the case, phenomena and context are not necessarily distinctly separate and are therefore elaborated upon within the research inquiry. Timmons and Cairns (2010:100) describe the case study methodology as flexible in that it allows a researcher to study a variety of phenomena: from common to unusual, or simple to complex interactions. Timmons and Cairns (2010:101) further outline that the case study approach is flexible in that it allows investigation of constructs not anticipated in the researcher’s original aims. McMillan and Schumacher (2010:24) add that a case study can draw on multiple sources of data as found within the setting. The case study approach, being identified as the most applicable means of achieving understanding for the purposes of this study, develops an in-depth analysis of the lived experiences

of a few individuals in relation to the phenomenon. In this study, the phenomenon in question refers to what academic staff do to develop critical thinking competencies in first-year students.

Case study investigations often produce a phenomenological theory of the processes involved, which are then informed by theoretical concepts and utilise qualitative data gathering methods to explore and analyse the phenomena. Timmons and Cairns (2010:100) argue that the use of case studies in educational research creates both knowledge and understanding through gaining exposure to a particular phenomenon. They conclude that this can enable an overall higher quality of education for students (*ibid.*). Marshall (2010:723) describes this as practice-orientated case study research which involves inquiry into the methods of professional practice in relation to an aspect of practice. The goal of such research is to utilise researched knowledge to enhance the development and implementation of policy and practice, as is the aim in this study.

The validity of this type of research is dependent on the access that the researcher gains to the knowledge and meanings of the participants (Theodoridis, 2014:5). Where the sample size for this research is discussed in section 4.5.3., the justification for striving for depth and quality of understanding, rather than striving for a greater quantity of participants, is intimated here. Sanders (1982:356) supports this claim in proposing that the phenomenologist researcher should probe the research phenomena in-depth whilst being less concerned with the number of informants. Theodoridis (2014:8) draws on the work of Yin (2003) to argue that case studies can be generalisable to a theoretical proposition and, therefore, in doing a case study the aim is to develop and explore theories.

Theodoridis (2014:6) further points out that the case study method has been used in research problems that concern decision-making, as this allows for focus on a group of actors whilst permitting the researcher to explore their perceptions. In-depth interviews are a common method of conducting a phenomenological research project, where interviews are supported by other data such as documents or observations. When considering phenomenological case studies, Creswell prefers a systematic methodology, as outlined by Moustakas (1994) and adopted by Theodoridis (2014), in which participants are asked two broad, general questions: "What have you

experienced in terms of the phenomenon?"; and "What context of situations have typically influenced your experiences of the phenomenon?". In case study research, defined as an in-depth exploration of a bounded system within a real-life contemporary context or setting, Creswell (2007:476) emphasises that a critical component is to define a case that can be bounded or described within certain parameters (such as a specific place and time). This is supported by Sanders (1982:356) who proposes a phenomenological research model including the determination of limits of what and who is to be investigated. Creswell (2015, 2007) notes that, while a case may reference a single individual or several individuals separately or in a group, what is being investigated can determine the boundaries of the case and thus the scope of the study.

In addition, case study researchers must be sensitive to the ways in which research participants conceptualise and act in relation to institutional boundaries surrounding the phenomenon being studied (Elger, 2010:56). Gibson and Hanes (2003:202) conclude that phenomenological research is an effective methodology for researchers who explore human experience in organisations and is especially applicable when dealing with complex issues, such as is the case in managing the multiple perceptions and concepts of critical thinking that are applied here, and how they are articulated and managed by academic staff. Therefore, in this research, the case study design, as proposed by Creswell (2007:476-7) is utilised to provide insight into the issues related to both to first-year curriculum design by academic staff in the context of a specific private HEI, and to the critical thinking skills development strategies employed within the classroom.

Theodoridis (2014:9) outlines that a phenomenological case study can have six (6) steps: construction of the lifeworld – through a literature review and development of interview schedule; the interviewing; an exploration of intentionality which includes the thematic analysis; validation of the transcribed data by interviewees, which builds trust and achieves intersubjectivity; phenomenological reduction, where the feedback is used with other sources of data; and the resulting theory building. Moustakas (1994:155) describes this final stage of theory building as "the researcher summariz[ing] the study in its entirety and now considers possible limitations". He (ibid.) further indicates how the researcher should return to the literature review and

distinguish findings from prior research, outline a future research project that would advance knowledge on the topic, and discuss the outcomes of the investigation in terms of social meanings and implications as well as personal and professional values. The research undertaken here responds to the process outlined by Moustakas (1994:155) in Chapter 6.

However, an additional step was added in constructing guidelines for a professional development intervention that responds to the phenomenon and insight established, whilst being coherent with the existing literature and theory. The call towards establishing such a professional development intervention constitutes an original contribution to the field, as described in Chapter 1, section 1.3. As a result, this enquiry aspires to achieve what Moustakas (1994:162) refers to as the aim of phenomenological investigation: where the researcher develops as an expert on the phenomenon; the research describes the nature and findings of prior research; the research report develops new knowledge on the topic, and the research describes the kinds of future research that would deepen and extend knowledge on the phenomenon.

4.3.3. Methodological assumptions

Methodological assumptions are the assumptions made by the researcher regarding the methods used in the process of qualitative research (Creswell, 2007). These assumptions are specified to both clarify the alignment between the qualitative research approach, a constructivist approach and the phenomenological case study method as well as contribute to the dependability of the research. An inductive approach was taken in data analysis, in that this research seeks to develop concepts, insights and understanding from the data rather than test data against hypotheses. The inductive approach is a core characteristic of qualitative research and a phenomenological approach as discussed above (Creswell, 2015, 2007; Young & Babchuk, 2019). Inductive reasoning seeks to establish a relationship between observations and theory in order to inform insights and theory “intended to apply beyond the sample of participants interviewed” (Given, 2008:429). Given’s definition of the inductive process, therefore, guides this research in extending beyond merely

understanding towards application, thereby promoting the attainment of the research aim.

Drawing on the constructivist approach to learning (as discussed in Chapter 2, section 2.1.) the impact of the context is explored both in the interview questions and data analysis. Some authors, like Mascolo and Fischer (2015:114), feel that the analysis should begin with considering the role of context and that individuals vary their actions based on context and support for skilled performance. In this research, the national and HEI context was considered systematically and thematically within the data analysis. Therefore, the literature review articulates national policy and context, and the data collection at the site included collecting relevant policy documents as HEI-specific.

Within a phenomenological case study design, methodologically, phenomenology is characterised by four major concepts as described in Table 4.1 below:

Table 4.1: The major characteristics of the phenomenological methodology (Gibson & Hanes, 2003:184-6; Theodoridis, 2014:4)

Intentionality	The object or experience exists in one's mind in an intentional and always conscious way
Lifeworld	The context where individuals experience phenomena
Intersubjectivity	The act of researchers' being with, and developing a trusting relationship with, the researched individuals as they describe their experience
Phenomenological reduction	The process whereby the researcher perceives, thinks, remembers, imagines and judges the contents that build the phenomenon

Developing from contextual considerations, this study progresses to the lived experiences of research participants as functioning within a specific context and possibly informed or constrained by the context and then extending this to the evidence of practice. Moustakas, (1994:84) argues that evidence from phenomenological research is derived from first-person reports of life experiences. Therefore, this research draws on a rich description of the South African higher

education context and current literature in chapters 2 and 3, as well as the Institutional context and policy (analysed in Chapter 5, section 5.3.2.) to inform the interpretation of the data and lived experiences of participants as described in the interviews (described in section 5.3.1.) and triangulated against evidence of practice in Chapter 5.

4.3.4. Advantages of using a phenomenological case study

Hijmans and Wester (2010:178) advocate that choosing the case study maintains the naturalness of the research situation and the natural course of events. This type of research design permits the investigation of dynamic social processes in the research setting (Hijmans & Wester, 2010:178), which is relevant to pedagogical and andragogical practices. Hijmans and Wester (2010:179) recommend that the complexity of such situations requires triangulation of viewpoints in order to improve the quality of the research. Therefore, allowing multiple research participants, and exploring their institutional context with evidence of practice in document artefacts, allows for a richer exploration. Timmons and Cairns (2010:102) maintain that case study research is valuable in education by informing educators about situations they may encounter in practice. A well-documented case study can be used by current and prospective educators to explore the value of a specific theory, or challenges in real-life, whilst presenting possible solutions and actions that can be taken to address similar scenarios.

The qualitative approach adopted here allows the perspectives of participants to be considered. The use of semi-structured interviews in relation to this type of case study allows for an exploration of the opinions and constructions of the participants as they make meaning and adapt their practice in response to new experiences and additional information as it emerges. Timmons and Cairns (2010:101, 103) see that case study research is particularly valuable for policy development and exploring the impact of policy implementation. A policy is often informed by the lived experiences of policy writers or a systematic review of research cases to identify good practice or impact of existing policy and practices (see, for example, Hénard, 2010:3). Therefore, in this study, the exploration of the site and HEI included the review of relevant policy (see

Chapter 5, section 5.3.2.) as constituting a contextual stimulus that participants assimilated with or adapted to. In addition, case study researchers must always be sensitive to the ways in which participants conceptualise and act in relation to institutional boundaries surrounding the phenomenon being studied (Elger, 2010:56). In this study, this meant that the institutional policy was also analysed and participants were explicitly questioned in this regard (see Annexure C, which contains the interview question “How do your institutional environment and their policies impact on your practice?”). Furthermore, in this context, the articulation of SoTL research and practice in South Africa may enhance the further development of policy review and practice at HEIs as a form of practice-based feedback.

By incorporating a phenomenological approach into this case study, this research is better able to integrate multi- and inter-disciplinary bases (as described by Gibson & Hanes, 2003:200). These are useful to the curriculum studies field, where curriculum and learning theory is applied within many disciplines. However, the research design allows for the focus of the study to be on the experiences and practices of the research participants and not on comparing the disciplinary approaches.

4.3.5. Challenges of using a phenomenological case study

Whilst case studies attempt to be detailed investigations of a specific phenomenon, this methodology faces practical limits regarding the extent to which a researcher can broaden their analytical scope without jeopardising the study's strengths as an intensive or holistic analysis (Elger, 2010:57). Therefore, this case study is similarly bounded by practical considerations of the timeframe for the study, the availability and consent of participants, the availability of relevant documents and other resources, and the required consents and ethics requirements needed to access the context of the HEI. Such considerations can be thought of as the temporal and methodological bounding of the case (Elger, 2010:57, 58). These methodological and temporal bounds are regarded as a disadvantage in that they may be research project and case-specific, and could, therefore, reduce generalisability or repeatability. Whilst one case study can be described as limited in generalisability, Timmons and Cairns (2010: 101) argue that, when the findings are considered with other findings, wider

applicability is possible. Therefore, this study includes the literature review and returns to the literature and other research findings in qualifying how the findings of this study, outlined in chapters 5 and 6, could find wider application.

A further limitation related to phenomenological case studies is the number of participants involved. Schunk (2012:13) states that “[a] potential limitation is that qualitative studies typically include only a few participants, who may not be representative of a larger population of students or teachers” (Schunk, 2012:13). The use of phenomenological case studies, therefore, limits the generalisability of findings beyond the research context because, as findings may present as context-specific, the experience of the phenomenon in other similar contexts may vary based on, for example, policy, resources, culture, language, intended learning outcomes, etc.

Another further limitation is that data collection, analysis, and interpretation can be time-consuming (Schunk, 2012:13). This is due to the volume of data collected, the attention to detail required, and the emergent nature of inductive research. Nonetheless, as a research model, this paradigm offers a useful approach for obtaining data typically not achieved through other approaches. Therefore, qualitative research yields rich sources of data, which can be more intensive and thorough.

Timmons and Cairns (2010:102) advocate that maintaining the anonymity of the participants involved in the case study research is very important, this can become difficult in some situations where some of the variables that contribute to the phenomenon could potentially serve as identifying factors. In this instance, the researcher needs to provide enough detail to maintain research validity, but plan for maintaining the anonymity of participants. This is discussed in further detail in section 4.10.

4.4. ROLE OF THE QUALITATIVE RESEARCHER

The main role of the researcher in a qualitative study is that of the primary instrument for data collection, analysis and interpretation (Creswell, 2015; 2007; Henning et al., 2004:7 Merriam & Tisdell, 2016). The responsibility of the researcher rests on them

being sensitive to the role of context in making judgements (Henning et al., 2004:20). As described by Graue (2016:5), ontology, epistemology and methodology affect the above-mentioned researcher roles. While this study acknowledges the influence of the researcher's background, theories of praxis, ontology and epistemology, the researcher strives for accountability in the collection and interpretation of data: achieved through triangulation, transparency and 'rich' descriptions of sites, methods and participants. This notion of researcher accountability is supported by Singh (2017:4), who argues that "[r]esearchers with an understanding of their ontological, epistemological, and phenomenological positions will be able to account for their own subjectivity in their research designs and conclusions". Phenomenological constructs of phenomenological reduction are, therefore, supported in that the researcher is called on to perceive, consider and judge the contents that build the experiences of the phenomenon, in order to communicate the perceptions and experiences of the participants.

Based on the requirements of a phenomenological approach, the research methodology proposes that the role of the researcher, within an interviewing process, includes facilitating meaning-making by asking questions that link experiences and theory. McMillan and Schumacher (2010:346) include appreciating and presenting the participant's voice as part of the researcher's role. Similarly, the research participants may create meaning in tandem with the researcher through sharing experiences and construction of meaning by describing their experiences and meaning-making processes: what Smith (1983:8, 12) refers to as a 'subject-subject' relationship between the researcher and research participant, and the subject under research.

The role and position of the researcher can influence the building of trust and rapport with participants and can contribute to the willingness of research participants to contribute to data collection. In this study, the researcher was known to several participants as a past colleague. However, the researcher was not employed within the HEI concerned. Given the relatively smaller size of the private higher education industry in South Africa, this type of relationship was likely at several sites. Based on participant feedback, having known the researcher prior to the interview contributed positively to access and trust-building, while engaging additional feedback during participant checking and ensuring researcher accountability to participants. This is

similar to what Snyman (2013:141) described as a benefit of prior experiences with a group which enhanced access to the participants as a result of existing trust and rapport with the research participants. Snyman's observation affirms the phenomenological constructs of intersubjectivity as being the act of researchers being with, and developing a trusting relationship with, the researched individuals as they describe their experience.

4.5. RESEARCH METHODS

This section on research methods begins by describing the site for this study. This is followed by a discussion of the selection of the participants and the sampling procedures that were followed and builds on the application of the qualitative research approach of a phenomenological case study.

4.5.1. Selection and description of the site

The site of research was a private HEI Campus. As described in Chapter 2, section 2.7. and 2.7.1., private provision of higher education is a growing part of higher education in South Africa. This sector is subject to the same quality assurance requirements, and the Commission of Enquiry into Higher Education and Training (2017:101) described these HEI as equal in the provision of undergraduate education. In order to maintain confidentiality and ethical commitments, the private HEI is referred to as [Private Institution] in all references. At the time of the onset of research and selection of sites, the HEI concerned had over 3000 students and the majority of the students were accessing higher education for the first time as recent matriculants: either through a higher certificate, foundation programme or initial degree studies. The HEI offered a range of qualifications in several faculties. This provided a significant population of lecturers with first-year experience in various disciplines. At this campus site, lecturers were responsible for the design and implementation of course modules for first-year students. The HEI is a relatively long-standing HEI of almost 25 years, with multiple sites of delivery nationally: this, despite changes in ownership and name, which are aspects common to private HEI in South Africa in recent years. The HEI had

reviewed policies and had undergone programme accreditation and reaccreditation reviews by the national quality assurance council throughout its existence. The HEI campus site on which the primary research was conducted had professional development structures in place and had a history of internal teaching excellence awards. This meant that lecturers were aware of the value of professional development and the commitment to related professional competencies.

In addition, the HEI had a research ethics committee in place, who acted as a gatekeeper to give permission for research, and academic staff had been informed, through their own post-graduate studies and research, as to research ethical practice. In requesting access for the research undertaken here, receiving permissions was achieved in an accountable way.

In relation to the description above, the HEI was experiencing changes in student numbers and qualifications offered, as well as undergoing internal restructuring to align with recent ownership changes and the merger of two previously separated HEIs: which occurred two years prior to the onset of the study conducted here. This impacted on policy and curriculum document review as, during the study, some policies were in the process of being updated or had been recently updated: for example, the Assessment policy was updated after the onset of the study and prior to data collection. Furthermore, there were efforts to align material templates to the new policy and branding guidelines, as discussed in Chapter 5, section 5.3.3. Several changes were consistent with recent developments in higher education in South Africa and were not unique to this provider, such as the move to a digital blended learning approach to teaching and learning.

This site was one of several HEIs familiar to the researcher and, therefore, selection became purposeful and convenient. The site selected was large enough to assist the researcher in meeting aspirations of more than one faculty, to allow for the inclusion of different fields of study and methodologies, and to allow for the inclusion of a variety of disciplines offered to students. Therefore, a sufficient pool of first-year lecturers was accounted for in determining appropriate research participants without pressurising for consent. In contrast, several other private HEI sites often are niched or specialised with respect to a field of study or industry affiliation. The selected HEI site also

permitted access to academic staff who were setting the curriculum and developing material. At some private HEI sites, there are centralised offices where material and assessments are developed and only lectured at the campuses by academic staff. This site resolved this constraint and, therefore, allowed for richer data collection.

4.5.2. Selection of participants

As discussed above, participants were selected based on criterion sampling within the context of a private HEI campus site. Participants were selected as constituting academic staff who lecture first-year students at this HEI, as well as who develop curriculum and assessments in such courses. This selection of participants is, therefore, purposive and constrained by the case site, consent and access to participants at the site.

The number of participants was influenced by considering a range of diverse academic disciplines within first-year curricular offerings. HEIs are usually organised in clusters of like disciplines that have some form of similar cognitive structure or paradigm. In South Africa, HEIs use the Classification of Educational Subject Matter (CESM), as developed by the then Department of Education (2008), to align qualifications and fields of study to the HEMIS (Higher Education Management Information System). HEMIS which requires institutions to classify the subjects or fields of study embedded within the programme concerned. Therefore, all disciplines are referred to with reference to this classification.

The initially desired diversity included at least one academic discipline within different faculty programmes: such as Commerce, Visual Arts, Humanities, Law, Information Technology and Science, so as to include different fields of study and different methodologies. However, due to issues of consent, as well as practical considerations, a full spectrum of disciplines was not achieved. That being said, sufficient diversity was achieved to build insight from different disciplines. In addition, it was proposed to include diversity in terms of language competencies, numeracy, theoretical and applied knowledge, and academic competencies development. This aspect of diversity was better achieved. Diversity was also documented in terms of participants'

gender, qualifications and experience. The diversity in terms of gender, age and experience are discussed in Chapter 5 (refer to section 5.2.).

‘Discipline’ is defined by the Oxford English Dictionary (2019) as “a branch of learning or scholarly instruction”. In 1973, Biglan (1973) classified disciplines along 3 dimensions – hard vs. soft; pure vs. applied; life vs non-life, as indicated in Table 4.2 below:

Table 4.2: Biglan's classification of academic disciplines, adapted

	Hard		Soft	
	Life	Non-Life	Life	Non-Life
Pure	Biology Biochemistry Genetics Physiology etc.	Mathematics Physics Chemistry Geology etc.	Psychology Sociology Development Studies Political Science Anthropology etc.	Linguistics Literature Communication Science Economics Philosophy History etc.
Applied	Agriculture Dentistry Pharmacy Medicine etc.	Engineering Computer Science etc.	Arts Education Nursing Human Resources Management etc.	Finance Accounting, Marketing Journalism Graphic Design Law Interior Design etc.

The disciplines, indicated in bold type, are those included in the research undertaken here, allowing for a diversity of discipline-specific andragogic and pedagogic perspectives. Such diversity in participants is a form of triangulation, in that the individual viewpoints and experiences are used to verify other’s viewpoints and experiences (Shenton, 2004:66). Such corroboration then allows the findings to be applied more broadly to comparable situations.

Site triangulation may be achieved through the participation of academic staff at several HEI, so as to reduce the effect of local factors peculiar to one institution on the study (Shenton, 2004:66). Nonetheless, this was not achieved within this research design and is, therefore, identified as an avenue for further research.

4.5.3. Sample size

In this study, a purposive and convenience-based sampling method was applied to support a purposive phenomenological case study approach. Timmons and Cairns (2010:102) show that using the case study approach enables researchers to complete a comprehensive study with a smaller sample size, and, thus, allows the research to be undertaken in a smaller timeframe. However, such a smaller sample size should be compensated for through purposive sampling (Timmons and Cairns, 2010:102). Purposive sampling increases the relevance of participant contributions by increasing focus in relation to the phenomenon under investigation. This is also seen as vital (Theodoridis, 2014:6).

Pool and Reitsma (2017:44) observe that, while research participants should participate voluntarily in the research process, the population may be limited due to purposive sampling. This is because only those participants who meet the specific criteria or are within a specific cohort or class in which the research study is conducted and who consent to such research participation may limit the population and therefore the sampling.

Theodoridis (2014:6) notes that the number of participants necessary in sampling for a phenomenological case study is not clearly set in literature, where variations from four (4) to ten (10) are typically used. However, the limited quantity of participants is offset by the emphasis on quality and depth in that there is a shift away from the volume of participants to theoretical saturation from a variety of participants. The shift towards quality and depth builds on the work of Sanders (1982:356) who argued that “more subjects do not yield more information”, and that the interview depth is more significant in allowing for exploration of the participants’ experience and meanings. This aspect of qualitative research is often described as “redundancy of data”, and,

therefore, most research design according to this type of case study proposes a minimum sample size which may be increased as the study continues (McMillan & Schumacher, 2010:329). In this case, the sampling minimum was set at 8 before the empirical research commenced in order to achieve both diversity in discipline types and diversity in terms of language competencies, numeracy, theoretical and applied knowledge and academic competencies development. The minimum selection criteria for academic staff members included the following:

- Lecturers who were lecturing first-year students in higher education;
- Lecturers who were responsible for developing curriculum and related assessments for a course module offered to first-year students; and
- Lecturers who were available at the site who consented to be interviewed.

During the course of the study and particularly while conducting interviews, it became possible to interview two additional academic staff members who met the original criteria and were available at the time of the interviews, and this was pursued to check for saturation and data redundancy. In this report, no cases were omitted from the study once consent was obtained, and a final number of 10 cases was explored.

At the onset of the study, the HEI site selected employed 140 academic staff members who lectured. Of these, not all academic staff were involved in curriculum development or development of related assessments. The pool of academic staff who lectured first-year students was identified as a subset of these academic staff and constituted approximately 45 lecturers. As this institution draws on part-time contracted academic staff as well as full-time academic staff, the academic staff numbers fluctuate each semester. Consequentially, the sample of approximately 10 constitutes a significant proportion of first-year lecturers.

Possible research participants were contacted via email at the beginning of the 2018 academic year, and provided with information about the research and the letter of consent (see Annexure C). Three prospective participants failed to respond or declined. It was confirmed through the campus academic manager that some of those who failed to respond were no longer lecturing at that campus site. As this was a private HEI, the use of contracted or part-time lecturers was included and the turnover

of such academic staff is often higher than full-time lecturers. The increased turnover has been ascribed to the demand for increasing flexibility in staff numbers caused by annual variations in student intakes, the maintenance of part-time practices outside of higher education (for example lawyers or designers), or the findings that academic careers are less stable or not as well-paid, as articulated by Beaton and Gilbert (2013:18-20). Those who declined indicated that they felt that they either did not meet the criteria, were unavailable due to lecturing responsibilities, or, in one case, was on sabbatical to pursue a post-doctoral fellowship. However, as stated previously, such challenges did not disadvantage the research process as a sufficient number of participants was achieved.

4.6. DATA COLLECTION

Data collection was done through interviews and document analysis of course outlines (or syllabi), related assessments and policy documents of the institution concerned.

4.6.1. Semi-structured interviews

To explore participant views, this research employed semi-structured interviews to collect data in the form of spoken words. In phenomenological approaches, interviewing is regarded as a 'typical technique' (McMillan & Schumacher, 2010: 24). Siedmann (2013:9) writes that the purpose of an interview is to "understand the lived experience of other people and the meaning that they make of that experience". Siedmann (2013) elaborates by clarifying that, if a researcher's goal is to understand the meaning people involved in education make of their experience, then interviewing provides a necessary and sufficient mode of inquiry. From a constructivist paradigm, this makes interviewing an appropriate part of the research design in exploring academic staff's perceptions of what is required in developing critical thinking competencies in first-year students through their practice. A semi-structured interview was used to support other data and this process commences with the preparation of interview questions. Sanders (1982:357) argues that, as the focus in phenomenological approaches is the in-depth exploration of lived experiences, it is

better to start with fewer questions and probe these areas intensively than to ask too many questions.

Following the qualitative approach, the approach to interviewing participants modelled itself more on a normal conversation than a fixed formal question-and-answer exchange (Taylor, DeVault & Bogdan, 2016:9). An interview is consistent with a constructivist paradigm, as Taylor, DeVault and Bogdan (2016:114) describe an interview as a form of social interaction within which the participants and interviewer are face to face and explore the meanings of each other's words, expressions and gestures. As interviews with participants progressed, their answers were probed and clarified, allowing new lines of enquiry to emerge. This means that an interview question guide was used as a starting point (refer to Annexure C), and then participant answers probed in a conversational approach. The direction of probing was informed both by researcher curiosity (as consistent with the researcher as the instrument) and participant responses. As a result, there was some expected variation in interviews with the different research participants. Data emerged in the form of verbal feedback.

McMillan and Schumacher (2010:346) propose that the personal interview is one of the key data collection processes for phenomenological studies. In this research design, the interviews were semi-structured to standardise question themes and allow probing of answers or exploration of answers. The interviews were conducted face to face. Only one interview per research participant was planned in the initial design. However, a follow-up interview was provided for in order to clarify findings after reviewing data from curriculum and assessments, though this was not utilised due to the satisfactory alignment between the types of data (see Chapter 5, section 5.4.).

The purpose of a phenomenological case study was to explore how research participants experience phenomena (within the *lifeworld*) and who they are in relation to the phenomena, and so participants were encouraged to provide rich (detailed) descriptions of their experiences (Gibson & Hanes, 2003:187) and their meaning-making processes through probing questions. While interviews are used to learn about participant perspectives, the participants also were observers in reporting on and describing strategies employed in the classroom, actions taken to promote critical thinking, and measuring student reactions to these strategies and actions (Taylor,

DeVault & Bogdan 2016:104). Receiving participant feedback about their own theory and practice creates opportunities for a participant to misrepresent their action and responses as a way of presenting themselves more favourably. This constitutes the reason as to why multiple data sources are used to confirm descriptions of practice. In addition, the interview process, and the participant articulation of practice, can initiate a reflective cycle that the participant had not previously embarked on. Paget ([1983] in Taylor, DeVault & Bogdan 2016:114) referred to the interview as a 'search procedure', where the interviewer and participant collaborate to reveal aspects of the participant's experience and insights that are of interest in the research. This may mean that knowledge and meaning are constructed during the interview (Taylor, DeVault & Bogdan 2016:114). Through the process of being interviewed, the participant may develop new insights and understanding of their knowledge. If they have not previously reflected on this in the ways approached by the interviewer, by asking questions and probing for meaning, interviewers are able to encourage participants to articulate things that they may not have articulated before. In addition, gestures and tone, as non-verbal aspects of communication, can add interpretive meanings.

Taylor, DeVault and Bogdan (2016:102) comment that within a qualitative approach, interviewing is flexible and dynamic. They also point out that, in using non-standardised and open-ended questioning, this directs an interview towards understanding participant perspectives in their own words and this type of interview is modelled after "a conversation between equals rather than a formal question and answer exchange" (Taylor, DeVault & Bogdan, 2016:102). Initially, in such an interview, the interviewer attempts to establish rapport with participants and enable them to reveal what is important to them before focussing on research interests (Taylor, DeVault & Bogdan 2016:102). Within this type of approach, the research explores participants' views, but attempts to remain non-judgemental (Taylor, DeVault & Bogdan, 2016:116). This strategy is used to encourage honesty in participants (Shenton, 2004:67), as participants are encouraged to contribute their ideas without image management.

While participant observation can yield a depth of insight regarding a lecturer's practice, this may fail to reveal the thinking and theory used to choose certain activities

and actions. Interviewing can, however, invite descriptions of theory. In addition, observing all learning activities covering a full semester's curriculum for several lecturers at the same time becomes impractical within time constraints of this study, and might not yield more insights than interviewing and document analysis. Interviewing and document analysis allowed access to more participants within the same academic year.

Taylor, DeVault and Bogdan (2016:105 -106) suggest that interviewing is appropriate where the research interests are well-defined; where interviewing allows access, where there are time constraints; and where a researcher is interested in understanding a range of participants. The limitations, however, include: that participants may say something different to what they do; that the language used by a participant may be misunderstood if the words used are not universally understood in the same way conceptually; and that participants may be unable to articulate some of their thinking and experiences (Taylor, DeVault & Bogdan, 2016:106). These can be addressed through strategies that lessen these limitations, such as confirming what a participant means in using certain terms and using triangulation through related documents sources. However, these limitations may not be fully mitigated, in terms of achieving trustworthiness, and is common in this type of research.

Interviews occurred over a 3 month period in 2018 towards the end of the first semester, over the mid-year break and beginning of the second academic semester, as this meant that the academic staff felt they were more available without conflicting with their timetable constraints (in South Africa, the first semester runs from February to June and the second semester from July to November). The timing also allowed the use of course material and assessments that were more recently developed for first-year students. The ten interviews averaged approximately 40 minutes each, with the shortest being 30 minutes and the longest being 60 minutes. Where participants were clearer regarding their practice, interviews were more succinct as less probing was required.

4.6.2. Document analysis

Following the semi-structured interview process, the related course module/subject outcomes and assessments documents were requested from the academic staff (lecturers) concerned. These were evaluated in order to explore if the outcomes and assessments show evidence of developing and accessing critical thinking competencies. During this period of data collection in 2018, the related institutional policy documents such as the Teaching and Learning (tuition) policy, Assessment policy and Curriculum Design policies were collected, as these both inform and constrain the development of curriculum at an institution. Tribe (2001:447) suggests that a curriculum is socially constructed, as the product of human thought and negotiation, and such an observation could account for the variability of curriculum design as a human-directed response to the policy. The inclusion of these documents in research design supports the triangulation of interview data with supporting documents as proposed by Taylor, DeVault and Bogdan (2016:93) and Shenton (2004:65). According to these sources, triangulation refers to the combination of methods or sources of data in a study and may lead to a deeper understanding of the data or confirm insights (Taylor, DeVault & Bogdan, 2016:93; Shenton, 2004:65). The document analysis, therefore, assists in verifying details provided by participants during interviews, and can also assist in exploring the context of the participants (Shenton, 2004:66).

The documents consulted were considered as secondary data through document analysis. Such sources of data were explored for evidence of theory in practice and revealed perceptions, discrepancies or correlations can be identified. Some authors, like Mascolo and Fischer, (2015:114) feel that the analysis of documents should begin with an analysis of the role of context, considering that individuals vary their actions based on context and support for skilled performance. Therefore, investigating the documents that describe the policy context requires further exploration of understanding academic staff's strategies and conceptions of students; objectives of their curriculum and critical thinking competencies; and how theory is translated into practice.

Gibson and Hanes (2003:195) suggest that the aspiration of phenomenological research is crafting a well-argued text and that this is part of the process by which researchers and participants sustain a conversational relationship. Therefore, the aim of the document analysis, when brought alongside the analysis of interview transcripts, is to engage these in conversation with each other. Doing so will reveal potential challenges and opportunities for professional development, focusing specifically on how academic staff engage first-year students in developing critical thinking competencies.

4.7. DATA ANALYSIS

This section describes the approaches and methods for data analysis and interpretation. In this study, the analysis of the data was postponed until the majority of the data collection had been finalised to prevent the analysis from interfering with the emergent nature of the qualitative research design. This approach to data analysis was more likely to allow for a consistent analytical focus and perceptions of patterns across data, as the analysis was carried out within a designated block of time. As described by Creswell (2007:244), in analysing qualitative data from interviews and documents, as was done in this study, an inductive approach was followed. This included reviewing the detail of data and specific transcripts and developing to more general themes. Codes are described by Given (2008:105) as being used to organise sections of text as a means of exploring themes and patterns within data. Codes can be informed by the research questions, literature, and interview protocols (Given, 2008:105). Coding is discussed in more detail in the next three sections. Each section describes the themes and codes that emerged inductively from each data type: interviews; course module curriculum and policy documents; and assessment documents. The themes and codes were then compared, aligned (if needed), and simplified during triangulation.

4.7.1. Data analysis of interviews

In order to ensure adequate recording of data, the researcher took notes and recorded³² the interview to allow transcription and checking of transcriptions. From this, the first phase of data analysis sought to identify and compare the themes and activities of the interviews. In order to ensure impartial transcription, the transcriptions were prepared by a research assistant and the researcher used the audio recordings to check the accuracy of the transcriptions. During the notetaking and interviewing, the researcher identified some linkages with literature, policy documents collected and themes across interviews. These were noted for further analysis in a manner that is similar to what is described by Creswell (2007:245). Like other research, during data analysis, there is an interchange of the researcher's prior knowledge, literature review, the input of participants, the identification of themes and the context of the study. However, to ensure the rigour and validity of the data analysis, linkages and the data analysis process is described and challenges acknowledged, thereby achieving transparency.

The second phase of the analysis of the interviews incorporated identifying themes from the interviews. From a phenomenological case study approach, after the interviewing and documentation, the researcher explores meaning by analysing the descriptions of the interviewees in, what is described as, a tripartite (i.e. whole/parts/whole) structure, as described by Bostrom (2019: 1004) and Gibson and Hanes (2003:194). This phenomenological approach is similar to what Smith (1983:12) describes as a hermeneutic approach to the interpretation of the text, where the meaning of any part of a text requires an understanding of the meaning of the whole. To facilitate this phase of analysis, transcripts were developed in word processing files, where an initial check was conducted against the recording. To assist in the storage, analysis and sorting of data, computer tools such as the programmes, Microsoft word and QDA Miner Lite, were utilised to store coding and comments (Creswell, 2007:245-6). This allowed for the integration of themes across documents, as well as for the collapsing of some codes. Due to the volume of data collected, and

³² Recording of research participant interviews was done using an Olympus Digital Voice Recorder,

the triangulation between interviews, course module documents, assessments, and policy, a meaningful interpretation required movement between the parts and the whole as described in the tripartite approach to phenomenological research above. Additionally, Smith (1983:12) points out that to understand a chosen action requires an understanding of the context within which it takes place, as expressed in the language of the context. Therefore meaning, as proposed by Smith (1983:12) is both socially and environmentally bound. Such a hermeneutic approach aligns with the description offered by Given (2008:116), where a knowledge of context is needed for interpretation and “interpretation develops out of a... movement between parts and the whole”.

Data was analysed via content analysis to explore concepts and themes, as well as to adjust and interpret these. Content analysis is interpretive and recognises that context informs meaning (Given, 2008:121). As this is a phenomenological case study, like Yildaz and Gizir’s (2018: 314) approach, it is necessary to utilise detailed descriptions, including direct quotations, in order to provide validity and reliability. As recommended by Given (2008:121), codes were generated using language consistent with the text under analysis, and aligned to themes evident in the literature. Therefore, identification of possible codes was initiated during the literature review. Codes were then grouped to enable answering of the research questions. The phenomenological case study approach is interpretive and sense-making, as findings and insight are cognitively constructed. Consequently, where relevant, direct quotations were utilised in the data analysis, as reflected throughout Chapter 5.

In Table 4.3 below, the coding themes utilised during data analysis of interviews are shown. As described by Bostrom (2019: 1004), the codes were sorted into potential themes and thus, the overarching themes were grouped under critical thinking competencies, first-year experience, professional development and roles of lecturer and student.

Table 4.3: Coding used during data analysis of interviews

Perception of Practice		Critical Thinking Competencies	Professional Development (PD)	Institutional Context
Roles	First-Year Experience			
Lecturer	Academic Success	Analysing arguments, claims or evidence	Institutional PD	Institutional Context
Student	Institutional Access	Asking and answering questions for clarification	Communities of Practice (Peers)	Blended learning
	Critical thinking importance	Identifying assumptions	Discipline-specific PD	Bloom's taxonomy
	Student Support	Interpreting and explaining	Formal Studies	
	Develop reading competency	Making inferences using inductive or deductive reasoning <i>(includes drawing conclusions)</i>	Informal learning	
		Judging or evaluating	Online workshop/course	
		Making decisions or solving problems	On-the-job	
		Predicting	Research	
		Seeing multiple perspectives	Reflective Practice	
		Synthesising information	Workshop Interactive	
	Self-regulation			
	Creative thinking			

Initial provisional codes were informed by literature used to develop the semi-structured interview schedule (Annexure C) and then refined during data analysis. Codes not applied were omitted and some codes were refined based on the data. For example discussions regarding professional development from communities of practice, peer review and mentoring were merged. An additional aspect was that the role of the lecturer was differentiated during the review.

4.7.2. Analysis of curriculum and policy documents

Policy, assessment and curriculum documents, identified here as research artefacts, were collected for each course module from the research participants.

Curriculum learning outcomes per course module discipline were analysed against the NQF 5 level descriptors (listed in Annexure G for reference purposes), the components of critical thinking identified in Chapter 3 (see section 3.1.1.) and Chapter 5 (see section 5.3.3.), against the Anderson et al. (2001) revision of the original Bloom's taxonomy (Bloom, 1956) and relevant knowledge domains (see Annexure H: Example of Analysed Data: Course Module Outcomes). These tables of analysis were then reviewed by a peer acting as a curriculum manager at another private HEI.

The abovementioned process of document analysis follows the work of authors like Brumwell, Deller and MacFarlane (2017:5) who maintain that learning outcome assessment can be a means of improving educational quality and accountability. More recently, Schoepp (2019) evaluated learning outcomes of ten internationally highly ranked universities in the USA and UK, as discussed in Chapter 2, section 2.6.

As indicated in the discussion in section 4.7.1. above, comparable codes from the interview coding (refer to Table 4.3) were applied to policy documents during analysis, as initially proposed and then refined. While critical thinking was referred to in policy (see Chapter 5, section 5.3.2.), the differentiation of various critical thinking competencies were not evident and, therefore, the subcodes were removed. Additionally, all first-year student experience aspects were merged under items relating to access and success. This resulted in fewer codes applied during coding. As a result, the following themes emerged, as detailed in Table 4.4 below:

Table 4.4: Coding used during data analysis of policy documents

Roles of lecturers and students	First-Year Experience	Critical Thinking Competencies	National Policy Influences	Professional Development
Lecturer Student First-year students	Access and Success	Critical thinking competencies and student success	National policy	Formal Studies Institutional PD Mentoring On-the-Job Peer feedback Reflective Practice Research

Bowen (2009:27) defines document analysis as “a systematic procedure for evaluating documents”, and requires that this type of data be examined and interpreted in order to gain understanding and expose meaning. Bowen (2009:27) draws on several authors to describe documents as containing text and images that have been formed without a researcher’s intervention, are shared and utilised in socially organised ways. Document analysis, therefore, yields data as quotes or excerpts which can be organised into themes or codes through content analysis. In this study, document analysis has been used with other qualitative research methods as a means of triangulation (Denzin & Lincoln, 2003b). Thus, the review of module guides and assessment was used to reveal enacted curriculum, teaching and learning practice and corroborate what the participants had stated in the interviews. Institutional policy was used to explore institutional context as an influence on academic staff’s praxis with respect to the phenomenon of critical thinking competencies. The above follows the advice of Bowen (2009:33), who makes the point that when evaluating documents, researchers should establish which documents relate to the research phenomenon. Therefore, during the research, selected policies that related to teaching and learning, assessment, material development, lecturer selection and professional development, were reviewed, as indicated in Table 4.5 below:

Table 4.5: Selected policies and institutional documents

Assessment Policy (2018a)
Teaching and Learning Policy (2014)
Staff Development, Recruitment, Selection, and Equity Policy (2017a)
Policy for the Development of Learning Materials (2017b)
Policy on the Monitoring and Evaluation of Teaching and Learning (2017c)
Conditions of Enrolment (2018b)

The same codes as developed for the interviews were applied, where applicable, in analysing the policy documents for alignment and to support triangulation. However, during the review of policy documents, some codes were further refined, and additional codes explored for professional development and the role of lecturers and students.

4.7.3. Analysis of assessments

As discussed in Chapter 3, while such studies are seldom published, many institutions review assessment questions against Bloom's taxonomy (Bloom & Krathwohl, 1956; revised by Anderson and Krathwohl, 2001) to examine the cognitive levels of assessments as part of professional development. For that reason, a similar strategy was utilised to examine academic staff assessments (see Chapter 3, section 3.2., and Chapter 5, section 5.3.4.).

4.8. DEVELOPMENT OF PROFESSIONAL DEVELOPMENT INTERVENTION

From the data collected and analysed, the literature review undertaken, and findings communicated, recommendations regarding professional development strategies will be made. These will then be used to create a professional development intervention that supports the enhancement of and critical reflection on learning activities used to develop critical thinking competencies in first-year students. This contribution falls within SoTL.

In higher education, SoTL investigates classroom practice, using a systematic and intentional methodology, resulting in scholarly products that can be built upon by colleagues also engaging in SoTL research (Pool & Reitsma, 2017:36). Creswell (2007:4) comments that research is important if it suggests improvements for practice which can enable educators to become more effective professionals. This is achieved by assisting educators in evaluating approaches or offering educators new ideas to consider (Creswell, 2007:5). Therefore, offering workable solutions and strategies is part of the contribution of this research, and will assist educators in reflecting on their approaches, offering inputs to better consider their practice through professional development, and promoting suggestions for the South African context of practice. This is achieved by building on the contributions of others engaged in SoTL research, as documented in the literature review, and on the links found between research findings and the literature, as described in Chapter 5.

Within SoTL, using academic staff as research participants may result in reflexivity through the research process. This may occur when the research or interview processes allows a research participant to reconsider their practice and make meaning or achieve new insights in attempting to answer the questions. While such reflection is as a result of the researcher's presence and the research process followed, McMillan and Schumacher (2010:333) argue that, in qualitative research, the progress of the research often depends on an interaction between the research participant and the researcher. This, however, also means that data may have been influenced by the researcher during the interview process. McMillan and Schumacher (2010:333) conclude that this can be minimised through multiple data collection strategies. It is the view, here, that, questioning by an other may result in new insights of the research participant into their practice, and that the researcher should, therefore, be aware of this, and also be mindful of their potential influence on the participant within the interview process.

4.9. TRUSTWORTHINESS, VALIDITY AND RELIABILITY

Like other forms of qualitative research, this study has been conducted within a specific context and has been cognisant of the differences in subject content between

academic disciplines, as delivered by the participants. This means that the findings may not be generalisable for all contexts, and some findings may be discipline-specific. The purpose of this study is not to provide a complete model of developing critical thinking competencies in first-year students, but to explore how academic staff, in a South African context, approach the development of these competencies in their pedagogical approaches. Nevertheless, this research seeks to achieve trustworthiness through addressing the criteria for educational research, as suggested by Guba ([1981], in Anney, 2014; Johnson, Adkins & Chauvin, 2020; and Shenton, 2004): credibility, transferability, dependability and confirmability.

In addressing credibility, the research methodology will attempt to show that a factual picture of the research is being presented. This has been achieved through member checks, reflexivity and triangulation of interview data with supporting documents (Anney, 2014:276-278). To allow transferability, sufficient detail of the context of the research was provided as a means of determining whether the specific context is similar to another context: specifically through the provision of a 'thick description' (Anney, 2014:278), and whether the findings can justifiably be applied to the other setting (Shenton, 2004:69-70).

The dependability criterion has been addressed in this chapter to at least enable future researchers to repeat the study and the application of overlapping methods (Shenton, 2004:73). Dependability is synonymous with reliability, and refers to, when a study is replicated, whether it will achieve the same results as the first iteration (LeCompte & Aguilera-Black, 2012:615). However, in non-experimental research, such as that done in case studies, LeCompte and Aguilera-Black (2012:615) advance that the real issue is "whether or not the conditions in the original site, the characteristics of the original population, the methods used, and the researcher's stance and role have been documented with sufficient care that another researcher, given the same or similar conditions, could replicate the study". This type of detail allows a principle of comparability to be applied when relevant, as a measure of reliability. Dependability is also thought of as stability of findings over time (Anney, 2014:278), and has been further supported by member checking in this study. Finally, to achieve confirmability, researchers must take steps to demonstrate that findings emerge from the data and

not their own predispositions (Shenton, 2004:73). As far as possible, this has been aspired to and achieved.

Validity refers to the “degree of congruence between the explanations of the phenomena and the realities of the real world” (McMillan & Schumacher, 2010:330). Fendler (2016:215) argues that ‘valid’ describes a way of reasoning as a means of reviewing whether inferences and conclusions derived from results are appropriate. McMillan and Schumacher (2010:330) describe the validity of qualitative research as the degree to which the interpretations given have a mutual meaning between the researcher and the research participants. To enhance validity, member checking and participant review may be used as a strategy (McMillan & Schumacher, 2010: 330-331), which was applied in this research design. The interview accounts include the use of the participant’s own language and verbatim quotes in justifying emerging themes in analysis. The audio recording of interviews, and checking of transcriptions against the recordings, was also utilised to ensure accuracy. From time to time, the use of the participant’s own language and verbatim quotes may result in informal or grammatically incorrect language. However, these were retained for accuracy.

Furthermore, validity is the research principle that necessitates that the instruments or methods used actually measure the intended concepts. This requires using questions and items that are meaningful and make sense for the population being studied (LeCompte & Aguilera-Black, 2012:616) and includes the exploration of whether constructs used have the same meaning for the research participants as that intended in the study. LeCompte and Aguilera-Black (2012:616) apply internal validity in qualitative research as a means of assuring the extent to which a researcher confirms that the results obtained, and the data described and the concepts utilised, authentically clarify what the research participants *do* and *believe*. In qualitative approaches, this includes that the narratives and explanations are viewed as credible by the participants. For this reason, member checking and triangulation of interview data with curriculum artefacts and assessments were developed and entrenched within the research design.

Triangulation adds to establishing strategies of credibility, dependability and confirmability in a qualitative approach. The purpose of triangulation in qualitative

research is to achieve crystallisation as it provides the qualitative researcher with the possibility of interpreting data from different points of view or perspectives (Denzin & Lincoln, 2000:5). In this study, triangulation across the three types of data and the inductive coding process, as discussed in section 4.7., is described in Chapter 5, section 5.4.

Fendler (2016:217) comments that reliability is connected with generalisability and defines reliability as the “degree to which research findings pertain to people in times and places other than those on whom the research was conducted”. In order to achieve this criterion, research must have two components: research should be a “systematic investigation”; and research should be “designed to contribute to generalizable knowledge” (ibid.). In clarifying these components, Fendler (2016:218) draws on Michigan State University’s Human Research Protection Program Manual (2015) to clarify criteria for generalisable knowledge: knowledge contributes to a theoretical framework of an established body of knowledge; results are expected to be generalised to a larger population beyond the site of data collection or population studied; and results are intended to be replicated in other settings. Similarly, Fendler (2016:218) describes a “systematic investigation”, as a study which: attempts to answer the research question(s); is methodologically driven by the collection of data in an organised and consistent way, and that data collected is analysed by quantitative or qualitative data analysis; and those conclusions are drawn from the findings. This research employed the process of “systematic investigation” as outlined by Fendler (2016:218), and the investigation is designed to both contribute to the SoTL body of knowledge and with the hope that this will contribute to the professional development of other academic staff at additional HEI.

4.10. ETHICAL MEASURES

Research ethics exist to ensure the autonomy and well-being of the research participants at every stage of the research process (Pool & Reitsma, 2017:38). In line with the guidelines proposed by Pool and Reitsma (2017:38), this research recognises that there is a need to acknowledge and manage risks to the participants’ current and future well-being in educational research. In qualitative research, the ethical guidelines

refer to obtaining informed consent, avoiding deception, establishing confidentiality and anonymity, and promoting respect and caring. McMillan and Schumacher (2010:338) maintain that these ethical guidelines must often be applied in complex dynamic educational contexts. Therefore, SoTL researchers must demonstrate that they have conscientiously and thoroughly considered the ethical implications of their work, as well as that they have fostered personal ethical reflection without being prescriptive (Pool & Reitsma, 2017:37-38).

In response to this call, the first step in engaging in research was to receive ethical clearance from the College of Education at UNISA (see Annexure A: Letter of permission for ethical clearance). This was received on 15 November 2017. Ethical clearance was additionally obtained from the Research Site HEI through the appropriate research Committee (see Annexure B).

Pool and Reitsma (2017:39) review several publications which highlight principles for ethical research involving human participants, and make reference to respect, privacy, conflict of interest, confidentiality, and risk to benefit analysis. Current guidelines for ethical principles in research are often based on three founding documents: the Nuremberg Code (1949), the Declaration of Helsinki (World Medical Assembly, 1964), and the Belmont Report (1979) (Michigan State University, 2015). The Belmont Report (National Commission for the Protection of Human Subjects of Biomedical and Behavioural Research, 1979) refers to three fundamental ethical principles that are applied when using any human subjects for research: respect for persons, beneficence and justice. This means that an ethical approach should protect the autonomy of all participants and treat them with courtesy and respect through allowing for informed consent. The Economic and Social Research Council (2019) further develop the three fundamental ethical principles entrenched in the Belmont Report (1979) in proposing six core principles for ethical research, and state the following:

“research should aim to maximise benefit for individuals and society and minimise risk and harm; the rights and dignity of individuals and groups should be respected; wherever possible, participation should be voluntary and appropriately informed; research should be conducted with integrity and transparency; lines of responsibility and accountability should be clearly defined; and independence of research should be

maintained and where conflicts of interest cannot be avoided they should be made explicit.”

Economic and Social Research Council (2019) also recommends that researchers should consider ethics issues throughout the lifecycle of a research project, as different ethical issues can emerge at different stages. This suggests that ethical review or approval is not a single event, but a continuous process applied within research practice.

Elias and Theron (2012:151) add that fidelity, responsibility and integrity should be included as ethical principles, where research should establish relationships of trust with participants, and researchers should take responsibility for their behaviour in pursuing honesty and similar ethical behaviour. In accordance with the South African Constitution, and authors like Elias and Theron (2012: 152), respect for people’s rights, worth and dignity is aligned with the rights of individuals to privacy, confidentiality and self-determination. This has an impact on two practical aspects of the research: the protection of the participants (both the students and the academic staff) in terms of confidentiality and anonymity, and the data-gathering process.

While much of SoTL research can be ethically challenging when the research occurs within practitioners’ own classrooms, sometimes as action research, this investigation does not face the ethical challenges of the dual role of researcher-lecturer and the resulting relationship of the researcher-lecturer to their students, not only as learners but also as research participants (Pool & Reitsma, 2017:40). In much of SoTL, the lecturers as researchers cannot distance themselves from either their teaching or research, thus becoming an ‘insider’ researcher (Pool & Reitsma, 2017:40). The research design used will engage the lecturer as a critically reflective practitioner through interviewing and participant checking. However, this type of research does not permit the use of control groups, as no hypothesis is being tested in experimentation.

The ethical risks need to be weighed against the perceived benefits of the research: in this case, there is a dual focus on improved teaching and learning and research output. In this study, the risk was assessed as low to the participants. This is because,

although there are human participants, they are non-vulnerable informed adult participants, and the interviews focus on non-sensitive information. Most academic staff can be regarded as informed in having an understanding of research processes and procedures (as documented in their postgraduate qualifications at Masters or Doctoral levels in Table 5.2). In addition, no deception was used as a strategy.

The interviewing of participants required them to volunteer time and share reflective insights. Participants were asked to submit assessments and course module syllabi for document analysis. Participants' criteria were set as being that they are adults over the age of 18 years, who are employed as academic staff, and who lecture first-year students. Informed consent was obtained through a letter which included the requisite elements of an informed consent document, as described by Elias and Theron (2012:153-154). A copy of this letter may be found in Annexure D: Written Invitation to Participants to Participate in Research.

As organisational boundaries are often clearly marked, monitored, and managed, a researcher is required to negotiate access to the Institution (Elger, 2010:56). In this case, permission was obtained from the HEI concerned (refer to Annexure A: Letter of permission for ethical clearance). In order to mitigate risks associated with conducting research at the participants' workplace, the researcher made sure that, after obtaining informed consent and ensuring that the right to withdraw was understood, protection of confidentiality was established through anonymising settings and participants in research reports. After the research was conducted, participants were extended the invitation of being able to review their transcriptions and how this would be used in the thesis. This invitation would potentially be relevant to those participants interested in that aspect of member checking, or who are familiar with such research. This is consistent with the research design and characteristics of phenomenological methods, as discussed in section 4.3.2.

As the researcher does not work at the private HEI concerned, there is no risk derived from managing any of the participants and the researcher cannot intervene in performance management or similar decisions. As such, the participants will not be disadvantaged in any such interaction. Furthermore, the participants were anonymised through the use of pseudonyms. Where one participant referred to the

name of another participant, this was aligned to the pseudonym of that participant in reporting, as represented in the transcripts of interviews. Other names were changed to ensure the safeguarding of non-participants and confidentiality of participants. Any use of the names of the Institution concerned was amended to '[Private Institution]' and other identifying names of the tools of the institution were also adapted and represented in square brackets. Changes were tracked for accountability and coloured for review.

In research related to SoTL, the students as research participants are regarded as a vulnerable population, due to the power differential between lecturer and students (Pool & Reitsma, 2017:41). The power relation between student and educator/researcher places the responsibility on the more powerful person (the educator/researcher), to act in the best interest of the other party in the power hierarchy (Pool & Reitsma, 2017:41). As the researcher is not involved in the teaching of students, this reduces the potential conflict of interest. Additionally, the focus of this research is on what academic staff do to develop critical thinking competencies, and how they verify this in the artefacts of their practice. This confirmed the need for triangulation to verify findings and insights.

During data analysis of the interviews, names of the participants with pseudonyms, as well the name, programme names, other identifying features and the location of the private HEI, were anonymised. Additionally, where a participant referred to another staff member by name, these names were also anonymised to protect the confidentiality of non-participants at the site. The analysis of documents and inclusion for publishing in this dissertation had the name, any identifying features and the logo of the institution anonymised to protect the confidentiality of participants. An idealised view of anonymity is that a person will never be traceable from the data presented about them (Pool & Reitsma (2017:42). However, guaranteeing complete anonymity to participants can be an unachievable goal in SoTL research, especially where qualitative research is used, as rich descriptions may identify a site, and thus a participant. Some commentators argue that since the primary researcher (in this case the interviewer) knows who the participants are, true anonymity is, by definition, never achievable as there will always be at least one person with access to participant information (Pool & Reitsma 2017:42). The research undertaken incorporated a

realistic appraisal of anonymity, with the view that true anonymity, though not achievable, could be aspired to through the strategy employed, as described above.

4.11. CONCLUSION

This chapter described the research design and methodology used in the study and articulated the research paradigm, the data collection and approach to data analysis within a qualitative approach. This included a description of the site, population and sampling of the research participants. In order to improve an understanding of context, details of the context and choices were articulated. The use of a phenomenological case study and the methods chosen were described. The chapter concluded with a discussion on the means trustworthiness, reliability and validity were ensured and outlined the relevant ethical considerations for SoTL research as applicable for this study. The next chapter reports the data analysis, findings and triangulation of the empirical research undertaken.

CHAPTER 5

FINDINGS AND DISCUSSION OF EMPIRICAL RESEARCH

5.1. INTRODUCTION

The purpose of this chapter is to present and discuss the findings of the empirical research. As outlined in Chapter 4, this research was informed by literature and proceeded from a qualitative approach, as described in the research methodology. This chapter, therefore, analyses the data from interviews with academic staff as participants, the respective participants' curriculum documents, and the Institutional policy – constituting the parts of enquiry – with the view of understanding how academic staff perceive their curriculum and practices as developing critical thinking competencies in first-year students.

The chapter begins by examining the descriptive and biographic details of the research participants to inform the analysis of the data. The data analysis commences with an analysis of the semi-structured interviews and then proceeds to the analysis of the Institutional policy documents and course module documents in order to review the learning outcomes and curriculum of the course modules. An analysis of a sample of formative and summative assessments of the course modules will build on the analysis of the learning outcomes. From the analysis of the parts, the analysis of the whole is revisited in triangulating data sources to complete the tripartite (whole/parts/whole) structure as described by Bostrom (2019: 1004) and Gibson and Hanes (2003:194) and described in Chapter 4, section 4.7.1. The movement between whole, parts and returning to the whole, seeks to develop a hermeneutic approach to the interpretation of the data (Smith, 1983:12), where the meaning of any part requires an understanding of the meaning of the whole.

This chapter explores each type of data collected, moving from an appraisal of the whole phenomenon towards a closer examination of its constituent parts in relation to how academic staff develop critical thinking competencies in first-year students. Findings are then directed back towards a more holistic evaluation through a triangulation of data, which will then better facilitate addressing each of the research

questions, as done in Chapter 6. During data analysis, it became evident that themes did emerge across the participant responses and the documents analysed. In the transcribed interviews, the themes that emerged were participants' construction of: practice and first-year students; critical thinking competencies; institutional context; and professional development. In the policy documents, the themes which correlated to these were the institution's articulation of the roles of lecturers and students; the policy making direct reference to or linking to first-year students; and the linkages between critical thinking competencies and student success, national policy influences and requirements regarding professional development. Therefore, an integrated approach is used to describe the accounts of participants and the curriculum documents in order to allow for triangulation of findings within a constructivist approach.

The presentation of data and research participants has been anonymised, as described in Chapter 4, section 4.8. This was purposefully done in order to preserve the commitment to confidentiality made to the participants and the HEI concerned. Therefore, the Institution and policy documents are named "[Private Institution]", the names of the LMS or similar programmes have been amended to a more functional description, and pseudonyms are used for names of participants.

5.2. REVIEW OF RESEARCH PARTICIPANTS

The selection of the research participants was described in Chapter 4, section 4.5.2., and the sample size was determined in relation to the site and population in section 4.4.3.

The faculty descriptions adopted align with the South African CESM faculty categories of Business, Commerce and Management; Education; Humanities and Social Sciences; and Science, Engineering and Technology (DOE, 2008), as utilised by the CHE in their 2013 sector data (CHE, 2018b). It is pertinent that the CESM categories, as a classification system, confines itself to the various knowledge components (course modules, sometimes called modules) which appear within an academic programme, and not with academic programmes, which are defined in HEMIS as

“ordered sets of teaching/learning activities which eventually lead to the award of a qualification in one or more major fields of study” (DOE 2008:8). This implies that some faculty’s course modules are represented as a specified faculty discipline, but may be offered within a programme that relates to a differing CESM field of study: such as, for example, Student Skills, which is an educational discipline offered within both Commerce and Humanities academic programmes at the [Private Institution] (refer to Annexure H). More specific detail of the research participants, their level of qualification, and their lecturing discipline are summarised in Table 5.1 below.

Several of the academic staff had education qualifications, with some of these education qualifications being in higher education, such as indicated for Audrey and Camden. Others had Secondary FET-level education qualifications such as Camila, Esther, Tessa and Vivian. Furthermore, Layla mentioned in her interview that she was busy with her Post Graduate Diploma in Higher Education.

In their interviews, participants suggested that an education qualification was a significant asset in their roles as lecturers, and some, like Camden, described the professional learning and reflection that resulted from pursuing such higher education qualifications. In her interview, Lillian described a desire to further her academic discipline studies to be able to qualify to lecture a related discipline module by completing two modules for non-degree purposes in her field. It is worth noting that despite this being a private HEI, most lecturers have qualifications from public institutions. Of those who are not South African by birth, all participants had studied at a South African public HEI, and any foreign qualifications had been verified by SAQA as equivalent to the relevant South African qualification on the NQF. This is evidence of the integrated nature of South African higher education across both public and private HEI with inter- and intra-institutional influence, institutional niching within certain fields, and peer review as part of the quality assurance processes.

Table 5.1: Research participants

Pseudonym	Approx. age	Gender	Lecturing Discipline	Highest Qualification	Educational Qualification	Number of years as HE lecturer	Full/Part-time	Language	Other educational experience	Currently studying further?
Alex	40	Male	English; Linguistics	Masters	PGCE	10+	FT	Bilingual (English 2 nd language)	Secondary school educator	Doctoral studies
Audrey	35	Female	Academic Literacy, Communication	PhD	PGDIP Tertiary Education	5+	FT	Bilingual (English 2 nd language)		
Camila	35	Female	Academic English, Language & Literature	Masters	M.Ed, B.Ed	5+	FT	Bilingual (English 2 nd language)	Secondary school educator	
Camden	35	Male	Critical Reasoning, Political Science	Masters	PGCHE	9	FT	Bilingual (English 2 nd language)		
Esther	45	Female	Marketing	Masters	PGCE	10+	FT	Multilingual (English 2 nd language)	Secondary school educator	
Layla	35	Female	Development Studies	Masters	<i>Busy with PGDIP (HE)</i>	7+	FT	Multilingual (English 2 nd language)		PGDIP(HE)
Leilani	35	Female	Psychology, Academic literacy	Masters		7+	FT	Bilingual (English 2 nd language)		
Lillian	55	Female	Academic & Business English	Masters		15+	PT	Bilingual (English 2 nd language)		
Tessa	35	Female	Business Management	B.Com Hons	PGCE	7+	FT	Bilingual (English 2 nd language)	Secondary school educator	
Vivian	35	Female	Mathematics & Mathematics Education	Honours	B.Ed Honours in Maths	5+	FT	Multilingual (English 2 nd language)	Tutoring at other institutions	MBA

Of particular interest, in reviewing the above summary, is the language profile of participants. South Africa is a multilingual country with 11 official languages, and, despite English being the dominant language of teaching and learning, most participants do not have English as a first language. At the institution of participants, English is the language of teaching and learning. Therefore, in Table 5.1. English as a first or second language was noted. In the context of the institution concerned, this is aligned to the linguistic profile of students who similarly most do not have English as a first language. It further aligns the institution to the South African context of having 11 official languages in that a proportion of students have completed their secondary school studies with languages other than English as the language of teaching and learning, as deduced from institutional information and research participant comments.

While several of the research participants were only lecturing first-year students at the time of the study, others – like Alex, Tessa and Esther – also lectured second- or third-year groups. Their comments allowed for additional insights regarding comparative practice in lecturing first-year students in relation to second- or third-year students. This was similarly valid for lecturers like Lillian and Audrey, who had previously lectured second- or third-year students. Research participants identified as secondary school educators had had experience teaching in either public or private secondary schools. Vivian also tutored mathematics at a public institution for undergraduate students. During their interviews Alex, Audrey, Lillian and Leilani also disclosed past public and private institution experiences of lecturing. These experiences allowed these research participants to make comparative evaluations regarding their experience with first-year students at the [Private Institution] during the course of their interviews. These diverse experiences of other students and learners, and multiple contexts, informed research participants' relationship to first-year students as a phenomenon and within their context of practice.

As the study progressed, one participant, Audrey, went from being a lecturer to being promoted to Foundation Programme³³ academic manager with lecturing

³³ In South African higher education, foundation programmes, bridging programmes or extended degrees are offered to students who do not meet the requirements to proceed directly to degree studies.

responsibilities. While she met the selection criteria throughout the study,³⁴ she was appointed to her new role a few months before the interview, affirming her expertise with first-year students and transitions to higher education. This allowed an additional exploration of her insights with respect to foundation programmes as a supported transition to higher education for first-year students. Additionally, two of the research participants had received Institutional teaching excellence awards,³⁵ and an additional participant had been nominated as a finalist. As the institutional teaching excellence award process included gathering evidence of practice and feedback on practice, these participants had evidence of evaluated reflection and feedback which has informed ongoing articulation of their theory and practice, as well as relationships with students as beneficiaries of their practice. Therefore, part of the diversity of the study is including recognised teaching expertise and various professional learning experiences within the HEI concerned.

5.3. DATA ANALYSIS

As described in Chapter 4, the analysis of the data was postponed until the majority of the data collection had been finalised to prevent the analysis from interfering with the emergent nature of the qualitative research design. As described by Creswell (2007:244), in analysing qualitative data from interviews and documents, an inductive approach was followed as a means of achieving the development of concepts, insights and understanding from the data. This objective was achieved as reported in the findings below.

5.3.1. Analysis of interviews

The interviews, as discussed in Chapter 4, section 4.6.1., were semi-structured in order to accommodate emerging trains of thought as directed by the participant

³⁴ as a lecturer who was lecturing first year students in higher education, responsible for developing curriculum and related assessments for a course module offered to first-year students and being available at the site who consented to be interviewed

³⁵ While several private HEI do host teaching excellence awards, these are not considered as entries into the National Teaching Excellence awards which are restricted to public HEI academic staff (CHE, 2012)

responses. The findings are presented as a study of the lived experiences of the participants who are being researched in order to explore the meaning they construct from their theory and experiences. The interview schedule is available in Annexure C, and an example of an anonymised transcribed interview may be found in Annexure I. Where research participants answered aspects of questions within other answers, a specific question or probing question was not repeated.

In the interviews of the academic staff, as indicated in Table 5.1, responses of research participants showed the integration of the topics explored by questions. For example, against a question of what participants do to develop critical thinking skills, one participant referred to module outcomes, assessment strategies and institutional constraints, and did not distinguish these in their response. Therefore, the researcher adapted the approach to analysis as a means of responding to this tendency across participant responses, and the topics under analysis were addressed using an inductive thematic approach. In addition, where participants were clearer regarding their practice, interviews were more succinct as less probing was required.

Table 5.2: Overview of themes originating from the interview analysis

Theme	Related Sub-theme
Participant construction of practice and first-year students	Roles of lecturer Differentiation for first-year students Blended learning
Participant construction of critical thinking competencies	Various competencies as in Table 5.3 Bloom's taxonomy
Participant construction of institutional context	Various types of professional development as described in Table 5.4
Participant construction of professional development	Institutional Context Blended learning

In the discussion that follows, one adaption was made. During coding, the repeated references to Blooms' taxonomy were initially coded under 'institutional context' (see Chapter 4, section 4.7.1.), but as these references to Bloom's taxonomy were applied in assessing critical thinking competencies, these references were discussed in relation to the theme of 'critical thinking competencies'. Additionally, in descriptions of

practice, blended learning was described as a strategy to support participant teaching practices. Therefore, where appropriate, this was separately coded.

In the interview excerpts below, quotes from the interviews are given to illustrate how the various themes are evident in the described lived experiences of participants and to give voice to the research participants. This preference for quotation aligns to the research method of a phenomenological case-study (as discussed in Chapter 4, section 4.3.2.), where the meanings that participants assign to phenomena, and their own descriptions thereof, are utilised as a “critical reflection of conscious experience” (Theodoridis, 2014:4). Within a constructivist paradigm, interview quotes are utilised as participants’ voice within the thesis, which allows both the researcher and reader to construct knowledge and gain insight regarding the participant’s experience (Given, 2008:117).

5.3.1.1. Participant construction of practice and first-year students

While the interviews initiated with background information (see Annexure C: Semi-structured interview schedule) to put the participants at ease, the first exploration of practice was with the questions “Can you describe your role as a lecturer?” Evaluation of teaching practice, therefore, initiated with determining how research participants understand their role as lecturer and how they described their experiences of teaching first-year students. Participants described their role as a lecturer in various ways, with reference to the roles of lecturing (teaching or learning mediator), assessor, interpreter and designer of learning materials, subject discipline specialist; administrator and often a nurturing or caring role (pastoral role). This aligns with the roles of academic staff discussed in Chapter 2, section 2.8 and with the national policy discussed in Chapter 3, section 3.1.3, against which both the institution and academic staff will be benchmarked. However, most participants reflected the conceptual move from a dispenser of content to facilitator of learning within a conception that students were responsible for learning. Yet in their interviews, participants did not describe the collaboration between themselves as lecturers and students in relation to what students need to know (content) and be able to do (competency).

Several of the participants included notions of student support, mentoring and pastoral care within their descriptions of practice. Participants generally reflected a more diverse understanding of what constitutes the role of lecturer. Several key descriptors emerged throughout the interview process that speak to a revised understanding of lecturer as “*facilitator of learning*” (Alex), “*to encourage students to get that curiosity*” (Audrey) and “*to coach them, mentor them, [and] teach them*” (Lillian). Several of the participants included notions of student support, mentoring and pastoral care within their descriptions of practice, and so revealed that the role of lecturer incorporated a diversity of roles in relation to their students. Lillian’s response to this question provided the most succinct description of the lecturer role:

“My role is to coach them, mentor them, teach them and not too much in an old school method. I am sometimes a bit of a more unconventional teacher or lecturer, ... thinking of their backgrounds and where they come from and how they think, trying to make things more current and more interesting and not, not using old examples.”

In her description, Lillian reflects the principles within the *National Framework for Enhancing Academics as University Teachers* (DHET, 2018b:5), which describes “good teaching” as responsive to specific students in specific contexts. The National Framework is used, as well as relevant national policy criteria, as these set the standards against which academic staff are benchmarked. Furthermore, these policy criteria position academic staff as agent-intermediaries who enable the application of policy as discussed in. One of the diverging responses was Tessa, who drew on her discipline to define her role as a lecturer:

“I see the role of a lecturer and the role of a manager, cause that’s what I’m teaching, the same, that you are there to remove obstacles for your employees or your students out of the way, ... at the end you should develop them to be a per- a whole person that can operate in a business at the end, in my class, in my business class.”

As the *National Framework* described “good teaching” as “grounded in a deep understanding of a discipline” (DHET, 2018b:5), these descriptions of the lecturer’s roles align well to the national policy. Participant responses are also noted as omitting the imperative towards research and publishing as core responsibilities, despite the

equivalence of both aspects noted in Chapter 2, section 2.8. None of the participants referred to publishing as a responsibility. This aligns with the private HEI context, where publishing is not subsidised by DHET³⁶ and must be funded by the private HEI or individual concerned. Consequently, many academic staff who lecture undergraduate course modules do not participate in these aspects unless their responsibilities include academic responsibilities in post-graduate qualifications which are then required as mandatory by the CHE programme accreditation, criterion 9 (CHE, 2004:15). However, this omission of research and publication is in contrast with the *National Framework*, which describes a need for the status assigned to teaching compared to research to improve so that teaching and research can be “equally valued as interdependent activities” (DHET, 2018b:4), which also indicates the “[r]ecognition of competence as a researcher is more visible in the [public] university system”. While the status of university teaching at public universities has been improved, as seen in recent reports, policy and publication (see for example CHE, 2017; DHET, 2018b; DHET, 2016), the respective importance of the roles of teaching in relation to research appear inverted in the private higher education sector. In both public and private higher education, this increasing emphasis on teaching reflects the demand to improve student throughput and graduation rates from both society, government and students.

Research participants did not refer to the roles related to community engagement, even when the nature of the module implied this. The omission of the role of community engagement may be due to the focus of the interviews in exploring the teaching and curriculum practice of academic staff. An alternative possibility is that most qualifications include community engagement or work-integrated learning in the third or final year of the Bachelor’s degree, which removes this from the focus of the interviews. During the interviews, research participants expressed that several aspects of the role of a lecturer restricted or obstructed their role as teachers, especially when discussing institutional policy and context. This reveals the prioritisation of the teaching and related roles, by the participants, above roles of administration and pastoral student support, and confirms the literature which describes that academic staff are

³⁶ Refer to Deacon, van Vuuren & Augustyn (2014:5) who cite CHE (2009:28); DHET (2015b) and the South African DHET funding formulas available at: <https://www.dhet.gov.za/Financial%20and%20Physical%20Planning/19%2012%2017%20Ministerial%20Statement.pdf>

required to fulfil multiple roles (as discussed in Chapter 2, section 2.8.). Additionally, while not in response to the specific question regarding the role of a lecturer, most participants did mention some form of their own scholarship, research and lifelong learning during the interviews. This was more often in relation to discussions on further studies or professional development.

In their work with first-year students, research participants described that they adapt their practices to support first-year students. Several lecturers referred to a competency or ‘skills gap’ when students start their studies. This resulted in many of the research participants describing a more academically supportive or structured stance regarding first-year students. For example, Lillian described that *“they [are] not all inadequate, but many of them will just give you a blank answer or a one-sentence answer and then others would bring in their prior experiences and the other integrations that they would link it with...”*. Tessa added to this perception of the needs of first-year students in stating that she felt *“you have to baby them”* (emphasis added), and described scaffolding steps to link theory, case studies and practical examples to what was required from students in both lectures and assessments. Tessa later compared first- and second-year students when she described making a revision video where she discussed a previous year’s examination paper and how to answer this for both years. She comments that the number of views for *“the second years were four times more views than the first-years”* (Tessa). Tessa described a lack of responsibility, but also an uncertainty about what was needed by students to do well, which was reinforced by the responses from other research participants. Camila particularly provided commentary as follows:

“I think it’s the fact that they are very unsure of themselves and they are very unsure of what they know, and where their place is and where they are going. So, I think it takes a lot more patience, a lot of, more patience to um... teach a first-year group,... in comparison to others.”

Leilani and Esther drew on the colloquialism “spoon-fed”³⁷ to describe the learning approaches of first-year students, as illustrated in the quote below. The tendency

³⁷The Oxford dictionary defines spoon-feed as “Provide (someone) with so much help or information that they do not need to think for themselves” (Oxford Dictionaries, 2019)

towards needing to ‘spoon-feed’ students is often as a result of secondary school experiences, as well as the private HEI context, where students seem to expect more active input from lecturers in the teaching and learning experiences:

“... the critical thinking analysis is quite low, they, they want to be spoon-fed, they want to be given information, they think that memorising the work is learning, ... they don’t like asking the probing questions, they just want to get information... they want you to tell, to direct them in terms of learning, not to direct the learning....” (Esther, emphasis added)

Alex, who lectured English literature, described a discipline gap which changed his practice when lecturing. His description is worth quoting at length because of the richness of the description offered on both a theoretical and practical level:

“... in first year, on a very pragmatic level, [um] because they often come... a secondary school system, where the... quality of education is often... grammatically varying. So, you never know what the work quality was of their matric proficiency... I give them some, let’s call it structure, some backbone, some basics, that first make [sure] cover... We always start with Poetry and then we’ll first cover basic knowledge – figures of speech, for instance – and then a basic knowledge of textural analysis, and then we build on that. So, in first-year, I read a lot more in class with them, physically reading the texts, than we do, for instance, in second or third year, ... For instance, pointing out themes and examples from the plot, where you actually also use the text in a very hands-on sense for that analysis...” (Alex)

As can be seen, Alex’s comments highlight practical challenges in addressing both generic language competencies and discipline-specific competencies. He draws on the word “pragmatic” as if to emphasise very real practical challenges. Alex describes initiating his relationship with students, where students are partly unknown in their diversity in Grade 12 (matric) competencies. He does not imply fault on either the students or their previous teachers’ parts, but emphasises a transitional gap, seeming optimistic as to the students potential in overcoming these challenges.

Several participants, however, wanted to clarify that this was an inconsistent gap across the spectrum of students and is perhaps not indicative of future academic success. For example, Audrey, whose views aligned with other participants in this regard, described diversity in her class in terms of language competency, country of origin, educational experience and varying conceptual competence. She additionally emphasised differing competencies in English as the language of teaching and learning:

“... you get very smart students and also students coming from different countries you know they’ve got different experiences, and different ways of how they see things, which means some things, let’s say for instance some of the concepts they know but they struggle with just being able to follow the class in English, you know compared to another student who might be okay with following the class in English, but they have no idea about the concept that being explained.” (Audrey)

“... it’s also a case of one has to be careful not to confuse that perhaps with a lack of self-confidence. I think, often, they have, they have more ideas than they’ll give on to, ... but, because they lack confidence, they won’t always say it. You have to really draw it from them. (Alex)

This lack of self-confidence, as described by Alex, acts as a barrier to evidencing critical thinking competencies, and was supported by Audrey who described her experience as follows:

“... in their first year also for me what I find is they are very scared, they are scared to ask questions, they are scared to even engage with people in their groups or in, in their classroom, because they are scared they say something wrong and then someone’s going to laugh at them and this greatly influences that critical thinking, so for me when they start in these, in in the groups or in the classes, it’s not high, it really isn’t very high, because it’s almost like they’re scared to explore things or scared to try new things....” (Audrey)

In probing Alex’s response, he agreed that he was describing both a lack of critical thinking and a lack of the related competencies that enable somebody to present

evidence of their critical thinking competency. He continued by drawing on his experience in teaching at secondary schools:

“And I think... a lot of that comes from the basic education system. [Uh] They were never trained in doing that... As a former high school teacher myself, I know that that is, [um], often the approach. It’s not necessarily independent thinking, or independent discovery, or independent opinion... If you look at poetry, for instance, I would expect them, after a proper Grade twelve, to come in with a basic poetry analysis ability, and, and with the realisation that there is not a hidden textbook that you receive with your degree in English that will tell you what every poem means... They expect you to tell them what the content is, what it means, basically, instead of discovering it for themselves. And that’s, that’s a lack of skill that was instilled in secondary school...” (Alex)

What emerged from the interview process is that the academic staff, like Alex, who were most critical of secondary schooling education, were also those who had been teachers in that environment and had transitioned to teaching in higher education. For example, Tessa stated, *“All that I can say is the school system, up until Grade Twelve, are failing South Africans”*.

Tessa also described a difference between being able to think critically and then communicate that competency in an assessment:

“... you can have students whose looks can be deceiving, I had students in my class, I thought you are the most brilliant student, cause when we do these exercises and we have discussions you know the answers, but when it comes to the test you don’t have that ability.”

To practically assist students, participants gave examples of some practices concerning how they engage with students, utilising blended or online learning tools. Esther mentioned posting adverts from YouTube for her other marketing students and the first-year *Consumer Behaviour 1* students, which they are required to watch in preparation for their next lecture. She added that this strategy of pre-viewing videos was provoked by challenges with projectors and internet access in some venues. Esther follows the viewing of videos up with an in-class discussion or class quiz which requires analysis and insight. Esther discussed her perception that students are not

reading enough. To assist in engaging this, she gave an example of how, in the second semester, she requires students to start a blog:

“So, another thing I tend to do is [in] second semester, is for them to start a blog, and they will give me a report about the blog, and the blog must be related to something in marketing.” (Esther)

Lillian outlined how she engages a blended learning strategy for her Business English students by using Edmodo³⁸ and posting YouTube videos. In relation to her context, this reveals that Lillian and other lecturers are not only utilising the HEI’s Moodle³⁹-based LMS, but additional generic tools which allow greater flexibility.

From a curriculum perspective, academic staff, as lecturers, referred to curriculum planning as informing their lecturing practice. For instance, Lillian referred to planning from outcomes, stating that *“I think it’s the outcomes that help me, probably dissecting them and seeing if we indeed [are] answering them”*.

From the discussion above, it is clear that the research participants believe their practice influences the development of critical thinking competencies in first-year students. Lillian, for example, explores the achievement of outcomes from a place of mutual responsibility, using the word “we”. Academic staff adapt their practice to first-year students and describe challenges engaged in terms of language competence, diversity, and infrastructural challenges.

5.3.1.2. Participant construction of critical thinking competencies

Part of the focus of the interviews was exploring research participants’ perceptions of critical thinking competencies, and how these are developed in their practices. From the data, it was evident that research participants regarded critical thinking competencies as important and essential in higher education. Research participants

³⁸ **Edmodo** is an educational website that takes the ideas of a social network and refines them and makes it appropriate for a classroom. Using **Edmodo**, students and teachers can reach out to one another and connect by sharing ideas, problems, and helpful tips” (Cauley, 2019)

³⁹ Moodle is an acronym for *modular object-oriented dynamic learning environment* which refers to a free and open-source learning management system (LMS) written in PHP. Additional information can be found at <https://moodle.org/>

were asked two opening questions which initiated the interview: “What is your understanding of critical thinking competencies?” and “What do you think critical thinking competencies are?” (refer to Annexure C). Participant answers were probed further in order to achieve greater clarity. The critical thinking competencies referred to in the initial defining questions, and those that emerged during participant’s discussions of practice and assessment differed. The table below summarises the references to critical thinking competencies and where they were mentioned:

Table 5.3: References to critical thinking competencies in interview transcripts

Description of competencies	Participants who refer to this competency:	
	In their definition of critical thinking	In discussions of teaching or assessment practice
Analysing arguments, claims or evidence	Alex, Camden; Camila; Layla; Leilani; Tessa;	Camden; Camila; Esther; Layla; Leilani;
Asking and answering questions for clarification	Camden; Camila; Esther; Layla; Leilani; Tessa;	Camden; Esther; Layla;
Defining terms		Camden; Camila;
Identifying assumptions		Alex; Camden; Camila;
Interpreting and explaining	Layla; Leilani;	Alex; Esther; Layla; Leilani;
Judging or evaluating	Alex, Camden; Layla; Tessa;	Alex, Camden; Camila; Esther;
Making interferences using inductive or deductive reasoning (includes drawing conclusions)	Layla; Tessa;	Alex, Camila; Esther; Layla;
Making decisions or solving problems	Camden; Esther; Vivian; Leilani;	Esther; Leilani;
Predicting	Leilani; Tessa	Camila; Layla;
Seeing multiple perspectives	Layla; Leilani;	Alex, Camden; Camila;
Synthesising information	Alex; Leilani;	Camila; Layla;
Self-regulation	Esther	Alex
Creative thinking	Alex, Camden;	

Several participants did not have a clear definition of articulation of what critical thinking competencies were. However, they were able to refer to what they expected students to do in demonstrating their critical thinking abilities. This reveals that research participants tend to define critical thinking competencies in relation to what a student should be able to *know* and *do* rather than what it *is*, reflecting a so-called outcomes approach in relation to a specific module. This uncertainty about clear definitions of what critical thinking competencies aligns with the findings of international literature such as that of Bezanilla, Fernandez-Nogueira and Poblete (2019), Bonnefon (2018), Drake and Reid (2018) and Stassen, Herrington and Henderson (2011). Research participants distinguished between the ability to apply critical thinking competencies, the ability to communicate their critical thinking competencies and a disposition to be critical thinkers, and clearly felt that critical thinking competencies were not intrinsic (i.e. that people are “not born with it” as stated by Tessa). Rather, these were, according to participant views, developed competencies. Further, the research participants, while able to describe critical thinking competencies as distinct competencies, they seemed to expect a selective, integrated application of several competencies in order to demonstrate critical thinking competencies. However, research participants seemed frustrated at the underdeveloped critical thinking competencies of students in their first-year, and emphasised the need to be able to apply knowledge and competencies for academic success and as a means of problem-solving.

Tessa provided the most comprehensive definition of critical thinking linked to her *Business Management* course module, but did so by way of an example, further qualifying the observation that the participants struggled to denote what critical thinking and were more confident in illustrating the active symptoms of critical thinking at work:

“I’m going to give a rather practical example... Okay, let’s say that we have nine steps in the planning process, and I can give them a scenario, they have got the theory and then link the theory [to the] case study, that you can critically go and think okay, here they talk about something that happens outside the business I need to go and ask myself: ‘Is it inside the business? Is it outside the business?’ And that’s being critical and looking critically at the situation. It’s a skill that they need to develop. You are not born with it....”

Through additional probing of her answer, Tessa revealed that she was looking for questioning, the examining of assumptions, the interrogation of a case, making inferences using reasoning, and making a judgement about the case. However, she struggled to articulate this as explicitly as would have been preferred in her answer. Her practice, both as a lecturer and assessor, enabled several well-developed examples of how she seeks to develop and assess critical thinking in students, as described in the interview. Yet she was only able to relate this to her modules, or as specific applications of these competencies, rather than provide a clear description, as stated above. This was typical of several research participants who were able to give evidence of practice relating to critical thinking competencies in their approaches to teaching and their assessments.

Interestingly, in response to the questions above exploring participants understanding of critical thinking, some of the research participants mentioned Bloom's taxonomy (Bloom, 1956; Anderson et al., 2001) during the interviews as a way of assessing critical thinking competencies. Alex went further than this and used Bloom's taxonomy to describe his understanding of critical thinking competencies and assessing these. In contrast, Esther only referred to Bloom's taxonomy when asked about institutional context and policies. She described that she felt required to make sure that her third-year assessments had "*eighty [or] ninety percent of application kind of questions*". Alex provided further elaboration on this imperative and described evaluating his assessments against Bloom's taxonomy (Bloom, 1956; Anderson et al., 2001) as being required by institutional policy. He describes that "*the institution has recently been pushing Bloom's taxonomy very hard*" (Alex). In his interview, he then extrapolates this that he had to reevaluate what he had considered the Bloom's descriptors to mean, as part of his discussion in answer to this question (see Annexure I).

The research participants demonstrated evidence of institutional policy informing their theoretical constructions of practice, and being measured against such policy prescriptions. This impacted on their applied practice, especially through the required use of templates, editing of the material, course module guides, and assessment structures. Despite this compliance, not all participants reflected an accurate understanding of Bloom's taxonomy. Layla for example, referred to "five levels of

Bloom's" in her interview. While she did not list which 5 levels, in her discussion she referred to terminology associated with understand, apply, analyse, evaluate and create and differentiated 'lower-order thinking skills' from other thinking skills when describing growth in her practice relating to assessing.

In response to the question "What's your understanding of critical thinking competencies?" (refer to Annexure C), two participants, Layla and Leilani, used the phrase "thinking out of the box", which implied linking critical thinking to creative thinking competencies, and aligning more with the top tiers of Bloom's taxonomic model (Bloom, 1956; Anderson et al., 2001). Esther also used the phrase, "thinking out of the box", later in her interview in response to a discussion on critical thinking competencies and first-year students. Some participants, like Camden and Vivian, also referred to the value of contextual knowledge which enables students to apply critical thinking competencies. Tessa and Vivian referred to knowledge assumed to be in place given the previous schooling experiences.

During one of the earlier interviews with Camden, he commented that he perceived that one semester was too short to develop critical thinking competencies when asked what would help him improve the development of critical thinking competencies in students. When his answer was probed for more detail as to why, he described that he felt students need more time, which he clarified as being able to practice the relevant competencies. Based on his response, the researcher adapted the structure of the interviews that followed to allow for probing into the length of time required to develop critical thinking competencies. Participant responses in subsequent interviews confirmed Camden's observation, where, for example, Tessa agreed that one semester was not enough, and referred to the difference she experienced when students transition to their second year. Esther described that she felt it would be better if critical thinking skill development was initiated in secondary schooling, and that consequently, based on this deficit, it would take longer than a semester to develop at the tertiary level. Therefore, in her discussion, she described the development of critical thinking both as a process and a habitual progression and aligns with developing a disposition towards applying critical thinking competencies. Esther, therefore, described the development of critical thinking competencies as "*[n]ot a quick fix thing at all*". All responses sustained literature found in the South African context,

where, for example, Cloete (2018:492) suggested a longer time period than one semester to achieve proficiency in critical thinking. Likewise to Huber and Kuncel's (2016:452-3) meta-analysis in the USA, who found that longer periods of time led to greater gains in critical thinking.

Alex was the only participant to challenge this assertion and was the only lecturer with a one-year module, and therefore less limited period of time to develop critical thinking competencies. He described a recent change in assessment practice which had allowed him to see a progression in the development of critical thinking competencies by the mid-year exam, with further development noted thereafter. Alex referred to the value of continuous assessments, where students write a one-page essay on a relevant theme, saying "*...it's really a case of practice makes perfect*". In his discussion, it seems that Alex agreed that opportunities to practice are required in developing critical thinking competencies. Alex's use of writing arose from his discipline, and yet this strategy aligns with authors such as Mihaila-Lica (2012), Eberly and Trand (2010) and Wentworth and Whitmarsh (2017) who recommended writing-based activities and assessments to develop critical thinking competencies.

Lillian further intimated that not only time but class size impacted on the lecturer's ability to foster critical thinking competencies in students. She mentioned that, with approximately 72 students in some of her class groups, smaller groups of less than 10 students allowed her to focus more on critical thinking activities. Lillian had mentioned that, with a full class or large group, the tendency was to focus more on getting as many students to pass as possible, thereby inferring a quantity-over-quality imperative under these circumstances. She, therefore, implied a shift in practice to a less interactive approach with larger groups, and greater facilitative approaches with smaller groups. Her description suggested that she felt a high level of interaction and more personalised engagement and feedback assisted in the development of critical thinking competencies.

Tessa argued that she used assessment to evaluate students' critical thinking competencies, and used this as evidence of how she knew her practice to be effective in doing so. She also drew on an evaluation of how the cognitive levels of Bloom's

taxonomy were utilised to review assessment instrument questions, as required by institutional policy:

“... this semester, the high order or the application questions was forty percent of the [examination] paper and sixty was, was theory in the end, and they couldn't do that forty.” (Tessa)

Research participants described utilising both formative and summative assessment to assess critical thinking competencies. This is evident in their assessments, although not as consistently, as some early formatives have low levels of critical thinking competencies assessed. In her interview, Camila discussed how she utilises assessment performance in her classroom practice through provocative discussions as her main feedback regarding student critical skill development. Camila also described being a role model of practice:

“[what] I did with the critical thinking was I gave them to do an academic writing, an essay, using proper sources, showed them how to use it, and how to have an argument from a source and how to justify that. And using things like hedging and ideas, and how to use somebody else's idea to motivate that...” (Camila)

This aligns to Brookfield (2012:xii, 54-55), who recommended that educators need to model the process for students, and found that critical thinking is best developed within a social learning process. Furthermore, during the course of her interview, Camila revealed a differentiation of the competencies that constitute critical thinking in referring to argumentation, interpreting information, synthesising multiple sources, making inferences and predicting. In this, it is evident that, while participants may not describe the constituent critical thinking competences, they can apply these components distinctly within their discipline and teaching practice. This reveals that reflective processes may assist these academic staff in improving their articulated theories of practice.

Research participants clearly indicated engagement with critical thinking competencies in both their teaching and assessing practices. The interviews included examples of the application of critical thinking competencies, and the value of this in relation to the various disciplines, thereby meeting outcome and assessment

requirements and enabling future academic success. Research participants varied, however, in their approach to developing critical thinking competencies, and whether this was taught explicitly or implicitly. This variation continued in the discussions regarding institutional context and professional development. From the evidence, this variation seems to be both as a result of the different disciplinary approaches, as well as their experiences of practice.

5.3.1.3. Participant construction of institutional context

The role of lecturer is informed by two key relationships: the academic staff's relationship to students and to institution. The relationship with the institution is directed by institutional expectations. In the interviews, the participants compared being at a private to a public and to other private HEI providers. As discussed in section 5.2., the experiences of participants at both public and private HEI's informed their feedback. In their discourse, it was evident that the research participants experienced both the constraints and advantages of their site and institution. Their narratives aligned with several themes. For example, in her interview, Tessa referred to a narrative, at private HEI, that academically stronger students go to public universities and that private HEI accepts students who qualify for admission at the minimum requirements. Tessa linked the entrance requirements and quality of student intake to the articulation gap between secondary schooling and higher education, stating *"so there's a huge gap between school for them and then sitting in the first year"*. Tessa then described that this contributed to her adjustment in practice with first-year students, in deliberately testing knowledge assumed to be in place from the secondary school curriculum, because this assumption often proves to be false.

Participants mentioned challenges in their teaching and learning environment in terms of very practical operational aspects. For example, Lillian suggested problems showing videos during lectures, and specifically mentions equipment challenges: *"we don't have a projector working in the huge venue there"*. She later qualifies this and compares to other institutions in stating that *"...I must say, all in all, this company is providing us with good facilities. That was just one of the hiccoughs, because it's so big, I think. [Um] The projector works. If it works it's fantastic. We have lovely*

venues....” From a classroom infrastructure perspective, the relationship between lecturer and institution is tentative and dependent on all equipment designated to facilitate blended learning working efficiently. This is because such equipment would shape what activities are possible in the menu of learning activities to best achieve course module learning outcomes.

This was echoed by Esther, who described the institutional network and facilities as a constraint for both her and her students:

“... it’s two-sided in a sense that you are expected to carry out [these] policies, but sometimes the facilities to back it up is quite challenging. For example, if I have to load a video, I can’t do it here because of the internet. I will always have to do it at home,... and sometimes also the support, well the overhead projectors, the internet for the learners, for the learners in their hostels for them to be able to, the platform which is [Moodle-based LMS system], for them to, all, for them to be able to get the information before class,....”

Later in the interview, she reiterated the sense of her role being difficult due to workload and the expectations of including blended learning teaching tools without consistent institutional support.

The comparison between differing institutional contexts was mentioned several times by different research participants, and comparisons were both positive and negative. Vivian felt strongly that a public institution was preferable to her current institutional context, and that this comparison was justified through her work experience at both HEIs. Other participants compared their current institution with experiences at other private HEI. These comparisons were qualified in terms of what was perceived as an acceptable practice, institutional policy comparisons, working conditions, and academic quality.

In shifting away from institutional constraints in relation to classroom experience, and towards institutional constraints and opportunities in relation to professional development, several participants mentioned time as an obstacle to professional development. Some referred to workload in marking and student contact time as

obstacles, while others described the timing of professional development as problematic. Available time to participate in professional development and reflective practices was seen as problematic, as the institutional context prioritised student-focussed activities over professional development and other development activities. Participants commented that timing was important as, if professional development clashed with teaching responsibilities, the latter would have to be prioritised. Others suggested the value of asynchronous flexibility of online learning as a possible solution to timing challenges. Esther cited time as both a teaching practice constraint and a professional development constraint. Lillian described her workload as a “constraint” on her practice and professional development. In her interview, she described lecturing 25 hours of contact lecturing time with several groups of students per week. This is as a result of her lecturing as part of a team of lecturers on two modules, *Business English* and *Academic English*. She additionally manages the curriculum, material, assessments and lecturing for the course module *Introduction to Writing Skills*. Lillian clarified that the [Private Institution] has a practice of prescribing marking turnaround times: “[p]olicy-wise, we have five working days, ..., to mark assignments... I manage because I’ve had tighter deadlines....”

Given the context of a private institution, where costs are part of managerial decision-making (see for example CHE, 2018), these types of workloads are not unusual and, as indicated by Lillian, some institutions have tighter deadlines. However, this does call into question the time available for professional development as required by national education policy (see for example DHET, 2018b: 6; CHE, 2004).

While this was not necessarily institutionally specific, Camila felt that she enjoyed the academic freedom, evident in higher education compared to her secondary school experiences, to engage in provoking thought and debate and described “controversial discussions”. This impacted her curriculum and teaching practice, as she described deliberately selecting content that causes opportunities for “*thought-provoking - questions*”, initiating discussions and assigning academic argumentative essays as a means of evaluating student progress in this regard.

Layla argued that she felt HEI’s should prioritise professional development and take a proactive approach to professional development. She proposed a “*professional*

development department” that pro-actively observes lecturer’s practice and student success, and, from theses, develop interventions that improve practice.

5.3.1.4. Participant construction of professional development

The research participants were able to comment broadly on professional development as it pertained to their experience, practice and subject matter expertise. The types of professional development mentioned are summarised in Table 5.4 below:

Table 5.4: Professional development activities referred to by research participants

Types of Professional Development activities mentioned	Discipline/ Subject matter expertise	Teaching and learning practice	Specific to Critical Thinking
Research	Esther;		
Institutional PD		Alex; Esther, Camila	
Personal PD	Audrey;	Audrey;	
Discipline-specific PD		Camila;	
Face-to-face Workshops	Tessa; Vivian;	Alex; Audrey; Camila; Tessa, Vivian;	Vivian
Formal studies	Alex; Audrey; Esther; Lillian;	Audrey; Esther; Tessa;	
Online/ Mobile learning course modules	Audrey; Lillian	Audrey; Camden; Camila; Tessa;	Audrey;
Communities of practice (including Peer Review & Mentoring)	Alex; Audrey; Esther; Lillian; Vivian	Alex; Audrey; Camden; Camila; Esther; Lillian; Vivian	Audrey; Alex; Camila; Esther;
On-the-Job		Alex; Audrey;	Alex; Audrey;
Reflective practice		Alex; Audrey; Camden;	Alex; Camden;
Feedback from moderator	Audrey;	Audrey;	
Reading/relevant articles	Camden;	Camila;	Vivian

Though participants all endorsed the value of professional development, as can be seen from the table above, their preferred mode of engagement in professional

development activities differed and presented in varying degrees of specificity. For example, Audrey defined professional development as both improving current competencies and learning new competencies. She also described that professional development needed to directly improve her practice when she described “*being better at what you are doing*” (Audrey).

Several of the participants, like Audrey, Camden and Layla, referred to the value of doing a post-graduate education qualification, especially where they were able to do a qualification relevant to higher education. This seems to relate to the notion that a smaller institution may only offer generic professional development and not discipline-specific professional development, as there may only be one or two lecturers in some discipline specialisations at a campus. For example, in response to a question regarding her further educational studies, Camila stated:

“[A]s a lecturer you, you need to be confident in your subject knowledge: how you teach, what you teach, how you, you going to bring it to the table. And I think that professional development and there is developing those skills and your own knowledge base does improve that.”

The value of such qualifications aligns with authors like Shava (2016:68), who found that a postgraduate higher education qualification enabled academic staff to improve their teaching strategies. Audrey strongly motivated the value of such qualifications as follows:

“... the content was such a huge impact because, if you don't understand the basics of why you are doing what you are doing, then it's not really going to have an impact on you when you want to develop,... and I am saying this because I came from a background where I had industry knowledge and I started lecturing on that... that's when I finally start realising, you know, what there's actually quite, quite a background to this, and there is a reason why this is important,... if I can challenge anybody to do it, I will, because it will absolutely open and broaden your mind of how to think about students and how to think about curriculum, and how to think the work... it was such an important thing, and I've never really understood why it was so important until I did it.”

While Audrey, Camden and Esther had pursued such qualifications part-time through public HEIs, Tessa had taken a full year off working a few years prior to this study to do her Postgraduate Certificate in Education (PGCE). Tessa felt that doing a PGCE, even though this was orientated for secondary school education, substantively impacted both her higher education teaching and assessment practice. Like Camden, she had been a lecturer before attempting an educational qualification and felt that teaching practices, peer review and the theoretical integration enabled her to reflect on her practice and improve thereon. She further described the value of being more sensitive towards the diversity of contextual circumstances surrounding students' transition into higher education.

Not all research participants identified further studies as part of their educational professional development (or CPD) activities. An example of this is Vivian. Vivian also felt her further studies of an MBA were unrelated to her current work as an academic staff member. In her choice of an MBA, Vivian revealed a possible shift in specialisation from mathematics education to a business context with previous work experience.

A theme that emerged in the interviews was a distinction between discipline-specific qualifications and professional development, as contrasted with professional development as an educator. For example, Layla stated, *"I didn't have an education background, and seeing that lecturing really requires one to understand some of these basic education theories, I've enrolled myself to, to really understand and know education better..."*.

The [Private Institution] offers online courseware support through a Moodle-based Learning Management System (LMS). This private HEI has been increasing online tools and support to improve learning outcomes. Several academic staff cited this as relevant and key to include in professional development. For example, Camden referred to the institution's commitment to blended learning, which required him to redesign courseware into an online environment and which he saw as a constraint. He felt that this environment reduced the range of activities he was able to utilise to develop critical thinking competencies in learning interactions with students. Camden additionally referred to a time constraint which limited his ability to find or further

develop learning activities relevant to his module. Vivian mentioned that the institutional training with respect to the tools was the most useful professional development she had participated in and Leilani prioritised this as a topic for further professional development. On the other hand, Audrey was able to recognise both the challenge and the constraint for some academic staff in describing varying competencies in academic staff when she stated: *“but I do think there were a lot of lecturers that, they found it quite difficult because it’s not something that they used as a normal practice”*. Audrey described that there were opportunities to develop specific competencies related to the Moodle-based LMS system. She further related the policy movement towards blended learning and the required technical competencies as affecting assessment design:

“... [It’s not just about] how they are setting continuous assessments, because it’s not just about now having something on paper. How can you do something differently so that it actually stays with the student and it makes a bigger impacts on that student.” (Audrey)

Esther also described a similar requirement. However, she felt the facilities to enable her to comply were lacking, and described utilising personal resources to complete such tasks. As previously quoted, Esther described that she is expected to enact the policy but institutional network facilities were not reliable.

Of interest, is that some of the research participants, like Audrey, quoted above, saw blended learning as impacting on formative assessment practice more than on teaching practice. In particular, the migration of some formative assessments to online assessment tools allowed for different types of assessments, and yet teaching was still largely classroom-based and unchanged. The requirement to utilise blended learning by the institution seems to have motivated academic staff to consider and reflect on their practices, how they resource students and assessment. For example, Audrey describes that continuous assessment processes were easier in a blended environment.

A theme that emerged in relation to professional development opportunities is that these participants felt personalised and contextual professional learning within their discipline and context was valuable and should form part of any professional

development. This led several participants to distinguish between workshops and interactive participatory workshops. Camila made a recommendation that large scale professional development was better offered through online courses than non-interactive workshops. These preferences for interactive workshops align with the principles of adult learning as described by Knowles, Holton & Swanson (2005:3-5), findings by authors like Feist (2003), and the imperative to adapt andragogic approaches to the academic as a learner and address situational differences (Gravells & Simpson, 2014). The research participants consistently emphasised the benefits of peer interaction and communities of practice, resulting in a preference for a workshop format that was interactive and included other academic staff. It became apparent that these research participants see themselves as learners with knowledge and experience, both in terms of their disciplines and their educational practice. A further awareness demonstrated was that these academic staff are aware that there is more to learn, and this awareness is not held in conflict or contrast to their self-perception of being knowledgeable.

Of interest is the fact that some lecturers, like Vivian and Layla, referred to professional development activities in their field as offered at other HEI or by professional bodies. Vivian stated explicitly that, due to her students' challenges in Mathematics, she felt discipline-specific professional activities would be of more value to her. Vivian reflected that her desire for discipline-specific workshops, and collaborating with colleagues in the same discipline, as the most productive of previous professional development experiences. In contrast, Esther expressed a preference for engaging in a community of practice with peers in an interactive workshop format. This revealed an alignment with andragogical learning principles, such as adapting learning to fit the individual learner, taking into account situational differences and prior knowledge, addressing what the learner identifies as a need to know, relating learning to problem-solving, and other principles as discussed further in Chapter 2, section 2.4.

During interviewing, questioning by an other may result in new insights of the research participant into their practice. As described in Chapter 4, section 4.6.1., through the process of being interviewed, the research participant may develop new insights and understanding of their knowledge, if they have not previously reflected on this in the ways approached by the interviewer, or if the connection of concepts utilised is not

part of the participant's construction of theory. Furthermore, by asking questions and probing for meaning, interviewers are better able to encourage participants to articulate things that they may not have articulated before. This may mean that knowledge and meaning are constructed during the interview as described by Taylor, DeVault and Bogdan (2016:114). In reviewing the interviews with the above in mind, these sentiments were mentioned and implied by some research participants. Camila described that, since becoming a lecturer, she was busier which resulted in her having less opportunity to be purposively reflective and that, during the course of the interview, she thought of some aspects she hadn't considered in a long time. In particular, Audrey felt mentoring and building communities of practice during professional development activities were essential for day-to-day considerations of problem-solving as a professional. This demonstrated that these research participants felt the interviewing process was insightful and allowed for professional reflection. The articulation of this reveals a self-awareness, consistent with meta-learning and critical thinking competencies, as well as a constraint to their agency in professional reflection.

Camila was quite scathing of massified online professional development or being lectured at for professional development. Alex concurred in describing that he felt several of the institutions' professional development events or videos, where presenters just spoke around slides, were not engaging. Camila further critiqued being lectured about implementing online or blended learning functionality which was not available in her institution's Moodle-based Learning Management System (LMS). With an M.Ed, and her peers like Lillian referring to her as a peer resource in Lillian's discussion of Edmodo, this critique was determined as being motivated from a competency base, not from an aversion to online learning. In contrast, Audrey cited the institution's access to Lynda.com⁴⁰ and her personal use of Skillshare⁴¹ as valuable online resources:

⁴⁰ "Lynda.com is a leading online learning platform that helps anyone learn business, software, technology and creative skills to achieve personal and professional goals, hosted by LinkedIn" (<https://www.lynda.com/aboutus/>). LinkedIn Learning is an American website offering video courses taught by industry experts in software, creative, and business skills. It is a subsidiary of LinkedIn.

⁴¹ Skillshare is an American online learning community for people who want to learn from educational videos." (<https://www.skillshare.com/>)

“we are quite lucky that we’ve got different platforms, that we can use, I think one of the platforms that we’ve got ... is the Lynda.com ... and ... Skillshare.”

The emphasis on online-learning approaches was taken further at this institution in that they offered both synchronous and asynchronous online workshops or training and, as described by Audrey, enabled access to Lynda.com. The [Private Institution]’s commitment to blended learning led Layla to identify “blended learning” as a professional development topic for which additional learning and support is needed. Furthermore, from the feedback across the interviews, more focus is needed to address the deficits of the institutional context so that blended learning workshops or courses are relevant and can be implemented effectively and consistently.

In addition to the endorsement of online workshops by some, research participants felt that practice-based workshops and communities of practice were essential in enabling academic staff to apply what was learnt in such professional development. Audrey described a strong preference for interactive approaches to institutional professional development as follows:

“... but the moment you make it interactive it changes the environment, and it changes the feel to it. So, even if you are gonna have a workshop and it’s not done online, it needs to be practical. Everyone can go and read up on something, you know... if I have to look at the NQF, I can read up on it, but if I’m placed in the workshop and I have to practically, you know, do something with that information, how does that change my interaction with the information?... I have to actively engage with what I have learnt, and I think that that is an important part of, of professional development.”

Lieb (1991) describes that adults want learning to be relevant, and Killen (2010:249) described learning activated through problem-solving. Camila clearly demonstrated the relevance of adult learning principles in her discussion of desired professional development. She indicated a clear preference for “a workshop or resource-based reading that you can engage with to solve a specific problem” and drew on the example of her experience in attending an interactive workshop on group assessment:

“Like I could use that, and the fact that we’ve got like eighty students in a class if we do groups... we were actually discussing it with some people here because of the large group numbers: how do you fairly assess a group submission, where, for example, and we found this also to be quite tricky in the sense of ‘Right, I didn’t do anything, but two of [my] group mates did and they complain and they say [Camila] didn’t do anything’. ... so at this point, we are looking for how to do good assessments, but also stuff that’s reasonably practical for the lecturer to mark.” (Camila)

These types of interactive approaches both support and resolve Camila’s earlier critique of massified online learning and other participants’ complaints regarding being ‘lectured-at’. The recommendation for interactive approaches affirms earlier findings in literature as still being relevant. For instance, when researching the implementation of online learning Feist (2003:31) recommended that educators are more likely to participate in professional development opportunities that they could use immediately or those which were related to a current problem (active learning), and that included follow-up procedures.

With regards to peer review and communities of practice, Camila described how she went to specific academic colleagues for specific input or collaboration. She clearly distinguished between educational or generic competencies and subject matter expertise:

“... I think what would make it easier is, I like the fact, right if I am going to get somebody to look at my English Context and the stuff I’ve done I’ll go to [Anonymised Lecturer] because she’s experienced with teaching it,... but if I am looking for somebody who is very good with multiple-choice, I’d, for example, to go [Camden] who, who, who’s good with that, or if I need a rubric despite the fact that [Anonymised Lecturer]’s got subject knowledge I can go to somebody like, Audrey for example and say is this....”(Camila)

Vivian echoed this differentiation of peers, and, in so doing, echoes literature which describes differing value from peer reviews and communities of practice. Lillian

described utilising the input of colleagues as specialists, much like Camila does, in developing online interactions with students through Edmodo.

It was interesting to note that some research participants were very certain that their professional development had improved student success. Alex emphasised that he felt his personal professional development led to greater student success, and thus job satisfaction. He especially linked student success to his reflective practice:

“Well, for me to have any form of a job satisfaction, I have to be, if you realise that, I mean there is just no point in just going through the motions with Literature Studies in any case. If you, if you realise that, and I did, for instance, now with the second years... So, if I want them to perform better, I have to approach it differently this time. So, that was already, basically, my classroom experience forces me, basically, to do that reflection. Otherwise, they won't perform better in future.” (Alex)

Alex felt that his reflective practice enabled him to fulfil his role, and aligns with recent findings by (Ambler, et al., 2019:1,7) that professional learning is “intrinsic to being an academic”.

In some of the interviews, this aspect of whether professional development would improve student success, as attained curriculum, was probed. While some commented that they hadn't reflected on this, the linkages seemed clear for them. Camila indicated that she had adapted her practice after enactment and reflection, and consequently felt that student success is affected by changes in practice “...in the long run.” The emphasis on reflection as improving practice aligns with Dewey's [1916] proposition discussed in Chapter 2, section 2.3., where he proposes that knowledge arises from reflection on our actions and knowing is an active activity.

Research participants most often cited course module throughput (pass rates) as evidence of student success, which is measured and reported on at most institutions. Amongst others, Audrey was able to reflect on her practice and cite other evidence that her practice and professional development had improved student success:

“I do think so, yes, because I think if I think for instance on the curriculum you know when I started out with stuff, ... let’s change or bring in new information and add things, and I could see the difference in the students understanding different concepts and work, as well as how it changed how they were, would tackle specific types of work, ..., and I also kept note on their throughput rate and to see the change”

In contrast, Tessa was more tentative:

“I hope to think so, I... I will never know, the only way that I will know one of my old students will come back in my class again and then say ‘Shjoe, you’re worse or you’re better’....”

These discussions revealed that research participants rely on comparable institutional pass rate measures and evidence of students’ success in specific course modules as evidence of effective practice. There is, however, an omission regarding the use of data by these lecturers to evaluate their practice in relation to student success. While some of the participants also proceed with second- and third-year course modules, the evaluation across years was not explicitly stated by them. For example, in considering if a first-year marketing module prepares students well, the result would be that they proceed successfully in second- and third-year studies. Additionally, within a first-year module, retention rates and engagement measures of students would be significant indicators of good practice. While some of the participants did have teaching portfolios, these were only utilised in evaluations for teaching excellence awards.

It is also noted that, despite the focus of the interviews on practice related to the development of critical thinking competencies, none of the research participants mentioned that they had received professional development related to the development of or assessment of critical thinking competencies.

5.3.2. Analysis of institutional policy documents

Developing from the initial analysis of participant interviews, this section provides an analysis of the [Private Institution]'s policy documents (as artefacts) as a means of understanding the institutional constraints within which lecturers function at a policy level. As these policies additionally shape the course module guides, presentation and structure of outcomes and assessments through the Institutional templates, these are analysed before the outcomes and assessments.

The purpose of this analysis is to review the policies for principles, instructions and insights regarding curriculum, assessments and professional development in order to assist in triangulating data and answer the fourth research question “*How do academic staff perceive their environment and their institutional policies as impacting on their practices?*”. Doing so contributes to enriching the understanding of the site and the [Private Institution] as context, and will create meaningful points of comparison and contrast with participant responses during their interviews and in response to specific contextual questioning. During the interviews, it emerged that the institutional context and policy impacted the theorising and practice of academic staff more than anticipated. Therefore, the analysis of policy documents was revisited after interview coding and the review of outcomes and assessments. The table below describes which policies and institutional documents were analysed.

Table 5.5: Selected policies and institutional documents

Assessment Policy (2018a)
Teaching and Learning Policy (2014)
Staff Development, Recruitment, Selection, and Equity Policy (2017a)
Policy for the Development of Learning Materials (2017b)
Policy on the Monitoring and Evaluation of Teaching and Learning (2017c)
Conditions of Enrolment (2018b)

For the purposes of thematically analysing the above policies, the following will be discussed in detail as they relate, not only to the congruency between policy and

practice of academic staff, but also how they either align with or divert from conceptual and national policy paradigms discussed previously in this document:

- Critical thinking competencies
- National policy influences
- Professional development
- Roles of lecturers emphasised more than the role of student
- First-year student experience

During the 3 years of research, the private HEI where this study was conducted began a cycle of updating its policies in line with institutional changes and the merger of two previously separate HEI's. This data analysis, therefore, reviews the policy version which was approved and in place during the interviews and assessment document collection, and not the version of policy which was approved and applied when the study was proposed prior to data collection. In addition, more recent policy changes were excluded as these were implemented too late within the research cycle or after this study according to institutional planning of policy updates.⁴²

The [Private Institution] appears to have attempted to develop an integrated policy approach, in that their assessment policy initiates with a quotation from the tuition policy which states “student assessment practice is an integral part of curricula and should be consistent with the [curriculum] principles outlined...” ([Private Institution], 2018). The policy then proceeds to quote several “curriculum principles” (refer to figure 5.1 below) intended to position assessment as “an integral part of curricula” (ibid.:1). It appears that the institution is attempting to explicitly ensure alignment between the various policies that apply to curriculum, teaching and learning, and assessment.

⁴² For example, the Conditions of enrolment are updated annually and some policies have specific future review dates specified while the policy on Staff Development states “[the Institution] will keep this policy and its implementation strategies under regular review” ([Private Institution], 2017a)

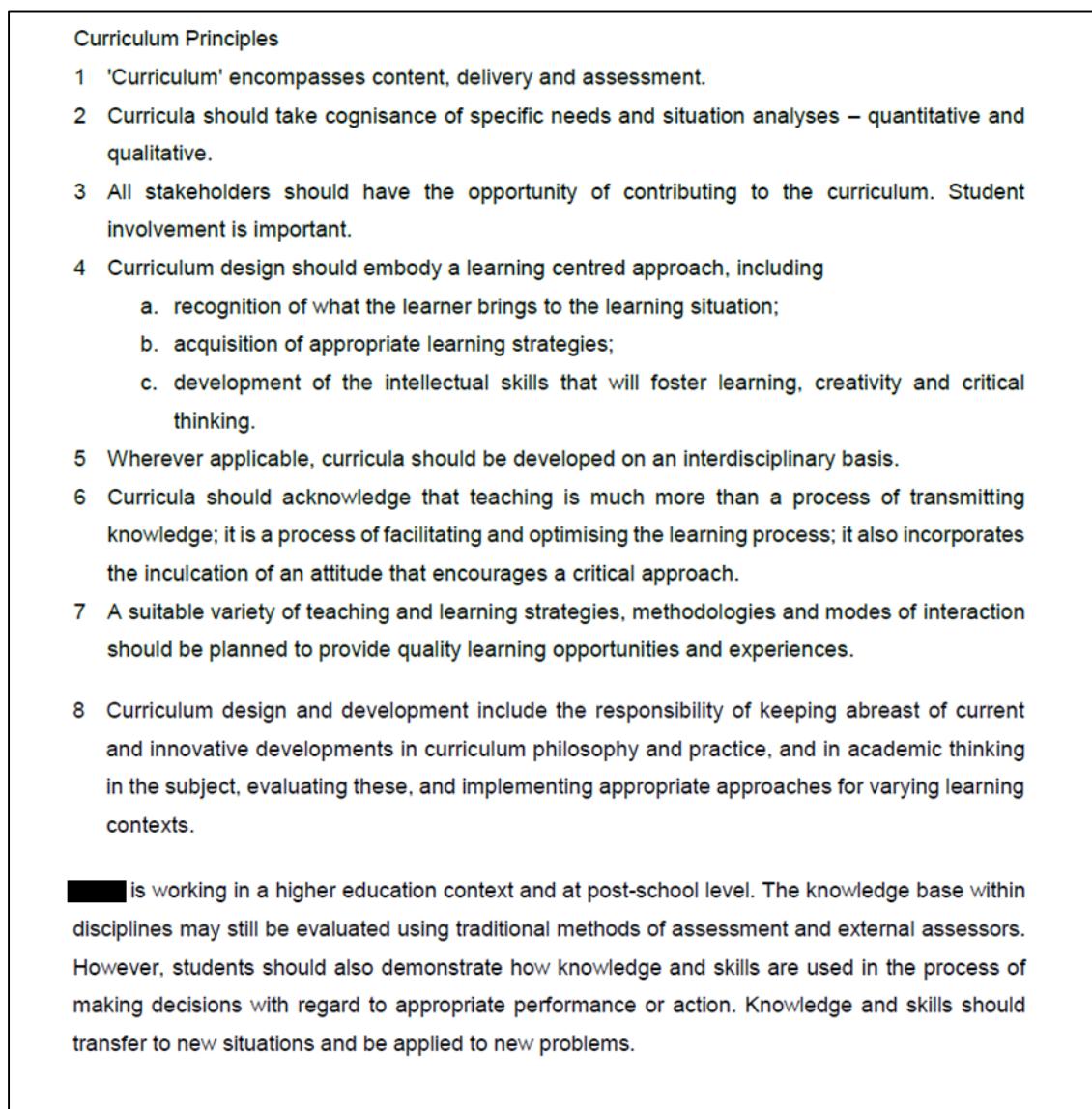


Figure 5.1: Extract from Assessment Policy: Curriculum Principles ([Private Institution], 2018: 1-2) (The name of the Institution has been anonymised)

5.3.2.1. Roles of lecturers and students

The institution's *Policy for the Development of Learning Materials* (2017b) describes the role of a 'module leader', who is responsible for the material development of a module. The policy describes this person as an academic staff member who manages the material design, development, review and evaluation of a full course module's material and assessments.

This Institution's *Assessment Policy* ([Private Institution], 2018:4) describes academic staff roles as "practitioner-assessor" and defines this as "the people who facilitate the learning assess the learning outcomes". Therefore, the policy describes that the institution's own staff are used as assessors within a quality management system that includes moderation, induction by the relevant Dean, and mentoring by senior academic staff. The [Private Institution] consequently affirms the agency of academic staff to evaluate student performance and related judgement of progression of students. The assessment policy specifies the minimum requirements for appointment as a lecturer or external marker as an honours degree (ibid.:5), which, in this research, can be seen as being adhered to (refer to Table 5.1). The role of the academic staff member as a lecturer or as an assessor is described in the assessment policy as including: marking and applying professional judgement to make assessment outcome decisions (ibid.:12, 13); constructive feedback on assessment and responding to assessment mark queries (ibid.:7, 27); consultation during assessment preparation (ibid.:7); providing students with the course module outcomes, how performance will be assessed and other expectations (ibid.:15); developing assessments and responsibility for the quality of assessment (ibid.:12, 17); and assessment related administration (ibid.:17). Consequently, this policy affirms significant agency of staff in their ability to evaluate student performance and progress students based on their professional judgement.

Academic staff are required to participate in professional development and the mentoring of junior or new lecturers by senior colleagues (ibid.:5). In both the Assessment and the Teaching and Learning policy, academic staff are required to apply reflective practices with respect to improving teaching and learning through reflecting on student performance in assessment to modify teaching ([Private Institution], 2018:6,15) and as part of the quality assurance process (ibid.:6). More than this, the assessment policy states strongly that "Lecturers will view student performance in assessment as feedback on their teaching" (ibid.:15). This suggests that student performance as student success is prioritised over a richer quality of teaching evaluations and interactions.

Throughout the policies, academic staff as lecturers, assessors or material developers are positioned as accountable to their Heads of Department, the Dean and if needed the Academic Board or Senate ([Private Institution], 2018; 2017; 2017b).

5.3.2.2. First-year student experience

A unique aspect of the [Private Institution]'s assessment policy is that it specifies some aspects related to first-year students, and discusses the transition of first-year students from school to higher education ([Private Institution], 2018:13). For example, in the section 'Academic Standards', under a heading entitled 'Learner-centeredness and learning-centeredness', the [Private Institution]'s policy refers to curriculum and assessment aspects specific to first-year students: bridging courses; formative assessments which not only allow for constructive feedback but also an indication of higher education requirements; exposure to assessment methods that will be used in summative assessment; and coaching on how to utilise feedback on assessment in learning (ibid.:13). This is reiterated elsewhere in the policy, where first-year students are contrasted with other students. For example,:

“First-year students need more bridging and more support to remain motivated. Regular assignments encourage regular study habits and an awareness of the standards of assessment within the module. More advanced students might require less direct guidance and be more able to undertake self-assessment tasks.” (ibid.:7)

A further example shows that: “Assessment should also – progressively from first-year level to final year level – show growth in the use of higher cognitive levels to assess learners” (ibid.:11). Additionally, while the policy promotes the utilisation of self-assessed tasks for formative and feedback purposes, the policy still recommends that this is not suitable for first-year students as “assessment that requires experience and a measure of subjective judgement may not be suitable for self-assessment tasks, particularly at first-year level” (ibid.:14). These aspects imply greater responsibility on the part of first-year lecturers and assessors and reinforce the passive role of students as described earlier. There is a further implied cause-and-effect correlation between student's motivation to complete tasks and the level of responsibility of lecturers

assume in facilitating and directing such motivation, evident in the directive for first-year students to receive “more bridging and more support to remain motivated”.

At enrollment each year, the [Private Institution]’s students receive a *Conditions of Enrollment* guide ([Private Institution], 2018b) during the registration process, which clarifies several policies, the code of conduct, disciplinary processes, conditions and academic rules. This guide is aligned to the policies in place at the time of publication each year and, when policies are reviewed, this is updated to achieve concise alignment. The institution uses this document as an attempt to ensure that all students are informed regarding the applicable Tuition and Assessment policies. This is re-enforced by the repetition of assessment aspects in the course module guides. Within this document, the language policy is reiterated and confirms that the institution’s language of teaching and learning (tuition) is English. Of interest, is that the [Private Institution] commits itself to “to assist students whose mother tongue is not English by offering special English language skills programmes, support and training” ([Private Institution], 2018b:25). This seems to align with the principles regarding first-year students in the assessment policy (2018:13) discussed above, but such language skills programmes were not specifically referred to by participants interviewed as a means of overcoming the language barrier.

For this private HEI, templates are provided by the institution for course module guide documents (sometimes called course syllabus documents). These course module guides contain the course module aim and descriptions, learning outcomes, assessment criteria, assessment information, learning management system information, applicable policy information such as plagiarism requirements and required learning resources such as prescribed textbooks. These assist to standardise the information distributed to students per course module and the alignment with some policy requirements, and ultimately guides the teaching and learning experience for both lecturers and students. For example, in the assessment policy, the policy defines formative assessment, summative assessment and integrated assessment which are specifically applied and described in each course module’s assessment plans.

5.3.2.3. Critical thinking competencies and student success

Figure 5.1 showed that the Institution refers to 8 curriculum principles ([Private Institution], 2018:1-2). Of interest to this study is principle 4, where point (c) states that curriculum design includes the “development of the intellectual skills that will foster learning, creativity and critical thinking.” (ibid.) This indicates that the institution is committed to the development of critical thinking competencies and justifies the relevance of this research to enhancing to the practice and priorities of the institution concerned. These ‘curriculum principles’ also reveal links to learning theory. For instance, principle 4, point (a) aligns to the adult learning principles as discussed in Chapter 2, section 2.3., specifically with reference to the prior experience of the learner/student.

The explicit definition and linked measurement of student success is an omission in the various policies of the institution, as the term ‘student success’ is not explicitly defined. The *Policy for the Monitoring and Evaluation of Teaching and Learning* refers to the Dean’s responsibility to report on “learning success (pass and throughput rates)” ([Private Institution], 2017c:7). While in the introduction of the policy (ibid.:1) the policy describes that “[a]n underpinning component of the [evaluation] process is critical reflection, based on sound evidence”, the nature and type of such evidence is less clear and criteria for evaluating the “soundness” of such evidence is omitted. Similarly, in the *Teaching and Learning Policy*, faculty (academic staff) are responsible for “[m]aximis[ing] opportunities for students to be successful and complete their studies” ([Private Institution], 2014:9). What is meant by “students [being] successful” ([Private Institution], 2014:9), other than completing their studies, is not described. As noted by the DHET (2018b:4), student success is a complex matter and, within the South African higher education context, student success is linked with transformation, addressing inequality. However, in the policy documents reviewed, no such complex and intricate definition of student success is provided, preferring an oversimplified notion of this. Given the references to course module pass and throughput rates, and completion of studies, the definition of student success can be expanded to include aspects like; improved academic achievement (good marks); development of discipline-specific competencies, development of competencies such as critical thinking competencies, effective integration with the academic community

(epistemological access); retention rates; graduation rate/ completion of qualification (throughput rates); employability and good citizenship or holistic development of the person (see, for example, HETS, 2007; Miller, 2015; Cuseo, n.d.:1- 3; CHE, 2010:35; Maree, 2015:408).

5.3.2.4. National policy influences

The [Private Institution]'s assessment policy (2018:2) specifically references the NQF, the SAQA Act (Act 58 of 1995), NSB Regulations (Regulation 452, No. 18787: March 1998) and ETQA Regulations (Regulation 1127, No. 19231: September 1998) in defining the context of outcomes-based education approaches and applied competence. A concern is that the policy references older aspects which are not consistently applied in higher education. Unit standards and technical and vocationally-orientated qualifications do not form the basis of higher education qualifications, and relevant legislation has consequently been updated. From the Acts and National Policies cited, the [Private Institution] then draws on definitions of assessment, assessors, learning outcomes, assessment criteria, OBE, and others. It seems unusual for higher education that this institution repeatedly refers to the 'ETQA⁴³ Regulations (1998)' formed under the SAQA Act (Act 58 of 1995) more than more recent publications from the CHE or SAQA, or the updated the NQF Act (Act 67 of 2008) which apply to specifically to higher education. While an ETQA fulfilled an equivalent role to the CHE in higher education, HEIs are only required to register with the CHE as the relevant Quality Council, unless they additionally offer SETA unit standards or technical and vocationally-orientated education qualifications which are not part of the HEQSF. This inconsistency is emphasised by the interchangeable use of the terms 'learner' and 'student': learner or learners is used 16 times in the policy, only three of which are within the terms 'learner-centredness' and 'learning-centeredness', and none are within quotations of national policy. For example, the policy describes links to employability: "Students will know what is expected of them

⁴³ While an Education and Training Quality Assurance (ETQA) body reports to the South African Qualifications Authority (SAQA), they are responsible for the accreditation of education and training providers which offer unit standards and/or qualifications that fall within the primary focus area of a specific ETQA body of the relevant Sector Education and Training Authority (SETA) or professional body, which is not part of Higher Education in South Africa.

and employers will know what a learner who holds a particular qualification has achieved” (2018:3). This is unusual in a higher education policy, as, while the term ‘learner’ is used in National Policy such as the SAQA Level Descriptors for the South African National Qualifications Framework (2012) to encompass all types of learners, it is more often used in the General and Further Education and Training (GENFET) and Trades and Occupations (TO) sectors. In contrast, HEI policies and policies from the CHE utilise the term ‘student.’⁴⁴ Furthermore, the assessment policy ([Private Institution], 2018: 2, 8) refers to the SAQA critical cross-field outcomes (CCFO’s) in the discussion on formative assessment. Again this reveals an institutional choice to refer to a more dated version of national policy, as SAQA updated the NQF level descriptors in 2012, as discussed in Chapter 2, section 2.7.1.

Both here and later, the policy ([Private Institution], 2018:2-3,11-12) emphasises the context of an outcomes-based system and criterion referencing, and requires this as a practice for the institution in stating that “[t]he outcomes and their associated assessment criteria will be available to students and other stakeholders so the learning and assessment system will be transparent, reliable and accountable” (ibid.:3). The institution’s assessment policy sets a requirement for outcomes per course module, which the policy states should have two to six specific outcomes (ibid.: 14). This aligns with guidelines such as those described by Schoepp (2019) discussed in Chapter 2, section 2.6. The policy further indicates that assessment in a course module should cover all outcomes of the module, and that “ assessment will cover the full range of outcomes, with no particular outcome being under- or over-assessed” (ibid.:14).

In describing the purposes of assessment, the [Private Institution] (2018:6) refers to ‘formative’, ‘summative’, ‘reflexive’ and ‘administrative’. However, in defining these terms in relation to the purpose of assessment, there appears to be some inconsistencies (refer to the extract in figure 5.2 below), as the active participant in these descriptions seems to be the lecturers as subjects, with the students being more passively positioned. Furthermore, in the purpose of assessing learning, the points regarding formative, summative and reflexive assessment identify the active subject

⁴⁴ As an example of this, the CHE Programme accreditation criteria (2004) and various good practice guides (2014, 2016) only utilise the term “learner” when quoting SAQA prescripts, national policy definitions, in reference to the national learner database or in quoting international documents.

as the lecturer who monitors and improves the quality, makes appropriate decisions, and also identify the lecturer as one who receives feedback.

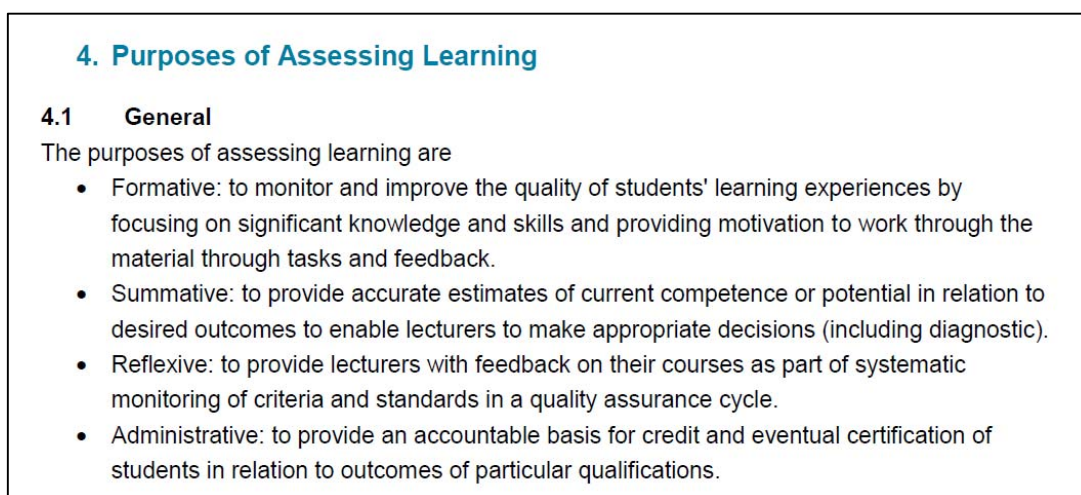


Figure 5.2: Extract from Assessment Policy: Purposes of Assessing Learning ([Private Institution], 2018: 6) (The name of the Institution has been anonymised)

Later in the policy, each of the types of assessment are described as “the function of formative assessment is to *encourage*, *direct* and *reinforce* learning... during the process of learning and teaching”; and “summative assessment also tests the student's ability to *manage* and *integrate* a large body of knowledge to achieve the stated outcomes of a module/ course/ paper/ programme” ([Private Institution], 2018:7-8, emphasis added). In further references, the student is more the focus, but as a passive subject in relation to the lecturer as actor. Further in the same policy, in a section titled ‘Principles’, the purpose of assessment is defined as “to *diagnose* students' strengths and weaknesses, to *focus* attention on main areas of learning, to assess if learning outcomes of significance have been achieved, etc.” ([Private Institution], 2018:9, emphasis added).

This lack of internal coherence regarding the purpose of assessment, where the approach is described as “learner-centeredness and learning-centredness” ([Private Institution], 2018:13) with the approaches to professional development reveals a dynamic in this institution, where assessment outcomes and student performance are seen as reflections on the quality of a lecturer's teaching and assessment practices. This approach to the quality of a lecturer's teaching is in conflict with the critical thinking

competencies, which include self-regulation, where the responsibility falls on the learner. Here the specific wording suggests greater accountability on the part of the lecturer and a defensive stance on the part of the institution (ibid.) in relation accounting for student performance outcomes. This also reveals a lack of alignment with the SAQA National Assessment Policy (2014:14,15) which recognises four purposes of assessment: formative, summative, integrated and diagnostic.

In the institutions' assessment policy (2018:9-11), the general principles include the purpose of assessment, assessment criteria, assessment gap (appropriateness), fairness, validity, reliability, practicality and cognitive complexity. All the principles are described within an OBE context. In comparing the assessment policy to the SAQA National Assessment policy (SAQA, 2014:4-6), the policy has not used the SAQA definitions but is also not explicitly in conflict with these (refer to Table 5.6 below). Later, with reference to academic standards, principles of relevance, learner-centeredness, learning-centeredness, accountability, transparency, and academic integrity in terms of plagiarism are promoted. While some terms like 'accountability' and 'transparency' are not clearly defined in the policy, the usage of the principles is aligned to the national standards. In Table 5.6 below, the definitions utilised are compared to the SAQA glossary contained in the National Policy and Criteria for Assessment (2014).

Table 5.6: Comparing definitions of [Private Institution] policy to SAQA National Assessment Policy definitions

Term	Definition from [Private Institution], 2018	SAQA Definition (SAQA, 2014)
Assessment	During assessment, an assessor collects evidence to identify the level of knowledge and/ or skill acquired so that he or she can make decisions related to the learner and/ or the learning programme, depending on the purpose of the assessment.	"Assessment" means the process used to identify, gather and interpret information and evidence against the required competencies in a qualification, part-qualification, or professional designation in order to make a judgement about a learner's achievement.
Assessment Criteria	<i>Assessment/ performance criteria</i> specify how much learning has to be	"Assessment criteria" means the standards used to guide learning

	evidenced, at what level of complexity and responsibility and how well.... Criteria for assessing achievement should be clear. In an OBE system, the outcomes and associated assessment criteria are specified in advance.	and assess learner achievement and/ or evaluate and certify competence
Accountability	[<i>Note: this principle is not defined in the institution's assessment policy but is utilised and applied as a standard</i>]	"Accountability" means that all relevant role-players must be able to provide evidence of the development and moderation of assessment tasks and processes, and that these tasks and processes are aligned with National Policy
Fairness	Assessment should be fair: that is, not advantage or disadvantage any student (see 'face validity' below). Stating outcomes and assessment criteria explicitly and transparently ensures fairness.	"Fairness" in assessment means that learners are assessed on what they know and have been taught; where questions are set in relation to the cognitive and affective curriculum covered in the teaching and learning
Outcomes	<i>Outcomes</i> are what a student can do and what he or she understands, i.e. the contextually demonstrated end products of the learning process. Outcomes are the results of learning processes – knowledge, skills, attitudes and values – within a particular context	"Outcomes" means the contextually demonstrated end-products of specific learning processes which include knowledge, skills and values.
Reliability	Assessment should be reliable; that is, produce the same results when particular students are tested again on the same test in a similar context. Value judgements (such as passing or failing grades) should be as objective as possible.	"Reliability" is the overall consistency of a measure. A measure is said to have high reliability if it produces similar results under consistent conditions. In assessment, reliability refers to the extent to which, in similar contexts,

		the same assessment-related judgements can be made.
Transparency	Any assessment task will be accompanied by clear assessment criteria and memoranda that are effectively communicated to students and markers	“Transparency” in assessment means the extent to which the assessment criteria and processes are known, visible to, and understood by learners and the various role-players in the assessment process.
Validity	The assignment or examination must be valid. This means that it measures what it intends to measure. Three important forms of validity are: face validity, content validity and construct validity	“Validity” means the extent to which the assessment measures what it has been developed to measure. Validity is about the appropriateness, usefulness and meaningfulness of assessment procedures, methods, instruments, and materials. Assessment is valid when assessment tasks actually test the knowledge and skills required for defined competencies and learning outcomes.

Based on the comparison of the SAQA definitions, as a national policy, and the institution’s definitions in the assessment policy, an incongruent pattern is revealed. This inconsistent alignment of the [Private Institution]’s assessment policy definitions with SAQA definitions is revealed through the institution’s *Policy for the Development of Learning Materials* which claims that the definitions are presented according to the CHE documents on ‘Criteria for Programme Accreditation’ and ‘Framework for Programme Accreditation’, as a national benchmark ([Private Institution], 2017b:1). Though such misalignment may be addressed as the Institution completes the policy update cycle, at the time of analysis, translation of universal definitions within the context of an institutional glossary has not been consistently established.

Where some incongruency is noted in terms of the institutional glossary, there are instances where a drive towards promoting higher education purposes is more clearly

stated. One of the principles described in the [Private Institution]'s assessment policy (2018:11) refers to "Cognitive Complexity", and demonstrates an instance where the Institution makes the higher education context explicit and differentiating. The policy states "at higher education level, the assessment should have adequate cognitive complexity to assess higher levels of thinking. Assessment criteria should, therefore, include level descriptors" (ibid.:11) The level descriptors referred to here are the NQF level descriptors. Developing from this, the policy describes that each year of study should be progressively more cognitively complex in terms of developmental competency levels, implying both scaffolding and increasing levels of difficulty. The institution's policy here gives an example of the application of Bloom's taxonomy as an approved scaffolding tool to ensure the suitable cognitive levels are applied in outcomes and assessment criteria (ibid.:11).

There are some obvious omissions of National Policy. For example, the *Assessment Policy* does not reference any SAQA or CHE policy or guidelines with respect to RPL ([Private Institution], 2018:9) despite extensive policy and guidelines published in relation to this core aspiration of the NQF (refer to Chapter 2, section 2.7.1.). Though there are obvious diversions from conceptual and national policy paradigms, what is encouraging, in terms of this study, is that there is a clear drive towards promoting greater cognitive complexity, as initiated in the first year of study.

5.3.2.5. Professional development

The [Private Institution]'s policies clarify the role/s of both academic staff, other staff functions and students. For the purposes of this research, the role of academic staff in relation to curriculum, teaching and learning, assessment and professional development are focused on their alignment to the specified research questions. From the [Private Institution]'s *Policy for Staff Development, Recruitment, Selection and Equity* ([Private Institution], 2017a), it is apparent that the institution is committed to academic staff development, as the institution links professional development to institutional performance as stated in the aim of the policy: "The aim of staff development is to assist the development of each individual and thereby enhance the institution's performance through improved organisational efficiency and

effectiveness” (2017a:2). This declaration reveals an institutional belief that the practice of the academic staff directly affects student performance and organisational objectives.

This policy places the responsibility for staff development both on the individual staff and on their line managers (ibid.:3,4). This reflects a hierarchical delegation of institutional responsibilities that may be incongruent with the responsibility for professional development as prescribed by the CHE in their Programme Accreditation Criteria (2004) and discussed in Chapter 2, section 2.9., and also contradicts literature by the likes of Imel (1990), where professional development is often viewed as the responsibility of the professional and as a self-regulated professional learning process. In this section of the policy document, formal qualifications are specifically encouraged. From the *Staff Development* policy, it is clear that both academic and non-academic staff are addressed. However, there are some aspects that are differentiated for academic staff such as “... an introduction to the theory and practice relating to student learning, curriculum planning and development, course management, course evaluation, teaching, student supervision, assessment and examination, scholarship, research and community service... and an introduction to the use of the library” (Ibid.:11).

In relation to professional development, the [Private Institution]’s assessment policy ([Private Institution], 2018:5) states “assessment is a crucial part of teaching and learning which requires considerable expertise”. From this, the policy commits the institution to train academic staff in assessment in order “to set up fair, valid and reliable assessments for students”; training to develop assessment criteria in relation to specified learning outcomes; and the selection of assessment methods (ibid.). This aligns with the CHE programme accreditation criterion (2004) as described in Chapter 2, section 2.9. The policy prescribes a means of professional development as including short courses or workshops, mentoring, informal peer review, ‘on-the-job’ training and award courses. Many of these types of professional development are mentioned by the academic staff in their interviews (refer to Chapter 5, section 5.3.1.3.). Later, the policy states, “[I]nstructors are trained to improve the quality of assessment, not necessarily the quantity of assessments... assessment is ultimately an exercise of professional judgement” ([Private Institution], 2018:12). This shows the institution’s

perception of the role of the lecturer as assessor as a 'professional' function and, therefore, requiring development. Such a description of the need for lecturer education and training is entrenched in the CHE programme accreditation criteria (CHE, 2004). Towards the end of the policy, the [Private Institution] states that "[l]ecturers will view student performance in assessment as feedback on their teaching" and describes assessment as revealing "students' misunderstandings" in order to modify teaching ([Private Institution], 2018:15).

Notably, the policy does not describe how the effectiveness of professional development will be measured other than in referring to "enhanc[ing] the institution`s performance through improved organisational efficiency and effectiveness" (2017a:2). Such a definition shows itself to be organisation-centred rather than academic staff-centred and is in contrast to the proposed evaluation of professional development by authors like Quinn, et al. (2019) and Guskey (2014:13). Furthermore, this policy omits the references to individual staff goals and how professional development assists academic staff in achieving their personal aspirations. While the aim and introduction of this policy suggests that staff will benefit from professional development, this is presented as subordinate to institutional performance and organisational efficiency. Career advancement is perceived as within the institution and for the purpose of achieving organisational objectives. For example, the objectives of the staff development policy and programmes include: "provide support for career advancement, so that [Private Institution] will retain staff who perform well; prepare staff for possible future responsibilities in the institution; enhance the standard of performance of all staff in their current jobs..."([Private Institution], 2017:2).

5.3.3. Analysis of curriculum module documents

In addressing the scope of the research, the modules, as presented in Table 5.7 below, were selected as course modules for which the research participants were responsible. These responsibilities extended to curriculum and assessment development of these course modules, and act as exemplars of participant practice. Additionally, these modules are representative of typical first-year course module structures at the [Private Institution] concerned:

Table 5.7: Credits per course module

Course module	Course module credits (or equivalent)
Academic English A	12 Credits
Business Management 1A	12 Credits
Consumer Behaviour 1	11 Credits
Development Studies B	12 Credits
English Literature Studies 1 (1 Year)	20 Credits
Introduction to Critical Reasoning	12 Credits
Introduction to Mathematics	12 Credits
Introduction to Writing & Communication Skills	12 Credits
Student Skills A (First Semester)	12 Credits
Student Skills B (Second semester)	12 Credits

All the modules reviewed are first-year modules and are mostly semester modules unless otherwise stated (where a semester is regarded as 16 weeks of study offered within a six-month period). The number of credits varied from 11 or 12 credits per semester to 20 credits for a year-long module. In South Africa, a “credit” is defined as “the amount of learning contained in a qualification or part qualification whereby one credit is equal to ten notional learning hours” (SAQA, 2014:8). In South African higher education, approximately 120 credits are equivalent to one year (two semesters) of academic study. A Bachelor’s degree can, therefore, be accredited over 3 or 4 years with a minimum of 360 credits and a maximum of 480 credits (DHET and CHE, 2014:32). In terms of time taken to complete each module, the modules listed in the table above vary from 100 to 120 notional learning hours per semester (1 credit is approximately equal to 10 notional learning hours). Moreover, a student will attempt four to six modules with such credit allocations in each semester in their first year, depending on the degree concerned.

In reviewing the learning outcomes of the course modules which the participants were responsible for, other than the course module *Introduction to Critical Reasoning* and *Student Skills A*, the course modules did not explicitly mention critical thinking in the learning outcomes. However, in order to achieve the learning outcomes or the associated assessment criteria, components of critical thinking would need to be

utilised. For example, in the *Development Studies* course module, the outcome “select a political ideology for the above purpose by comparing and contrasting the different theories with one another” ([Private Institution], 2017e:2) would draw on critical thinking competencies.

The quality and clarity of learning outcomes in the evaluated course modules varied. Some outcomes clearly indicated the cognitive levels, range, required knowledge and competency. Other outcomes were less clear and seemed to refer to topics that needed to be covered. This seems to reflect both the level of competence of the course module developer and in some cases, the nature of the discipline. In some cases, the clarity of an outcome needed to be evaluated using its related assessment criteria. Additionally, outcomes varied in terms of measurability. For example in *Introduction to Writing and Communication Skills*, one outcome was described as “*Perfect* their writing skills and understand the importance of proofreading” ([Private Institution], 2018h:2, emphasis added). While the associated assessment criteria indicated “be able to do research and reference”, both the measurability of ‘perfect’ and the clear association of how researching and referencing would *perfect* writing and proofreading are not clear based on the course module information alone.

An outcome with stronger measurability can be found in the *Development Studies* course module, where an example “Define, discuss, explain and understand how the following concepts relate to human development and one another in the political dimension: The United Nations; Sustainable Development Goals; Human Rights; Democracy; and Non-Governmental Organisations” ([Private Institution], 2017e:2) is associated with the assessment criteria, “Define, outline and discuss the role and composition of the United Nations; Define, outline and discuss the importance of the Sustainable Development Goals and the goals themselves; Define, outline and discuss the origins and principles of human rights, as well as the three generations; Define, outline and discuss the nature of democracy, its principles and the relationship between democracy and development (good governance); and Define, outline and discuss the characteristics and role of Non-governmental organisations” (ibid.:3). Such clearly stated outcomes and their associated assessment criteria would, therefore, be easier to corroborate in the developed assessments, and would lead to clearer

evaluation as aligning with the characteristics of good outcomes as stated in section 3.1.3.

The number of outcomes per module varied from one outcome to ten outcomes. For example, the *Business Management 1A* course module had one outcome with four associated assessment criteria, as seen below in Table 5.8:

Table 5.8: *Business Management 1A* course module criteria

Outcome	Assessment criteria
1. Demonstrate understanding of and the ability to apply management principles in the business environment.	1.1 Demonstrate in-depth understanding of the management environment. 1.2 Describe the evolution of management. 1.3 Demonstrate understanding of and the ability to apply the basic management tasks in the business environment. 1.4 Demonstrate understanding of and the ability to apply the additional management tasks in the business environment.

In total, across the ten modules, 53 outcomes were evaluated reflecting an average of 5 outcomes per module. It is interesting to note that several outcomes can be considered ‘complex’ in that they contain more than one assessment verb, or can be re-written as two or more outcomes. An example of this can be seen in the *English Literature Studies 1* course module, where the outcome is both task and cognitively complex: “*Demonstrate* an ability to gather and *evaluate* different sources of information; to *select* information appropriate to the task, and to *apply* well-developed processes of analysis, synthesis and evaluation on that information in the presentation of essay responses” ([Private Institution], 2018e:2, emphasis added). This is in contrast with an outcome from the *Introduction to Critical Reasoning* course module which simply states: “*Establish* what constitutes a good argument” ([Private Institution], 2018f:2, emphasis added).

When the outcomes were evaluated against the revised Bloom's taxonomy (Anderson, et al., 2001), some outcomes reflected more than one level of the taxonomy, especially where 'Understand' and 'Apply' were evaluated. Therefore, an additional category referring to both was established. An example of this would be the outcome from the *Consumer Behaviour studies* module: "Demonstrate an understanding of what personality is and how it applies to marketing" ([Private Institution], 2018d:2). A summary of the analysis is presented in Table 5.9 below.

Table 5.9: Analysis of outcomes against Blooms taxonomy

Bloom's taxonomy level descriptor	% of outcomes reflecting this level	Example of outcome
Remember	0%	N/A
Understand	21%	Demonstrate basic understanding of what social class and reference groups are.
Understand and Apply	19%	Display an improved understanding and application of emotional intelligence skills
Apply	43%	Apply critical thinking skills
Analyse	9%	Analyse good and bad arguments
Evaluate	8%	Demonstrate an ability to evaluate, select and apply standard analytical, argumentative or discursive methods in the writing of both short-form and long-form responses.
Create	0%	N/A
Total:	100%	

In this table, the Bloom's taxonomy level descriptor most used is 'Apply' both in the category 'Apply' and 'Understand and Apply'. Bloom's taxonomy level descriptors of 'Remember' and 'Create' are not indicated. Analysis suggests that academic staff regard the use of 'Remember' as embedded within the more cognitive complex higher levels and that academic staff simply regard recall as too simplistic for higher education NQF levels despite the use of recall-based questions in some assessments. This aligns with critiques by Lawler (2016) who describes in fields like Botany that "identifying and naming are at the lowest level of cognitive skills and have been systematically excluded from University degrees because they are considered simplistic" (ibid.). This is further supported by Bovill and Woolmer (2019:411) and Ashwin et al. (2015: 161) who argue that through learning outcomes, higher education is "attempting to move away from a focus on teaching ..., to a focus on learning, what

the student does". The resulting emphasis in learning outcomes at the level 'apply' and higher seems to be evidence of this. As several learning outcomes refer to more than one level descriptor, this supports the application of Bloom's taxonomy and critical thinking competencies in non-hierarchical and integrated approaches. As these are first-year modules and do not fall under creative disciplines such as design or the fine arts, the absence of 'Create' may either be due to the cognitive complexity required which may be more relevant in subsequent years of tertiary study, or the nature of the discipline documents being investigated here as not being design- or fine arts-orientated. Given the literature which notes a high level of recall required at the secondary school level, the absence of 'Remember' is evidence of a threshold gap in the transition to higher education, where previously secondary education strongly assesses 'Remember' in many disciplines.

A summary of the analysis of outcomes against the related Knowledge Domain descriptors is presented below in Table 5.10. Given the repeated references to Bloom's taxonomy by the research participants, the value of the knowledge domain in higher education and the apparent omission of 'remember', this review was done to provide further insight into the outcomes of the analysis in Table 5.9.

Table 5.10: Analysis of outcomes against knowledge domain descriptors

Knowledge Domain descriptor	% of outcomes reflecting this level	Example of outcome
Factual	0%	N/A
Conceptual	25%	Demonstrate basic understanding of what social class and reference groups are.
Procedural	26%	Write and present for a wide range of purposes and audiences.
Metacognitive	4%	Demonstrate self-regulated learning in a higher education learning environment
Procedural and Conceptual	45%	Distinguish between deductive and inductive reasoning
Total:	100%	

The findings presented in tables 5.9 and 5.10 reveal patterns between the cognitive levels of the outcomes and applicable knowledge domains. As can be seen from the

table above, the low utilisation of the taxonomy level 'Remember' seems to correlate with the use of the 'factual' Knowledge Domain descriptor. In relation to critical thinking competencies, this may be an overcompensation for the secondary schooling emphasis on recall as described in Chapter 2 as academic staff invest in differentiating higher education from schooling. It is noted that, when an outcome was evaluated against the 'metacognitive' Knowledge Domain, in both cases, the related Bloom's taxonomy level was 'Evaluate' and the related critical thinking competency was 'self-regulation'. This suggests an urgency associated with the development of students towards independent scholarship. Since nearly 45% of learning outcomes refer to more than one cognitive domain this supports the application of Bloom's taxonomy and critical thinking competencies in non-hierarchical and integrated approaches.

The outcomes were analysed to consider which critical thinking competency most applied to the outcome statements. While some outcomes show evidence of possibly requiring more than one critical thinking competency, the evaluation of what was most applicable and utilised was considered. As can be seen in Table 5.11 below, the critical thinking competency most utilised was that of 'Interpreting and explaining':

Table 5.11: Analysis of outcomes against critical thinking competencies

Critical Thinking Competencies	% of outcomes reflecting this level	Example of outcome
Analysing arguments, claims or evidence	13%	Select a political ideology for the above purpose by comparing and contrasting the different theories with one another
Asking and answering questions for clarification	6%	Acquire and apply oral presentation skills
Defining terms	4%	Define, discuss, explain and understand how the following concepts relate to human development and one another in the political dimension: The United Nations; Sustainable Development Goals; Human Rights; Democracy; and Non-Governmental Organisations;
Identifying assumptions	0%	N/A
Interpreting and explaining	40%	Demonstrate basic understanding of what social class and reference groups are.
Judging or evaluating	4%	Establish what constitutes a good argument
Making inferences using inductive or deductive reasoning	8%	Determine the factors that influences family and household decision making
Making decisions or solving problems	11%	Identify and solve a problem involving number patterns that lead to arithmetic and geometric sequence and series
Predicting	0%	N/A
Seeing multiple perspectives	9%	Demonstrate effective conflict resolution strategies and communication skills relating to self and group/team contexts
Self-regulation	6%	Engage in effective self-reflection activities, exploring concepts of self-esteem, self-awareness and self-regulation
Creative thinking	0%	N/A
Total:	100%	

For some outcomes, it can be seen that more than one critical thinking competency would need to be utilised in order to achieve the outcomes prescribed. An unforeseen

finding was that all outcomes required one or more critical thinking competencies in order to achieve the outcomes prescribed. This suggests the incorporatedness of critical thinking competencies in higher education is very high, even at the first-year level. A possible implication is that most academic staff engage with critical thinking more implicitly than previously suggested. As discussed in Chapter 3, section 3.1.3. Goff et al. (2015:30) recommended that learning outcomes must define critical thinking in relation to the context of the programme. In this review, three of the modules, which were designed to be offered within multiple disciplines, did not describe critical thinking in a discipline context: *Introduction to Critical Reasoning*; *Student Skills A*; and *Student Skills B*. This finding evidences the approach to developing critical thinking, both as a generic competency and as a contextually applied competency within first-year higher education.

5.3.3.1. The effect of template changes

As stated previously, during the course of the study, the institution revised the template of course module information which migrated the format from outcomes listed, followed by assessment criteria, to a table where the relevant assessment criteria were presented next to the learning outcome concerned. While the study did not investigate the impact of the template changes, in one case, the lecturer of *Consumer Behaviour* supplied both an older template of course module information guide and an updated version in the subsequent semester of the same year. The two templates confirmed the template change which was seen in other course module documents.

The outcomes were edited by academic editors as part of a review process in order to improve the quality of documentation. Previously, the course module information guides had only been reviewed by a programme manager, or Dean, and the extent of the review and feedback varied. The learning outcomes of the course modules were improved in the process, as the initial learning outcome was pre-empted by “At the end of this course learners should be able to demonstrate a sound knowledge and understanding of the following as relates to Consumer Behaviour” ([Private Institution], 2017d:2) with a list of topics to be covered. In the older version, the competencies and cognitive levels were described in the assessment criteria, for example on assessment

criteria was “Understand and explain Consumer attitudes and how this affects the decision-making process” (ibid.). However, in the updated template, the outcomes and associated assessment were more articulate: for example, “Determine the factors that influences family and household decision making” ([Private Institution], 2018d). This outcome now had 6 associated assessment criteria: “Discuss the difference between family and Household; Explain the main functions of a family; Describe key roles that members play in the family or household decision making; Discuss factors that affect the role played by different members in the family or household decision-making process; Explain the major causes of conflict in family or household decision making; and Identify the influences of the family life cycle stages on family consumption activities” (ibid.)

This suggested the impact of changing institutional templates and requirements as a way of scaffolding lecturer professional practice in outcome development. While the impact of templates, or structure shaping content, is not the focus of this study and other lecturers did not share both versions, it does demonstrate a need for more concise definitions of outcomes which may motivate the need to better define key terminology associated with this, such as what critical thinking is within this particular institutional context. It further reveals a potential area of future study, which will be reiterated in Chapter 6 of this document.

5.3.4. Analysis of assessments

As discussed in Chapter 3, section 3.2, while such studies are seldom published, many institutions review assessment questions against Bloom’s taxonomy (1956) to examine the cognitive levels of assessment as part of professional development or a quality assurance process. For that reason, a similar strategy was utilised to examine academic staff assessments (see Chapter 3, section 3.1.3. and Chapter 4, section 4.7.3.). For the purposes of this analysis, the Anderson and Krathwohl’s (2001) revision of the original Bloom’s taxonomy (Bloom & Krathwohl, 1956) was utilised by research participants to show evidence of quality and alignment with Institutional policy and practice.

At the HEI concerned, the assessment policy requires that students complete all required formative assessments and achieve a 'due performance' (DP) mark in order to be permitted to attempt the summative assessment ([Private Institution], 2018a:17; 2018b:28). The specific DP requirements for each course module are required to be stated in the course module guides from this assessment policy document. Therefore, the course module guide templates specifically include a relevant section for the disclosure of DP requirements. As most course modules are offered on a semester basis (approximately 13 teaching weeks, followed by a study week and two examination weeks), most course modules have approximately three assessments in a semester, consisting of written tests and/or assignments. From evaluating the assessments, it seems the term 'assignment' is used broadly to include both research essays, evaluative argumentative essays, assignments with application-type questions, online multiple-choice questions, and weekly or bimonthly continuous assessment activities (sometimes referred to as tutorial activities). The types of assessment are influenced by the discipline of the course module. For example, in the *English Literature Studies 1* course module, the assignment is described in the course module outline by "The assignments require students to respond to a topic in the form of an academic research essay" ([Private Institution], 2018e:6). One of the related assignments then asks for a six-page written essay evaluating a text in relation to a specified topic or theme. This can be contrasted with the *Introduction to Mathematics* course module, where the assignment is a series of mathematical problem-solving questions.

Table 5.12 below summarises both the formative and summative assessments per course module as reviewed from the course module documents. As can be seen, all course modules have more than one formative assessment and are assessed summatively through a summative assignment or summative examinations. This information is disclosed to students in each course module's guide, which aligns to the CHE programme accreditation criteria (2004:19-20), which requires that assessments need to be aligned to learning outcomes and related assessment criteria at the modular and programme levels, and that these are clearly stated and communicated to students.

Table 5.12: Overview of assessment plans of course modules

Course module	Student Skills A (First Semester)	Introduction to Critical Reasoning	Introduction to Mathematics	Student Skills B (Second Semester)	Introduction to Writing & Communication Skills
Course module credits (or equivalent)	12 Credits	12 Credits	12 Credits	12 Credits	12 Credits
Length	1 Semester	1 Semester	1 Semester	1 Semester	1 Semester
Number of formatives	3	3	3	3	3
Type of assessment	1 Written test, 2 Research Assignments	1 Written test, 2 Research Assignments	1 Written test, 1 Assignment, 1 Online continuous assessment (tutorials)	1 Written test, 2 Research Assignments	3 Written Assignments
Weighting of formatives	50%	50%	50%	50%	60%
Required DP sub minima	40%	40%	40%	40%	40%
Number of Summatives	1	1	1	1	1
Type of Assessment	Summative Assignment	Summative Assignment	Written Examination (3 hours)	Summative Assignment	Summative Assignment
Weighting of Summative	50%	50%	50%	50%	40%
Summative sub minima	40%	40%	40%	40%	40%
Required course module pass mark	50%	50%	50%	50%	50%

Course module	Development Studies B	Consumer Behaviour 1	English Literature Studies 1	Business Management 1A	Academic English A
Course module credits (or equivalent)	12 Credits	11 Credits	20 Credits	12 Credits	12 Credits
Length	1 Semester	1 Semester	1 year (2 Semesters)	1 Semester	1 Semester
Number of formatives	5	5	6	4	4
Type of assessment	2 Written tests; 2 Research Assignments, 1 Online MCQ Assignment	2 Online Tests; 1 Theoretical written test; 1 group Assignment	2 Written tests, 4 Assignments, 1 mid-year Examination	2 Continuous assessments, 1 Test; 1 Assignment	1 Online weekly Tutorial; 1 Online Assessment; 1 Test; 1 Assignment
Weighting of formatives	50%	40%	50%	40%	50%
Required DP sub minima	40% minimum average	40% minimum average	40% minimum average	40% minimum average	40% minimum average
Number of Summatives	1	1	1	1	1
Type of Assessment	Written Examination (3 hours)	Written Examination (3 Hours)	Written Examination (3 Hours)	Written Examination (3 Hours)	Written Examination (3 Hours)
Weighting of Summative	50%	60%	50%	60%	50%
Summative sub minima in Summatives	40%	40%	40%	40%	40%
Required course module pass mark	50%	50%	50%	50%	50%

It must be noted that the alignment between pass mark, DP subminima and examination subminima requirements show the alignment of research participants to institutional policies and processes, including the use of standardised templates, faculty editors and management requirements to check policy adherence. The course module information additionally reflects that, when students achieve between 45% to 49% module marks, they are permitted to write a supplementary summative assessment which replaces the module mark should a student achieve 50% or higher.

All research participants submitted more than one assessment which was reviewed. In most cases, there was evidence that the formative assessments prepared students for the summative assessments. For example, in the course modules reviewed, if the course module had a written summative examination, the formative assessments included a written test during the semester. Similarly, if the course module had a written summative assignment, the formative assessments included a formative assignment. This would provide for first-year students to be exposed to the types and levels of assessment before summative evaluation is made.

As can be seen in Table 5.12, four of the modules reviewed utilised an assignment format for the summative assessment. The other 6 modules applied a more traditional summative examination approach. From the module course outlines and assignment instructions, the summative assignments were individual assessments. In these summative assignments, it was clear that critical thinking concepts were deliberately assessed, and were required for successful completion. While this was an obvious requirement for a module like the *Introduction to Critical Reasoning*, this was also explicit in other assignments. For example, in the *Student Skills B* (Second semester) summative assignment, under the initial heading “Learning Objective”, the assessments states:

Students will be assessed on their logic, creativity and application of critical thinking and analytical skills. This assessment is based on Application and Self-reflective activities linked with theoretical knowledge. ([Private Institution], 2018m:2)

This assessment then asked questions with specific mark allocations. These questions varied in type, complexity, degree of critical thinking and constituent critical thinking

competencies. It is interesting to note that this quote, refers to both critical thinking competencies and component critical thinking competencies of analysis, self-regulation (through reflection) and creativity in an integrated way with critical thinking.

The *Introduction to Critical Reasoning* module adopted a different approach to assessment in that an overall percentage out of 100 was preferred to specific mark allocations, with the merit of answers measured according to specified criteria, as shown in the rubric in figure 5.3 below.

Mark allocation for the presentation of the argument

Criteria	Important points to remember	Percentage contribution
Identifying arguments	<ul style="list-style-type: none"> Identify, name and explain each sub-argument (12) Identify, name and explain the overall argument (8) 	20%
Analysis of the use of language	<ul style="list-style-type: none"> Analysis of ambiguity (4) Analysis of emotive meaning (4) Analysis of tone used (4) Analysis of obfuscation (4) Analysis of weasel words (4) 	20%
Assumptions	<ul style="list-style-type: none"> Identify where it occurs (1) Explain the assumption (2) Show how it affects the overall argument (3) 	6%
Logical Fallacies	<ul style="list-style-type: none"> Identify where it occurs (3) Explain the logical fallacy (3) Show how it affects the overall argument (3) 	9%
Validity	<ul style="list-style-type: none"> Determine validity for each argument (sub- and overall argument) (10) Show impact on overall argument (2) 	12%
Truth of Premises	<ul style="list-style-type: none"> Identify premises that are false (8) Present evidence that show these premises are false (8) 	16%
All relevant information	<ul style="list-style-type: none"> Presenting overlooked information (3) Explaining how it affects the argument (3) 	6%
Good or Bad Argument	<ul style="list-style-type: none"> Stating whether the argument is good or bad, with reasons as determined from the above (1) 	1%
Referencing	<ul style="list-style-type: none"> Alphabetical list of references Correct referencing for different sources Number and quality of works consulted In-text referencing and reference list. 	10%

Figure 5.3: Example of mark allocation from the *Introduction to Critical Reasoning* summative assessment ([Private Institution], 2018k:6)

The summative assessment rubric above compares with some resources for higher education academic staff such as the rubrics developed for Deakin University by Thyer (2018). However, such rubrics normally include descriptors against the criteria for categories of competency to assist both academic staff as assessors and students in evaluating how their competency measures up to each criterion, such as those developed by the Association of American Colleges and Universities (2017) in figure 5.4 below.

CRITICAL THINKING VALUE RUBRIC

for more information, please contact value@aacu.org



Definition

Critical thinking is a habit of mind characterized by the comprehensive exploration of issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion.

Evaluators are encouraged to assign a zero to any work sample or collection of work that does not meet benchmark (cell one) level performance.

	Capstone 4	Milestones		Benchmark 1
		3	2	
Explanation of issues	Issue/ problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Issue/ problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/ problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/ or backgrounds unknown.	Issue/ problem to be considered critically is stated without clarification or description.
Evidence <i>Selecting and using information to investigate a point of view or conclusion</i>	Information is taken from source(s) with enough interpretation/evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.	Information is taken from source(s) with enough interpretation/evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.	Information is taken from source(s) with some interpretation/evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning.	Information is taken from source(s) without any interpretation/evaluation. Viewpoints of experts are taken as fact, without question.
Influence of context and assumptions	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.
Student's position (perspective, thesis/hypothesis)	Specific position (perspective, thesis/hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/hypothesis).	Specific position (perspective, thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/hypothesis).	Specific position (perspective, thesis/hypothesis) acknowledges different sides of an issue.	Specific position (perspective, thesis/hypothesis) is stated, but is simplistic and obvious.
Conclusions and related outcomes (implications and consequences)	Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order.	Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.	Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly.	Conclusion is inconsistently tied to some of the information discussed, related outcomes (consequences and implications) are oversimplified.

Figure 5.4: Example of a rubric with descriptors from the Association of American Colleges and Universities (2017)

In returning to the HEI as the site of study here, types of questions used in summative assessments included Multiple-choice questions, True-False questions, short questions, questions that require paragraph responses, and essay-type questions. In some assessments, there were questions that explicitly tested students recall of knowledge. For example, in the *Business Management 1A* module's summative examination, students are asked to "Explain the difference between a goal and an objective?" ([Private Institution], 2018:9). While the examination also included case studies, the questions in relation to the case studies contained both understanding and application taxonomy cognitive levels. This shows the application of Bloom's taxonomy in a more integrated way than suggested by the discrete levels of the revised taxonomy and yet aligns with Anderson et al. (2001:270) who perceived 'problem-solving' and 'critical thinking' as requiring cognitive processes in several levels of the taxonomy and not confined to one level.

Self-reflective or meta-cognitive questions were only present in some of the assignments, like that quoted above, but not in the test or examination-type assessments submitted. This may relate to the course module outcomes and the conceptual understanding that self-regulation is seldom assessed in these types of assessments. The questions utilised in examinations and test drew more on the testing of understanding, analyse and apply with respect to the Bloom's taxonomy levels.

5.4. TRIANGULATION OF DATA

From the analysis above, it can be seen that the themes which emerged from the interview data, and the themes contained within the policy documents, differed slightly in detail and subthemes, but overlapped in related concepts.

Table 5.13: Comparison and overview of themes originating from interview data and Institutional policy analysis

Interview Data Themes		Policy themes
Theme	Related Sub-theme	
Participant construction of practice and first-year students	Roles of lecturer	Roles of lecturers and students
	Differentiation for first-year students	First-year students
Participant construction of critical thinking competencies	Various competencies as in Table 5.3	Critical thinking competencies and student success
	Bloom's taxonomy	
Participant construction of institutional context	Institutional Context	National policy influences
	Blended learning	
Participant construction of professional development	Various types of professional development as described in Table 5.4	Professional development

Given the alignment above, and the integration of the conceptual framework in Chapters 2 and 3, Figure 5.4 below informs the discussion of the data analysis. While participants did not explicitly differentiate between the intended, enacted, assessed and attained curriculum, it is evident that these participants as academic staff were influenced by their institutional context in articulating their practices related to teaching, learning, curriculum, and assessment. These participants were also able to show reflection on what was attained by students in terms of student success.

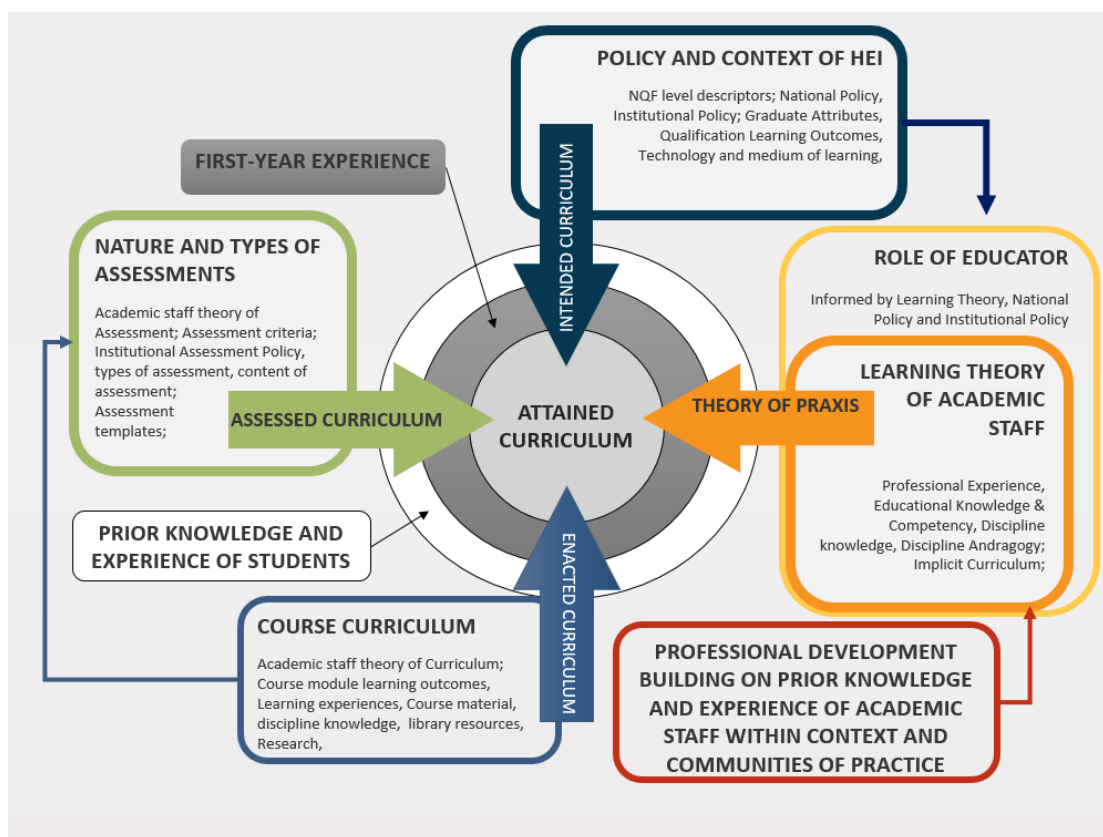


Figure 5.5: Conceptual Frame for intended, enacted, assessed and achieved curriculum for first-year students in relation to praxis and professional development of academic staff (Source: Researcher's own construct conceptualised from literature)

In this case study, the ways in which research participants conceptualise and act in relation to institutional boundaries of policy and context did affect their practice surrounding the phenomenon of developing critical thinking competencies in first-year students being studied. From the data analysed, research participants have strong perceptions of boundaries in terms of their institution, such as: requirements regarding assessments and the application of Bloom's taxonomy (Anderson, et al., 2001); and the evaluation of student success and teaching success via throughput rates. However, the phenomenological boundary is inconsistent, as different participants have constructed different meanings of concepts and context. For example, several of the lecturers interviewed felt the fact that the institution was a private provider, impacted on them. Academic staff specifically described the emphasis on students as 'customers', and the need to provide additional support for at-risk students and adopt customer service approaches as a result of being a private HEI. Some participants perceived the HEI as constraining or directing their time towards administration, while others did not feel constrained or limited. Three participants also mentioned workload

and, thus, time as a constraint on their practice. The institutional context, through policy expectations, informs intended curriculum which thus shapes activities of academic staff and shapes teaching and learning resulting in the enacted curriculum. In the wording used to describe this in the interviews, participants suggest a lack of agency in their relationship with the HEI in describing a compliance-based approach to policy and related practices.

Relatively speaking, in the interview data, the academic staff emphasised student competency, student roles, and the responsibility for learning more than the institutional policy. However, in highlighting academic staff focus on their role in student competency development as an active process, [Private Institution]'s policies commented on the role and responsibility of the lecturer four times more than that of the student, thereby inferring a customer service directive that promotes academic staff as active and students as more passive recipients of instruction. While other institutional documents which were not included may comment on student roles further, the documents analysed reflect the growing managerialism and performance management mentioned in literature. Vivian specifically mentioned a compliance orientation and the [Private Institution] protecting itself through staff development related to the code of conduct and data security.

The academic staff confirmed adjusting their practice to first-year students and attempting to develop critical thinking competencies in both the enacted and assessed curriculum. In relation to their theory of praxis, most participants reflected the conceptual move from lecturer as a dispenser of content to facilitator of learning within a conception that students were responsible for learning. The research participants described themselves as facilitating learning, offering learning opportunities, and the students having mixed responses and differing levels of responsibility for learning. Yet, in their interviews, participants did not describe collaboration between themselves as lecturers and students in relation to developing what students need to know (content) and be able to do (competency). This retains the relationship of the institution and academic staff as agents in determining the curriculum for first-year students. From the course module documents, it seems clear that academic staff are determining what students should know (content) in relation to their disciplines, to build towards what the HEI has registered as the accredited curriculum. The types of assessment questions asked relate to the assessment criteria and learning outcomes contained in

the course module documents. However, the associated cognitive levels of critical thinking competencies, as described in Bloom's taxonomy, are not fully aligned. This may be due to the specific assessments reviewed.

The policy and interviews revealed that this institution is committed to a blended learning approach, though the means of identifying what constituted blended learning was approached differently by each participant in terms of what technology was incorporated to achieve blended learning. For example, Lillian discussed how she used Edmodo by posting YouTube videos and creating discussion forums. In relation to her context, this reveals that research participants are not only utilising the Institution's Moodle-based LMS, which has both discussion tools and the ability to post links while also drawing on additional online tools allowing for ease of use and greater flexibility. Other participants referred to blended learning and tools such as tablets and the use of smartphones. Previously, this institution included tablets in their costs,⁴⁵ and the management of this is still referenced in the Conditions of Enrolment ([Private Institution], 2018b:9, 11). Some participants mentioned technology as not always reliable and felt that the fact that the [Private Institution] no longer issued or required tablets or mobile devices as a constraint meant that they could no longer had to use these consistently during lectures. This shows that the practicalities of the institutional context are impacting on enacted curriculum choices.

While the Institution's assessment policy sets a requirement for outcomes per course module as having two to six specific outcomes ([Private Institution], 2018: 14), as noted in section 5.3.3. the number of outcomes per module varied from one outcome to ten outcomes. This places three of the course modules reviewed outside of policy guidelines and guidelines from the literature described in Chapter 2, section 2.6. It is not clear whether the number of outcomes affects the content of the course modules. For example in the *Business Management 1A* module, in Table 5.8, it seems the assessment criteria may be used to clarify the learning outcomes in the intended

⁴⁵ This HEI made tablets available to first-year students for their use throughout the course of their studies. While this practice was discontinued in 2017 after approximately 4 years to allow for greater choice in devices and prior ownership of similar devices, some of these students are still progressing with their studies.

curriculum. Broadly stated outcomes may lead to bigger variations between the intended, enacted and assessed curriculum.

Several participants referred to institutional changes which interview participant Camden described as unpredictable and unstable, and frustrated his desire to gather evidence of effective practice through evaluation and reflection. The institutional changes seemed to vary from updates in policy, templates and procedures, changes to organisational structure and staff turnover. This was evident in the course module guide documents submitted, where changes in templates were evident. It was also evident that different lecturers experienced the same institution differently.

In relation to the intended, assessed curriculum and Bloom's taxonomy, while lecturers like Alex (see section 5.3.1.2.) described critical thinking by drawing on the Bloom's taxonomy descriptors, this both diverged from the literature and aligned with the literature. As described in Chapter 3, section 3.1.1., Lai (2011:8) described Bloom's (1956) taxonomy as the most widely utilised descriptors of cognitive competencies (see additional information in Chapter 3, sections 3.1.3 and 3.2. When describing critical thinking, Anderson et al. (2001: 270) argues that critical thinking requires cognitive processes in several categories of the taxonomy and therefore cannot be confined to one level. Alex aligned to this in using analysis, evaluate and create descriptors to describe what he saw as increasing difficulty in critical thinking. Yet despite his reference to creating, neither his outcomes nor his assessment required "Create" competencies. This was also the case with Camden who referred to creative thinking, but differentiated this from critical thinking:

"... as far as the other skills that you could tie in with, that like problem-solving and creative thinking I would consider those to be separate but can only function together with critical thinking" (Camden)

These two participants, therefore, reflect the mixed perspectives in literature as to whether critical thinking and creative thinking are separate cognitive competencies, whether creativity is a component of critical thinking or alternatively authors like Anderson et al. (2001: 270) who argue that critical thinking is necessary to create. This differs from Macat International Limited (2017) who describe that critical thinking has "six distinct but linked skills", one of which is creative thinking.

The emphasis in Institutional policy of Bloom's taxonomy was reflected both in academic staff's interviews and even in course module content, as the planned intended curriculum. Of interest was that the summative assignment for the *Student Skills B* module, contained a question which showed that students were expected to know Bloom's taxonomy and be able to interpret how this would be used in higher education. While this was not explicitly in the outcomes of the course module, it was relevant to meeting the outcomes of succeeding in higher education at the institution.

From the intended and assessed curriculum, the enacted curriculum had evidence of drawing on Bloom's taxonomy. In the interviews two participants mentioned that their assessments are often evaluated against the cognitive level descriptors from Bloom's taxonomy (1956). While such studies are seldom published, many institutions review assessment questions against Bloom's taxonomy (1956) to examine the cognitive levels of assessments as part of professional development or a quality assurance process, and for that reason, a similar strategy was utilised to examine academic staff assessments (see Chapter 3, section 3.1.3. and Chapter 4, section 4.7.3.). In this context of drawing on Bloom's taxonomy as an evaluative tool, several research participants mentioned that they deliberately draw on this taxonomy to evaluate and develop their own assessment instruments. Of interest is that academic staff were well able to quote Bloom's taxonomy but did not reference the NQF level descriptors in their interviews which was mentioned in the policy. In the course module guides, the course modules are stated as being at NQF level 5, however, the alignment of outcomes to this level is not well articulated and would not be obvious to those unfamiliar with the descriptors.

While this is referred to repeatedly in the Conditions of enrolment ([Private Institution], 2018b:9, 11, 12) which includes references to e-learning, the use of tablets and "electronic textbooks", the associated policy principles are less clear. Additionally, conspicuous in its' absence in policy is blended learning and technology-mediated learning. Several of the academic staff refer to Moodle, online staff development, and a pressure to support teaching and learning online, which lead lecturers like Esther, Lillian and Vivian to utilise non-Institutional tools like Edmodo in order to enact this methodology. Of interest, is that the research participants did not describe digital

literacy challenges in students, but did reference practical challenges for students to access blended learning tools.

In the discussions above, it emerges that academic staff feel required to comply with policy prescriptions. This emphasises the hierarchical delegation of Institutional responsibilities within Institutional policy (2017a) discussed earlier in section 5.3.2.5. The compliance discourse is reflected in discussions regarding blended learning, professional development and evaluation of assessments. This can also be seen in the application of standard templates for course module curriculum information and the related processes of editing and approval of these documents by the relevant Dean or programme manager.

From the literature (see Chapter 3, section 3.1.4.), Huber and Kuncel (2016:460) conclude that basic competencies such as reading and mathematics contribute to improvement in critical thinking and more specifically, critical thinking in major-related domains are a more practical target for instruction rather than general domains. This suggests both a need to ensure that such reading and mathematics are included in first-year curricula and that practising such competencies context develops critical thinking competencies. Within the modules reviewed, these aspects are included in the enacted curriculum in modules like *Introduction to Mathematics*, and the references to encouraging reading made by lecturers like Alex, Camden, Camila, and Leilani. Alex, in particular, described how he spent time with students both reading in class, starting with small units of poetry and building to reading novels with first years which is critical in relation to his module of *English Literature Studies 1*.

In the literature reviewed, there was mention of barriers to expressing critical thinking competencies such as Hammer and Green (2011:303) who refer to the challenge of academic literacy in developing critical thinking competencies. This was mentioned by several participants with examples. The lack of confident fluency in English as the language of teaching and learning, and the self-confidence of first-year students in applying critical thinking competencies or making their insights public. This is not unusual in the South African context which has well-documented challenges in both language and academic literacy (see for example the discussion in Boughey, 2009; CHE, 2013a; DHET, 2016).

Research participants were positively invested in professional development and reflective practice linking these to job satisfaction and success. Research participants described that professional development affected their theory of practice and enacted practice. However, these academic staff were critical of more passive professional development and showed strong preferences for professional development aligned to andragogic learning principles as well as well contextualised discipline-specific interventions. Research participants described that educational formal courses and qualifications improved their theory construction and practice. These comments from academic staff support the literature which describes that for successful university teaching, academic staff are required to have both discipline competency and educational expertise. Interviewees were able to describe that changes in the practice impacted on student success. As Guskey (2014:14) points out that if professional development increases academic staff's knowledge and skills but fails to change education practice or improve student learning outcomes, this would not be regarded as a successful development. In offering further professional development opportunities, these need to be offered in a customised flexible opportunity that coaches academic staff through both applying professional learning to their practice within their specific context and builds professional communities of practice as a network resource. The nature and timing of professional development as customised and flexible suggests that policy needs to shift from hierarchical responsibility for outcomes and professional development and that academic staff prefer a peer-based nonhierarchical collaborative approach to professional learning.

In some of the interviews, this aspect of whether professional development would improve student success, as attained curriculum, was probed. While some commented that they hadn't reflected on this, the linkages seemed clear for them. Some research participants like Audrey were very clear that improving her professional practice had directly impacted the student success measured in module throughput on her modules. The gap in both Institutional policy and research participants interviews regarding measurements of or appropriate evidence of effective practice results in a recommendation to include this in professional development. These findings confirm an alignment to utilising professional development, with educational theory learning and critical reflection by academic staff on their existing educational practices to

improve their practice. The students remain positioned as beneficiaries of continuously improving the teaching and learning practices of academic staff.

5.5. CONCLUSION

In this chapter, findings determined through both data analysis, and informed by the review of relevant literature, were presented. From the findings discussed, several themes emerged which described the experiences of research participants in lecturing first-year students as a specialised context. Research participants tend to agree that there is a gap in the critical thinking competencies of first-year students, and that developing critical thinking competencies are essential for student's academic success, indicated as attained curriculum. While the themes in the [Private Institution]'s policies varied, there was evidence that the policies influence the research participants approaches to both enacted and assessed curriculum. The development of critical thinking competencies are, therefore, both implicitly and explicitly part of the research participant's practices, curriculum and assessment document artefacts. Research participants are both challenged, enabled and constrained by an institutional commitment to blended learning and the expectations of students, as well as the institutional requirements related to academic staff fulfilling the responsibilities for curriculum and acting as disseminators of information. Their awareness of the right of obligation to the institution is amplified by facilities not being aligned to the institutional policy in this regard. Despite awareness of multiple roles, research participants are challenged, enabled and constrained by the expectations of students, and the HEI (as expressed in the policy) for academic staff taking responsibility for curriculum, being positioned as disseminators of information rather than facilitators, and developing student success.

CHAPTER 6

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1. INTRODUCTION

This thesis culminates in a review of the study undertaken in order to complete the phenomenological case study process. Here, the empirical findings are reviewed with literature and other sources of data as they contribute to answering the research questions and recommendations which results in theory-building as the final stage. Therefore, this chapter begins by presenting a review of the literature and conceptual framework. Thereafter, a synthesis of the research findings are reviewed against the research question and subquestion in order to inform the conclusions of the study. The limitations of the study are considered and recommendations are made with respect to the site HEI's policy and practice, as well as for the professional development of Academic Staff. The chapter concludes with a discussion regarding suggestions for further research. The contributions of this study to the South African context and the Scholarship of Teaching and Learning (SoTL) are clarified in response to this.

6.2. SUMMARY OF LITERATURE REVIEW

The literature review was separated into two sections. Chapter 2 focused on Learning Theories and the purpose and context of higher education, in order to articulate the conceptual framework and the context that informed this study. The third chapter built on this discussion in specifically considering critical thinking, and how academic staff strategise to develop, assess and design curriculum with critical thinking competencies in mind. Chapter 3, thus, included an analysis of prior research that examined critical thinking and academic staff's curriculum strategies to developing critical thinking competencies amongst first-year students. The literature review incorporated considerations of both the applicable learning theory framework and the conceptual framework from a constructivist paradigm as a means of justifying the conceptual framework adopted for the research undertaken here. The literature review initially informed decisions regarding research methods and the design of the semi-structured

interview schedule (Annexure C). During the course of the study, however, the literature review was added to as new articles were published, relevant statistics were updated. Furthermore, as described in Chapter 4, section 4.3., the literature review was revisited during and after data analysis as certain aspects and themes emerged during data analysis.

The second chapter began by presenting constructivism as a research paradigm that informs approaches to learning theory and research design. From this learning theory and relevant types of learning were explored including the definition of learning and constructivism as a theory of learning. In this chapter, the approaches to pedagogy and andragogy were explored, as first-year students are transitioning from secondary schooling to adult learning and differentiated within a constructivist paradigm.

This was followed by an exploration of the purpose of higher education, both as a contributor to economic development and the transformation of society and a developer of the student as an individual agent. The contribution of higher education as a public and private good was described in the South African context. The purposes of higher education are applied through curriculum design, with curriculum planning including the application of pedagogy and andragogy and drawing on assessment to measure learning and progression of students. In the literature, the curriculum is differentiated as constituting the intended curriculum, the enacted curriculum, the assessed curriculum and the attained curriculum.

To inform the further perspectives, challenges in higher education as aligned to the aspirations of higher education were explored. The discussion on the success of students was regarded as important because the study was within the South African context where student success remains challenged by historical patterns of inequity, academic and language literacy. Given this context, many HEI in South Africa include student success in evaluation criteria, for quality purposes, and within mandates to academic staff. This was followed by a discussion of the role of academic staff, with an emphasis on roles relevant to being a 'university teacher in higher education which aligns with academic staff strategising to support their students' success in higher education. This chapter concluded with an exploration of the professional learning and professional development of academic staff.

As the study aimed to explore how academic staff strategise to develop critical thinking competencies in first-year students, the third chapter built on the discussions from Chapter 2 and focused on exploring critical thinking and how academic staff strategises to develop, assess and design curriculum with critical thinking competencies in mind. This included exploring various definitions of critical thinking competencies and some consensus regarding which abilities are attributes of critical thinking. Strategies reported in the literature to develop critical thinking were explored. The value of developing critical thinking competencies for academic success and future workplace success was described. The discussion then revisited assessment as verifying student learning and competency in critical thinking. This chapter concluded with an exploration of the utilisation of Bloom's taxonomy (1956) and its subsequent revision by Anderson, et al. (2001) by higher education practitioners. This chapter narrowed the focus within the South African higher education and fields of curriculum studies and SoTL.

As discussed in Chapter 4, the significance of the literature review is the contribution towards the concept construction of the research – both through a literature review and development of the interview schedule. The literature review also contributes towards phenomenological reduction where the feedback is used with other sources of data. Therefore the research design responded to and developed from the literature reviewed. This led to the analysis of empirical data in light of the literature reviewed within the conceptual framework. A summary of the study is provided below and will inform a reflection on the successes and challenges of the research methodology adopted.

6.3. SUMMARY OF EMPIRICAL STUDY

This study aimed to explore the pedagogical and andragogical strategies of academic staff as they are designed to develop critical thinking competencies in first-year students. Within a qualitative approach, the research design drew on constructivist approaches and utilised a phenomenological case study methodology. The empirical study analysed data from the interviews conducted with ten research participants. Institutional policy documents, and the course module curriculum guides and

assessments documents were also incorporated and analysed as a means of better understanding the institutional context. These were then triangulated as a means validating insights from the transcribed interviews. However, priority within the empirical study was given to a review of the transcribed interviews conducted with the research participants in order to inform the understanding of the phenomenon and context. The review was enhanced by analysis of policy documents as additional and complementary data sources. Enacted curriculum was further explored through curriculum documents, and the assessed curriculum through assessment documents.

The analysis of the interviews identified several themes and sub-themes relevant to the research questions. As the initial questions of the semi-structured interview were designed to answer the research sub-questions, the themes aligned well to insights with respect to how academic staff perceive critical thinking competencies and their practice; descriptions of curriculum, learning opportunities and evaluating and assessing the development of critical thinking competencies; and the perceptions of academic staff regarding professional development, their institutional context and policies as impacting on their practices. The research participants described their roles as a facilitator of learning, and as responsive to students in specific contexts. As a result, these research participants adapt their practice to first-year student contexts. Furthermore, research participants revealed indications of integrating blended learning strategies aligned with the HEI prerogatives, and applying Bloom's taxonomy (1956; Anderson, et al., 2001) to evaluate their assessments and abide by guidelines regarding the development of cognitive complexity which includes critical thinking competencies.

The document analysis of the policy documents revealed several themes relevant to teaching and learning, the roles and practices of academic staff and the development of critical thinking and first-year students in particular. These themes aligned to those that emerged in the interviews as described in Table 5.13. As the HEI's policies additionally shaped the course module guides, the presentation and structure of outcomes, and assessments through the institutional templates, these were analysed before the learning outcomes and assessments were reviewed. The analysis of policy documents as artefacts further contributed to enriching the understanding of the site and the HEI as context. The analysis of policy documents assisted in exploring

mandates given to academic staff and how they, in turn, respond to the imperatives and approaches entrenched within this policy. The themes that emerged during the policy analysis included: critical thinking competencies; national policy influences; professional development prescriptions; and that the roles of lecturers were emphasised more than the role of students, with a clear differentiation of the first-year student experience.

The analysis of curriculum documents and the course module learning outcomes revealed the integrated importance of critical thinking competencies in all modules. This reinforced the research participants' statements of their perception of the importance and relevance of critical thinking competencies as evidenced in their curriculum practice. The further analysis of related assessments revealed that assessments included critical thinking competencies in assessment instructions, questions and criteria. Despite the research participants' challenges in providing a clear definition of what critical thinking is and how critical thinking competencies are developed; applying the curriculum and assessment documents as higher education artefacts; and showing evidence of the integration of these competencies in planning teaching and learning, and assessment practice. It was further noted that, in relation to Bloom's taxonomy level descriptors, the most utilised descriptor is 'Apply' both in the category 'Apply' and 'Understand and Apply'. While Bloom's taxonomy level descriptors of 'Remember' and 'Create' are not utilised (see Chapter 5, section 5.3.3 and Table 5.9).

In analysing the curriculum and assessment documents, it was noted that the institution required both formative and summative assessment. In the course modules reviewed, the formative assessments were utilised to prepare students for summative assessment, and a variety of assessment instrument types were utilised. Given the findings in policy, curriculum, learning outcomes, it was not surprising to find that critical thinking concepts were deliberately assessed and required for successful completion of the various modules. However, as students and their critical thinking competencies were not the focus of this study, the specific evaluation of student success, related course throughput statistics and development of critical thinking competencies was not evaluated. As described in chapters 1 and 4, though students remain positioned as beneficiaries of improvements in academic staff professional

practice, this study was designed to explore *how* academic staff articulated their practice and constructed their theory, curriculum and assessments in relation to the phenomenon of critical thinking competencies in first-year students.

6.3.1. Reflection on Research Methodology

A constructivist paradigm allows a review of methodology as critical reflection, bringing reflexivity in research. This is considered and applied in the study undertaken here. As can be seen in the discussion above, the research design provided data relevant to the research questions, with alignment between the interview questions and research questions achieved, and relevant insights from the documents analysed. Consequently, this study found that the methods utilised are appropriate to the nature of the research and the research question, as the data analysed was relevant to answering the research questions. The use of a constructivist paradigm permitted engagement with academic staff's theory of practice and enacted practice, both as emerging and dynamic constructs. This was supported through an evolving literature review to construct and develop deeper understandings of the development of critical thinking competencies. Additionally, this research sought to achieve trustworthiness through addressing the criteria for qualitative educational research as suggested by Guba ([1981] in Anney, 2014; Shenton, (2004): credibility, transferability, dependability and confirmability.

The triangulation of academic staff interviews against curriculum and policy documents, as artefacts, provided insights into research findings. These both confirmed and magnified themes that emerged during interviews, while policy documents provided additional descriptions and evidence of context. Previous research seldom utilises policy documents to provide insight into prescribed approaches and constraints when exploring the educational practice in higher education within curriculum studies or SoTL.

The section below synthesises the findings against the research questions.

6.4. THE RESEARCH CONCLUSIONS

The intention of this investigation was to explore what academic staff do to develop critical thinking competencies in first-year students. As a means of guiding the study, the following research questions were presented, and informed the qualitative constructionist approach taken:

1. How do academic staff perceive their curriculum and pedagogical practices as developing critical thinking competencies in first-year students?

In order to clarify and explore the main research question, the research proposed the following subordinate questions:

- 1.1. How do academic staff perceive critical thinking competencies?
- 1.2. How do academic staff construct curriculum and learning opportunities to develop critical thinking competencies in first-year students?
- 1.3. How do academic staff evaluate the development of critical thinking competencies in first-year students?
- 1.4. How do academic staff perceive their environment and their institutional policies as impacting on their practices?
- 1.5. What are the implications for professional development and practice?

The aim of this research focused on exploring pedagogical and andragogical strategies of academic staff designed to develop critical thinking competencies in first-year students. The insights from this research assisted in exploring how academic staff conceptualise their theory and practice in relation to their lived experience of developing critical thinking competencies in first-year students. Working from a knowledge of 'what is' current practice, guidelines for a professional development process have been constructed in order to support and improve academic staff's practice in relation to informing professional reflection, changes in curriculum, teaching and learning practice, and improving student success.

The findings are presented below as initially based on responding to each sub-question. This is then followed by a discussion of the main question, and, from this, the implications for professional development and practice are determined.

6.4.1. How do academic staff perceive critical thinking competencies?

This research aligned to other studies reviewed in the literature, in that the academic staff surveyed often did not have coherent well-articulated constructions of critical thinking and specific competencies related to this. A contributing factor to this may be, the lack of consensus on defining critical thinking and related competencies (as described by Lai (2011), Stassen, Herrington and Henderson (2011) and discussed further in Chapter 3, section 3.1.1). Another possibility is that of Bonnefon (2018:113) assertion, that the lack of specific clear definition makes it easier for many to agree that critical thinking is an essential skill and this can permit assuming agreement what is meant in their construction of meaning. These aspects may lead to a lack of prioritisation in clarifying critical thinking and related competencies. However, academic staff were able to describe critical thinking competencies in terms of what students could do and gave examples from their classroom, curriculum and assessment practice in reinforcing this. The learning outcomes approach to describing critical thinking in this way aligns to literature definitions of competencies as applying learning outcomes within a defined context (Bovill & Woolmer, 2019; Ashwin et al., 2015). Furthermore, the findings confirmed that these research participants not only regard critical thinking as integral in higher education but confirm that a significant portion of academic staff are actively seeking to address these critical thinking competencies through their curriculum and pedagogic practice at the first-year level. Therefore, it can be said that critical thinking finds relevance and revealed meaning to these research participants through their practice, rather than well-developed constructions of theory. Research participants enhanced their descriptions of such strategies by describing challenges to first-year success, and the development of critical thinking competencies such as language, attitudinal and confidence. From these aspects, research participants confirmed adapting their practice in response to the identified needs of first-year students.

6.4.2. How do academic staff construct curriculum and learning opportunities to develop critical thinking competencies in first-year students?

All research participants interviewed felt that critical thinking competencies are essential for both academic and future life success. From their curriculum documents, identified as intended curriculum, the outcomes in all modules include both explicit and implicit references to critical thinking competencies. One module, *Introduction to Critical Reasoning*, is offered to explicitly develop critical thinking competencies for students in the Humanities degrees. Research participants are further able to describe deliberate actions taken in their teaching practices, as enacted curriculum, to facilitate the development of these critical thinking competencies. These include utilising critical thinking competencies in their classroom and the assigned individual study and formative assessment activities as a means of improving student learning.

Most of the academic staff interviewed are able to clearly link critical thinking competencies to informal in-class responses and assessments as a means of evaluating if students are developing in their critical thinking through showing explicit attempts to evaluate attained curriculum in both formative and summative ways. These critical thinking competencies are described and developed in integrated non-linear ways relevant to discipline and application task undertaken. While some academic staff can see improvement in critical thinking within a semester, most describe a process that needs longer than one semester to achieve the desired levels of critical thinking competencies as a precursor to further student success. This experience aligns to research by Cloete (2018), Good and Boyd (2020), and Huber and Kuncel (2016). This may be partly due to the secondary schooling competency that is not developed adequately for the purposes of higher education.

In their theory and articulation of practice, these academic staff described adapting their practice to the first-year students in ways that increased pedagogical support, where the academic staff acted as a MKO aligned to Vygotsky's approach (as described by authors like Eun, 2019; Kozulin, Gindis, Ageyev & Miller, 2003; Smith, 2013) to guide students in developing their critical thinking, and related academic competencies.

6.4.3. How do academic staff evaluate the development of critical thinking competencies in first-year students?

In their responses, research participants describe a variety of teaching and learning strategies to develop critical thinking competencies. These academic staff referred to utilising questioning in class, applications from case studies, group discussions and assessment through continuous assignments to evaluate critical thinking.

Research participants described utilising both informal, formative and summative assessment, as assessed curriculum, to assess critical thinking competencies in relation to course module outcomes. This is evident in their assessment documents, although not as consistently, as some early formatives have low levels of critical thinking competencies assessed. Summative assessments align with the outcomes and include deliberate assessment of critical thinking competencies as can be seen in the use of action words such as ‘apply’ and ‘analyse’ and ‘evaluate’.

From the literature (see Chapter 3, section 3.3.4.), Huber and Kuncel (2016:460) conclude that basic competencies such as reading and mathematics contribute to improvement in critical thinking and, more specifically, that critical thinking in major-related domains are a more practical target for instruction rather than general domains. Competency in the language of learning, in this case, English, aligns with recommendations from the CHE task team regarding the design of first-year curriculum, that this should include “key language, communication and critical thinking skills to be studied in the context of real-world business issues, which establish the foundations of those graduate attributes required” (CHE, 2013a:213). As discussed in Chapter 5, section 5.3.1.1., research participants indicate language and communication challenges of first-year students, both as a generic competency gap, and as a gap to applying and assessing critical thinking competencies. This was implicitly referred to by several research participants who described strategies to develop reading competency within non-language course modules. Such a reference affirms the need to ensure that such reading, communication and numeracy skills are included in first-year curricula, and that practising such competencies within academic discipline contexts supports the development of critical thinking competencies.

6.4.4. How do academic staff perceive their environment and their institutional policies as impacting on their practices?

In this case study, the ways in which research participants conceptualise and act in relation to institutional boundaries did affect their practice surrounding the phenomenon of the development of critical thinking competencies in first-year students being studied. From the data analysed, research participants have strong perceptions of boundaries in terms of their institution. However, the phenomenological boundary is inconstant as participants have constructed different meanings of concepts and context in response to their experiences, construction of theory and practice within the HEI as context. Research participants describe requirements for complying with certain policies and practices, such as the use of Bloom's taxonomy to evaluate assessments and adapting to blended learning approaches. However, the discourse used did not reveal that research participants perceived themselves as agents able to change institutional practicalities or policy. As such a perception of a lack of agency would reduce academic staff's attempts to facilitate the improvement of institutional operations or to make a contribution to informing policy, the HEI may need to clarify the processes and means for engaging academic staff in these areas in order to maximise the benefits from the expertise within this HEI academic community. Improving collaboration and shared construction of meaning will further assist in aligning the professional learning and practice of academic staff within academic qualifications and the HEI.

6.4.4.1. Context of institution

Research participants were reluctant to be seen as criticising their HEI or their campus operational contexts. However, there was evidence that some research participants were explicitly unhappy, as well as evidence of institutional constraints affecting their capacity as lecturers. Aspects of managerialism and performance management were evident both in policy and academic staff's descriptions of practice. The HEI's commitment to blended learning was evident in interview data, policy and curriculum documents, yet research participants gave examples of operation constraints to the successful implementation of blended learning. Research participants drew on

institutional requirements related to utilising Bloom's taxonomy to evaluate their assessment practice. More than this, in considering the impact of their professional development, the research participants made use of course module throughput rates as a measure of success. However, the discourse used did not reveal that research participants perceived themselves as agents able to change institutional practicalities or policy.

6.4.4.2. Institutional policy

From the policy and course module guides reviewed, there is evidence that the policy principles are applied in templates which both guide and constrain lecturers to meet policy requirements. For example, the HEI's policies ([Private Institution], 2018) refer to OBE, learning outcomes and the application of assessment criteria, and states that "the criteria for assessing achievement should be clear... and specified in advance (ibid:9). The templates of course module guides require these to be specifically stated, which are then issued to students as part of the introduction of course modules.

The assessment policy requires the utilisation of both formative and summative assessment strategies and describes a range of instruments which can be utilised for this purpose ([Private Institution], 2018:12). The research participants all employed both formative and summative assessments, as is evident in the assessment information within the course module guides (as indicated in Table 5.10), and all the course modules evaluated utilised a variety of assessment instrument types.

As described earlier, the assessment policy refers to curriculum and assessment aspects specific to first-year students: bridging courses; formative assessments which not only allow for constructive feedback but also an indication of higher education requirements; exposure to assessment methods that will be used in summative assessment; and coaching on how to utilise feedback on assessment in learning (ibid.:13). In the course modules reviewed as part of the research, some are clearly bridging modules in assisting students to transition to higher education and succeed in their further degree studies: for example, *Student Skills, Introduction to Writing and Communication Skills, Introduction to Critical Reasoning* and *Introduction to*

Mathematics. The inclusion of such modules reveals the enactment of policy in programme curriculum in order to specifically support the transition of students into higher education. These course modules confirm that the HEI shapes the practices of academic staff, requiring them to improve the competencies of first-year students in order to achieve qualification learning outcomes. An alternative approach would be academic staff equipping students to improve their critical thinking competencies and capacity for reflection, metacognition and self-regulation. Investing in the professional development and learning of academic staff to support the development of critical thinking competencies remains aligned to institutional objectives seen as improving teaching and learning practices and student success.

6.4.5. How do academic staff perceive their curriculum and pedagogical practices as developing critical thinking competencies in first-year students?

Academic staff see critical thinking competencies as important for success in higher education, and, therefore, embed this both implicitly and explicitly in their curriculum. However, they are not able to clearly articulate a definition of critical thinking or its constituent competencies and tend to express an understanding of critical thinking in what students know and can do, which demonstrates the influence of the OBE context. The awareness of critical thinking competencies is seen in the intended planned curriculum through learning outcomes. Academic staff take deliberate actions in their teaching and formative assessment practices, as the enacted curriculum, to develop critical thinking competencies and support first-year students in overcoming barriers to applying these competencies, such as language and self-confidence. Thus, it is clear that the research participants believe their practice influences the development of critical thinking competencies in first-year students, despite not being able to clearly articulate what constitutes critical thinking. The research participants express adapting teaching and learning practices to the context of first-year students because of the perceived deficit in these students' critical thinking competencies.

Academic staff are able to describe how first-year students give evidence of these competencies in relation to their course modules and disciplines. The research

participants assess critical thinking competencies in the assessed curriculum, and draw on tools such as Bloom's taxonomy (Anderson, et al., 2001), as prescribed by the HEI, to assess the levels of cognitive complexity in summative assessments.

6.4.6. What are the implications for professional development and practice?

The institution's policies ([Private Institution], 2018) require professional development to be implemented. In their interviews, several participants referred to this. However, the perceived value and format of professional development was mixed. Several research participants reflected on the value of educational qualifications in improving their theory and practice as lecturers, assessors and curriculum developers.

The academic staff interviewed expressed a desire for professional development to be offered as flexible learning, available when they were available. Research participants seemed to agree that professional development must be relevant and applicable in order to change professional practices. However, there emerged little agreement as to what the preferred format of such professional development should be. This suggests that professional development activities need to be offered in a variety of formats, as well as considering the inclusion of coaching applications within a community of practice. Alternatively, the blended approach with online and interactive workshops suggested by Audrey would be applicable in enhancing best practice and offering another strategy for student success.

As discussed by Marshall (2010:723), researchers need to address the problem of knowledge transfer, where practitioners need to consider how research findings and theories are transferred into current practice and adopted by education practitioners in various contexts. In describing how professional development can develop competency in academic staff, it is necessary to subscribe to a unified definition of what constitutes such competency development: for the purpose of this study, the cluster of related abilities, knowledge, experience and expertise that enable an academic staff member to act effectively in order to develop critical thinking competencies in first-year students and solve related problems in relation to their disciplines. This requires a consideration of a whole-part-whole consideration of how

development should be approached: standardising the understanding of institutional policy; growing the competency and proficiency of academic staff, both in terms of subject-proficiency and skill-proficiency and then feeding that back into the collective through a progressive and meaningful collaboration in order to achieve student success.

A related theme that emerged is that these participants felt personalised and contextual professional learning within their discipline and context was valuable and should form part of any professional development. Given the breadth of experience and disciplines of academic staff, professional development needs to allow space for varying perspectives and experiences. This suggests that a “one-size fits all” approach is unsuitable for academic staff’s professional learning in higher education and a preference for more personalised learning in professional development. From the literature, this means that professional development should include strategies for self-regulated professional learning and reflective practice, and was identified in several interviews with research participants as well.

The ability to evaluate different types of evidence of student success as a result of practice is identified as a gap in both institutional policy and the narratives of research participants. Broader measures of evidence of effective and appropriate practice should be included in professional development.

6.5. LIMITATIONS

While the phenomenological case study at one site, and the relatively small number of participants, allowed for exploration of the phenomenon in a specific context, the broad generalisability of the research findings needs verification in additional contexts. The experiences of participants in terms of other HEI did allow for a broader-than-anticipated comparison in practice and institutional context during interviews. However, generalisations regarding practice at all HEI cannot be made. This is consistent with the nature of qualitative case study educational research, as described by McMillan and Schumacher (2010:15), who further comment that research generalisations may be limited in scope due to the dynamic complexity of the research

context in education. In utilising inductive reasoning approach, the insights and theory are regarded as tentative for other contexts. Yet, as this is presented as a phenomenological case (Given, 2008:429-430), this case can be utilised in conjunction with other research, as reported in the literature review, to improve the current understanding of the phenomena. Nonetheless, interpreting these findings with other research within the South African context and context-specific adaption is necessary for this type of research.

As indicated in Chapter 4, the research undertaken as primary to this study utilised self-reported data from academic staff, as well as data from the curriculum and assessment documents. The consensual nature of research, and the availability of research participants as described in Chapter 4, section 4.5.2., resulted in a limiting of the possible diversity of disciplines of the academic staff explored. While there was a diversity of course modules in relation to their disciplines, the potential insights from design or creative disciplines and more scientific, hard disciplines are not included in this study. For example, research by Chu et al (2017), Potter and Goode (2019) and guidelines from the Australian Curriculum, Assessment and Reporting Authority (2019) describe an interrelated aspect to critical and creative thinking competencies. This can, however, be addressed in potential future research. However, despite this limitation, the number of participants and the application of research ethics is appropriate for this type of research and finds justification as relevant because of this.

Similar to many studies in SoTL, as the focus is on academic staff professional development and lecturer experiences, the design of the research and this research report excludes measuring any improvements in student learning, and, therefore, remains an area of further research. As discussed in Chapter 1, section 1.3, and from the gaps identified in the literature review, student improvements in critical thinking were not the focus of this study and were therefore not measure. It may be helpful to explore the efficacy of staff actions to develop critical thinking in the South African context.

Despite the limitations described above, this study is still able to contribute to insights regarding critical thinking competencies, and the strategies of first-year lecturers in addressing the challenges experienced by their students, through creating

opportunities for including the development of such competencies in their curriculum, assessment and teaching practices. Additional contributions are discussed in section 6.8.

6.6. RECOMMENDATIONS

From the discussion above, this study makes the following recommendations in reference to the HEI stakeholders, specific to the [Private Institution] and the South African higher education context:

6.6.1. Institutional policy and SoTL

It is recommended that institutional policy of the [Private Institution] is aligned to the most updated national policy prescriptions to ensure consistency across policies and evaluations by quality assurance councils, in this case, the CHE. As discussed in Chapter 5, section 5.3.2., alignment to National policy is beneficial in ensuring a common understanding of terminology and measurement of evidence required by the DHET and CHE in annual reporting, and during Institutional audits. This would further improve the ease of onboarding of academic staff who have worked at other HEI's in the sector, as the common terminology builds a shared understanding of strategic objectives.

The institutional policy should be clarified to include an explicit and rich definition of student success, and what can be considered as evidence of student success beyond simplified course module throughput measures and student satisfaction. While the policy requires Deans to be accountable for and report on “learning success (pass and throughput rates)” ([Private Institution], 2017c:7), as stated previously in Chapter 5, section 5.3.2.1., the policy does not include a comprehensive definition of student success other than what is contained in brackets. The exclusive measurement of “pass and throughput rates” ([Private Institution], 2017c:7) fails to embed a rich definition of student success which can be expanded on to include aspects like completing a degree; improved academic achievement (good marks); discipline-specific

competencies, the development of competencies such as critical thinking competencies, and effective integration with the academic community (epistemological access); retention rates; graduation rate, or completion of qualification (throughput rates); articulation rates, employability and good citizenship or holistic development of a person (see, for example, HETS, 2007; Miller, 2015; Cuseo, n.d.:1-3; CHE, 2010:35; Maree, 2015:408). The adoption of a richer and clearer definition of student success will affect the practice and theory of academic staff. Assuming that academic staff are working towards enhancing or enabling student success, how this is measured or achieved will influence what these staff members do to achieve this.

As has been shown, policy both guides and informs the practice of academic staff. The emphasis on Bloom's taxonomy (1956) is an example of this. This strategy in utilising policy to additionally develop shared constructions and 'teach' academic staff has been missed. From policy, the academic development practitioners should develop professional development opportunities and staff onboarding strategies that deepen the embeddedness of such a definition of student success within the practice of academic staff, as well as from evidence collection within academic staff practice.

In relation to critical thinking competencies, it was noted in Chapter 5, figure 5.1 that the HEI refers to 8 curriculum principles: where principle 4, point (c) stating that curriculum design includes the "development of the intellectual skills that will foster learning, creativity and critical thinking" ([Private Institution], 2018:1- 2). However, no specific resource designated to provide a concise definition of what constitutes learning, and defines creativity or critical thinking is referred to as directing this development. It is, therefore, recommended that the institution develops a resource that can guide academic staff as to how the HEI defines critical thinking, how these can be taught, and how these competencies can be assessed in the HEI context of the [Private Institution]. An example of a similar resource is that developed by Thyer (2018), though no evidence of its application in this HEI context is noted. This type of resource can serve as a basis for a professional development intervention.

Notably, the HEI's policies do not describe how the effectiveness of professional development will be measured other than in referring to "enhanc[ing] the institution`s

performance through improved organisational efficiency and effectiveness” ([Private Institution], 2017a:2). The effectiveness of professional development could be aligned to the proposed richer definition of student success and linked institutional evidence collection. Authors like Labone and Long (2016) describe that effective professional learning has the potential to improve both teaching and student outcomes while Guskey (2014:13) prioritises improving student learning outcomes. Furthermore, the policy omits the references to individual staff goals and how professional development assists academic staff to achieve their personal aspirations. While the aim and introduction suggest that staff will benefit from professional development this is presented as subordinate to institutional performance and organisational efficiency.

Policies that affect professional development will benefit from aligning with the *National Framework for Enhancing Academics as University Teachers* (DHET, 2018b), and the Criteria for Programme Accreditation (CHE, 2004; 2014) to enhance quality assurance processes. For example, the institution’s policy reflects a hierarchical delegation of institutional responsibilities that may be incongruent with the responsibility for professional development as prescribed by the CHE in their Programme Accreditation Criteria (2004) as discussed in Chapter 2, section 2.9. and Chapter 5, section 5.3.2.3.

The workload of academic staff needs review to improve participation in professional development activities and allowing for time to be allocated to professional reflection on practice and the adaption of professional practice that results. The research participants’ preference for a spectrum of professional development activities, as well as requests for a more interactive community of practice type of intervention, need more careful consideration by the HEI as a deliberate design that needs to be accommodated. This requires the training and development of academic developers to adopt a facilitative personalised coaching approach to enable academic staff to apply professional learning to their practice in specific contexts, support evaluation and feedback of practice, provide learning opportunities for critical reflection and develop effective evidence of practice collection strategies.

The institution’s stated move towards blended learning needs greater support in terms of the operational infrastructure available to lecturers, the network capabilities and IT access available from lecturing venues, and the development of academic staff in

related skills. The maintenance of such campus infrastructures in a way that allows academic staff to utilise these tools as they plan, improves the planning and utilisation of blended learning approaches. Furthermore, professional development with respect to the specific tools of a Moodle-based LMS needs to be adapted to version and tools that are available to academic staff. The use of general tools such as Edmodo, as indicated in one of the interviews, needs investigation to explore how current LMS tools can be improved to better support how academic staff and students would like to engage on these platforms. Professional development to enhance higher education outcomes through blended learning is included in the National Framework for Enhancing Academics (DHET, 2018b:11), and so professional development strategies should incorporate sessions that empower lecturers as blended learning practitioners on a more tangible level.

6.6.2. Academic staff and the development of critical thinking competencies

Professional development for academic staff should assist these practitioners in developing their theory and practice: in this instance, as directed towards developing critical thinking competencies in first-year students. In particular, a clear understanding of what academic staff are attempting in order to develop key competencies in students, such as critical thinking competencies, will enable academic staff to more clearly articulate the scope of these competencies to both students and communities of practice, as well as clearly communicate how the actions and curriculum they develop will develop these competencies. Developing a concise articulation of practice can clarify how these are developed and assessed in their respective course modules. There were variations in the competencies described as part of critical thinking. More consistency in teaching, assessment and curriculum practice, also referred to as constructive alignment (Biggs, 1996), can support student success both in terms of meeting immediate learning outcomes, qualification outcomes and improving future employability. Further aligning such definitions, assessment criteria and descriptions within a faculty as a community of practice will assist students to more consistently develop and apply these competencies.

Academic staff at the [Private Institution] are required to develop and improve the alignment of the intended prescribed curriculum to the enacted and assessed curriculums, thereby increasing the alignment to the attained curriculum. The relevant professional development should initiate with constructing a clear understanding of the registered qualification curriculum and from this the alignment of course module outcomes to the qualification and graduate outcomes. This is not unique to this institution, as constructive alignment (Biggs, 1996) between the intended, enacted and assessed curriculum has been articulated in other research (see, for example, Brumwell, Deller & MacFarlane, 2017; Drake & Reid, 2018; Lloyd, 2019; Biggs, 1996).

Academic staff should be empowered in identifying gaps in their professional knowledge and practice. In their framework of knowledge, competencies and attributes required for teaching first-year undergraduate students, Ambler et al. (2019:10) include topics like: knowledge of supporting first-year students' transition into higher education; requirements of policies and accreditation; teaching strategies responsive to diversity; student-centred learning theory and practice; evaluation and assessment; and the ability to teach critical thinking, problem-solving, creativity, collaboration and communication, amongst others. Academic staff should also be empowered to evaluate their professional practice against this type of framework, and plan for professional learning to address gaps that are identified. Such frameworks can be drawn on in facilitating mentoring and communities of practice discussions, where academic staff can amend and contextualise what knowledge, competencies and attributes are needed for their context and discipline. This would make professional learning and development more intentional and accountable.

From the data analysed and the findings reported, such recommendations point towards the designing and implementing professional development, or a process to support academic staff in developing critical thinking competencies within their curricula. This intervention can be regarded as emancipatory in taking appropriate action to positively impact the academic staff's ability to facilitate student development.

6.7. SUGGESTIONS FOR FURTHER RESEARCH

As this study focused on a specific context, further studies to explore the more broad experiences of higher education academic staff and students in South Africa would be of value. For instance, site triangulation would be developed by expanding the study to include the participation of academic staff at several HEI as a means of reducing the effect on the study of local factors peculiar to one institution (Shenton, 2004:66). This was not achieved within the research design and is, therefore, an avenue for further research.

As the research design focused on the experiences and practices of the research participants with a view to further professional development and learning, this study did not explore comparing the disciplinary approaches to developing competencies in first-year students. Furthermore, while there has been research into articulating threshold competencies necessary for higher education, both in generic and discipline-specific studies (refer to discussion in Chapter 1, section 1.2; and Chapter 3, section 3.1.4), the practices in South Africa are still under-researched and this needs to be addressed. Much of the research considered in the literature review is Western-based, and so there is an awareness that developing more inclusive approaches to what critical thinking competencies are and how these are developed and practiced within the African context constitutes a recommendation for further study.

This study focuses on first-year students, yet within a Bachelor degree, little research seems to focus on second-year students. While there is a more significant body of research regarding third-year or final-year students, and research in relation to graduate attributes⁴⁶, how academic staff adapt their strategies across the 3 or 4 years of degree programmes as the level descriptors changes has not been clearly compared in the South African context. It would be of interest to explore whether academic staff are actively seeking to address these critical thinking competencies through their curriculum and pedagogic practice in similar or different ways at each year or level of the Bachelor degree.

The students and their competencies were not the focus of this research. However, students remain positioned as beneficiaries of continuously improving practices of

⁴⁶ See for example Good and Boyd (2020),

academic staff with respect to teaching and learning. Therefore, the impact of the professional development of academic staff on students and their competencies constitute areas of future research. Exploration of which practices of academic staff are most effective at developing critical thinking competencies in South Africa, and which can substantively improve student success, would add a greater depth of insight into practical responses to recommendations made. Related to this, the duration of the incubation of significant improvement in critical thinking competencies should be further explored.

The impact of institutional policy expressed through institutional templates was not part of this study, though the institutional policy was analysed as part of primary research. However, the case discussed in 5.3.2., where two templates were used for course module information, has suggested the impact of changing institutional templates and requirements as a way of constraining or scaffolding lecturer professional practice in outcome development which can be further explored. While the impact of templates, or document structure shaping the content expression of the academic practice of staff, is not the focus of this study and other research participants did not share both versions, it reveals a potential area of future research in relation to HEI structures, as revealed in specific templates.

6.8. IMPACT OF RESEARCH

This research contributes to the exploration of the South African context by addressing the gap in literature concerning what academic staff do to develop critical thinking competencies in relation to their first-year students, and supporting the documentation of effective teaching and learning and the SoTL field. In particular, this study shifts focus away from that of previous studies, as presented in the literature review, to what academic staff are doing in their university teaching practices and how they are theorising about their practice and students in relation to the development of critical thinking competencies. From knowing what is emerging in academic staff's practice, professional development can be aligned to improving both student success and changing education practice, as described in Chapter 2, section 2.9. by Guskey (2014:14). The findings presented in Chapter 5 show that academic staff are

committed to adapting their practice to improve the development of critical thinking competencies in first-year students, and that they engage differently with first-year students in relation to other subsequent NQF levels or years of study at tertiary institutions. The findings confirm that these academic staff are, therefore, open to further professional development opportunities, but that these need to be offered as customised flexible opportunities that coach academic staff through both applying learning to their practice within their specific context, and building professional communities of practice as a network resource.

Such professional development strategies suggest that policy needs to shift from hierarchical responsibility for outcomes and professional development to a more preferred peer-based nonhierarchical collaborative approach to professional learning. Furthermore, these strategies can be approached in an outcomes-based manner, where the institution focuses on the outcomes of professional development as being reflected in improved and deepened student learning evidenced in rich definitions of student success and transformation of educational practice.

This aligns with what was proposed by Ashwin et al. (2015:415) in that it is now possible to identify more effective teaching strategies and draw on teaching and learning evidence and theory to improve student progression and success. Therefore, this study contributes to existing literature and research by exploring the development of practice within the South African higher education context, and thereby also supports the recommendations of CHE's Higher Education Monitor 14 (CHE, 2017:75) in addressing the need for further empirically-based research in teaching and learning, as well as professional learning.

As the context of the study was a private institution and the analysis of private institutional policy, is relatively underreported in literature in South Africa, this research assists in exploring this context. Furthermore, the growth of student enrolment in this sector of the higher education industry in South Africa (DHET, 2015a) suggests the need for further review and investigation of quality aspects in private higher education as part of their accountability to students and employers.

The research undertaken in this study confirmed the perceived importance of critical thinking competencies within South African higher education institutions and the integration of these competencies in learning outcomes, assessment practice, teaching practice and curriculum in both implicit and explicit ways. The research participants further confirmed the perception that critical thinking competencies and related competencies that enable critical thinking by students are underdeveloped in secondary schooling, and thereby confirms the inferences of other research as discussed in the review of literature in Chapter 2.

The ability of research participants to describe how they deliberately act to both develop and assess critical thinking competencies confirms that academic staff are deliberately strategising to assist first-year students in developing threshold competencies. However, as Stassen, Herrington and Henderson (2011:127) pointed out, this research confirmed that academic staff in higher education often have no clear definition or description of what constitutes critical thinking, and the research participants confirmed this in indicating that they had not been specifically taught to develop critical thinking competencies.

While the problem of developing critical thinking competencies in first-year students is not new, exploring the perspectives of academic staff as they approach this problem, as opposed to more student-focused studies, has not been well-documented in South Africa. This research, therefore, advances the exploration of critical thinking competencies in South Africa and informs a deeper understanding of the first-year context in South Africa by promoting academic staff's insights, practices and experiences as an important part of the exploration. This study confirms international findings that academic staff agree with the importance of developing critical thinking competencies in higher education, yet, at the same time, struggle to articulate their construction of what critical thinking competencies are. Such alignment with international imperatives to developing critical thinking competencies enables the development of interventions to improve evidence collection and the professional learning of academic staff. Promoting and utilising professional development as a strong educational tool promotes more close consideration of and reflection on educational theory learning and critical reflection by academic staff on their existing educational practices to improve their practice. Approaching professional development

in this way positions students as beneficiaries of continuously improving teaching and learning practices of academic staff.

McMillan and Schumacher (2010:15, 16) also warn that education is a relatively public enterprise that is influenced by the external environment through policy, required curriculum requirements, and socio-economic aspects. This specifically informed the study in that, before and after data collection, the HEI was in the process of updating the Institution's policies and practices to align with National changes. As indicated in the HEI's permission to undertake research at this site, in Annexure B, the findings of this research will be shared with the Institution concerned, where the Institution concerned may draw on this research to inform further revisions of policy.

While these factors are beyond the scope of the study, the response in exploring what can be done to improve first-year success by academic staff is a significant area allowing practitioner professional development.

As discussed in Chapter 1, section 1.2., this research aimed to contribute to a discussion on how best to improve teaching and learning for the development of critical thinking competencies by describing the current state of this phenomenon at an HEI in South Africa. The findings would then be used to develop guidelines for professional development interventions to assist academic staff in facilitating the development of these competencies. In addressing these, the following key impact points were determined as responding to this aim:

- The research undertaken confirmed that professional development needs to include exposure to educational theory related development of critical thinking competencies of students;
- Academic staff need to be supported to clarify a definition of critical thinking competencies within their discipline context;
- Such an intervention should include the following within a community of practice:
 - Negotiating and selecting content and competencies from discipline knowledge and research during curriculum development as described in Chapter 2, section 2.6. and figure 2.3;

- Determining best practice in developing learning outcomes and assessment criteria which describe what a student should know, understands, and the related competencies, including critical thinking competencies;
 - Aligning course module outcomes within qualifications to achieve overarching qualification outcomes;
 - Developing pedagogic and andragogic strategies to achieve such outcomes;
 - Aligning an appropriate assessment strategy; and
 - Developing constructive alignment between the intended, enacted and assessed curriculum
- Academic staff should be made aware of frameworks of knowledge, competencies and attributes required for teaching first-year undergraduate students, such as that developed by Ambler et al. (2019:10) to evaluate professional learning and practice to identify gaps;
 - Building on this, the measurement of practice and evidence of student success should be aligned with an institutional definition of student success (as described in the recommendations above); and
 - Scheduled, possibly facilitated, reflections on practice should be promoted in drawing on evidence of practice to explore possible adaptations to constructed theory and practice within the community of practice.

While this research may have already impacted the participants by encouraging reflexive practice and professional development, the exploration of their understanding of critical thinking and the strategies that academic staff employ in relation to developing these competencies in first-year students may not explicitly have a notable immediate impact. This is consistent with practice-based educational research which seeks to contribute to the body of knowledge by exploring a specific context of research. As Ashwin comments, “Individual research projects contribute to collective bodies of knowledge in a discipline or professional field. It is these bodies of knowledge that lead to impact, not individual studies” (Ashwin, 2015).

From the literature, it seems that critical thinking is seldom defined or referred to without some analogous description of competencies associated with or utilised during critical thinking. The study documented how academic staff describe and assess such competencies within the first-year context within South African higher education, and noted how they drew on example and metaphor to describe critical thinking rather than providing a clear and concise definition thereof.

This research explored a complex system of challenges within the South African tertiary education context, and attempted to overcome the gap identified by Ashwin below:

“The danger is that the individual, durable and stable elements of higher education that can be easily measured are given a greater value than those that are collective, complex, changing and country-specific”.
(Ashwin, 2015)

The findings and discussion in this study have revealed the complex nature of the discourse surrounding what critical thinking competencies are, as constructed by academic staff, and the diversity of strategies employed to engage first-year students from a diversity of cultural backgrounds in developing these

From a meta-study of recent theses completed in South African universities, Du Preez and Simmonds (2014:13) recommended that doctoral candidates pursuing a study should consider exploring curriculum studies in present South Africa and draw on trans-disciplinary approaches to make theoretical contributions. In their work, they note that much research fails to initiate change. Therefore, this study responds to this call in drawing on curriculum artefacts, academic staff's practice and revealed theory in specific contexts of higher education, and initiating changes in addressing professional development. This research also contributes to entrenching the design of professional development to include evaluations of the impact of professional development, as measured through the criteria of transformations in practice and terms of student success. Such criteria positions academic development as accountable to the stated objectives of improving professional teaching and learning practices, whilst being mindful of the responsibility toward students and society as beneficiaries of academic staff's practices.

Therefore, while this dissertation includes descriptive accounts related to context and practice, it also seeks to go further in promoting and initiating changes through the evaluation of critical thinking competencies and academic staff's strategies to develop these, whilst informing professional development.

6.9. CONCLUSION

Critical thinking competencies are not only seen as crucial for success in higher education, but also for future personal and workplace success. These competencies are commonly cited as a graduate attribute or goal of higher education. While this study has explored the curriculum and practice of academic staff within higher education in relation to their theorising and practice in developing critical thinking competencies in first-year students as part of their professional practice, much of what was found about academic staff approaches to critical thinking does not fix these competencies in an absolute understanding of what they are. Yet, academic staff have developed strategies to instil their development amongst their first-year students based largely on their own academic experience within their discipline.

In addition, within the context of this study, there is a perception by research participants of a decline in the development of critical thinking competencies within the secondary school system. This has also informed their practice which has both reacted and adapted to this lack of first-year critical thinking proficiency through additional support for students. More than this, academic staff, as research participants, were able to describe deliberate actions taken in their teaching practices to facilitate the development and assessment of critical thinking competencies as guided by institutional policy and the NQF level descriptors.

The findings revealed that academic staff – while having no coherent, well-articulated construction of critical thinking competencies – feel that such competencies are essential for academic and future life success. This affirmed previous research reviewed which stated that there is a deficit in a strong working definition of critical

thinking competencies⁴⁷ in higher education and that challenges identified in other research⁴⁸ in relation to the South African experience of teaching first-year students persists.

The research undertaken here visibly shows how critical thinking competencies are integrated into higher education teaching and learning as part of the intended, enacted, assessed, and, therefore, the achieved curriculum. Focusing on the first-year student is a priority given the challenges faced during transition to higher education, where academic staff fulfil the role of *More Knowledgeable Other* and facilitate the development of self-regulation in learning as a critical thinking competency. Therefore, supporting academic staff in their professional learning and development – to reflect on their curriculum, teaching and assessment practices in order to support the development of critical thinking competencies in their students – remains crucial to achieve graduate outcomes.

⁴⁷ See Bonnefon (2018), Stassen, Herrington and Henderson (2011) and Drake and Reid (2018) as previously discussed.

⁴⁸ For example, CHE, 2013a; DHET, 2015b

REFERENCES

- [Private Institution]. (2017c). *Policy on the Monitoring and Evaluation of Teaching and Learning*. Johannesburg: [Private Institution].
- [Private Institution]. (2014). *Teaching and Learning Policy*. Johannesburg: [Private Institution].
- [Private Institution]. (2017a). *Staff Development, Recruitment, Selection, and Equity Policy*. Johannesburg: [Private Institution].
- [Private Institution]. (2017b). *Policy for the Development of Learning Materials*. Johannesburg: [Private Institution].
- [Private Institution]. (2017d). *Consumer Behaviour course module guide*. Johannesburg: [Private Institution].
- [Private Institution]. (2017e). *Development Studies B course module guide*. Johannesburg: [Private Institution].
- [Private Institution]. (2017f). *Student Skills B course module guide*. Johannesburg: [Private Institution].
- [Private Institution]. (2018a). *Assessment Policy*. Johannesburg: [Private Institution].
- [Private Institution]. (2018b). *[Private Institution] 2018 - Conditions of Enrolment (V1.0)*. Johannesburg: [Private Institution].
- [Private Institution]. (2018c). *Business Management 1 A*. Johannesburg: [Private Institution].
- [Private Institution]. (2018d). *Consumer Behaviour 1 course module guide*. Johannesburg: [Private Institution].
- [Private Institution]. (2018e). *English Literature Studies 1 course module guide*. Johannesburg: [Private Institution].
- [Private Institution]. (2018f). *Introduction to Critical Reasoning Course module guide*. Johannesburg: [Private Institution].
- [Private Institution]. (2018g). *Introduction to Mathematics course module guide*. Johannesburg: [Private Institution].
- [Private Institution]. (2018h). *Introduction to Writing and Communication Skills course module guide*. Johannesburg: [Private Institution].
- [Private Institution]. (2018i). *Student Skills A course module guide*. Johannesburg: [Private Institution].

- [Private Institution]. (2018j). *Academic English A course module guide*. Johannesburg: [Private Institution].
- [Private Institution]. (2018k). *Introduction to Critical Reasoning: Summative Assessment*. Johannesburg: [Private Institution].
- [Private Institution]. (2018l). *Business Management 1 A: Summative Assessment*. Johannesburg: [Private Institution].
- [Private Institution]. (2018m). *Student Skills B: Summative Assessment*. Johannesburg: [Private Institution].
- Abrami, P., Bernard, R., Borokhovski, E., Waddington, D., Wade, C., & Persson, T. (2015). Strategies for Teaching Students to Think Critically: A Meta-Analysis. *Review of Educational Research, 85*(2), 275 - 314.
- Adebanji, C., Goode, H., & Gumbo, M. (2014). A Different Path: Curriculum Experiences of International Students in a Private Institution's Foundation Programme. *Mediterranean Journal of Social Sciences, 5*(1), 31-42.
- Akshir Ab Kadir, M. (2018). An inquiry into critical thinking in the Australian curriculum: examining its conceptual understandings and their implications on developing critical thinking as a “general capability” on teachers’ practice and knowledge. *Asia Pacific Journal of Education, 38*(4), 533-549.
- Alt, D. (2015). Assessing the contribution of a Constructivist Learning Environment to Academic Self-Efficacy in Higher Education. *Learning Environments Research, 18*(1), 47-67.
- Altbach, P. (2014). The Complexity of Higher Education: A Career in Academics and Activism. In M. Paulsen (Ed.), *Higher Education: Handbook of Theory and Research* (Vol. 29 , pp. 1-32). New York: Springer.
- Ambler, T., Solomonides, I., Smallridge, A., McCluskey, T., & Hannah, L. (2019). Professional learning for academics teaching first-year undergraduate students. *Professional Development in Education, 1*-13. Retrieved November 12, 2019, from <https://doi.org/10.1080/19415257.2019.1647272>
- American Psychological Association. (2013). *Guidelines for the undergraduate psychology major (Version 2.0)* . Retrieved from American Psychological Association: <http://www.apa.org/ed/precollege/about/psymajor-guidelines.pdf>
- Anderson, L., & Sosniack, L. (1994). *Bloom’s taxonomy: A forty-year retrospective*. Chicago, IL.: University of Illinois Press.

- Anderson, L., Krathwohl, D., Airasian, P., Cruikshank, K., Mayer, R., Pintrich, P., . . . Wittrock, M. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's Taxonomy of Educational Objectives*. New York: Longman.
- Anney, V. N. (2014). Ensuring the Quality of the Findings of Qualitative Research: Looking at Trustworthiness Criteria. *Journal of Emerging Trends in Educational Research and Policy Studies*, 5(2), 272-281.
- Anosike, P., Ehrich, L., & Ahmed, P. (2012). Phenomenology as a method for exploring management practice. *International Journal of Management Practice*, 5, 205-224.
- Ashwin, P. (2015). Five ways universities have already changed in the 21st century. *The Conversation*, May 14. Retrieved August 10, 2017, from <https://theconversation.com/five-ways-universities-have-already-changed-in-the-21st-century-39676>
- Ashwin, P. (2016a). From a teaching perspective, 'impact' looks very different. *Times Higher Education*, 21 March. Retrieved August 8, 2017, from <https://www.timeshighereducation.com/blog/teaching-perspective-impact-looks-very-different>
- Ashwin, P. (2016b). Why Would Going to University Change Anyone?: The Challenges of Capturing the Transformative Power of Higher Education in Comparisons of Quality. *Educational Studies Moscow*(1), 21-34.
- Ashwin, P., Abbas, A., & McLean, M. (2014). How do student accounts of sociology change over the course of their undergraduate degrees? *Higher Education*, 76(2), 219-234.
- Ashwin, P., Boud, D., Coate, K., Hallet, F., Keane, E., Krause, K., . . . Tooher, M. (2015). *Reflective teaching in higher education*. London: Bloomsbury Publishing Plc.
- Association of American Colleges & Universities. (2017, 10 20). *Critical Thinking VALUE Rubric*. Retrieved from Association of American Colleges & Universities: <https://www.aacu.org/value/rubrics/critical-thinking>
- Australian Curriculum, Assessment and Reporting Authority (ACARA). (2019, July 6). *Critical and Creative Thinking*,. Retrieved from [Australiancurriculum.edu.au](https://www.australiancurriculum.edu.au),: <https://www.australiancurriculum.edu.au/f-10-curriculum/general-capabilities/critical-and-creative-thinking/>

- Awaya, A., McEwan, H., Heyler, D., Linsky, S., Lum, D., & Wakukawa, P. (2003). Mentoring as a journey. *Teaching and Teacher Education, 19*, 45-56.
- Badat, S. (2010, April). *The Challenges of Transformation in Higher Education and Training Institutions in South Africa*. Retrieved from Rhodes University: <https://www.ru.ac.za/media/rhodesuniversity/content/vc/documents/The%20Challenges%20of%20Transformation%20in%20Higher%20Education%20and%20Training%20Institutions%20in%20South%20Africa.pdf>
- Bahr, N. (2010). Thinking Critically about Critical Thinking in Higher Education. *International Journal for the Scholarship of Teaching and Learning, 4*(2), Article 9. Retrieved from [://digitalcommons.georgiasouthern.edu/ij-sotl/vol4/iss2/9](http://digitalcommons.georgiasouthern.edu/ij-sotl/vol4/iss2/9)
- Balwanz, D., & Ngcwangu, S. (2016). Seven Problems with the 'Scarce Skills' Discourse in South Africa. *South African Journal of Higher Education, 30*(2), 31-52.
- Banda, F., & Banda, D. (2017). Demystifying research methods: everyday experiences as socio-cultural co(n)texts for effective research methods in teaching and learning in institutions of higher learning in Africa. *SOTL in the South, 60-77*.
- Bandura, A. (1977a). *Social learning theory*. New York: General Learning Press.
- Bandura, A. (1977b). Self-efficacy: towards a unifying theory of behavioural change. *Psychological Review, 84*(2), 191-215.
- Barac, K., & Du Plessis, L. (2014). Teaching Pervasive skills to South African Accounting students. *Southern African Business Review, 18*(1), 53-79.
- Bearman, M., Dawson, P., Bennett, S., Hall, M., Molloy, E., Boud, D., & Joughin, G. (2017). How do university teachers design assessments: a cross-disciplinary study. *Higher Education, 74*, 49-64.
- Beaton, F., & Gilbert, A. (Eds.). (2013). *Developing effective part-time teachers in higher education: New approaches to professional development*. London: Routledge.
- Behar-Horenstein, L. S., & Niu, L. (2011, February). Teaching Critical Thinking Skills In Higher Education: A Review Of The Literature. *Journal of College Teaching & Learning, 8*(2), 25-42.
- Bennett, R., & Kent, M. (2017). *Massive Open Online Courses and Higher Education : What Went Right, What Went Wrong and Where to Next?* New York: Routledge.

- Bensley, D., Crowe, D., Bernhardt, P., Buckner, C., & Allman, A. (2010). Teaching and Assessing Critical Thinking Skills for Argument Analysis in Psychology. *Teaching of Psychology, 37*(2), 91-96.
- Berger, R. (2018, March 14). *Here's What's Wrong With Bloom's Taxonomy: A Deeper Learning Perspective*. Retrieved from Education Weeks Blogs: Learning Deeply:
http://blogs.edweek.org/edweek/learning_deeply/2018/03/heres_whats_wrong_with_blooms_taxonomy_a_deeper_learning_perspective.html
- Bernstein, B. (1975). *Class, Codes and Control: Towards a Theory of Educational Transmissions*. London: Routledge and Kegan Paul.
- Bernstein, B. (2000). *Pedagogy, Symbolic Control and Identity: Theory, Research, Critique*. Lanham: Rowman & Littlefield Publishers.
- Bertucio, B. (2017). The Cartesian Heritage of Bloom's Taxonomy. *Studies in Philosophy and Education, 36*, 477-497.
- Bezanilla, M., Fernandez-Nogueira, D., & Poblete, M. (2019). Methodologies for teaching-learning critical thinking in higher education: The teacher's view. *Thinking Skills and Creativity, 33*, 1-10.
- Biggs, J. (1989). Approaches to the Enhancement of Tertiary Teaching. *Higher Education Research and Development, 8*(1), 7-25.
- Biggs, J. (1996). Enhancing teaching through constructive alignment. *Higher Education, 32*, 347-364.
- Biggs, J. B. (1985). The role of meta-learning in study process. *British Journal of Educational Psychology, 55*, 185-212.
- Biglan, A. (1973). The characteristics of subject matter in academic areas. *Journal of Applied Psychology, 57*, 195-203.
- Blitzer, E. (Ed.). (2009). *Higher Education in South Africa – A scholarly look behind the scenes*. Stellenbosch: Sun MeDIA.
- Blom, R. (2016). Towards a vocational pedagogy for South African TVET educators. *Occasional paper, Education Policy Consortium, 1-13*.
- Bloom, B. (1956). *Taxonomy of Educational Objectives: Cognitive domain*. New York: Longman.

- Blunt, R., & Conolly, J. (2006). Perceptions of Mentoring: Expectations of a key resource for Higher Education. *South African Journal of Higher Education*, 20(2), 195-208.
- Boghossian, P. (2012). Critical thinking and Constructivism: Mambo Dog Fish to the Banana Patch. *Journal of Philosophy of Education*, 46(1), 73- 84.
- Bok, D. (2006). *Our underachieving colleges: A candid look at how much students learn and why they should be learning more*. Princeton, NJ.: Princeton University Press.
- Bonnefon, J. (2018). The Pros and Cons of Identifying Critical Thinking with Systems Processing. *Torpoi*, 37, 113-119.
- Booth, S., & Woolcott, L. (2018). On the constitution of SoTL: its domains and contexts. *Higher Education*, 75(3), 537-551.
- Booyse, C., & Du Plessis, E. (2018). *Curriculum Studies: Development, Interpretation, plan and practice* (3rd ed.). Pretoria: Van Schaik Publishers.
- Bostrom, P. (2019). In Search of Themes – Keys to Teaching Qualitative Analysis in Higher Education. *The Qualitative Report*, 24(5), 1001-1011.
- Botman, H. (2012). Forward. In B. Leibowitz (Ed.), *Higher Education for the Public Good: Views from the South* (pp. xiii-xvi). Stellenbosch: SUN MeDIA.
- Boud, D. (2018). Assessment could demonstrate learning gains, but what is required for it to do so? *Higher Education Pedagogies*, 3(1), 1-3.
- Boughey, C. (2005). 'Epistemological' access to the university: an alternative perspective. *South African Journal of Higher Education*, 19(3), 230-242.
- Boughey, C. (2009). Understanding teaching and learning at foundation level: A 'critical' imperative? In C. Hutchins, & J. Garraway (Ed.), *Beyond the university gates: Provision of extended curriculum programmes in South Africa. Proceedings of the January 2009 Rhodes University Foundation Seminar*. Grahamstown: Rhodes University.
- Bovill, C., & Woolmer, C. (2019). How conceptualisations of curriculum in higher education influence student-staff co-creation in and of the curriculum. *Higher Education*, 78, 407-422.
- Bowen, G. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, 9(2), 27-40.

- Brandon, A., & All, A. (2010). Constructivism Theory Analysis and Application to Curricula. *Nursing Education Perspectives (National League for Nursing)*, 31(2), 89-92.
- Bredo, E. (1997). The Social Construction of Learning. In G. Phye (Ed.), *Handbook of Academic Learning* (pp. 3-45). San Diego: Elsevier Inc.
- Brookfield, S. (2012). *Teaching for Critical Thinking*. San Francisco: Jossey-Bass.
- Brown, A. (2014). How students make sense of criticality skills in higher education. *Practitioner Research in Higher Education*, 9(1), 4-17.
- Brown, J., Collins, A., & Dugid, P. (1989). Situated Cognition and the Culture of Learning. *Educational Researcher*, 18(1), 32-42.
- Brown, T., & Mbatl, L. (2015). Mobile Learning: Moving Past the Myths and Embracing the Opportunities. *International Review of Research in Open and Distributed Learning*, 16(2), 115-135.
- Brumwell, S., Deller, F., & MacFarlane, A. (2017). Why Measurement Matters: The Learning Outcomes Approach – A Case Study from Canada. *Journal of Higher Education in Africa*, 15(1), 5-22.
- Burch, V., Lewis, J., Subramaney, U., Katurura, A., Quinot, G., Singh, S., & Dhunpath, R. (2016). Towards a conceptual framework for interdisciplinary teaching and learning dialogues in higher education. *Alternation*, 23(1), 233-264.
- Burton, L. (1998). An Explicit or Implicit Curriculum: Which Is Better for Young Children? *OMEP's XXII World Congress: The Child's Rights to Care, Play, and Education* (pp. 2-10). Copenhagen, Denmark: ERIC. Retrieved from <https://eric.ed.gov/?id=ED434754>
- Butler, G. (2013). Discipline-specific versus generic academic literacy intervention for university education: An issue of impact? *Journal for Language teaching*, 47(2), 71-88.
- Byrnes, J., & Dunbar, K. (2014). The Nature and Development of Critical-Analytic Thinking. *Educational Psychology Review*, 26(4), 477-493.
- Cargas, S. (2016). Honoring Controversy: Using Real-World Problems to Teach Critical Thinking in Honours Courses. *Honours in Practice*, 12, 123-137.
- Carless, D. (2015). Exploring learning-oriented assessment processes. *Higher Education*, 69, 693-976.

- Carstens, D. (2016). The Anthropocene Crisis and Higher Education: A Fundamental Shift. *South African Journal of Higher Education*, 30(3), 255-273.
- Case, J. (2017a, March). *Public higher education in peril? A view from the South*. Retrieved from Centre for Global Higher Education Working Papers, No. 15,;: <http://www.researchcghe.org/publications/public-higher-education-in-peril-a-view-from-down-south/>
- Case, J. (2017b, June). *Higher education and social justice: engaging with the analytical*. Retrieved from Centre for Global Higher Education Working Papers, No. 23,;: <http://www.researchcghe.org/publications/higher-education-and-social-justice-engaging-the-normative-with-the-analytical/>
- Cauley, P. (2019, November 15). *Edmodo User Guide: A guide to explain it all*. Retrieved from California State University, Bakersfield: https://www.csub.edu/~tfernandez_ulloa/Edmodo%20User%20guide.pdf
- CEDEFOP. (2017). *Defining, writing and applying learning outcomes: a European handbook*. Luxembourg: Publications Office of the European Union.
- CEDEFOP. (2019). *Global inventory of regional and national qualifications frameworks 2019 Volume 1: thematic chapters*. Italy: CEDEFOP and UNESCO Institute for Lifelong Learning. Retrieved September 25, 2019, from <https://www.cedefop.europa.eu/en/publications-and-resources/publications/2224-0>
- CFO South Africa. (2017, September 14). *Disruption alert: Will CAs be redundant in 2025?* Retrieved November 5, 2019, from CFO South Africa: <https://cfo.co.za/article/disruption-of-the-status-quo>
- Chalmers, D., & Hunt, L. (2013). *University Teaching in Focus: A Learning-centred Approach*. Abingdon, Oxon: Routledge.
- Chiu, M., & Kuo, S. (2009). From Metacognition to Social Metacognition. *Journal of Education Research*, 3(4), 1-19.
- Chu, S., Renyolds, R., Tavares, N., Notari, M., & Lee, C. (2017). *21st Century Skills development through Inquiry-based learning: From Theory to Practice*. Singapore: Springer.
- Çil, E., & Çepni, S. (2014). The Association of Intended and Attained Curriculum in Science with Program for International Students Assessment. *International Educational Studies*, 7(9), 1-14.

- Cloete, M. (2018). The impact of an integrated assessment on the critical thinking skills of first-year university students. *Accounting Education*, 27(5), 479-494.
- Coetzee, M. (2014). Measuring student graduateness: reliability and construct validity of the Graduate Skills and Attributes Scale. *Higher Education Research & Development*, 33(5), 887-902.
- Coles, C. (1996). Approaching professional development. *Journal of Continuing Education in the Health Professions*, 152-158.
- Commission of Enquiry into Higher Education and Training. (2017). *Report of the Commission of Enquiry into Higher Education and Training to the President of the Republic of South Africa*. Department of Justice. Cape Town: Department of Justice. Retrieved January 26, 2018, from http://www.justice.gov.za/commissions/commissions_list.htm
- Conana, H. (2017). The Physics Extended Curriculum Programme at the University of the Western Cape. In A. Van Zyl (Ed.), *The First Year Experience in Higher Education in South Africa: A Good Practices Guide* (pp. 5-17). Cape Town: Fundani Centre for Higher Education and Training. Retrieved July 31, 2017, from <http://heltasa.org.za/wp-content/uploads/2016/04/TDG-FYE-Good-Practices-Guide-24-5-5-17-final-2.pdf>
- Connelly, F., He, M., & Phillion, J. (Eds.). (2008). *The SAGE Handbook of Curriculum and Instruction*. London: SAGE Publications Ltd.
- Connelly, M. (2013). Joseph Schwab, curriculum, curriculum studies and educational reform. *Journal of Curriculum Studies*, 45(5), 622-639.
- Corbett, M. (2010). Pedagogy and Case Study. In A. Mills, G. Durepos, & E. Wiebe (Eds.), *Encyclopedia of Case Study Research* (pp. 666-669). Thousand Oaks: SAGE Publications, Inc.
- Cosgrove, R. (2011). *Improving teaching and learning of critical thinking across the curriculum at a large research university: An empirical study using qualitative methods*. Cambridge: Darwin College, University of Cambridge. Retrieved July 27, 2017, from <http://www.criticalthinking.org/data/pages/45/d62c0654702626eac6a4504f8042a50a52408a877fe4f.pdf>
- Cosgrove, R. (2017, April 20). *Critical Thinking: Lessons from a Continuing Professional Development Initiative in a London Comprehensive Secondary*

- School*. Retrieved from Foundation for Critical Thinking: <http://www.criticalthinking.org/pages/critical-thinking-lessons-from-a-continuing-professional-development-initiative-in-a-london-comprehensive-secondary-school/928>
- Cotton, K. (1991). Close-Up 11: Teaching Thinking Skills. *School Improvement Research Series*, 1-18. Retrieved November 7, 2017, from <http://educationnorthwest.org/sites/default/files/TeachingThinkingSkills.pdf>
- Council for Higher Education (CHE). (2016, August 26). *CHE submission to the Presidential Commission*. Retrieved from Council for Higher Education: <http://www.che.ac.za/announcements/che-submission-presidential-commission>
- Council on Higher Education (CHE). (2009). *Higher Education Monitor 8: The State of Higher Education in South Africa*. Pretoria: Council on Higher Education .
- Council on Higher Education (CHE). (2010). *Higher Education Monitor 9: Access and throughput in South African Higher Education: Three case studies*. Pretoria: Council on Higher Education.
- Council on Higher Education (CHE). (2012). *Higher Education Monitor 13: Teaching Excellence Awards in South Africa - A national study*. Pretoria: Council on Higher Education (CHE).
- Council on Higher Education (CHE). (2013a). *A proposal for undergraduate curriculum reform in South Africa*. Pretoria: Council on Higher Education.
- Council on Higher Education (CHE). (2013b). *Quality Enhancement Project: The Process*. Pretoria: Council on Higher Education. Retrieved from www.che.ac.za
- Council on Higher Education (CHE). (2014). *Distance Higher Education Programmes in a Digital Era: Good Practice Guide*. Pretoria: Council on Higher Education (CHE).
- Council on Higher Education (CHE). (2016, January 22). *2013 Higher Education Data: Participation*. Retrieved from Council on Higher Education: www.che.ac.za/focus_areas/higher_education_data/2013/participation
- Council on Higher Education (CHE). (2016). *A good practice guide for the quality management of short courses offered outside the higher education qualifications sub-framework*. Pretoria: Council on Higher Education (CHE).

- Council on Higher Education (CHE). (2017). *Higher Education Monitor 14: Learning to Teach in Higher Education in South Africa*. Pretoria: Council on Higher Education.
- Council on Higher Education (CHE). (2018). The changing landscape of private higher education. *Briefly Speaking*, 5, 1-12.
- Council on Higher Education (CHE). (2018b). *2013 Higher Education Data: Staffing*. Retrieved September 26, 2018, from Council on Higher Education: http://www.che.ac.za/focus_areas/higher_education_data/2013/staffing
- Council on Higher Education (CHE). (2018c, April). The National Plan for Higher Education (2001) targets: Have they been met. *Briefly Speaking*(6). Retrieved from Council on Higher Education: <https://www.che.ac.za/media-publications>
- Council on Higher Education. (2004). *Criteria for Programme Accreditation*. Pretoria: Council on Higher Education.
- Council on Higher Education and South African Institute of Physics (CHE-SAIP). (2013). *Review of undergraduate physics education in public higher education institutions*. Pretoria: Council on Higher Education and South African Institute of Physics (CHE-SAIP). Retrieved July 31, 2017, from South African Institute of Physics : http://www.saip.org.za/images/stories/documents/Reports/Undergrad_Physics_Report_Final-1.pdf
- Cracolice, M., & Busby, B. (2015). Preparation for College General Chemistry: More than just a matter of content knowledge acquisition. *Journal of Chemical Education* , 92(11), 1790–1797.
- Creswell, J. (2007). *Educational research: planning, conducting and evaluating quantitative and qualitative research* (3rd ed.). New Jersey, USA: Pearson Education International.
- Creswell, J. (2015). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research*. New York: Pearson.
- Crick, R. (2008). Key Competencies for Education in a European Context: narratives of accountability or care. *European Educational Research Journal*, 7(3), 311-318.
- Crossley, M. (2016). Rick's Taxonomy. *Syracuse Law Review*, 66, 641-648.

- Cuseo, J. (n.d.). *Student Success: Definition, Outcomes, Principles and Practices*. Retrieved October 2015, 2015, from Student Success, Indian State University: <http://www2.indstate.edu/studentsuccess/pdf/Defining%20Student%20Success.pdf>
- Dall'Alba, G. (2017). Phenomenology of higher education. In M. Peters (Ed.), *Encyclopedia of educational philosophy and theory* (pp. 1805-1810). Singapore: Springer.
- Dawit, T. T., Verburch, A., & Elen, J. (2014). Effectiveness of Critical Thinking Instruction in Higher Education: A Systematic Review of Intervention Studies. *Higher Education Studies*, 4(1).
- De Boer, A., Du Toit, P., Scepers, M., & Bothma, T. (2013). *Whole Brain Learning in Higher Education: Evidence based Practice*. Cambridge: Chandos Publishing.
- De Jager, T. (2012). Can First Year Student's Critical Thinking Skills Develop in a Space of Three Months. *Procedia - Social and Behavioral Sciences*, 47, 1374-1381.
- Deacon, R., van Vuuren, R., & Augustyn, D. (2014). Research at private higher education institutions in South Africa. *Perspective in Education*, 32(3), 5-21.
- Deng, Z. (2018). Contemporary curriculum theorizing: crisis and resolution. *Journal of Curriculum Studies*, 50(6), 691-710.
- Denison, D., & Secolsky, C. (Eds.). (2012). *Handbook on Measurement, Assessment, and Evaluation in Higher Education*. New York: Routledge.
- Denzin, N., & Lincoln, Y. (Eds.). (2003a). *The landscape of qualitative research: Theories and issues*. California: Sage.
- Denzin, N., & Lincoln, Y. (2003b). *Strategies of qualitative inquiry*. London: Sage.
- Department Higher Education and Training (DHET). (2019). *Statistics on Post-School Education and Training in South Africa: 2017*. Pretoria: Republic of South Africa Government, Department of Higher Education and Training.
- Department of Basic Education (DBE). (2010). *Bill of Responsibilities: Building a culture of responsibility and humanity and accountability in our schools*. Pretoria: Department of Basic Education. Retrieved June 22, 2017, from <http://www.education.gov.za/Resources/Publications.aspx>

- Department of Basic Education (DBE). (2013). *South African Country Report- General Education System Quality Assessment October 2013*. Pretoria: Department of Basic Education Republic of South Africa.
- Department of Basic Education (DBE). (2017, June 22). *National Curriculum Statements (NCS) Grades R - 12*. Retrieved from Department of Basic Education:
<http://www.education.gov.za/Curriculum/NationalCurriculumStatementsGradeR-12.aspx>
- Department of Education (DOE). (1997). *Education White Paper 3*. Pretoria: Department of Education (DOE).
- Department of Education (DOE). (2001). *National Plan for Higher Education*. Pretoria: Department of Education, South Africa.
- Department of Education (DOE). (2008). *CESM: Classification of Educational Subject Matter*. Pretoria: Department of Education.
- Department of Education (DOE) and Department of Labour (DOL). (2007). *Enhancing the Efficacy and Efficiency of the National Qualifications Framework: Joint Policy Statement by the Ministers of Education and Labour*. Pretoria: South Africa Department of Education and Department of Labour.
- Department of Education of South Africa (DOE). (2002). *Revised National Curriculum Statement Grades R-9 (Schools)*. Pretoria: The Department of Education of South Africa.
- Department of Higher Education and Training (DHET). (2012). *Green Paper for Post-School Education and Training*. Pretoria: Department of Higher and Further Education, South Africa.
- Department of Higher Education and Training (DHET). (2013a). *White Paper for Post-School Education and Training*. Pretoria: Department of Higher Education and Training.
- Department of Higher Education and Training (DHET). (2014a). *Ministerial Statement on University Funding: 2015/16 and 2016/17*. Pretoria: Department of Higher and Further Education. Retrieved from www.dhet.gov.za
- Department of Higher Education and Training (DHET). (2014b). *Addendum to the classification of educational subject matter (CESM) manual: August 2008*. Pretoria: South African Government.

- Department of Higher Education and Training (DHET). (2015a). *Statistics on Post-School Education and Training in South Africa 2013*. Pretoria: Department of Higher Education and Training.
- Department of Higher Education and Training (DHET). (2015b). *Are we making progress with systemic structural transformation of resourcing, access, success, staffing and researching in higher education: What do the data say? prepared for the Second National Higher Education Transformation Summit*. Cape Town: Department of Higher Education and Training (DHET). Retrieved from <http://www.justice.gov.za/commissions/FeesHET/docs/2015-HESummit-Annexure03.pdf>
- Department of Higher Education and Training (DHET). (2016). *Report on Second National Higher Education Transformation Summit*. Pretoria: Republic of South Africa Government, Department of Higher Education and Training (DHET). Retrieved from University Education, Department of Higher Education and Training: <http://www.dhet.gov.za/SiteAssets/2nd%20HE%20Summit%20Report.pdf>
- Department of Higher Education and Training (DHET). (2018a). Regulations for the Quality Assurance of Private Colleges. *Government Gazette Notice 633 of 2018, NOTICE 633 OF 2018(41970), 274-325*.
- Department of Higher Education and Training (DHET). (2018b). *A National Framework for Enhancing Academics as University Teachers*. Pretoria: Republic of South Africa, Department of Higher Education and Training (DHET). Retrieved March 20, 2019, from HELTASA: <http://heltasa.org.za/wp-content/uploads/2019/03/March.pdf>
- Department of Higher Education and Training (DHET). (2018c). *Statistics on Post-School Education and Training in South Africa: 2016*. Pretoria: Republic of South Africa Government, Department of Higher Education and Training (DHET).
- Department of Higher Education and Training (DHET) and Council on Higher Education (CHE). (2014). *The Higher Education Qualifications Sub-Framework*. Pretoria: South African Government Gazette No.38116.
- Desai, M., Berger, B., & Higgs, R. (2016). Critical thinking skills for business school graduates as demanded by employers: A strategic perspective and recommendations. *Academy of Educational Leadership Journal, 20(1)*, 10-31.

- Dewey, J. (1910). William James. *The Journal of Philosophy, Psychology and Scientific Methods*, 505-508.
- Dewey, J. (1916). *Democracy and Education: An Introduction to the Philosophy of Education*. New York: Macmillan.
- Diab, S., & Sartawi, B. (2017). Classification of questions and learning outcomes statements into Bloom's Taxonomy by similarity measurements towards extracting of learning outcomes from learning material. *International Journal of Managing Information Technology*, 9(2), 1-12.
- Drake, S., & Reid, J. (2018). Integrated curriculum as an effective way to teach 21st Century capabilities. *Asia Pacific Journal of Educational Research*, 1(1), 31-50.
- Dron, J. (2019, May 28). *Education for life or Education for work? Reflections on the RBC Future Skills Report*. Retrieved from Jon Dron's home page: <https://jondron.ca/education-for-life-or-education-for-work-reflections-on-the-rbc-future-skills-report/>
- Dron, J., & Anderson, T. (2014). *Teaching Crowds: Learning and Social Media*. Edmonton, Canada: AU Press.
- Du Preez, P., & Simmonds, S. (2014). Curriculum, curriculum development, curriculum studies? Problematising theoretical ambiguities in doctoral theses in the education field. *South African Journal of education*, 34(2), 1-14.
- Du Toit, G. (2011). Curriculum types and models: A theoretical inquiry. In E. Bitzer, & N. Botha (Eds.), *Curriculum Inquiry in South African Higher Education: Some scholarly affirmations and challenges* (pp. 67-86). Stellenbosch: SUN MeDIA Press.
- Eberly, C., & Trand, P. (2010). Teaching Students to "Cook": Promoting writing in the first-year experience course. *Learning Assistance Review*, 15(1), 9-22.
- Economic and Social Research Council. (2019, March 26). *Our core principles*. Retrieved from Economic and Social Research Council: <https://esrc.ukri.org/funding/guidance-for-applicants/research-ethics/our-core-principles/>
- Editorial. (2019). Editorial: Debate and critique in curriculum studies: new directions? *The Curriculum Journal*, 30(4), 347-351.
- Einstein, A. (1921, May 18). Albert Einstein, in response to not knowing the speed of sound as included in the Edison Test. *New York Times*.

- Elger, T. (2010). Bounding the Case. In A. Mills, G. Durepos, & E. Wiebe (Eds.), *Encyclopedia of Case Study Research* (pp. 56-59). Thousand Oaks: SAGE Publications, Inc.
- Elias, M., & Theron, L. (2012). Linking purpose and ethics in thesis writing: South African illustrations of an international perspective. In K. Maree, & A. Anthanasou, *Complete Your Thesis or Dissertation Successfully: Practical Guidelines* (pp. 145-160). Cape Town: Juta and Company.
- Enders, J., & Jongbloed, B. (2007). The Public, the Private and the Good in Higher Education and Research: An Introduction. In J. Enders, & B. Jongbloed, *Public-Private Dynamics in higher education: Expectations, developments and outcomes* (pp. 9-36). New Brunswick and London: Transaction Publishers.
- Ennis, R. (2018). Critical Thinking across the Curriculum: A Vision. *Topoi*, 37, 165-184.
- Epic. (2010). *Epic Informal Learning White paper*. Retrieved October 20, 2011, from Epic Performance Improvement Ltd: <http://www.epic.co.uk>
- Eun, B. (2019). The zone of proximal development as an overarching concept: A framework for synthesizing Vygotsky's theories, Educational Philosophy and Theory,. *Educational Philosophy and Theory*, 51(1), 18-30.
- Facione, P. (1990). *Critical thinking: A statement of expert consensus for purposes of educational assessment and instruction*. Retrieved April 15, 2016, from ERIC: <http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED315423>
- Facione, P. (2011). *Critical thinking: What it is and why it counts*. Retrieved June 21, 2016, from Insight Assessment: <http://www.insightassessment.com/About-Us/Measured-Reasons/pdf-file/Critical-Thinking-What-It-Is-and-Why-It-Counts-PDF#sthash.oKhyPP3Y.dpbs>
- Facione, P. (2015). *Critical thinking: What it is and why it counts*. Retrieved from Insight Assessment: <https://www.insightassessment.com/Resources/Importance-of-Critical-Thinking/Critical-Thinking-What-It-Is-and-Why-It-Counts>
- Fallon, J. (2017, September 27). *Rather than taxing robots, we should be redesigning jobs*. Retrieved from The Telegraph: <http://www.telegraph.co.uk/business/2017/09/27/rather-taxing-robots-should-redesigning-jobs/>

- Feisel, L., & Rosa, A. (2005). The role of the laboratory in undergraduate Engineering Education. *Journal of Engineering Education*, 121-130.
- Feist, L. (2003). Removing Barriers to Professional Development. *Transforming Education through Technology Journal*, 30-36. Retrieved October 05, 2017, from Transforming Education through Technology Journal: <https://thejournal.com/articles/2003/06/01/removing-barriers-to-professional-development.aspx>
- Fendler, L. (2016). Ethical implications of validity-vs.-reliability trade-offs in educational research. *Ethics and Education*, 11(2), 214-229.
- Fesmire, S. (2015). *Dewey*. New York: Routledge.
- Flannery, M. (2007). Observation on Biology. *American Biology Teacher*, 69(9), 561-562.
- Flavell, J. (1979). Metacognition and cognitive monitoring: A new area of cognitive-developmental inquiry. *American Psychologist*, 34(10), 906-911.
- Flores, K., Matkin, G., Burbach, M., Quinn, C., & Harding, H. (2012). Deficient critical thinking skills among college graduates: Implications for leadership. *Educational Philosophy and Theory*, 44(2), 212-230.
- Franco, A. (2016). What do Ode to Joy, the Nobel Peace Prize, Umbrellas and Cartoons have in Common? Why Critical Thinking Matters and how Higher Education Moulds. *Higher Education for the future*, 3(1), 108-124.
- Freire, P. (1992). *The purpose of education*. Retrieved April 30, 2018, from Extract from "The 40th Anniversary of the UNESCO Institute for Education", UIE Reports No. 6: <http://www.unesco.org/education/pdf/FREIRE.PDF>
- Freire, P. (2004 (1992)). *Pedagogy of Hope: Reliving Pedagogy of the Oppressed*. London: Continuum.
- Freire, P. (2004). *Pedagogy of Indignation*. Boulder: Colorado: Paradigm.
- Freire, P. (2005). *Pedagogy of the Oppressed - 30th Anniversary Edition*. (M. Ramos, Trans.) New York: Continuum International Publishing Group Inc.
- Friedman, R. (2006). Deweyan Pragmatism. *William James Studies*, 1. Retrieved January 10, 2020, from <https://williamjamesstudies.org/deweyan-pragmatism/>
- Frith, V., & Prince, R. (2016). Quantitative literacy of school leavers aspiring to higher education in South Africa. *South African Journal of Higher Education*, 30(1), 138-161.

- Fry, H., Ketteridge, S., & Marshall, S. (Eds.). (2009). *Handbook for Teaching and Learning in Higher Education: Enhancing Academic Practice* (3rd ed.). New York: Routledge.
- Ganda, D., & Boruchovitch, E. (2018). Promoting Self-regulated Learning of Brazilian Preservice Student Teachers: Results of an Intervention Program. *Frontiers in Education*, 3, 1-5. Retrieved from <https://www.frontiersin.org/article/10.3389/feduc.2018.00005>
- Garraway, J. (2010). Knowledge boundaries and boundary-crossing in the design of work-responsive university curricula. *Teaching in Higher Education*, 15(2), 211-222.
- Gerring, J. (2007). *Case Study Research: Principles and Practices*. New York: Cambridge University Press.
- Ghanizadeh, A. (2017). The interplay between reflective thinking, critical thinking, self-monitoring and academic achievement in higher education. *Higher Education*, 74, 101-114.
- Gibson, S., & Hanes, L. (2003). The Contribution of Phenomenology to HRD Research. *Human Resource Development Review*, 2(2), 181-205.
- Gilbert, A., & Beaton, F. (2013). *Developing Effective Part-time Teachers in Higher Education: New Approaches to Professional Development*. Abingdon, UK: Routledge (Staff and Educational Development Series).
- Gilbert, A., & Beaton, F. (2013). *Developing Effective Part-time Teachers in Higher Education: New Approaches to Professional Development*. Abingdon, UK: Routledge.
- Gilstrap, D. (2013). Why Do We Teach? Adult Learning Theory in Professional Standards as a Basis for Curriculum Development. *College & Research Libraries*, 74(5), 501-518.
- Gittens, C. (2016). *Critical Thinking: What it is and why student success depends on it*. Retrieved June 8, 2016, from National Institute on the Assessment of Adult Learning: <https://www.tesu.edu/national-institute/documents/2016/NIAAL-Keynote-Gittens-061316.pdf>
- Given, L. (Ed.). (2008). *The SAGE Encyclopedia of Qualitative Research Methods* (Vol. 1 & 2). Thousand Oaks, California: SAGE Publications Inc.

- Goff, L., Potter, M., Pierre, E., Carey, T., Gullage, A., Kustra, E., . . . Van Gastel, G. (2015). *Learning Outcomes Assessment: A Practitioner's Handbook*. Toronto: Higher Education Quality Council of Ontario. Retrieved from <https://pdfs.semanticscholar.org/ea9f/03d35092cfb86b078876a4b13946a81d4335.pdf>
- Golding, C. (2011). Educating for critical thinking: Thought-encouraging questions in a community of inquiry. *Higher Education Research & Development, 30*(3), 357-370.
- Good, M., & Boyd, K. (2020). Auburn University: Positioning Assessment as an Educational Development Resource. *Assessment Update, 32*, 4-5.
- Goode, H. (2012). Bridging the Gap: Experiences of a Private Provider offering a Foundation Programme. *HELTASA Special Interest Group Paper presented at the extended colloquium, University of Pretoria on 25th June, 2012*. Pretoria.
- Goodwin, A., Chittle, L., Dixon, J., & Andrews, D. (2018). Taking stock and effecting change: curriculum evaluation through a review of course syllabi. *Assessment & Evaluation in Higher Education, 43*(6), 855-866.
- Grant, K. A. (2007). Tacit Knowledge Revisited - We can still learn from Polanyi. *The Electronic Journal of Knowledge Management, 5*(2), 173-180. Retrieved October 5, 2016
- Graue, C. (2016). Qualitative Data Analysis. *International Journal of Sales, Retailing and Marketing, 4*(9), 5-14.
- Gravells, A., & Simpson, S. (2014). *The Certificate in Education and Training*. London: SAGE Publications, Inc.
- Grayson, T. E. (2012). Approaches to Evaluation in Higher Education. In D. Denison, & C. Secolsky (Eds.), *Handbook on Measurement, Assessment and Evaluation in Higher Education* (pp. 455-472). New York: Routledge.
- Green, H. (2014). Use of theoretical and conceptual frameworks in qualitative research. *Nurse Researcher, 21*(6), 34-40.
- Greyling, W., & Du Toit, P. (2008). Pursuing a Constructivist Approach to Mentoring in Higher Education Sector. *South African Journal of Higher Education, 22*(5), 957-980.
- Griesel, H. (Ed.). (2006). *Access and Entry Level Benchmarks: The National Benchmark Tests Project*. Pretoria: Higher Education South Africa. Retrieved

- November 24, 2016, from http://www.universitiessa.ac.za/files/2006_HESA_Access%20and%20Entry%20Level%20Benchmarks.pdf
- Griesel, H., & Parker, B. (2009). *Graduate attributes. A baseline study on South African graduates from the perspective of employers*. Pretoria: Higher Education South Africa (HESA) & South African Qualifications Authority (SAQA).
- Groenewald, T. (2004). A Phenomenological Research Design Illustrated. *International Journal of Qualitative Methods*, 3(1), 42-55.
- Grossman, I. (2017). Wisdom and how to cultivate it: Review of emerging evidence for a constructivist model of wise thinking. *European Psychologist*, 1-45. Retrieved July 27, 2017, from https://www.researchgate.net/publication/318573930_Wisdom_and_how_to_cultivate_it_Review_of_emerging_evidence_for_a_constructivist_model_of_wise_thinking
- Gul, R., Khan, S., Ahmed, A., Cassum, S., Saeed, T., Parpio, Y., . . . Profetto-McGrath, J. (2014). Enhancing Educators skills for promoting Critical thinking in their classroom discourses: A randomized control trial. *International Journal of Teaching and Learning in Higher Education*, 26(1), 37-54.
- Guskey, T. (2014). Planning professional learning. *Educational Leadership*, 71(8), 11-16.
- Halupa, C. (2015). Pedagogy, Andragogy, and Heutagogy. In C. Halupa, *Transformative Curriculum Design in Health Sciences Education* (pp. 143-158). Hershey: ICG Global.
- Halx, M. (2010). Re-conceptualizing college and university teaching through the lens of adult education: regarding undergraduates as adults. *Teaching In Higher Education*, 519-530.
- Hammer, S., & Green, W. (2011). Critical thinking in a first year management unit: The relationship between disciplinary learning, academic literacy and learning progression. *Higher Education Research and Development*, 30(3), 303-315.
- Hanushek, E., & Woessmann, L. (2008). *The Role of Cognitive Skills in Economic Development*. Stanford University. Stanford: Stanford Institute for Economic Policy Research. Retrieved September 5, 2016, from

- <https://nicspaull.files.wordpress.com/2011/04/hanushek-woessmann-2008-the-role-of-cognitive-sk.pdf>
- Hart, C. (1998). *Doing a literature review*. London: SAGE Publications, Inc.
- Hase, S., & Kenyon, C. (2000). From Andragogy to Heutagogy. *Ulti-BASE In-Site*.
- Haynes, A., Lisic, E., Goltz, M., Stein, B., & Harris, K. (2016). Moving Beyond Assessment to Improving Students' Critical Thinking Skills: A Model for Implementing Change. *Journal of the Scholarship of Teaching and Learning*, 16(4), 44-61.
- Hénard, F. (2010). *Learning our lesson: Review of quality teaching in Higher Education*. Paris: OECD.
- Henning, E., Van Rensburg, W., & Smit, B. (2004). *Finding your way in Qualitative Research*. Pretoria: Van Schaik.
- HETS. (2007). Defining Student Success. (W. Latorre, Ed.) *Together!* (Fall 2007). Retrieved October 5, 2015, from <https://hets.org/wp-content/uploads/2011/11/4.pdf>
- Higher Education South Africa. (2014). *The Value of Designated Subjects in Terms of Likely Student Success in Higher Education*. Pretoria: Higher Education South Africa. Retrieved November 24, 2016, from <http://www.universitiessa.ac.za/value-designated-subjects-terms-likely-student-success-higher-education>
- Hijmans, E., & Wester, F. (2010). Comparing the Case Study with other methodologies. In A. Mills, G. Durepos, & E. Wiebe (Eds.), *Encyclopedia of Case Study Research* (pp. 177-180). Thousand Oaks: SAGE Publications, Inc.
- Huber, C. R., & Kuncel, N. K. (2016). Does College teach Critical Thinking? A Meta-Analysis. *Review of Educational Research*, 86(2), 431-468. Retrieved October 21, 2015, from <http://rer.aera.net>
- Husserl, E. (1931). *Ideas*. (W. Boyce Gibson, Trans.) London: George Allen & Unwin.
- Hyder, I., & Bhamani, S. (2016). Bloom's Taxonomy (Cognitive Domain) in higher education settings: Reflection Brief. *Journal of Education and Educational Development*, 3(2), 288-300.
- Imel, S. (1990). *Managing Your Professional Development: A Guide for Part-time Teachers of Adults*. Retrieved 2014, from ERIC digests: <http://www.ericdigests.org/pre-9215/guide.htm>

- Institute of Education Sciences. (2017, September 19). *Fast Facts: Graduation rates*. Retrieved from The Institute of Education Sciences: <https://nces.ed.gov/fastfacts/display.asp?id=40>
- Isaacson, R., & Fujita, F. (2006). Metacognitive knowledge monitoring and self-regulated learning: Academic Success and reflections on learning. *Journal of the scholarship of teaching and learning*, 6(1), 39-55.
- J L. (2015, June 19). *Social Learning Theory (Bandura)*. Retrieved July 10, 2017, from Learning Theories: <https://www.learning-theories.com/social-learning-theory-bandura.html>.
- James, D. (2014). Investigating the curriculum through assessment practice in higher education: the value of a 'learning cultures'. *Higher Education*, 67, 155-169.
- James, N., Hughes, C., & Cappa, C. (2010). Conceptualising, developing and assessing critical thinking in law. *Teaching In Higher Education*, 15(3), 285-297.
- Jansen, J. (2015). A quiet contemplation on the new anger: The state of transformation in South African Universities. *New Agenda*(60), 6-8.
- Jaschik, S. (2015, January 05). Well-Prepared in Their Own Eyes. *Inside Higher Education*. Retrieved July 05, 2017, from <https://www.insidehighered.com/news/2015/01/20/study-finds-big-gaps-between-student-and-employer-perceptions>
- Jenvey, N. (2016, June 30). *Changing universities – not students – to boost success*. Retrieved November 23, 2016, from University World News: <http://www.universityworldnews.com/article.php?story=2016063013103530>
- Johnson, J., Adkins, D., & Chauvin, S. (2020). A review of the quality indicators of rigor in qualitative research. *American Journal of Pharmaceutical Education*, 84(1), 138-146.
- Jost, J., Kruglanski, A., & Nelson, T. (1998). Social Metacognition: An Expansionist Review. *Personality and Social Psychology Review*, 2, 137-154.
- Jyväskylän University of Applied Sciences, Teacher Education College. (2007). *Formal, Non-formal, Informal Learning*. Retrieved October 22, 2013, from Jyväskylän University of Applied Sciences, Teacher Education College, Irmeli Maunonen-Eskelinen: http://salpro.salpaus.fi/tes/CD-rom/pdf/A1_Salpaus_formal_informal_nonformal_learning.docx.pdf

- Kafai, Y., & Resnick, M. (Eds.). (1996). *Constructionism in Practice: Designing, thinking and learning in a digital world*. New York: Routledge.
- Kafai, Y., Desai, S., Peppler, K., Chiu, G., & Moya, J. (2008). Mentoring Partnerships in a community technology centre: A constructivist approach for fostering equitable service learning. *Mentoring and Tutoring: Partnership in Learning*, 16(2), 191-205.
- Kala, F., & Bwala, J. (2017). What Makes Qualitative Research Good Research? An Exploratory Analysis of Critical Elements. *International Journal of Social Science Research*, 5(2), 43-56.
- Kerkman, D., & Johnson, A. (2014). Challenging Multiple Choice questions to engage Critical thinking. *Insight: A Journal of Scholarly Teaching*, 9, 92-97.
- Killen, R. (2010). *Teaching Strategies for Quality Teaching and Learning*. Cape Town: Juta & Company Ltd.
- Klopper, M., & Grosser, M. (2010). Exploring the impact of Feuerstein's Instrumental Enrichment Programme on the cognitive development of prospective mathematics educators. *The Journal for Transdisciplinary Research in Southern Africa*, 359-378.
- Knowles, M. (1970). Andragogy: An Emerging Technology for Adult Learning. In M. Knowles, *The modern practice of Adult Education: From pedagogy to Andragogy* (pp. 53-70). New York: Cambridge Book Company. Retrieved from <https://www.nationalcollege.org.uk/cm-andragogy.pdf>
- Knowles, M., Holton, E., & Swanson, R. (2005). *The Adult Learner* (6 ed.). Oxford: Elsevier.
- Koffeman, A., & Snoek, M. (2019). Identifying context factors as a source for teacher professional learning. *Professional Development in Education*, 45(3), 456-471.
- Kolb, , A., & Kolb, D. (2009). The Learning Way: Meta-cognitive Aspects of Experiential Learning. *Simulation and Gaming*, 40(3), 297-327.
- Korbin, J. (2015, June 16). *Critical Thinking = Critical for the Future*. Retrieved from Research and Innovation Network: <http://researchnetwork.pearson.com/college-career-success/critical-thinking-critical-future>

- Kozikoğlu, I. (2018). The examination of alignment between national assessment and English curriculum objectives using revised Bloom's Taxonomy. *Educational Research Quarterly*, 50-77.
- Kozulin, A., Gindis, B., Ageyev, V., & Miller, S. (Eds.). (2003). *Vygotsky's Educational Theory in Cultural Context*. New York: Cambridge University Press.
- Krahenbuhl, K. (2016). Student-centred Education and Constructivism: Challenges, Concerns, and Clarity for Teachers. *The Clearing House*, 89(3), 97-105.
- Krathwohl, D. (2002). A Revision of Bloom's Taxonomy: an overview. *Theory into Practice*, 212-218.
- Kridel, C. (Ed.). (2010). *Encyclopedia of Curriculum Studies*. Thousand Oaks, CA: SAGE Publications, Inc.
- Ku, K. (2009). Assessing students' critical thinking performance: Urging for measurements using multi-response format. *Thinking Skills and Creativity*, 4, 70-76.
- Kuhn, D. (1999). A developmental model of critical thinking. *Educational Researcher*, 28(2), 16-26.
- Labaree, D. (1997). Public Goods, Private Goods: The American Struggle over Educational Goals. *American Educational Research Journal*, 34(1), 39-81.
- Labone, E., & Long, J. (2016). Features of effective professional learning: a case study of the implementation of a system-based professional learning model. *Professional Development in Education*, 42(1), 54-77.
- Lai, E. (2011). *Critical Thinking: A Literature Review*. London: Pearson. Retrieved from <http://www.pearsonassessments.com/research>.
- Larkin, H., & Richardson, B. (2013). Creating high challenge/high support academic environments through constructive alignment: student outcomes. *Teaching in Higher Education*, 18(2), 192-204.
- Lategan, L. (2009). The university as key concept in higher education studies: A journey with research into a conceptual analysis of a university. In E. Bitzer (Ed.), *Higher Education in South Africa – A scholarly look behind the scenes* (pp. 53-70). Stellenbosch: Sun MeDIA.
- Lau, K., Lam, T., Kam, B., Nkhoma, M., & Richards, J. (2018). Benchmarking higher education programs through alignment analysis based on the revised Bloom's taxonomy. *Benchmarking: An International Journal*, 25(8), 2828-2849.

- Lave, J., & Wegner, E. (1990). *Situated learning: Legitimate Peripheral Participation*. Cambridge: Cambridge University Press.
- Lawler, S. (2016, February 26). Identification of animals and plants is an essential skill set. *The Conversation*. Retrieved from <https://web.archive.org/web/20161117044125/http://theconversation.com/identification-of-animals-and-plants-is-an-essential-skill-set-55450>
- Lawrence, N., Thomas, G., & Visentin, D. (2006). Enhancing critical thinking skills in first year engineering students. *Proceedings of the International Conference on Innovation, Good Practice and Research in Engineering Education 2006, EE 2006*, (pp. 305-310).
- Lawton, D. (1983). *Curriculum Studies and Educational Planning*. London: Hodder and Stoughton.
- Le Grange, L. (2016). Decolonising the University Curriculum. *South African Journal of Higher Education*, 30(2), 1-12.
- Leiber, T. (2019). A general theory of learning and teaching and a related comprehensive set of performance indicators for higher education institutions,. *Quality in Higher Education*, 25(1), 76-97.
- Leibowitz, B. (2011). Academic Literacy as a Graduate Attribute: Implications for thinking about 'Curriculum'. In E. Blitzer, & N. Botha, *Curriculum Inquiry in South African Higher Education: Some scholarly affirmations and challenges* (pp. 221-235). Stellenbosch: SUN MeDIA.
- Leibowitz, B. (Ed.). (2012). *Higher Education for the Public Good: Views from the South*. Stellenbosch: SUN MeDIA.
- Leibowitz, B. (2016). In pursuit of socially just pedagogies in differently positioned South African Higher Education Institutions. *South African Journal of Higher Education*, 30(3), 219-234.
- Leibowitz, B., Van der Merwe, A., & Van Schalkwyk, S. (Eds.). (2009). *Focus on First-Year Success: Perspectives emerging from South Africa and beyond*. Stellenbosch, South Africa: Sun Media.
- Levy, S., & Earl, C. (2012). *Student Voices in Transition: The experiences of pathways students*. Pretoria: Van Schaik Publishers.
- Lewin, T. (2014). *Student Access and Success: Issues and Interventions in South African Universities*. South Africa: Inyathelo: The South African Institute for

- Advancement. Retrieved from http://www.inyathelo.org.za/images/publications/summary_student_access_success.pdf
- Lewis, A., King, E., Pitt, J., Getachew, A., & Shamburger, A. (2010). Critical Thinking Skills for Rehabilitation Professionals in the 21st Century. *Rehabilitation Education, 24*(3-4), 123-134.
- Li, L., & Guo, R. (2015). A Student-Centered Guest Lecturing: A Constructivism Approach to Promote Student Engagement. *Journal of Instructional Pedagogies, 15*, 1-7.
- Lieb, S. (1991). *Principles of Adult Learning*. Retrieved August 26, 2010, from Faculty Development Honolulu Community College: <http://www2.honolulu.hawaii.edu/facdev/guidebk/teachtip/adults-2.htm>
- Lindeman, E. C. (1926). *The Meaning of Adult Education*. New York: New Republic.
- Linderman, E. (1956). *The democratic Man. Selected writings of Eduard C Linderman*. (R. Gessner, Ed.) Boston: Beacon Press.
- Lipman, M. (1988). Critical Thinking-What can it be? *Educational leadership, 46*(1), 38-43.
- Liu, O., Frankel, L., & Roohr, K. C. (2014). Assessing Critical Thinking in Higher Education: Current State and Directions for Next-Generation Assessment. *ETS Research Report Series, 1-23*.
- Lloyd, S. (2019). *The Conceptualisation and use of Learning Outcomes in South Africa*. SA-EU Policy Learning Forum (PLF) on Learning Outcomes. Ekurhurleni, South Africa: European Union.
- Lombard, K., & Grosser, M. (2008). Critical thinking: are the ideals of OBE failing us or are we failing the ideals of OBE? *South African Journal of Education, 56*(1)-579.
- Louw, J. (2016, December 10). *South African Higher Education*. Retrieved from News24.com: <http://m.news24.com/news24/MyNews24/south-african-higher-education-20161210>
- Luckett, K. (2016). Curriculum contestation in a post-colonial context: a view from the South. *Teaching in Higher Education, 21*(4), 415-428.
- Mabalebele, J. (2015, September 1). *HE in South Africa: emerging challenges & implications for universities*. Retrieved from PWC South Africa:

- https://www.pwc.co.za/en/assets/pdf/he-conference_the-future-of-higher-education-in-south-africa.pdf
- Macat International Limited. (2017). *What is critical thinking?* Retrieved July 18, 2018, from Macat International Limited: <https://www.macat.com/what-is-critical-thinking>
- Maree, J. (2015). Barriers to access to and success in higher education. *South African Journal for Higher Education*, 29(1), 390–411.
- Maree, K., & Athanasou, J. (2012). *Complete Your Thesis or Dissertation Successfully : Practical Guidelines*. Cape Town: Juta and Company.
- Marsh, P. (2011, May). Transferring knowledge at the speed of intent: Part 1 of a 6 part series on Effective Knowledge Transfer. *Civil Engineering*, 19(4), 58-59.
- Marsh, P. (2012, Jan/Feb). Building relationships of trust: Part 2 of a 6 part series on Effective Knowledge Transfer. *Civil Engineering*, 20(1), 49-51.
- Marsh, P. (2012, June). Intentional Storytelling as a tool for transferring knowledge and wisdom - Part 3 of 6 part series on Effective Knowledge Transfer. *Civil Engineering*, 20(5), 57-59.
- Marshall, E. (2010). Practice-Oriented Research. In A. Mills, G. Durepos, & E. Wiebe (Eds.), *Encyclopedia of Case Study Research* (p. 723). Thousand Oaks: SAGE Publications, Inc.
- Marshall, M. (1996). Sampling for qualitative research. *Family Practice*, 13(6), 522-525.
- Mascolo, M., & Fischer, K. (2015). Dynamic Development of Thinking, Feeling, and Acting. In B. Hopkins (Ed.), *Handbook of Child Psychology and Developmental Science* (pp. 113-161). Hoboken, USA: John Wiley & Sons, Inc.
- Maslow, A. (1970). *Motivation and Personality*. New York: Harper and Row.
- Mason, H. (2018). Learning and Study Strategies among First-Year Students at a South African University: A Mixed Methods Study. *Africa Education Review*, 15(4), 118-134.
- Maxwell, J. (2009). Designing a Qualitative Study. In L. Bickman, & D. Rog (Eds.), *The SAGE Handbook of Applied Social Research Methods* (2nd ed., pp. 214-253). London: SAGE Publications, Inc.

- Maxwell, J. (2017). The Validity and Reliability of Research: A Realist Perspective. In D. Wyse, L. Suter, E. Smith, & N. Selwyn (Eds.), *The BERA/SAGE Handbook of Educational Research* (pp. 116-140). London: SAGE Publications, Inc.
- McAuliffe, M., & Winter, A. (2014). Using Academagogy to meet the needs of millennial learners: A comparative case study. *European Scientific Journal* , 165-174.
- McKay, T. (2016). Academic Success, Language, and the four year degree: A Case Study of a 2007 Cohort. *South African Journal of Higher Education*, 30(4), 190-209.
- McMillan, J., & Schumacher, S. (2001). *Research in education: A conceptual introduction*. New York: Longman.
- McMillan, J., & Schumacher, S. (2010). *Research in education. Evidence-based research*. Boston: Pearson.
- Meeuwse, K., Mason, D., & IGI, G. (2017). *Personalized Professional Learning for Educators: Emerging Research and Opportunities*. Hershey, Pennsylvania: Information Science Reference.
- Mehta, B. (2015). *Thesis: The teaching of critical thinking: Reviewing the perceptions of educators in tertiary institutions in New Zealand*. Retrieved from Unitec Institute of technology: http://unitec.researchbank.ac.nz/bitstream/handle/10652/3257/Bhavana%20Mehta_2016-02-10.pdf?sequence=1&isAllowed=y
- Merriam, S. (1988). Finding your way through the maze: A guide to the literature on adult learning theory. *Lifelong Learning*, 11(6), 4-7.
- Merriam, S., & Tisdell, E. (2016). *Qualitative Research: A guide to design and implementation* (4th ed.). San Francisco: John Wiley & Sons.
- Michigan State University. (2015, December 10). *Human Research Protection Programme Manual*. Retrieved March 26, 2019, from Michigan State University Office of Regulatory Affairs: <http://hrpp.msu.edu/help/manual/index.html>
- Mihaila-Lica, G. (2012). Considerations on developing critical thinking skills in students of English. *Revista Academiei Fortelor Trestre*, 2(66), 138-142.
- Miller, B. (2015, October 5). *Five outcomes to student success*. Retrieved from Ellucian: <http://www.ellucian.com/Blog/Five-outcomes--to-student-success/>
- Moon, J. (2004). Using reflective learning to improve the impact of short courses and workshops. *Journal of Continuing Education in the Health Professions*, 4-11.

- Moore, T. (2013). Critical thinking: seven definitions in search of a concept. *Studies in Higher Education*, 38(4), 506-522.
- Morgan, B., & Sklar, R. (2012). Sampling and research paradigms. In K. Maree, & J. Athanasou, 2012, *Complete Your Thesis or Dissertation Successfully: Practical Guidelines* (pp. 69-80). Cape Town, South Africa: Juta and Company.
- Morton, C., Wells, M., & Cox, T. (2019). The Implicit Curriculum: Student Engagement and the Role of Social Media. *Journal of Social Work Education*, 55(1), 153-159.
- Moustakas, C. (1994). *Phenomenological research methods*. Thousand Oaks, CA: SAGE.
- Mouton, J. (2001). *How to succeed in your master's and doctoral studies. A South African guide and resource book*. Pretoria: Van Schaik.
- Mouton, N., Louw, G., & Strydom, G. (2012). A Historical Analysis Of The Post Apartheid Dispensation Education In South Africa (1994-2011). *International Business & Economics Research Journal*, 11(11), 1211-1222.
- Muir, P. (2007). Action research in the scholarship of Learning & Teaching. *The RMIT Teaching and Learning Journal*. Retrieved from <http://emedia.rmit.edu.au/edjournal/?q=node/280>
- Murray, M. (2014). Factors affecting graduation and student drop out rates at the University of Kwa-Zulu Natal. *South African Journal of Science* , 1-6.
- Murthy, S. (2011). Academagogical framework for effective university education: Promoting millennial centric learning in global knowledge society. *Technology for Education*, 289-290. Retrieved January 26, 2018, from <http://www.iicacademy.com/docs/academagogical-framework.pdf>
- National Commission for the protection of human subjects of biomedical and behavioural research. (1979). *The Belmont Report: Ethical principles and guidelines for the protection of human subjects of research*. Washington DC: United States Government Printing Office.
- National Planning Commission. (2012). *Executive Summary-National Development Plan 2030 - Our future - make it work*. Republic of South Africa Government, The Presidency. Pretoria: Republic of South Africa Government. Retrieved from <https://www.gov.za/issues/national-development-plan-2030>

- National Planning Commission. (2012b). *National Development Plan 2030*. The Presidency. Pretoria: Republic of South Africa Government. Retrieved from A National Framework for Enhancing Academics as University Teachers
- Neuman, W. (2003). *Social research methods: Qualitative and quantitative approaches*. Boston: Allyn and Bacon.
- Ng`ambi, D. (2013). Effective and ineffective uses of emerging technologies: towards a transformative pedagogical model. *British Journal of Educational Technology*, 44(4), 652-661.
- Ng`ambi, D., & Johnstone, K. (2006). An ICT-Mediated Constructivist approach for increasing Academic Support and Teaching Critical Thinking Skills. *Educational Technology & Society*, 9(3), 244-253.
- Nieuwenhuis, J. (2007). Qualitative research designs and data gathering techniques. In K. (. Maree, *First Steps in Research* (pp. 70-92). Pretoria: Van Schaik Publishers.
- Nilson, L. (2016). *Teaching at its Best : A Research-Based Resource for College Instructors*. San Francisco, CA: Jossey-Bass.
- Norton, L. (2009). Assessing student learning. In H. Fry, S. Ketteridge, & S. Marshall (Eds.), *Handbook for Teaching and Learning in Higher Education: Enhancing Academic Practice* (3rd ed., pp. 132-149). New York: Routledge.
- OECD. (2010). *Recognising Non-Formal and Informal Learning: Outcomes, Policies and Practices*. Retrieved October 22, 2013, from OECD: <http://www.oecd.org/education/skills-beyond-school/recognitionofnon-formalandinformallearning-home.htm>
- Olson, D. (1997). Critical Thinking: Learning to Talk about Talk and Text. In G. Phye (Ed.), *Handbook of Academic Learning* (pp. 493-510). San Diego: Elsevier Inc.
- Oxford Dictionaries. (2019, July 30). *Oxford Dictionaries*. Retrieved from <http://www.oxforddictionaries.com/definition/english/>
- Pacarella, E., Palmer, B., Moye, M., & Pierson, C. (2001). Do diversity experiences influence the development of critical thinking? *Journal of College Student Development*, 42(3), 257-271.
- Pandor, G. (2019). *Contested meanings of transformation in higher education in post-apartheid South Africa*. Pretoria, South Africa: Doctoral Thesis. Retrieved July

- 11, 2019, from UP Space Institutional Repository:
<https://repository.up.ac.za/handle/2263/69024>
- Park, J. (2014). Student interactivity and teacher participation: an application of legitimate peripheral participation in higher education online learning environments. *Technology, Pedagogy and Education*, 24(3), 389-406.
- Parker-Katz, M., & Bay, M. (2008). Conceptualizing mentor knowledge: Learning from the insiders. *Teaching and Teacher Education*, 24, 1259–1269.
- Partnership for 21st Century Skills. (2009). *P21 framework definitions*. Retrieved June 08, 2019, from <https://files.eric.ed.gov/fulltext/ED519462.pdf>
- Pascarella, E., & Terenzi, P. (2005). *How College affects students: A third decade of research*. San Francisco, CA: Jossey-Bass.
- Penkauskienė, D., Railienė, A., & Cruz, G. (2019). How is critical thinking valued by the labour market? Employer perspectives from different European countries. *Studies in Higher Education*, 44(5), 804-815.
- Phillips, D., & Siegel, H. (2015). *Philosophy of Education*. Retrieved from The Stanford Encyclopedia of Philosophy (Winter 2015 Edition): <https://plato.stanford.edu/archives/win2015/entries/education-philosophy/>
- Piaget, J. (1952). *The Origins of Intelligence in Children*. New York: International Universities Press.
- Piaget, J. (1970). Piaget's Theory. In P. Mussen (Ed.), *Carmichael's manual of Child Psychology* (pp. 703-732). New York: Wiley.
- Pinar, W. (1978). The reconceptualisation of curriculum studies. *Journal of Curriculum Studies*, 10(3), 205-214.
- Pinar, W. (2011). *The character of curriculum studies: Bildung, Curriere and the recurring question of the subject*. New York, N.Y.: Palgrave Macmillan.
- Polanyi, M. (1958). *Personal Knowledge: Towards a Post-Critical Philosophy*. London: Routledge.
- Polanyi, M. (1966). *The Tacit Dimension*. New York: Doubleday & Company Inc.
- Pool, J., & Reitsma, G. (2017). Adhering to scientific and ethical criteria for scholarship of teaching and learning. *CRiSTaL*, 5(1), 36-48. Retrieved from <http://cristal.epubs.ac.za/index.php/cristal/index>
- Pool, L., & Sewell, P. (2007). The key to employability: developing a practical model of graduate employability. *Education and Training*, 49(4), 277-289.

- Potter, M., & Goode, H. (2019). The Imperative for Developing Critical and Creative Thinking. *2019 International DEFSA Conference: Designed Futures*. Cape Town: DEFSA.
- Quinn, F., Charteris, J., Adlington, R., Rizk, N., Fletcher, P., Reyes, V., & Parkes, M. (2019). Developing, situating and evaluating effective online professional learning and development: a review of some theoretical and policy frameworks. *The Australian Educational Researcher*, 1-20.
- Quinn, L. (2012). *Re-imagining Academic Staff Development: Spaces for disruption*. (L. Quinn, Ed.) Stellenbosch: Sun Press.
- Ramchander, M., & Naude, M. (2018). The relationship between increasing enrolment and student academic achievement in higher education. *African Education Review*, 15(4), 135-151.
- Reck, A. (1984). The Influence of William James on John Dewey in Psychology. *Transactions of the Charles S. Peirce Society*, 20(2), 87-117.
- Redding, G. (2017, January). *Critical thinking, university autonomy, and societal evolution: thoughts on a research agenda*. Retrieved from Centre for Global Higher Education Working Papers, No.11: <http://www.researchcghe.org/publications/critical-thinking-university-autonomy-and-societal-evolution-thoughts-on-a-research-agenda/>
- Roksa, J., Trolan, T., Blaich, C., & Wise, K. (2017). Facilitating academic performance in college: understanding the role of clear and organized instruction. *Higher Education*, 74(2), 283–300.
- Royal Canadian Bank, Office of the CEO. (2018). *Humans Wanted:.* Ontario: Royal Canadian Bank. Retrieved from https://www.rbc.com/dms/enterprise/futurelaunch/_assets-custom/pdf/RBC-Future-Skills-Report-FINAL-Singles.pdf
- Ruszyniak, L., Dison, L., Moosa, M., & Poo, M. (2017). Supporting the Academic Success of first-year students: A study of the epistemological access they acquired through a lecture and text. *South African Journal of Higher Education*, 31(1), 2017-226.
- Sadler, R. (1989). Formative assessment and the design of instructional systems. *Instructional Science*, 18, 119-144.

- Saevi, T. (2017). Phenomenology in Education. In *Encyclopedia of Educational Philosophy and Theory* (pp. 1790-1795). Singapore: Springer.
- Saiz, C., Rivas, S., & Olivares, S. (2015). Collaborative learning supported by rubrics improves critical thinking. *Journal of the Scholarship of Teaching and Learning*, 15(1), 10-19.
- Salmon, M. H. (2013). *Introduction to Logic and Critical Thinking - International edition*. Pittsburg, USA: Wadsworth, Cengage Learning.
- Sambell, K., Brown, S., & Graham, L. (2017). *Professionalism in Practice: Key Directions in higher education learning, teaching and assessment*. Cham: Palgrave Macmillan.
- Sanders, P. (1982). Phenomenology: A New Way of Viewing Organizational Research. *The Academy of Management Review*, 7(3), 353-360.
- SAQA. (2000). *The National Qualifications Framework and Curriculum Development*. Retrieved from South African Qualifications Framework (SAQA): http://www.saqa.org.za/docs/pol/2000/curriculum_dev.pdf
- SAQA. (2012). *Level Descriptors for the South African National Qualifications Framework*. Pretoria: SAQA. Retrieved from http://www.saqa.org.za/docs/misc/2012/level_descriptors.pdf
- SAQA. (2014). *National Policy and Criteria for Designing and Implementing Assessment for NQF Qualifications and Part-Qualifications and Professional Designations in South Africa*. Pretoria: SAQA. Retrieved from SAQA.
- Saroyan, A., & Trigwell, K. (2015). Higher education teachers' professional learning: Process and outcome. *Studies in Educational Evaluation*, 46, 92-101.
- Saunders, M., Lewis, P., & Thornhill, A. (2003). *Research method for business students* (3rd ed.). New York: Prentice-Hall.
- Schoepp, K. (2019). The state of course learning outcomes at leading universities. *Studies in higher education*, 44(4), 615-627.
- Schrader, D. (2015). Constructivism and Learning in the Age of Social Media: Changing Minds and Learning Communities. *New Directions for Teaching & Learning*, 2015(144), 23-35.
- Schraw, G., Crippen, K., & Hartley, K. (2006). Promoting self-regulation in science education: Metacognition as part of a broader perspective on learning. *Research in Science Education*, 36(1-2), 111-139.

- Schunk, D. (2012). *Learning Theories: An Educational Perspective* (6th ed.). Boston, USA: Pearson Education Inc.
- Schunk, D., & Zimmerman, B. (2008). *Motivation and Self-Regulated Learning: Theory, Research, and Applications*. New Jersey: Lawrence Erlbaum Associates.
- Schwab, J. (2013). The practical: A language for curriculum. *Journal of Curriculum Studies*, 45(5), 591-621 (Reprinted from *The practical: a language for curriculum* by J. J. Schwab, 1970, Washington, D.C: National Education Association).
- Shava, G. (2016). Enhancing learner achievement through professional development: the Zimbabwean experience. *South African Journal of Higher Education*, 30(6), 56 - 72.
- Shay, S. (2017). Educational investment towards the ideal future: South Africa's strategic choices. *South African Journal of Science*, 113, 10-15.
- Shay, S., Wolff, K., & Clarence-Fincham, J. (2016). Curriculum reform in South Africa: more time for what? *Critical Studies in Teaching and Learning (CriSTaL)*, 4(1), 74-88.
- Sheffield, C. (2018). Promoting Critical Thinking in Higher Education: My Experiences as the Inaugural Eugene H. Fram Chair in Applied Critical Thinking at Rochester Institute of Technology. *Topoi*, 37, 155-163.
- Shenton, A. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, 22, 63-75.
- Siedmann, I. (2013). *Interviewing as Qualitative Research: A guide for researchers in* (4th ed.). New York: Teacher's College Press.
- Silva, E. (2009). Measuring skills for 21st-century learning. *The Phi Delta Kappan*, 90(9), 630-634.
- Silverman, D. (2005). *Doing Qualitative Research* (2nd ed.). London: SAGE Publications, Inc.
- Singh, V. (2017). Influence of Personal Epistemology on Research Design: Implications for Research Education. *Journal of Research Practice*, 1-18.
- Smith, T. (2013). Theory and Practice: Vygotsky's and Bloom's Theories. In T. Smith, *Undergraduate Curricular Peer Mentoring Programs : Perspectives on*

- Innovation by Faculty, Staff, and Students*. Lanham, Maryland: Lexington Books.
- Smith, B. (2013). *Mentoring At-Risk Students Through the Hidden Curriculum of Higher Education*. Lanham: Lexington Books.
- Smith, J. (1983). Quantitative versus qualitative research: An attempt to clarify the issue. *Educational Researcher*, 12(3), 6-13.
- Snyman, M. (2013). The Influence of the Learner profile on recognition of prior learning assessment. *Doctoral Thesis* (pp. 1-286). Pretoria: UNISA.
- South Africa. (2000, February 4). National Education Policy Act: Norms and standards for educators Notice 82 of 2000. *Government Gazette*, 415(20844), 3-34. Retrieved from http://us-cdn.creamermedia.co.za/assets/articles/attachments/08137_notice82.pdf
- South Africa. (2007, April 26). National Education Policy Act (27/1996): The National Policy Framework for Teacher Education and Development in. *Government Gazette*, 367(29832), 1-40.
- Stassen, M., Herrington, A., & Henderson, L. (2011). Defining Critical Thinking in Higher Education. In J. Miller, & J. Grocca (Eds.), *To Improve the Academy: Resources for Faculty, Instructional and Organizational Development* (Vol. 30, pp. 126-141). United States: John Wiley & Sons.
- Statistics South Africa. (2016). *Education Series Volume III: Educational Enrolment and Achievement, 2016/Statistics South Africa*. Pretoria: Statistics South Africa. Retrieved December 12, 2019, from http://www.statssa.gov.za/?page_id=737&id=4=4
- Steinert, Y. (2008). Faculty Development: From workshops to communities of practice. In M. C. McLean, *Faculty Development: Yesterday, Today and Tomorrow, AMEE Guide no. 33. Med Teach 30* (pp. 555-584). AMEE Guide Supplements.
- Stellenbosch University. (2012). *Stellenbosch University Institutional Plan: 2012-2016*. Stellenbosch: Stellenbosch University.
- Sternberg, R. (1986). *Critical thinking: Its nature, measurement and improvement*. Retrieved from National Institute of Education : <http://eric.ed.gov/PDFS/ED272882.pdf>

- Stewart, M. (2013). Understanding Learning: theories and critique. In D. Chalmers, & L. Hunt, *University Teaching in Focus: A learning-centred approach* (pp. 3-20). Abingdon, Oxon: Routledge.
- Strydom, J., & Mentz, M. (2010). *South African Survey of Student Engagement (SASSE) - Focusing the Student Experience on Success through Student Engagement*. Pretoria: Council on Higher Education. Retrieved August 28, 2015, from http://www.che.ac.za/sites/default/files/publications/SASSE_2010.pdf
- Swart, A. (2010). Does it matter which comes first in a curriculum for engineering students - theory or practice? *International Journal of Electrical Engineering Education*, 47(2), 189-199.
- Swartz, R., Ivancheva, M., Czerniewicz, L., & Morris, N. (2018). Between a rock and a hard place: dilemmas regarding the purpose of public universities in South Africa. *Higher Education*, 77, 567-583.
- Taber, K. (2016). Constructivism in Education: Interpretations and Criticisms from Science Education. In E. Railean, G. Walker, A. Elci, & L. Jackson (Eds.), *Handbook of Research on Applied Learning Theory and Design in Modern Education* (pp. 116-144). Hershey, PA: IGI Global.
- Taylor, S. J., DeVault, M. L., & Bogdan, R. (2016). *Introduction to Qualitative Research Methods : A Guidebook and Resource* (4th ed.). Hoboken, New Jersey: Wiley.
- Terblanche, E., & De Clercq, B. (2019). Factors to consider for effective critical thinking development in auditing students. *South African Journal of Accounting Research*, 1-19.
- The Foundation for Critical Thinking. (2018, July 11). *Defining Critical Thinking*. Retrieved from The Foundation for Critical Thinking: <http://www.criticalthinking.org/pages/defining-critical-thinking/766>
- The Nuremberg Code. (1949). The Nuremberg Code: Permissible Medical Experiments. *Trials of War Criminals before the Nuremberg Military Tribunals under Control Council Law No. 10, 2*, pp. 181-182. Retrieved from Trials of War Criminals before the Nuremberg Military Tribunals under Control Council Law: <https://history.nih.gov/research/downloads/nuremberg.pdf>

- Theodoridis, C. (2014). A phenomenological case study: strategy development in small and medium retail enterprises in Greece during recession. In *SAGE Research Methods Cases* (pp. 1-16). London: SAGE Publications Ltd.
- Thinking Schools South Africa. (2015, November 12). *Thinking in South African Schools*. Retrieved from Thinking Schools South Africa: http://www.thinkingschoolssa.co.za/?page_id=395
- Thomas, T. (2011). Developing first year students' critical thinking skills. *Asian Social Sciences*, 7(4), 26 -35.
- Thyer, E. (2018, Mar 22). *Development of Critical Thinking Resource*. Retrieved from Deakin Learning Futures, Deakin University: http://www.deakin.edu.au/__data/assets/pdf_file/0012/51222/critical-thinking.pdf
- Timmons, V., & Cairns, E. (2010). Case Study Research in Education. In A. Mills, G. Durepos, & E. Wiebe (Eds.), *Encyclopedia of Case Study Research* (pp. 100-103). Thousand Oaks: SAGE Publications, Inc.
- Tinto, V. (2017, November 28). *Re-imagining the University: Putting Student Outcomes First. Invited keynote presentation delivered at the Code of Good Practice Workshop on 28 November 2017, Centurion, South Africa*. Retrieved March 2018, 5, from Council for Higher Education Quality Enhancement Project: <http://www.che.ac.za/content/code-good-practice-workshop-vincent-tinto>
- Toombs, W., & Tierney, W. (1993). Curriculum Definitions and Reference Points. *Journal of Curriculum and Supervision*, 8(3), 175-195. Retrieved from <http://www.ascd.org/publications/jcs/spring1993/Curriculum-Definitions-and-Reference-Points.aspx>
- Tribe, J. (2001). Research Paradigms and the Tourism Curriculum. *Journal of Travel Research*, 39, 442-448.
- UNESCO. (2016). *Educational attainment and competencies*. Retrieved November 22, 2016, from UNESCO Education Quality Frameworks: <http://www.unesco.org/new/en/education/themes/strengthening-education-systems/quality-framework/technical-notes/educational-attainment-and-competencies/>

- UNESCO. (2016). *General Education Quality Diagnosis Framework (GEQAF)*. Retrieved November 21, 2016, from Unesco Education Quality Framework: <http://www.unesco.org/new/en/education/themes/strengthening-education-systems/quality-framework/background/>
- UNESCO. (2019). *International Bureau of Education*. Retrieved August 2019, from <http://www.ibe.unesco.org/en/glossary-curriculum-terminology/>
- UNISA (University of South Africa). (2007). *Guidelines for Ethics Review*. Pretoria: UNISA.
- UNISA (University of South Africa). (2007). *Policy on Research Ethics*. Pretoria: UNISA.
- UNISA. (2011). *A Framework and Strategy for Enhancing Student Success at Unisa*. Pretoria: UNISA. Retrieved November 24, 2016, from <http://uir.unisa.ac.za/bitstream/handle/10500/3277/Success%20&%20Retention%20Framework%20&%20Strategy%20STLSC%207%20May%202010.docx;jsessionid=21D248FD838E6D45051EDCA35821208A?sequence=1>
- Universities South Africa. (2014). *STRATEGIC FRAMEWORK, 2015 – 2019*. Pretoria: Universities South Africa. Retrieved November 24, 2016, from <http://www.universitiessa.ac.za/sites/www.universitiessa.ac.za/files/Strategic%20Framework%20for%20Universities%20South%20Africa,%202015-2019.pdf>
- University of Kwa-Zulu Natal. (2012). *Strategic plan 2007 - 2016 (revised June 2012)*. Durban: University of Kwa-Zulu Natal. Retrieved November 24, 2016, from <http://www.ukzn.ac.za/aboutus/strategicplan.pdf>
- University of Pretoria. (2011). *Strategic Plan —2025*. Pretoria: University of Pretoria. Retrieved November 24, 2016, from [http://tender.up.ac.za/upload/Image/STRATEGIC_PLAN_\(V11\)_13%20Feb.pdf](http://tender.up.ac.za/upload/Image/STRATEGIC_PLAN_(V11)_13%20Feb.pdf)
- University of the Orange Free State (UFS). (2015). *Strategic Plan 2015-2020*. Bloemfontein: University of the Orange Free State. Retrieved November 24, 2016, from <http://www.ufs.ac.za/docs/default-source/all-documents/ufs-strategic-plan-2015---2020.pdf?sfvrsn=0>
- Van Broekhuizen, H., Van der Berg, S., & Hofmeyer, H. (2016, September). *Higher Education Access and Outcomes for the 2008 National Matric Cohort*.

- Retrieved from Stellenbosch Economic Working Papers:
<http://www.ekon.sun.ac.za/wpapers/2016/wp162016/wp-16-2016.pdf>
- Van der Zwaan, B. (2017). *Higher Education in 2040: A Global Approach*. Amsterdam: Amsterdam University Press(AUP). Retrieved from <http://www.oopen.org/content/>
- van Gelder , T. (2005). Teaching critical thinking: Some lessons from cognitive science. *College Teaching*, 53(1), pp. 41-56.
- Van Zyl, A. (Ed.). (2017). *The First Year Experience in Higher Education in South Africa: A Good Practices Guide*. Cape Town: Fundani Centre for Higher Education and Training. Retrieved July 31, 2017, from HELTASA: <http://heltasa.org.za/wp-content/uploads/2016/04/TDG-FYE-Good-Practices-Guide-24-5-5-17-final-2.pdf>
- Vanderbilt University Centre for Teaching. (2017, November 17). *Teaching First-year students*. Retrieved from Vanderbilt University Centre for Teaching: <https://cft.vanderbilt.edu/guides-sub-pages/firstyears/>
- Veliz, L., & Veliz-Campos, M. (2018). An interrogation of the role of critical thinking in English language pedagogy in Chile. *Teaching in Higher Education*, 47-62.
- Villegas-Reimers, E. (2003). *Teacher Professional Development: An International Review of the literature*. Retrieved from <http://unesdoc.unesco.org/images/0013/001330/133010e.pdf>:
<http://unesdoc.unesco.org/images/0013/001330/133010e.pdf>
- Vygotsky, L. (1962). *Thought and speech*. Cambridge: MIT Press.
- Vygotsky, L. (1978). *Mind and society: The development of higher mental processes*. Cambridge: Harvard University Press.
- Waghid, Y. (2009). Universities and public goods: In defence of democratic deliberation, compassionate imagining and cosmopolitan justice. In E. Bitzer (Ed.), *Higher Education in South Africa – A scholarly look behind the scenes* (pp. 71-84). Stellenbosch: Sun MeDIA.
- Wald, H. S., Borkan, J. M., Taylor, J. S., Anthony, D., & Reis, S. P. (2012). Fostering and Evaluating Reflective Capacity in Medical Education: Developing the REFLECT Rubric for Assessing Reflective Writing. *Academic Medicine*, 87(1), 41-50. Retrieved from

- <http://bevwin.pbworks.com/w/file/fetch/50335188/REFLECT%20rubric%20to%20assess%20reflective%20writing.pdf>
- Wallace, E., & Jefferson, R. (2013). Developing Critical Thinking Skills for Information seeking success. *New Review of Academic Librarianship*, 19, 246-255.
- Webb, O., & Cotton, D. (2018). Early withdrawal from higher education: A focus on academic experiences. *Teaching in Higher Education*, 23(7), 835-852.
- Weimer, M. (2008, July 2). *Critical Thinking: A Lifelong Journey*. Retrieved May 11, 2016, from Faculty Focus: <http://www.facultyfocus.com/articles/teaching-and-learning/critical-thinking-a-lifelong-journey/>
- Wentworth, D., & Whitmarsh, L. (2017). Thinking Like a Psychologist Introductory Psychology Writing Assignments: Encouraging Critical Thinking and resisting plagiarism. *Teaching of Psychology*, 44(4), 335-341.
- Westbrook, J., Durrani, N., Brown, R., Orr, D., Pryor, J., Boddy, J., & Salvi, F. (2013). *Pedagogy, Curriculum, Teaching Practices and Teacher Education in Developing Countries*. Sussex: Education Rigorous Literature Review. Department for International Development. University of Sussex.
- Whiley, D., Witt, B., Colvin, R., & Sap, R. (2017). Enhancing critical thinking skills in first-year environmental management students: a tale of curriculum design, application and reflection. *Journal of Geography in Higher Education*, 41(2), 166-181.
- Wilson, K. (2009). Success in first year. *FYHE journal*, 1-19. Retrieved November 22, 2017, from http://transitionpedagogy.com/wp-content/uploads/2014/03/Keithia_Wilson_paper.pdf
- Wilson, L. (2016). *Anderson and Krathwohl – Bloom's Taxonomy Revised*. Retrieved September 26, 2018, from The Second Principle: The work of Leslie Owen Wilson, Ed.D. (revised): <https://thesecondprinciple.com/teaching-essentials/beyond-bloom-cognitive-taxonomy-revised/>
- Winter, A., McAuliffe, M., Hargreaves, D., & Chadwick, G. (2009). The Transition to Academagogy. *Philosophy of Education Society of Australasia (PESA) Conference 2008, 4-7 December 2008*. Brisbane, Queensland: QUT Digital Repository. Retrieved from <http://eprints.qut.edu.au/>

- World Economic Forum. (2016). *The Future of Jobs: Employment, skills and workforce strategy for the fourth industrial revolution*. Geneva, Switzerland: World Economic Forum.
- World Medical Assembly. (1964, June). *The Declaration of Helsinki - Ethical Principles for Medical Research Involving Human Subjects*. Retrieved March 26, 2019, from WMA Declaration of Helsinki: <https://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects/>
- Wyse, D., Hayward, L., & Pandya, J. (2016). *The SAGE Handbook of Curriculum, Pedagogy and Assessment*. London: SAGE Publications Ltd.
- Yang, Y., Gamble, J., Hung, Y., & Lin, T. (2014). An online adaptive learning environment for critical thinking infused English literacy instruction. *British Journal of Educational Technology*, 45(4), 723-747.
- Yildaz, S., & Gizir, S. (2018). A Phenomenological Study of the Perceptions of Candidate Teachers about the Concepts of School, Teacher and Student in Their Dreams. *International Journal of Instruction*, 11(2), 309-324.
- Young, M. (2014). Curriculum Theory: What it is and why it is important. *Cadernos de Pesquisa*, 44(151), 191-201. Retrieved July 11, 2017, from http://www.scielo.br/pdf/cp/v44n151/en_10.pdf
- Young, M. (2015a). Curriculum theory and the question of knowledge: a response to the six papers. *Journal of Curriculum Studies*, 47(6), 820-837.
- Young, M. (2015b). What is Learning and Why Does It Matter? *European Journal of Education*, 50(1), 17-20.
- Young, T., & Babchuk, W. (2019). Contemporary Approaches to Qualitative Research: Andragogical Strategies for Teaching and Learning. *Adult Education Research Conference*. New York: New Prairie Press.
- Zapalska, A., McCarty, M., Young-McLear, K., & White, J. (2018). Design of assignments using the 21st century Bloom's taxonomy model for development of critical thinking skills. *Problems and Perspectives in Management*, 16(2), 291-305.
- Zawacki-Richter, O., Röbbken, H., Ehrenspeck-Kolasa, Y., & von Ossietzky, C. (2014). Research Areas in Adult and Continuing Education. *Journal of Adult and Continuing Education*, 20(1), 68-86.

- Zimmerman, B., & Risemberg, R. (1997). Self-Regulatory Dimensions of Academic Learning and Motivations. In G. Phye (Ed.), *Handbook of Academic learning* (pp. 105-125). San Diego: Elsevier Inc.
- Zimmermann, B. (1998). Developing self-fulfilling cycles of academic regulation: an analysis of exemplary instructional models. In D. H. Zimmerman (Ed.), *Self-regulated learning: From teaching to self-reflective practice* (pp. 1-19). New York: The Guilford Press.
- Zulu, C. (2011). Empowering first year (post-matric) students in basic research skills: a strategy for education for social justice. *South African Journal of Education*, 31, 447- 457.

ANNEXURES

Annexure A: Letter of permission for ethical clearance



UNISA COLLEGE OF EDUCATION ETHICS REVIEW COMMITTEE

Date: 2017/11/15

Ref: 2017/11/15/58535195/27/MC

Dear Ms Goode

Name: Ms HN Goode

Student: 58535195

Decision: Ethics Approval from
2017/11/15 to 2022/11/15

Researcher:

Name: Ms HN Goode

Email: 58535195@mylife.unisa.ac.za

Telephone: +27 82 318 6254

Supervisor:

Name: Prof G van den Berg

Email: vdberg@unisa.ac.za

Telephone: +27 12 429 4895

Title of research:

Development of critical thinking competencies in first year students

Qualification: PhD in Curriculum Studies

Thank you for the application for research ethics clearance by the UNISA College of Education Ethics Review Committee for the above mentioned research. Ethics approval is granted for the period 2017/11/15 to 2022/11/15.

The low risk application was reviewed by the Ethics Review Committee on 2017/11/15 in compliance with the UNISA Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.

The proposed research may now commence with the provisions that:

1. The researcher(s) will ensure that the research project adheres to the values and



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principles expressed in the UNISA Policy on Research Ethics.

2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the UNISA College of Education Ethics Review Committee.
3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing.
5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.
6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data requires additional ethics clearance.
7. No field work activities may continue after the expiry date 2022/11/15. Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

Note:

The reference number **2017/11/15/58535195/27/MC** should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.

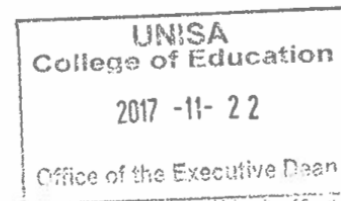
Kind regards,



Dr M Claassens
CHAIRPERSON: CEDU RERC
 mcdtc@netactive.co.za



Prof V McKay
EXECUTIVE DEAN



Approved - decision template – updated 16 Feb 2017

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Annexure B: Ethical Clearance from the research site

(Note redactions applied for confidentiality reasons)



30 November 2017

To Whom It May Concern:



UNISA

Research Ethical Clearance No:

██████████/2017/3011/01

Research Topic: Development of critical thinking competencies in first year students.

This is to confirm that the Research Ethics Committee of the ██████████ ██████████, acting on behalf of the Research Committee and Management of ██████████, has granted Ms Heather Goode approval to undertake a research project using a select sample of academic staff from the institution.

It is understood that appropriate protocols, with particular reference to consent by, and confidentiality for, all participants will be observed. It is further understood that the results of the research will be made available to the Research Ethics Committee and to Management.

The Research Ethics Committee and Management of ██████████ wish Ms Heather Goode success with her research project.

Sincerely, and on behalf of the ██████████ Research Ethics Committee,



Annexure C: Semi-Structured interview schedule

(Note: questions in brackets are optional additional questions which can be used for probing or clarity)

- **Background Questions**
 1. Employment status – are you a full-time or part-time employee?
 2. What are your professional qualifications?
 3. Which disciplines do you lecture?
 4. How long have you been a lecturer?

- **Exploring a Lecturer's perception of their practice**
 5. Can you describe your role as a lecturer?
 - 5.1. Do you do anything different in a first-year class to other classes?
 6. What is your understanding of critical thinking competencies?
 7. What do you think critical thinking competencies are?
 - 7.1. (Can you describe this in relation to your discipline?)
 8. Can you describe the level of critical thinking competencies new students, (i.e. first-year students) have they come to higher education?
 - 8.1. (Can you explain why this is adequate/inadequate?)
 9. How important is it to develop critical thinking competencies in first-year students?
 - 9.1. Describe why?
 10. What do you think you do in your classroom and curriculum that develops critical thinking skills in first-year students?
 - 10.1. (How do students develop critical thinking competencies?)
 11. How do you plan for developing critical thinking in your curriculum?
 12. How do you know if these practices are effective at developing critical thinking competencies in first-year students?
 - 12.1. (Do you explicitly measure these competencies – how?)
 13. What learning behaviours (skills, values, attitudes) do students exhibit that reflect critical thinking? E.g. "Students demonstrate critical thinking when they ..." (Stassen, Herrington, & Henderson, 2011)
 14. How do you measure critical thinking competencies?
 - 14.1. (Where do you assess this?)
 15. How does your institutional environment and their policies impact on your practice?
 - 15.1. (How does this constrain you?)
 - 15.2. (How does this enable or challenge you?)
 16. What is your understanding of professional development?
 17. To what extent do you perceive yourself as being pro-active in your professional development?
 18. What kind of activities within professional development would help you improve your educational practice further:
 - 18.1. In lecturing?

- 18.2. In assessing?
- 18.3. In developing critical thinking competencies in students?

Annexure D: Written invitation to participants to participate in research

25 October 2017

Title: DEVELOPMENT OF CRITICAL THINKING COMPETENCIES IN FIRST YEAR STUDENTS.

DEAR PROSPECTIVE PARTICIPANT

My name is Heather Goode and I am doing research under the supervision of Prof Geesje van den Berg, the Chair of Department: Curriculum and Instructional Studies towards a PhD in Curriculum Studies at the University of South Africa.

We are inviting you to participate in a study entitled DEVELOPMENT OF CRITICAL THINKING COMPETENCIES IN FIRST YEAR STUDENTS.

WHAT IS THE PURPOSE OF THE STUDY?

This study is expected to collect important information that could assist in exploring pedagogical strategies adopted by academic staff, and what they do to develop critical thinking competencies in first-year students. From this a professional development intervention will be developed to offer to lecturers to enable them to improve their practices.

WHY AM I BEING INVITED TO PARTICIPATE?

You are invited because you lecture first-year students.

I obtained your contact details from your Head of Programme after receiving permission to conduct research at [Private Institute]. I am hoping to interview between 8 to 10 lecturers across different degrees to explore this topic.

WHAT IS THE NATURE OF MY PARTICIPATION IN THIS STUDY?

The study involves participating in an interview about your lecturing and experience with first-year students to explore critical thinking competencies. The interview will be about 45 minutes long and questions will be about how you plan to develop critical thinking competencies in first-year students.

This study will also analyse your first-year course guides or syllabus with outcomes, related assessments, and institutional policy regarding teaching and learning, assessments and curriculum development.

You will be able to check the transcript of the interview, the written data and how this is used in the research report.

CAN I WITHDRAW FROM THIS STUDY EVEN AFTER HAVING AGREED TO PARTICIPATE?

Participating in this study is voluntary and you are under no obligation to consent to participation. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. You are free to withdraw at any time and without giving a reason.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

The research process may assist lecturers to reflect on their practice. The benefits of this study are the development of a professional development intervention designed to assist lecturers to improve their practices with respect to developing critical thinking competencies. If you would like to participate in this, I can arrange that you are invited.

ARE THERE ANY NEGATIVE CONSEQUENCES FOR ME IF I PARTICIPATE IN THE RESEARCH PROJECT?

The potential risks are possible inconvenience to you as a lecturer from the use of your time. Include any risk that may come from others identifying the person's participation in the research. Describe the measures that will be taken if injury or harm attributable to the study occurs.

WILL THE INFORMATION THAT I CONVEY TO THE RESEARCHER AND MY IDENTITY BE KEPT CONFIDENTIAL?

You have the right to insist that your name will not be recorded anywhere and that no one, apart from the researcher and identified members of the research team, will know about your involvement in this research. The Institution will be anonymized and a pseudonym used to prevent any connection to you from the answers you give in the data, any publications, or other research reporting methods such as conference proceedings.

Your answers may be reviewed by people responsible for making sure that research is done properly, including the transcriber, external coder, and members of the Research Ethics Review Committee. Otherwise, records that identify you will be available only to people working on the study, unless you give permission for other people to see the records. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

HOW WILL THE RESEARCHER(S) PROTECT THE SECURITY OF DATA?

The collected data will be stored electronically and confidentially (in a password protected folder) on an external drive with a copy supplied to my supervisor at UNISA for at least one year after the submission of the thesis unless otherwise requested by the institution. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After this time hard copies will be shredded and deleted.

WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

There will be no reimbursement or any incentives for participation in the research.

HAS THE STUDY RECEIVED ETHICS APPROVAL

This study has received written approval from the Research Ethics Review Committee of the College of Education, Unisa. A copy of the approval letter can be obtained from the researcher if you so wish.

HOW WILL I BE INFORMED OF THE FINDINGS/RESULTS OF THE RESEARCH?

If you would like to be informed of the final research findings, please contact Heather Goode on 011 XXX XXXX or email 58535195@mylife.unisa.ac.za . The findings are accessible for the duration of the study and a year after the study is completed (until approximately 2019).

Should you require any further information or want to contact the researcher about any aspect of this study, please contact Heather Goode on 011 XXX XXXX or email 58535195@mylife.unisa.ac.za. Should you have concerns about the way in which the research has been conducted, you may contact Prof Geesje van den Berg, the Chair

of Department: Curriculum and Instructional Studies at 012 429 4895 or vdberg@unisa.ac.za .

Thank you for taking the time to read this information sheet and for participating in this study.

Thank you.

Heather Goode

CONSENT/ASSENT TO PARTICIPATE IN THIS STUDY (Return slip)

I, _____ (participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read (or had explained to me) and understood the study as explained in the information sheet.

I have had sufficient opportunity to ask questions and am prepared to participate in the study.

I understand that my participation is voluntary and that I am free to withdraw at any time without penalty (if applicable).

I am aware that the findings of this study will be processed into a research report, journal publications and/or conference proceedings, but that my participation will be kept confidential unless otherwise specified.

I agree to the recording of the interview

I have received a signed copy of the informed consent agreement.

Participant Name and Surname (please print)

Participant Signature

Date

Researcher's Name & Surname (please print)

Heather Goode

Researcher's signature

Date

Annexure E: Example of letter requesting permission to research at site

25 October 2017

Title

Address 1

Address 2

Address 3

Dear Dr XXX,

I, Heather Goode am doing research under the supervision of Prof Geesje van den Berg, the Chair of Department: Curriculum and Instructional Studies towards a PhD in Curriculum Studies at the University of South Africa.

We are inviting your lecturers to participate in a study entitled DEVELOPMENT OF CRITICAL THINKING COMPETENCIES IN FIRST YEAR STUDENTS.

The aim of the study is focused on exploring pedagogical strategies of academic staff do to develop critical thinking competencies in first-year students. Your Institution has been selected because as a private higher education institution with a variety of degrees and disciplines, and this institution has a history of success with first-year students. The study will entail semi-structured interviews with lecturers and analysis of course guides or syllabus with outcomes, related assessments, and institutional policy regarding teaching and learning, assessments and curriculum development.

The benefits of this study are the development of a professional development intervention designed to assist lecturers to improve their practices with respect to developing critical thinking competencies. The interview process may also assist lecturers to reflect on their practice.

Potential risks are possible inconvenience to lecturers. This is regarded as low risk as these are generally non-vulnerable adult participants and non-sensitive information is involved. There will be no reimbursement or any incentives for participation in the research. Feedback procedure will entail member checking of transcripts and how this is used in the research report. Professional development opportunities may allow the workshopping of findings.

Yours sincerely

Heather Goode
PhD Candidate

Annexure F: Transcriber confidentiality agreement

I, [name of transcriber], agree to transcribe data for this study. I agree that I will:

- Keep all research information shared with me confidential by not discussing or sharing the information in any form or format with anyone other than the researcher on this study;
- Keep all research information in any form or format secure while it is in my possession. This includes:
 - using closed headphones when transcribing audio recordings of interviews;
 - closing any transcription programs and documents when temporarily away from the computer;
 - keeping any printed transcripts in a secure location such as a locked file cabinet; and
 - permanently deleting any e-mail communication containing the data when transcriptions are complete
- Give all research information in any form or format (e.g. audio, document transcripts) to the researcher when I have completed the transcription;
- Erase or destroy all research information in any form or format that is not returnable to the researcher (e.g., information stored on my computer hard drive) upon completion of the research tasks.

Signature of Transcriber

Date

Signature of Researcher

Date

Annexure G: NQF Level Five Level Descriptors

From: SAQA (2012: 8-9):

- a. **Scope of knowledge**, in respect of which a learner is able to demonstrate an informed understanding of the core areas of one or more fields, disciplines or practices, and an informed understanding of the key terms, concepts, facts, general principles, rules and theories of that field, discipline or practice.
- b. **Knowledge literacy**, in respect of which a learner is able to demonstrate the awareness of how knowledge or a knowledge system develops and evolves within the area of study or operation.
- c. **Method and procedure**, in respect of which a learner is able to demonstrate the ability to select and apply standard methods, procedures or techniques within the field, discipline or practice, and to plan and manage an implementation process within a well-defined, familiar and supported environment.
- d. **Problem-solving**, in respect of which a learner is able to demonstrate the ability to identify, evaluate and solve defined, routine and new problems within a familiar context, and to apply solutions based on relevant evidence and procedures or other forms of explanation appropriate to the field, discipline or practice, demonstrating an understanding of the consequences.
- e. **Ethics and professional practice**, in respect of which a learner is able to demonstrate the ability to take account of, and act in accordance with, prescribed organisational and professional ethical codes of conduct, values and practices and to seek guidance on ethical and professional issues where necessary.
- f. **Accessing, processing and managing information**, in respect of which a learner is able to demonstrate the ability to gather information from a range of sources, including oral, written or symbolic texts, to select information appropriate to the task, and to apply basic processes of analysis, synthesis and evaluation on that information.
- g. **Producing and communicating information**, in respect of which a learner is able to demonstrate the ability to communicate information reliably, accurately and coherently, using conventions appropriate to the context, in written and oral or signed form or in practical demonstration, including an understanding of and respect for conventions around intellectual property, copyright and plagiarism, including the associated legal implications.
- h. **Context and systems**, in respect of which a learner is able to demonstrate the ability to operate in a range of familiar and new contexts, demonstrating an understanding of different kinds of systems, their constituent parts and the

relationships between these parts, and to understand how actions in one area impact on other areas within the same system.

i. **Management of learning**, in respect of which a learner is able to demonstrate the ability to evaluate his or her performance or the performance of others, and to take appropriate action where necessary; to take responsibility for his or her learning within a structured learning process; and to promote the learning of others.

j. **Accountability**, in respect of which a learner is able to demonstrate the ability to account for his or her actions, to work effectively with and respect others, and, in a defined context, to take supervisory responsibility for others and for the responsible use of resources, where appropriate.

Annexure H: Example of analysed data: Course outcomes

Module Purpose:	The main purpose is to prepare students to succeed in their degree studies.			
Module outcomes:	Bloom's level (2001)	Knowledge Domain	Critical Thinking Competency	NQF 5 Level descriptor
Transfer academic and life skills into various other modules/degrees	Apply	Procedural	Making decisions or solving problems	Management of learning
Demonstrate skills in active reading and academic writing	Apply	Procedural	Asking and answering questions for clarification	Knowledge literacy
Learn and apply different learning styles	Apply	Procedural & Conceptual	Interpreting and explaining	Knowledge literacy
Demonstrate skills and understanding in information literacy	Apply & Understand	Procedural & Conceptual	Interpreting and explaining	Accessing, processing and managing information
Acquire and apply oral presentation skills	Apply	Procedural & Conceptual	Asking and answering questions for clarification	Producing and communicating of information
Research and reference effectively	Apply	Procedural	Interpreting and explaining	Accessing, processing and managing information
Demonstrate effective communication and interpersonal skills	Apply	Procedural & Conceptual	Seeing multiple perspectives	Producing and communicating of information
Demonstrate effective conflict resolution strategies and communication skills relating to self and group/team contexts	Apply	Procedural	Seeing multiple perspectives	Accountability
Display an improved understanding of group dynamics and teamwork	Apply	Conceptual	Seeing multiple perspectives	Accountability
Display an improved understanding and application of emotional intelligence skills	Apply & Understand	Procedural & Conceptual	Seeing multiple perspectives	Accountability

Annexure I: Example of transcribed interview⁴⁹

Date: 19 July 2018

Length of recording Alex: 39:44

Researcher: Thank you, thanks for meeting with me today and doing the interview. So, I just want to confirm that you know that the reason for this interview is that it's an exploratory interview. {Um} So, I want to hear your perspectives and input, and from that I am going to be clarifying your practice and your theory of how you teach.

Alex: Okay.

Researcher: Especially, in relation to critical thinking studies, and then the ultimate objective is to develop a professional development intervention.

Alex: Alright.

Researcher: So that [um] we can build lecturers competencies in dealing with first-year students in particular.

Alex: Yes.

Researcher: Ja. So, so that's like the long-term concept, just so you know.

Alex: Okay.

Researcher: I have a semi-structured interview process. I have questions.

Alex: Yes.

Researcher: And we will explore it as we go.

Alex: Okay.

Researcher: And, if something's not relevant, then we'll go from there.

Alex: Alright.

Researcher: [Um] And, if you are uncomfortable at any time, or you want to clarify, please feel free. This is not a formal process at all.

Alex: Okay, alright.

Researcher: So, [um]...

Alex: And you will know, I don't need to say my name for the purposes of this recording?

⁴⁹ Vocal hesitation indicated in square brackets. Unclear words and verbal cues, such as laughter, are indicated through the use of <...>, and incomplete expressions indicated with Non-verbal interruptions are marked in {...}.

Researcher: [Uh] No, and [uh] you will see there I will [um] anonymise you in the research findings.

Alex: Okay.

Researcher: And you are welcome to participant check, and, in fact, once I've written up the findings, I will send you a link and you are welcome to look at it or not look at it.

Alex: Okay, thank you.

Researcher: As you choose.

Alex: Thank you very much, appreciate that.

Researcher: [Um] And then you can see how we've done that, and if you would like a copy of the transcription at any point. Also quite, quite open to that.

Alex: [Um] I don't think I will have any problems about the [the] integrity of that, but I would perhaps like that as an example, as a case study for linguistics.

Researcher: Alright, you must be an academic.

Alex: <laughs>

Researcher: Ja, no you would be welcome to do that.

Alex: It's [it's] quite difficult to find them online. I've [I've], we've been setting exam papers now. I've been having, really struggling, to get source documents, [um] with, you know, with proper transcriptions.

Researcher: Yes.

Alex: So, people can see what people do when, when they speak. But you have to actually also indicate this in writing, so...

Researcher: Ja, and I suppose some of the consent wouldn't actually always cover that.

Alex: No.

Researcher: Unless you went and interviewed people specifically for...

Alex: Yes, yes, yes.

Researcher: ...for that. Sorry, I know that we are getting a little off-topic there,...

Alex: No.

Researcher: ...but [uh] that's fine. So, thank you for your time today. I just want to do some standard type of background questions just to...

Alex: Sure.

Researcher: And I think we can go from there. Um you are currently a full-time employee as a lecturer?

Alex: I am.

Researcher: Ja, and your professional qualifications?

Alex: I have a Master's degree in English Literature.

Researcher: And, so, you have no educational quals...

Alex: [Um] Qualifications. Yes, I have a PGCE.

Researcher: A PGCE. Okay. As well, okay. You went the BA route.

Alex: Yes.

Researcher: Through to...

Alex: BA, Honours, [um] did my Master's first actually, and then I, because I was teaching in a school environment. I actually did my PGCE. [Um...] You have to if you want to be SACE registered.

Researcher: Yes, so you are SACE registered as well.

Alex: Ja, ja

Researcher: Okay [um], and the disciplines you lecture?

Alex: [Uh] At this stage, English Literature.

Researcher: Yes.

Alex: And [uh] Linguistics. Second and third-year Linguistics and one, two, three Literature.

Researcher: Okay, I'm gonna focus in on the [uh] first-year stuff.

Alex: Yes.

Researcher: For the context of the interview, but occasionally the questions will branch into the higher levels as a contrast, or a...

Alex: Okay.

Researcher: ... comparison. And how long have you been a lecturer?

Alex: Lecturer or Educator?

Researcher: I think let's capture both.

Alex: Okay, so...

Researcher: Yes.

Alex: ... educator, basically for thirteen years [um], and basically for... for ten of those I was also school teaching. [Um] But then, when I initially started school teaching, I was [I was] not a full-time employee of [Private IEB School] at that stage I was, [um] so I led, I taught in the mornings I taught

at [Private IEB School]. In the afternoons at [Competitor Private Provider]. So, that would give me a lecturing experience of, that was about three years at [Competitor Private Provider], three years at [Public University] and say about three years here now, so...

Researcher: It's about nine.

Alex: Nine, ja...

Researcher: Ja, okay, so that's fine. So, when you think about your role as a lecturer, how would you describe your role as a lecturer?

Alex: [Uh] It's basically as facilitator of education, a facilitator of learning, that's how I would describe it. It's not [ur] what, remember this also goes back to my discipline, because Literature is not necessarily content-based.

Researcher: Yes.

Alex: It's much more an exploration of, ultimately, what this could mean. So, too, that's how I view myself is, [ah], we go on this journey together, and I'll point out certain things to you, but I can ultimately not just tell you just study that. [Uh] It's not a simple as that.

Researcher: So, you feel you're teaching more skills than process...

Alex: Yes, definitely.

Researcher: ... that builds to an understanding.

Alex: Definitely, definitely, yes.

Researcher: Do you do anything different in a first-year class compared to other levels?

Alex: Yes, [um], I think, in first year, on a very pragmatic level, [um] because they often come from a, at this stage a secondary school system, where the [where the um] quality of education is often [uh...] grammatically varying. So, you never know what the work quality was of their matric proficiency. [Um] So, I would definitely, I give them some, let's call it structure, some backbone, some basics, that first make [sh-] cover. [Um] We always start with Poetry and then we'll first cover basic knowledge – figures of speech, for instance – and then a basic knowledge of textural analysis, and then we build on that. So, in first year, I read a lot more in class with them, physically reading the texts, than we do, for instance, in second or third year, where we basically rely on them to [um] to read the texts for themselves,. But then part of doing that is so that you have an

actual, more than just an example of in a broad sense. For instance, pointing out themes and examples from the plot, where you actually also use the text in a very hands-on sense for that analysis: where you can show, and [in], it also, it also helps as a point of departure...

Researcher: Hmmm.

Alex: ... for the guided discovery process, asking them, for instance, well, 'What difference did this word choice make to, to the way you interpreted this?'; 'Do you feel it's ominous?'; 'Do you feel it's positive?'; 'Do you feel it's [um] do you, do you feel this is fore-, foreshadowing, for instance, of what's to come?' [Umm] That's so, [uh], it's, it's, in a nutshell, it's far more hands-on, ja.

Researcher: So, far more step-by-step.

Alex: Yes.

Researcher: Far more hands-on.

Alex: Yes, yes.

Researcher: And, and you don't assume things to be read.

Alex: No.

Researcher: Okay. So, what's your understanding of critical thinking competencies?

Alex: Oooo, [um]... So, just to clarify the question, so do you have a specific [um] like a sliding scale for this, or with different steps, [uh] or different levels, or is it, is it a generalised sense?

Researcher: Yes, I think I'm asking what do you understand critical thinking as...

Alex: Okay.

Researcher: ... and what competencies in relation to that?

Alex: Alright, so [um], so let's take, for instance, then, because we have been working without an <Opt> now, but let's take – and, and this is not only for critical thinking – this is basically also then the level of assessment more, but if you take, for instance, Bloom's taxonomy.

Researcher: Mm-mm.

Alex: ...[uh] basic, doing basic analysis which is already sort of a middle-order thinking skill.

Researcher: Mm-.

Alex: [Um] That is basically the start of critical thinking. Being able to pull anything apart and this, first seeing the different components and how

they add together. If you now build on to that and you say, 'Okay fine, now I can take a step back and I can actually [um], I can make a value judgement about this in the broader context of more information that, that I have now imbibed', [um] that's an even higher level of critical thinking. And, of course, the highest then, when you can say you can pull apart, put back together, make a value judgement of: 'I can create something new, similar or from different components and combining them, put something together'. So, that's of course the highest then, and what we do then is first, second and third year. So, in first year, it's very much text-based analysis. We just want them to first just be able to deal with a text, and base all of their [um], all of their insights on the text. They must be able to go back to the text and say 'I say this on the basis of that from the text'. In second year we give them a theoretical framework [um], which [uh], usually quite firm ones like gender studies and Marxism which is like nice and meaty so that they can, because it's also quite obvious often. So [um], second year we give them a theoretical framework so they can now [um], once it got pulled apart, also to take a step back and start evaluating, and by third year we would expect them to actually add a dimension of their own. Their own insight becomes quite..., and also the sort of the connections that they draw between different texts will become quite...

Researcher: So, you have described all of these in relation to your discipline specifically.

Alex: Yes.

Researcher: So that's fine, but if you had to think about what the new students are coming in with at the beginning of first year, how would you describe their level of critical thinking?

Alex: It's very difficult to judge that really, because often it seems quite limited or weak; but it's also a case of one has to be careful not to confuse that perhaps with a lack of self-confidence. I think, often, they have, they have more ideas than they'll give on to, [um], because they..., but, because they lack confidence, they won't always say it. You have to really draw it from them. In other cases, sometimes you get the idea they've just never, they not, because they are not very, [um], conscious

learners. Not very. There's not a lot of meta-learning taking place there. Yet, but I must, I, just, in their defence meta-learning also came late for me. I was probably on Honour's level before I started doing meta-learning.

Researcher: Yes.

Alex: [Um] So, because of that it's often quite, it's as if they are just going through the motions, [um], and that can be very frustrating. You ask a question, you want them to reflect, [um], you want them to see how different components hang together, and they just stare at you. It's like, 'But I already gave you the answer. Just give it back to me.' [Um] That can be very frustrating.

Researcher: So, you are describing a lack of critical thinking, and also a lack of the things that enable somebody to present that critical thinking.

Alex: And I think, if I may be so bold as to make this suggestion, unfortunately a lot of that comes from the basic education system. [Uh] They were never trained in doing that, [um], the... As a former high school teacher myself, I know that that is, [um], often the approach. It's not necessarily independent thinking, or independent discovery, or independent opinion, but very much [um] sort of, that's also. If you look at poetry, for instance, I would expect them, after a proper Grade twelve, to come in with a basic poetry analysis ability, and, and with the realisation that there is not a hidden textbook that you receive with your degree in English that will tell you what every poem means and you have to hide it from other people. Because, as a definitive meaning, [um], the poem's meaning is contained in the text. So, you can have a different interpretation from me, but you must base it on the text. There is nothing like that. They expect you to tell them what the content is, what it means, basically, instead of discovering it for themselves. And that's, that's a lack of skill that was instilled in secondary school: not, not because they don't have the ability necessarily, but they don't have the ability because they don't have the skill.

Researcher: So, in some of South African Literature I'm hearing a, a criticism of teaching for the exam, and teaching students what the examiner wants to see.

Alex: Yes.

Researcher: And that would then, the consequence of that...

Alex: Definitely.

Researcher: ... is what you're describing.

Alex: Definitely, tie it back.

Researcher: So, you would support that view.

Alex: Definitely, and it goes up to third-year level. [Um] I... this semester, I had a, [um], very sad query from another campus of ours who, [um], and the lecturer was very apologetic and she said, 'Well, I'm really sorry to have to ask you this, but I'm doing this for the sake of the process, because the students really wanted me to do this. So, then I can show them that I did this, [um], but, they were, the students were unhappy because they felt that the test question did not come directly from this, the module guide, and I actually wrote a very brief but quite, [um], comprehensive analysis where I said to them, no, no, no it did, but I cannot just ask you the themes straight out any longer and I expect you now basically to have the insight to realise this question would tie in with the following themes.' [Um] But they don't. They expect, basically, they expect to be trained for assessment purposes.

Researcher: So, how important is it to develop critical thinking competencies in first-year students?

Alex: It's integral, if you don't, there's no tertiary studies possible without it. It's, it's the whole, I don't want to call it a game, let's call it... [um], but the whole aim of the exercise is that, if they don't develop that critical thinking in first year, I cannot... I can't see, that the building process, from first year to the year in which they will graduate and beyond can be healthy, um, unless they do that. If they don't do that by their second year, definitely by the second semester of their second year they are either going to fail, and will have to repeat the second year, until they've now mastered the first-year skills, or they are going to pass very poorly, and probably not complete their degree.

Researcher: So, what do you do to develop critical thinking in your first-year class?

Alex: So, in the, that's why we start with the poetry, because it is a contained unit of meaning. So, it's something that they can basically get their heads

around. I don't want to say at a glance, but at least it's a contained text that they can read, [um], and then, so it has to become quite practical quite soon. So, I will give them a bit of background on the style period, and from a style period we'll do several poems, three or four say. And then, once they know, let's call it then, the content knowledge, say they know now the characteristics of the Shakespearean sonnet for arguments sake, now you give them a sonnet, and you say, Alright fine, with all the, with all of these discussions that we've had, and with your content knowledge of what a sonnet should be like, look at the following aspect for me in the sonnet. Tell me whether you think this is true or not. Tell me whether you think this is a valid assumption or, alternatively, what, what do you think would be a major theme that comes from the sonnet. And then, so identifying a major theme and back it up with evidence from the poem.' Um, and I usually make them do that in pairs or in groups. It helps them with the self-confidence issue, and then they don't feel out on the ice on their own. They had a friend to back them up. They can sort of reach consensus and say yes or no.

Researcher: Yes.

Alex: [Um] So that's a first introduction to that and, of course, from that progressively onwards as we start reading plays and novels and what we do now. We introduced this year. It really worked like a charm, it's wonderful. I was so impressed with the difference that we saw in the exams; but we've been introducing continuous assessments where basically, at the end of every topic, they write a, a one-pager, a one-page essay on a theme or a concern relating to that. And, obviously, then they must link the themes and the plot and the character development, all of that, to that major idea or that theme, and show us how works: that's that drawing apart and putting back together again.

Researcher: So, you've explicitly measured critical thinking in the development, then, over the course.

Alex: Yes.

Researcher: Of a semester, and you've looked at the mid-year exam and you felt that there's an improvement.

Alex: Definitely, definitely, yes.

Researcher: Okay, so...

Alex: Because prior to that, so sorry, just to...

Researcher: Ja.

Alex: ... So, prior to the continuous assessments, we would also then [uh], the semester tests would then basically be your first benchmark of that. Then, usually, you realise by the semester test [uh], especially in first year, you realise, 'Oh gosh, no these guys don't know what they're doing. They are just first year.' Hey, so if you, whereas I think the continual assessment, apart from that, it gives them more confidence for the exam, because they feel that they've done this now several times over again. So, yes, the time constraints might still be intimidating, thinking I have to write three essays in three hours or whatever, [uh], but I do think that it builds their confidence. But, also, I think really the skills are far more deeply instilled. It's really a case of practice makes perfect. The more they, and also the integration of skills, getting those critical thoughts on paper and linking those ideas in a logical way, [um], because that's often quite difficult. They may have the idea, but to really set it out in a systematic logical way in an essay format is often a whole different kettle of fish. So, that can be actually quite difficult.

Researcher: So, so your module if I, if I recall is actually a yearlong module?

Alex: Yes.

Researcher: And yet you've seen marked improvement in a semester?

Alex: Yes.

Researcher: Do you think one semester is long enough to develop critical thinking for first-year students, or do you need a whole year?

Alex: I think the development of critical thinking is an ongoing process, I think [um], so, already, so whereas, in the first semester, we would then look at say, very accessible, accessible to very accessible texts, by the second semester we are starting, [uh], to look at more difficult texts, [um], and so the, the incline becomes a bit steeper. So, whereas they've now mastered one skillset, now you have to apply those skills. But, [uh] the, the stakes become higher. So, now, in second semester, we are going to look at something like for instance '*Heart of Darkness*' or '*Death and the King's Horseman*', which are dramatically far stronger, [um], but also

far more complicated, it's really complex, and it's touched on major theatrical streams as well, like learning as a <...>... [um], where you... And you can already add a bit of that, [um], to that drawing apart and putting back together again, [um], and expect them to be able to, to do that: to see in the drawing apart. Okay, fine, so this text is drawn apart. This is how the text works, and this is how the text to start to see how the text actually works in a bigger framework as well.

Researcher: Okay. So, when you look at the students you, you feel that there is a continuous progression. Once a semester is not enough, but there's enough in a year, in the first year to make a substantive difference for the next year...

Alex: Yes, definitely.

Researcher: Would that be correct?

Alex: Ja, Ja.

Researcher: Thank you, that sort of helps me. [Um] When you look at what behaviours that exhibit, that students display when they exhibit critical thinking, you've mentioned some of the self-confidence issues; but what other behaviours, what learning behaviours, would you say, students exhibit when they are showing you they can do critical thinking.

Alex: Okay, so, so you feel... when they have a fair competence with the skill?

Researcher: Yes.

Alex: Okay, [um], they can for instance then... the moment when they can [um], in our case now, take a text and they can base what they say... oh sorry... I'm so sorry about this... {phone rings}.

Researcher: It's fine, you are not the first...

Alex: That's actually, that's my wife, I'll phone her back. But so, [um], if you, so they can take a text and they can base, clearly base whatever they say, [um], whatever opinions they have on that text, [um], and convince me of their argument and it's not, it's perhaps not even an extract that we looked at in class. It's something that's not that familiar to them, or I can also see that they have the insight to realise that this passage and the passage that I didn't mention, because we often give them extracts in assessments.

Researcher: Yes.

Alex: This extract, and many other passages from the novel or play that's not even physically reproduced there, actually have a connection with each other. I know that critical thinking has taken place, but also then say we are talking in class and I ask them based on the text and so, ... why do you think, [uh], say we talk um, we read *Great Expectations* now in the first semester and I would ask them, 'Why is, what is, the fact that the girl is saying this? What does this indicate about her attitude?', or, and they can tell me it indicated that she's proud or that she's [um] arrogant, or that she, [um], or that she has been, [um], she shares this mindset about men, for instance. [Um] Then, I know that they have actually reflected on what they have read.

Researcher: So, so if I understand you, you are looking for reflection, use of evidence, logical thinking.

Alex: Yes.

Researcher: And, so, you measure critical thinking competencies when somebody can take what you have given them in a text, interpret something or make a judgement, use evidence to substantiate that...

Alex: Yes.

Researcher: ... and present a line of thinking.

Alex: Absolutely.

Researcher: Okay. It's quite a complex set of things if we, if we look at it.

Alex: It is, but then what's so wonderful about it, and what I always used to say to parents especially when I was still high school teaching, [um], I always used to say to parents, but languages are like plants, they grow in the night. So, the more exposure you have, the more you practice, the better you become at this, and it's all quite, it's actually quite spontaneous. You must just be willing to engage... it doesn't have to be paint by numbers.

Researcher: Aha, yes... So, when you think of your institutional context, the environment here and the policy, do you feel that they impact on your practice?

Alex: [Um] Do you mean, does the institution or the environment enable me to do this... [um]?

Researcher: Enable or constrain you?

Alex: Well, I must say, I do think, look, so the continuous assessment, [um], let's call it directive came from management side. So, that's had a very positive impact ...

Researcher: So you made it work?

Alex: We made it work, yes. [Um] But then, on other hand, on the side, I often think it's, it's, there was a, a suggestion now more recently, [um], that we should perhaps do away with the, the, the, now you have also been employed here, so you will know what I am talking about, but that we have to do away with the, the DP, with the, or make it less, count less or... And I was, and my closest colleague, we were very much set against that, [um], because I think the odds become too high then. [Um] Then you cannot assess for learning, you must only do assessment of learning; and if they, [um], if they haven't mastered the skills, you only realise it at the end of the year. And then it is game over. [Uh] I think that's very unfair towards the students, whereas if you have a [uh], practically measurable portfolio of evidence for a year, showing you this development, it's far easier to determine now whether you have actually reached your outcomes or not.

Researcher: So DP was still being used to assess you qualified to write the summative exams?

Alex: Ja.

Researcher: So you know enough to have a good chance to pass.

Alex: Yes.

Researcher: Okay, and so, yet on the one hand insisting on more continuous assessment is quite formative.

Alex: Ja, it is.

Researcher: Okay... Alright [um], and then, when you look at professional development, what's your understanding of professional development?

Alex: It's quite difficult, [um], in... because I think it would be different for different educational environments. [Um] In the case of a tertiary environment such as this, I would think [um], but it could also differ from tertiary institution to tertiary institution. In our case, where we know we work with a niche market of students who might've struggled to actually get to, to tertiary study, [um], it would be really empowering and

developmental for your teaching body, for your faculty to actually, [um], instruct them perhaps, on, on a more systematic approach: how do you, how do you help support, sorry I just wanna... {closed the door to reduce noise}.

Researcher: It's fine...ja. Okay, sorry, you were saying, we were talking about professional development...

Alex: Yes, so I think if they [um], if they would, because now recently there was new staff; there were new blowouts sort of round the staff induction. Many lecturers are not familiar, they are, they are subject experts, they are not necessarily familiar with [um] policy requirements around NQF levels, or [um] different levels of, for instance, critical thinking and how to develop that. [Um] So, if yes, if the institution would, and they are, would invest in this, that I think would count as professional development, definitely. [Um] But also investing in a... in... enabling one's faculty to actually have a more reflective approach to classroom practice: really asking, 'But what is it that I want to achieve with this?' Are we just ploughing through the content? Now look, I am privileged. I can easily speak cause I work in a, in a, in a [um] field where it is all basically analysis, and so we have very little content that's not what it is about. I'm sure it is very different if you are working in a field and there's a tremendous amount of content that they just simply have to know, otherwise they cannot progress to the next level. But still, then, to get people not just to plough through content, but to actually make sure there was, was real learning taking place, so I think that would, that would help.

Researcher: So, to what extent do you see yourself as proactive in your personal professional development?

Alex: [Um] Well, for me to have any form of a job satisfaction, I have to be, if you realise that, I mean there is just no point in just going through the motions with Literature Studies in any case. If you, if you realise that, and I did, for instance, now with the second years: I realised that the [um], we read *Washington Square* by Henry James, and I realised that the transition was just too big from basically an external plot-driven story to all of the psychological drama. And I, they, they understood it, but I left them with too little. They didn't know how to structure an argument

round that. So, if I want them to perform better, I have to approach it differently this time. So, that was already, basically, my classroom experience forces me, basically, to do that reflection. Otherwise they won't perform better in future.

Researcher: Okay, so um, what do you do develop yourself professionally?

Alex: Well, for instance that's, the moment when you look, for instance, at the outcome: what did they produce, do you feel, that they understood.

Researcher: Ja.

Alex: [Um] And did they reflect that understanding in what they produced, or do you feel that there was a lack of understanding? And then one must also ask yourself, so what can this be ascribed to?

Researcher: So, you do reflective practice?

Alex: Yes, yes.

Researcher: Okay, and, and what if an institution was to put it together, what would improve your lecturing practice? What has impacted your lecturing practice?

Alex: I think [um]..., to a large extent, and this is a two-way street. There's a tremendous amount of emphasis on business as a teacher – at this stage, on the phasing in of blended learning – and that does impact on my lecturing practice. I must say, I think, in the past, I've always been fond for instance of, of, of film. I'm not particularly fond of slides necessarily. [Um] Slide shows can become very boring to me very quickly, [um], so, for me, it's always a combination. But I do like showing people visuals because I do think triggering the visual memory is important. So, from the institution side, I think that was quite a positive move to place bigger emphasis on blended learning. So, to force me not only to talk and talk and show them a picture now and again, [um], but to actually be more consistently integrated in that regard. On the other hand, I do think it can also be over-exaggerated. I think there is a point where, a-as I said, just another slide show's not, [uh], just compiling a slide. Slide show doesn't necessarily mean that you are actually reaching them.

Researcher: Yes...So, so you found that it triggered professional development for you, when somebody challenged you to do something?

Alex: Yes.

Researcher: And you tried it and you reflected on it.

Alex: Yes.

Researcher: Okay, so, in your assessment practice, what triggers professional development there for you?

Alex: [Umm] Also then, firstly I think, [um], when I first started working here, [um], we assessed the form, for instance, especially summative assessments, w-were, they were quite different from what they are now. What triggered that for me was benchmarking it against other institutions, really, and it was quite difficult. Luckily, my colleague who works with me is a, a, quite a bit younger than I am, and so he was, his years at varsity were [um] quite fresh in his mind still. But, and we really had that, we bounced those ideas off each other, and I asked him, 'But what do you think of this? Is, is this acceptable, do you think, or is this what they would have done when you were at varsity?' And he told me, 'No.' And I said, 'Well also not when I was at varsity.' So, we basically benchmarked it against each other. And luckily we [uh] also came from different institutions, and then against different institutions. And, so, that was a first drive towards that, towards saying well we have to, we have to play in the league where we are. So, if other institutions are doing it this way, we have to not necessarily do it exactly the same, but there has to be a comparable practice here, firstly. Then, secondly, [um], to try and make sure that you, that you are sure of what it is exactly that you want them to achieve, those outcomes, so the biggest, obviously we are, all of our assessment is essay-based. So, you must make very sure that you know what you're marking for here in this essay, so that you are not marking with a third-year standard in mind and you are marking first-year essays. It's simply not acceptable, it's not fair towards them either. So, to, to standardise that developmental process, what we want to develop across the three years, that helped quite a bit, and then, of course, also the most recent, once again this was also instilled then from management side. [Um] And I must say just this disclaimer before I say this: I don't think that that's necessarily the golden bullet, the answer to everything, and in many respects it can be a very limited tool to use. But

I think it is a, at least it's a start for a basic benchmark of where you are pitching your assessment, and then, so, the institution has recently been pushing Bloom's taxonomy very hard, [um]. And, whereas we had, for instance, one idea of what the word 'discuss' would mean, Bloom clearly has a very different idea from ours. So, Bloom thinks it's a very basic skill, we think it's, you can, it be a very high-level skill, but so we had to really address that and show, also how our marking rubrics that we drew up for the essays, we had to show those different levels and how, [um], the ratio in which you are assessing what year according to those levels, so that helped a lot as well.

Researcher: Okay. So, so again the challenge and almost a small community of practices has really given you feedback to work with.

Alex: Definitely and I do think it's a..., look I love working independently, but it's been a godsend not to be the only lecturer to have to do this, and [um] my closest colleague [Anonymised Colleague] and I have a very, very good relationship and we really, [ah], being able to bounce ideas off each other, soundboard each other, even about classroom practice. I ask him, 'Well, does this work for you? Have you, have you tried this, or...'. It works really well, helps a lot. I think [um], as, as free as it is to be very independent, the moment when you are like [uh], in your lonestar, in your solitary sheriff on your horse, it can be a very, very lonely life. I think, in many respects, a very poor one, where you don't really [um].... It's difficult to get input from other people, and, [and, and], basically, see what it is that you are doing here exactly.

Researcher: Okay, Do you think your professional development, your own learning, makes you a better lecturer?

Alex: Yes, I do think so. Yes, definitely. [Um] Whilst I was doing my Master's, I saw that in the sense that reading, now I looked once again, fair enough, [um] it was purely theoretical. So, it's non-empirical, but I had a very, my own reading opened up whole new worlds for me apart from the [um], from the, [the um] narrowly sort of circumscribed topic that I was busy with. You read such a lot of, [of] material that's [that's] related to that and [um] open up other sort of horizons and possibilities. Yes, it definitely, it was highly enriching and, again, now I've [I've] enrolled for

my PhD now as well and, in starting that process, reading, that the reading was the, or, information input, let's call it that, because sometimes also watching, it was really, [it's, it's, it...] it becomes all the more refined as you go along. So, you always knew the major idea. The more you find out about it, the more you realise, okay, I didn't know the whole story, it becomes much more enhanced, much more complicated, and also branching into other ideas, bigger ideas. It's almost, it's almost like a canvas that you keep on opening up, and opening up, and opening up, so <...> yes, definitely.

Researcher: Okay, do you think your professional development that you've described to me has improved student success?

Alex: Yes, I do. I think [um] it's one of the cornerstones of my teaching practice, because I think for me, personally, I'm also a big picture person. I don't believe in only giving people one piece of the puzzle. You must always show them where that piece of the puzzle fits in, in a far broader sense. So having the ability to do that [um] through my studies, is really, I think it's, it's helped them. At least, I hope it's helped them see the wood for the trees.

Researcher: Okay, thank you very much for your insights. Is there anything that I haven't sort of asked you about critical thinking and professional development, that you feel has been omitted?

Alex: Well, you've asked me quite comprehensive questions, so, no, I doubt it. [Um] If anything comes to mind, I promise I'll contact you, but...

Researcher: It's also worth checking. Is there anything you want to explore with me in terms of, of what you've said and...?

Alex: Yes, are you, so you're going to develop a model eventually. And it seems you already have many sort of threads that you can ravel, I got that from your, from the guidance in your questions so [um], but will this model be only applicable to a tertiary environment, or do you think it will also be applicable to basic education?

Researcher: So there, I've read a great deal of literature and also other institutional experience from the interviews done so far. I'm seeing some themes emerge, definitely, and the focus is very much on the first-year context, transitioning to, [to] higher education. But the point of impact of [um], I

recently read a quote 'Students can't change higher education, but it's us', as...

Alex: Yes. Absolutely, absolutely.

Researcher: Academic staff, yes. But we don't always know what to do, and [um] I think, the facilitating the learning of lecturers to know what to do. There's a fair amount of consensus that the secondary schooling system is not sufficient to prepare for higher education. So, what do we do at that point of transition? And [and] I think checking people's understanding of what is and what they're experiencing in the classroom as a phenomenon is where I am. And then I am going to develop a, more of a workshop type approach with some resources [um, to] to facilitate people's <...> ... but I can't develop a one type fits all disciplines.

Alex: No of course not.

Researcher: But I can give input into what could be useful and measurable in that space.

Alex: Of course, and, mind you, that's a [that's a, a], if I may add anything? That's a very relevant insight, that. I don't think there is a one size fits all for anything, really, within education.

Researcher: I'm going to stop recording now, if that's okay.

End Interview.