

Curriculum review in Economics: Re-thinking pedagogy

By

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DECLARATION

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Title

Curriculum review in Economics: Re-thinking pedagogy

I declare that the above-mentioned dissertation (article) 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.

A handwritten signature in black ink, appearing to read 'Zurika Robinson', written over a horizontal line.

Signature

18 September 2019

Date

ABSTRACT

The purpose of this article (see Annexure A)¹ is to review curriculum within the Department of Economics (Unisa). The article is intended for submission to the International Review of Economics Education (IREE) with the guidelines contained in Annexure F. Unisa is the largest open and distance, e-learning institution in Africa and as such requires reliable and applicable curriculum to cater in the needs of the continent and the rest of the world. The curriculum review also entails an evaluation of undergraduate and post graduate programmes offered by the Department of Economics. It is a mixed methods study, in that qualitative interviews inform and confirm the results of a quantitative survey done amongst alumni, students, faculty and industry on the degree offering within the Department. The world of work and workplace as such will change as part of the fourth industrial revolution. Improving the graduateness and employability of students has become crucial in line with Unisa's motto of "Define tomorrow". The main findings show that creative and critical writing and numerical skills in line with pluralism in Economics and pedagogy are key and at the forefront of any change that needs to occur. Further, re-thinking pedagogy will require a coordinated effort within the Department of Economics with revising all Micro- and Macroeconomics modules at the different levels of the BCom (Economics). This will also entail an overall strategy for assessment on the different levels to improve writing skills of the students. Implementing Calculus and Linear Algebra at first year level and Statistics up to third year level should bring the department in line with local and international universities. This has become clear within the Department and includes the two-stream qualification route, with revised Economics and new Applied Economics route. This curriculum review can inform other similar exercises, which makes South Africa the emerging market of future generations.

Keywords: Curriculum, evaluation, mixed methods, pedagogy, assessment

¹ The article is the final part of the coursework (structured) MEd Unisa, where credit is provided for two modules done from the University of Maryland University College and then two modules are done from Unisa.

OPSOMMING

Die doel van hierdie artikel is om die kurrikula in die Departement Ekonomie (Unisa) te hersien. Unisa is die grootste oop- en afstandsléerinstelling in Afrika en verlang as sodanig betroubare en toepaslike kurrikula om aan die kontinent en die res van die wêreld se behoeftes te voorsien. Die kurrikulumhersiening behels ook 'n evaluering van voorgraadse en nagraadse programme wat die Departement Ekonomie aanbied. Die studie het gemengde metodes gebruik. Kwalitatiewe onderhoude het die resultate van 'n kwantitatiewe opname onder alumni, studente, fakulteitslede en die industrie oor dit wat die departement aanbied, belig en bevestig. Die wêreld van werk en die werkplek sal verander as deel van die Vierde Industriële Rewolusie. Dit het noodsaaklik geword om studente se graadwaardigheid en indiensneembaarheid te verbeter, ooreenkomstig met Unisa se slagspreuk van "Definieer die toekoms". Die hoofbevindinge wys dat kreatiewe en kritiese skryf- en numeriese vaardighede ooreenkomstig pluralisme in Ekonomie, noodsaaklik en aan die voerpunt van enige veranderinge is wat moet plaasvind. Verder, om pedagogie weer te bedink sal 'n gesamentlike poging binne die Departement Ekonomie behels om alle mikro- en makro-ekonomiese modules op die verskillende vlakke van die BCom (Ekonomie) te hersien. Dit sal ook 'n algehele strategie vir die assessering op die verskillende vlakke behels om studente se skryfvaardighede te bevorder. Deur Calculus en Lineêre Algebra op eerstejaarsvlak aan te bied en Statistiek tot op derdejaarsvlak, sal die departement in lyn met plaaslike en internasionale universiteite bring. Dit sluit die tweestroomkwalifikasies in met hersiende Ekonomie en nuwe Toegepaste Ekonomie roete. Hierdie artikel belig ander kurrikulumhersienings van verskeie vakgebiede plaaslik en internasionaal, wat Suid-Afrika die ontluikende mark vir toekomstige generasies maak.

KAKARETSO

Sepheo sa sengolwa sena ke le lekola-botjha dikharikhulamo tsa Lefapha la Dithuto tsa Moruo (Unisa). Unisa ke setsi se seholo ka ho fetisisa tsa thuto ya elektroniki se butsweng hape e le sa thuto ka ngollano, mme ka mokgwa oo, se hloka ho ba le kharikhulamo e tshepehang hape e amehang hore e kgotsofatse ditlhoko tsa kontinente le lefatshe ka bophara. Tekolo-botjha ya kharikhulamo e boetse e ne e kenyelletsa mananeo a pele ho grata le a kamora grata a fanwang ke Lefapha la Dithuto tsa Moruo. E ne e le boithuto ba mekgwa e fapaneng moo teng dinthavu tsa mokgwa wa boleng di tsebisetseng le ho netefatsa diphetho tsa boithuto ba mokgwa wa mongata hara ba neng ba kena sekolo moo, baithuti, lekala le indasteri mabapi le digrata tse fanwang kahare ho lefapha. Lefatshe la mosebetsi le sebaka sa mosebetsi di tla fetoha jwalo ka karolo ya Phetoho e Kgolo ya Bone ya Indasteri. Ho ntlafatsa boemo ba ho fumana grata le bokgoni ba ho fumana mosebetsi ha batjha ho se ho le bohlokwahadi ho latela lepetjo la Unisa la "Hlalosa bokamoso". Diphetho tsa sehlooho di bontsha hore bongodi ba boiqapedi le boinahano le ditsebo tsa dipalo ho latela puso-pedi ho thuto ya tsa Moruo di bohlokwa mme di eme kapele ho phetoho efe kapa efe e hlokanang ho etsahala. Ho feta moo, ho nahanisisa mokgwa wa thuto ho tla kenyelletsa maikutlo a hlophisitsweng kahare ho Lefapha la Thuto ya tsa Moruo ho ntjhafatsa dithuto tsohle tsa *micro-* le *macro-economics* maemong a fapaneng a *BCom (Economics)*. Sena se boetse se tla kenyelletsa moralo o akaretsang wa tekanyo maemong a fapaneng ho ntlafatsa ditsebo tsa bongodi tsa baithuti. Ho tsebisa dithuto tsa *Calculus* le *Linear Algebra* boemong ba selemo sa pele sa dithuto le ho tsebisa thuto ya *Statistics* ho fihla ho boemo ba boraro ho ka tlisa lefapha maemong a tshwanang le a diyunivesithi tsa lehae le tsa matjhaba. Sena se kenyelletsa mangolo a karolo tse pedi le Dithuto tsa Moruo (le *Applied Economics*). Sengolwa sena se rerile ho tsebisa ditekolo tse ding tsa kharikhulamo ka mekgahlelo e fapaneng kahare ho naha le matjhabeng, e leng ho etsa Afrika Borwa e be setsi se hlahellang ka mahetla sa mebaraka bakeng sa maloko a nako e tlang.

1. INTRODUCTION AND BACKGROUND

The University of South Africa (Unisa) celebrated its 145th birthday during 2018. It is regarded as the first of its kind in the world, i.e. single-mode distance education institution (Peters, 2010: 57). As a mega university, it is also Africa's leading open distance learning (ODL) university. The vision and mission statement as well as the logo of "Define tomorrow" relates to its African but also futuristic character (Unisa, 2016). The open nature of the university means that it also caters for the underprivileged. Academic staff at Unisa need to deal with more unemployed, young students that are digital learners chatting online in groups (Letseka & Pitsoe, 2013). Van Niekerk, Heydenrych and Higgs (2003) warn against the danger of duplicating the print-based effort online with no learning taking place. Guri-Rosenblit (2009) says that universities might have to be redesigned, adjusting strategy to an online and virtual scope.

The vision and mission statement of Unisa relates to the African character of the university, with open learning catering for quality and life-long learning. A further key point in the mission statement refers to addressing the needs of a diverse learner profile by offering relevant learner support, facilitated by appropriate information and communications technology (ICT) (Unisa, 2010). E-learning or technology-enhanced learning can assist South Africa and the African continent's young population to stay relevant, vibrant and progressive within a fast-paced modern society. Mobile learning via smart phones tends to augment e-learning rather than replace it (Macdonald & Chiu, 2011). The African continent has become more connected, with interconnectivity at the doorstep of most learners (Unisa, 2010).

The world of work puts more emphasis on skills and abilities than on academic knowledge (Royal Bank of Canada, 2018). Therefore, universities need to produce research and graduates that are relevant to industry or for employment to optimise its contribution to the workplace. To remain at the forefront of tertiary education in South Africa, the Department of Education needs to be cognisant of a changing world, and the resultant

demands and expectations on and of research and graduates in industry. The Department of Economics at Unisa has consequently expressed a need to review the degree curriculum by seeking input and perceptions from important stakeholders such as business, alumni and academic staff members. The intention of such a review is to more effectively and proactively prepare students for the demands of the current and future workplace. Graduateness normally covers the following key aspects (Coetzee, Botha, Eccles, Holtzhausen & Nienaber, 2012):

- A suite of attributes which graduates acquire during the course of their university study;
- The relationship between graduateness and employability, including employer needs and expectations; and
- Student attitudes and orientation to the labour market.

As such, this article is a first attempt to rethink pedagogy. The evaluation of the degree offering through a curriculum review is therefore an important and value accretive initiative, which together with the College of Economics and Management Sciences (CEMS) (Unisa) transformation agenda as initiated in 2017 will foster and create a world class, while still uniquely African offering. The article represents mixed methods research. During 2017, the Bureau for Market Research (BMR) conducted a survey about the degree offering at the Department of Economics (Unisa). The results of this survey are reported as quantitative analysis and enriched by qualitative information obtained from interviews with academics from the Department of Economics. The latter step will be critical in understanding curriculum and fruitful intervention in terms of pedagogy.

1.1 STATEMENT OF THE PROBLEM

The central problem explored in this article relates to the need to evaluate the undergraduate and postgraduate programmes by the Department of Economics (Unisa). A gap exists in the present knowledge about Departments of Economics in South Africa, with only two evaluations of the performance of teaching and research activities having recently been conducted (Luiz, 2009: 591-602; Yu, Kasongo & Moses, 2017:138). With a fast and ever-changing world, the need clearly exists to revisit curriculum offered by the

Department of Economics at Unisa. As mentioned, the latter is the largest university in South Africa, with Unisa itself being the largest open distance education institution in Africa. The Department enrolls about 30,000 students per semester, taught by approximately 40 members of staff, who are experts in distance education. Economics is one of the core disciplines in all Bachelor of Commerce (BCom) degrees. The Department of Economics offers both undergraduate and postgraduate programmes. The evaluation of the curriculum will therefore focus on the relevance of programme offerings.

1.1.1 The aim and objectives of the article

The need for a curriculum review, particularly an evaluation of programmes, includes a framework as described by Mishra, Vijayshri and Garg (2009). The latter includes among others:

- the relevance of programme;
- student success;
- parity with contemporary programmes;
- quality of study materials;
- presentation;
- quality of student support services;
- pedagogical effectiveness e.g. learner friendliness, comprehensiveness, difficulty level;
- use of technology;
- administrative support;
- quality of curriculum;
- workload; and
- assessment.

The aim of the article is therefore to do a curriculum review (an evaluation) in Economics which leads to the following objectives:

- factors influencing student success;

- curriculum changes that might be necessary based on the quantitative results of the BMR, Unisa survey and interviews (meetings) conducted in the Department of Economics; and
- pedagogical intervention to improve the success of the students.

After outlining the relevant literature on student success and curriculum, the author discusses the quantitative and qualitative results, ending with concluding remarks and recommendations including pedagogical intervention.

2. LITERATURE REVIEW

In the current context, it is fitting to explore the factors such as demographic factors and final marks that best explain the success rate of students.

2.1 Student success

Learning analytics offers the availability of “big” data to analyse the impact of demographic factors and results of students. Slade and Prinsloo (2013) regard learning analytics as a moral and educational concept supporting better learning. Learning analytics therefore provides information about student success in order to improve throughput rates at universities. However, “big” data can conceal problems through trends and more specific problems can be overlooked. It is therefore important to investigate specifically student success, which has been researched widely, both locally and internationally. Prior knowledge seems to make a difference in Economics (Wagemans, Valcke & Dochy, 1991) such as Macro- and Microeconomics results. International studies such as Athey, Katz, Krueger, Levitt, and Poterba (2007) show similar results in terms of the graduateness of students.

Various other studies have been conducted in student success in Economics but with varied results in terms of high school and university performance (Danilowicz-Gösele, K., Lerche, K., Meya, J & Schwager, R. 2017). Academic development and summer school programmes are given as pedagogic intervention tools. Authors such as Smith and

Edwards (2007: 99), Horn and Jansen (2008) and Smith (2009) indicate that the high failure rate in Economics, specifically first year Microeconomics is problematic and that more attention to students in preparation can assist to alleviate the problem. They further detail the use of language, numerical and essay writing skills as pedagogic value. Educational intervention such as workshops may improve the success of students even further (Smith & Ranchhod, 2012). Language proficiency is of value as an academic factor for three-year degree students (Keeve, Naude & Esterhuyse, 2011), but other psychosocial factors may play a role in terms of four-year degree students.

In terms of e-learning, online recorded lectures improved Taiwanese students' performance by 3 to 5 percentage points on average (Chen & Lin, 2012). Podcasts can therefore be used effectively within an ODL environment. Further, the use of the learning management system (LMS) does not necessarily determine student achievement, with a recent study finding that self-efficacy and motivation are larger determinants than the use of the LMS itself (Broadbent, 2016).

Robinson (2018) found that second year results in Micro and Macroeconomics at Unisa have a significant impact on third year module success rates, which are either Micro or Macroeconomics-based, such as Public Economics and Monetary Economics. More targeted online intervention (added video clips) and assessment are suggested as solutions going forward.

The Department of Economics (Unisa) houses state of the art digital equipment for lecturing staff to utilise. The willingness of the staff to get involved plays an overarching role in available training, including that on "YouTube", for example the use of software packages such as Camtasia to make video clips. These video clips are also available on Unisa Open, an online platform for open education resources (OERs) and as such, curriculum plays a vital role in achieving excellence in the delivery of all learning material. The delivery of learning material is through the online learning management system (LMS), MyUnisa.

2.2 Curriculum review

Curriculum can be defined within a specific context (Carl, 2009). In this context, it entails some of the student experience of different learning units within every year of degree study in Economics at Unisa. It thus includes blended learning with interactive and self-directed student experiences (Makhanya, Mays & Ryan, 2013). Debates within networks become part of the broad curriculum and planned tuition. Understanding and mastering this curriculum (development) is unequivocally part of pedagogy.

Curriculum can be seen as a vehicle for social transformation (Belbase, 2011). In addition, curriculum is the process and creation of “productive thoughts and democratic ideals of society.” South Africa needs a quality education system to optimise productive capacity and innovation, especially in terms of previously disadvantaged scholars and students (NPC, 2011). Social and/or curriculum transformation is continuous and recently featured in CEMS at Unisa. CEMS stipulated the transformation objectives as Africanisation, ethics, sustainable economic development and entrepreneurship. The milestones therefore included student support, assessment, pedagogy, and Programme Qualifications Mix (PQM). Students and teachers need to work together towards cultural and social change (Bieger nd). Six broad principles guide curricula at Unisa (Unisa, 2012), namely, responsiveness, student-centredness, accountability, curriculum structure, quality assurance and impact. Priestley and Biesta (2013) contend that curriculum policy regards the outcome of education as what the student should become and no longer about what the student should learn. The graduateness of the student has therefore become crucial and preparing the student with the right equipment and skills for future workplaces, whether full time employment or self-employed, is an ongoing quest. The curriculum policy must therefore provide for change over time and Unisa has a policy document that extensively explains curriculum policy.

There is a need for foundational skills such as critical thinking, creative listening and innovative problem solving (Royal Bank of Canada, 2018). Various reasons exist for a curriculum review within the Department of Economics (Unisa). In an international comparison of 21st century competences, Voogt and Roblin (2012) find that the following are essential, namely, collaboration, communication, ICT literacy, and social and/or

cultural competencies (including citizenship). More recently in a White Paper, the World Economic Forum (2017) describes human potential realisation in the fourth industrial revolution. Continuous curriculum review is mentioned, with adult learning and continuous reskilling and lifelong learning, in an age where artificial intelligence are becoming more prominent. In order to do a curriculum review, one needs to know the population (student) sample that you are working with, as noted in the section covering student success, and how the distance learner learns.

The curriculum development process includes assessing needs, including the purpose and objectives; planning; implementation; monitoring; evaluation and review (SAQA, 2000). Curriculum structure and quality assurance play a pivotal role in the process. Although accreditation sets the foundation for institutions to nurture learner commitment, fostering basic education will support overall higher standards. Ultimately, free education for deserving students should uplift society as a whole.

Learning is a dynamic process of collecting new information built on base knowledge. The brain makes sense of this information and sorts it into a realistic fashion. Within the implementation phase of the curriculum development process, technology and multimedia are used to convey the message to the learner. Interactivity and motivation become important, with the integration of words and pictures, rather than text alone. Social media such as Facebook, Twitter and WhatsApp can be used in an effective manner in teaching. Video clips, also as provided on Unisa Open, are produced within fully equipped video studios. Video clips and social media enrich and assist, with pedagogy used on myUnisa to keep students informed. In terms of impact, assessment becomes critical. Little research has been conducted on alternative assessments with specific reference to formative assessment within an ODL environment.

Once curriculum is implemented, the evaluation and review process is paramount. This can be done through advisory board committees with experts from industry, or through surveys amongst alumni and industry. These surveys ensure that academic departments stay ahead both locally and internationally in terms of their PQM. The PQM and degree offering need to be reviewed on at least a three-year cycle for continuity. New modules

and online degree programmes, as well as certificates and short learning programmes, form part of the curriculum development process. Academic staff involved and the CHE should maintain quality assurance and standards with SAQA for accreditation of any new curriculum. The curriculum development process also ensures that the graduateness of the student stays applicable for the marketplace.

To summarise, the curriculum development process should include:

- (a) A clear definition of what curriculum involves with a broad transformation forum including local and international elements;
- (b) An outline of what the pedagogy involves in curriculum design;
- (c) Stipulating key issues for curriculum development such as technology and online learning;
- (d) Clear thinking regarding mobile learning in the curriculum development process;
- (e) The LMS used should facilitate the connected network of learning between students and akin to social media;
- (f) Provision should be made for future challenges, including AI and VR, within the curriculum;
- (g) The evaluation of curriculum and assessment and the role of self-assessment, which can facilitate learning on a different scale;
- (h) The review of curriculum needs to be on a three to five-year cycle with alumni and industry involved;
- (i) Quality assurance monitoring needs to be ongoing in all modules and programmes offered within academic departments and faculty.

3. RESEARCH DESIGN AND METHODOLOGY

Mixed methods research design is a combination technique where statistical information obtained from quantitative measurements is supported and enriched by qualitative information obtained from the explanations provided by research participants (Baran & Jones, 2016).

A sequential mixed methods analysis (SMMA) was used. The analysis used quantitative and qualitative research in a sequential manner, commencing with quantitative analysis (Hahs-Vaughn & Onwuegbuzie, 2010: 55). The purpose of the mixed analysis was development whereby the results from one analytical method informed the use of the other methods. The research started with the quantitative analysis, in which the BMR undertook a survey and thereafter the interviews (meetings) to inform the results of the BMR were conducted. The quantitative research has employed a survey design of the BMR and used structured questionnaires to collect data. Qualitative research in this case has employed a phenomenological case study design with interviews (meetings) within the Department of Economics. Data are in the form of words.

3.1 Methodology of quantitative analysis

The BMR did a quantitative questionnaire survey for a curriculum review (degree offering) for the Department of Economics (Unisa) in 2017. The intent was to discuss the proposed survey within the Department of Economics. The idea was to assist the Department of Economics with their PQM as part of the Department of Higher Education and Training (DHET) process. Unisa has a detailed curriculum policy in which curriculum reviews are discussed (Unisa, 2010).

Against this background, the BMR report presents a review of the perceptions of important stakeholders such as business, alumni and academic staff members, pertaining to the academic offerings of the Economics Department. The overall purpose of the research is to assist the Department of Economics at Unisa to deliver an Economics curriculum that will contribute to the long-term sustainability of the Department. There are many generic aims for conducting an evaluation of this nature among key Department of Economics stakeholders. The most common are as follows:

- To comprehensively understand the perceptions and experiences of stakeholders towards the various academic offerings of the Department.
- To address the expressed curriculum needs of the various stakeholders (BMR, 2017).

More specifically, the survey aimed to include and this related to the survey questions:

- Establish whether the current undergraduate (primarily driven the BCom qualification) and Honours in Economics degrees are addressing the market's needs and if not, which sub-disciplines should be strengthened or weakened.
- Prioritise the subject sub-disciplines with a view to classify core and supplementary areas.
- Identify the professional and community trends with regards to what economists do and what practitioners are expected to do to advance the field of Economics the most.
- Identify other emerging economic trends and topics that should be considered for future course and curriculum content and design.

The Department of Economics at Unisa offers a wide range of modules, each specialising in a particular field of study. First level modules aim to typically gain insight into how the basic economic problem is solved in different economic systems. This includes how economic activity is measured, and how prices are determined through decisions made by individual households and firms under conditions of perfect and imperfect competition. Furthermore, first level modules aim to gain insight into macroeconomic theory and variables, such as total production and income of a country, economic growth, unemployment, inflation, and the balance of payments. Second level modules in turn, focus on Microeconomics and Macroeconomics, Labour Economics, Development Economics, Environmental Economics, the South African Financial System, and Economics of Tourism. Finally, third level modules include Monetary Economics, International Trade, International Finance, Public Economics, Economic Policy in South Africa, History of Economic Thought, and Econometric Techniques.

Ethical clearance has been granted for the study in terms of the quantitative survey of the BMR and the BMR has granted permission that the Department of Economics can use the results of the findings.

3.2 Population, sampling and data analysis of the quantitative survey

The study entailed secondary and primary research, which guided the research approach, and methodology which is explained in more detail below. The exploratory phase of the quantitative analysis involved environmental scanning of the economics curricula of other influential tertiary institutions and thought leaders, plus informal discussions with the Department of Economics in workshop format. The BMR conducted a quantitative research study to address the research aims outlined above.

Based on the research need expressed, an electronic web-based self-completion survey was conducted. Stakeholders with access to the Internet were invited via e-mail to access the survey by clicking on the hyperlink designed for the survey. Available stakeholders' databases were used as contact lists for obtaining e-mail addresses of sample units adhering to the criteria to be included in this study. A first round personal e-mail invitation was sent and, with the administration of automated survey management technology, three weekly reminders were sent to those respondents who have not submitted within the weekly cut-off period. The online (web) survey was administered and managed by experienced BMR researchers. This process secured sufficient responses in support of valid research analysis.

The primary research methodology is described below. The population comprised the following core stakeholder groups in the Economics higher education landscape for 2017:

- Academic staff members teaching in the field of Economics.
- Unisa Economics third year students and Economics alumni students.
- Economists from all sectors.

Table 3.1: Participants in the survey

	<i>n</i>	%
Economists	9	1.4
Lecturers/tutors	26	3.9
Undergraduate students	468	70.6
Alumni (Hons students)	160	24.1
Total	663	100.0

It is clear from Table 3.1 that the vast majority of the participants consist of undergraduate students (70.6%) and alumni including honours students (24.1%). It is important to mention that the representation might seem low. This survey therefore served as a guide in the curriculum review for the Department of Economics.

A total of 663 sample elements participated across the various stakeholder groups outlined above. Based on the research needs expressed, an electronic web-based self-completion survey was conducted (see Annexure B). Stakeholders with access to the Internet were invited via e-mail to access the survey by clicking on the hyperlink designed for the survey. Available stakeholders' databases were used as contact lists for obtaining e-mail addresses of sample units adhering to the criteria to be included in this study. A first-round of personal e-mail invitations were sent out, and with the administration of automated survey management technology, three weekly reminders were sent to those respondents who had not submitted within the weekly cut-off period. The online (web) survey was administered and managed by experienced BMR researchers. This process secured sufficient responses in support of a valid research analysis.

The questionnaire used for the survey was designed in close consultation with the author of this article.

The topics addressed in the questionnaire focused on the following:

- Fellowship (Practicing Economist, Lecturer, Unisa third year or undergraduate student, Unisa honours or postgraduate student or Unisa Tutor) of participants.
- Importance of including certain fields of study/module/contents in Economics degree qualifications.
- Other subject matter/module/contents that should be included in Economics degree qualifications that are currently not part of the offering.
- Professional and community trends which influence what economists do and what they are expected to do.
- Emerging economic trends and topics stakeholders believe should be considered for future course and curriculum content and design.

These topics link also with the objective of curriculum changes that might be necessary based on the quantitative results of the BMR, Unisa survey in the Department of Economics. It is important to note that these topics are not necessarily mutually exclusive and were analysed in tandem as evident in the analysis section. As mentioned, Annexure B contains the questions included in the questionnaire. All collected data received by a web server designed for the study were collated and transformed into a Statistical Package for Social Sciences (SPSS) dataset. Once captured, the data were verified and stored for electronic analysis purposes.

3.3 Findings

In the quantitative analyses, the BMR report (2017) determined the feasibility and relevance of the Economics offerings. The analyses aimed to provide the Department of Economics (Unisa) with feedback and evidence to support teaching enhancement and excellence in teaching, including the development of the curriculum. In addition, the report enabled key stakeholder groups to contribute to the design and development of module/content areas by providing an opportunity for their views to be considered as part of the curriculum review process. Furthermore, the findings of the report facilitated a student-centred and job-market-related approach to curriculum development.

The Economics curriculum offered at Unisa has much in common with other universities, where the dual focus is specifically on Microeconomics and Macroeconomics. Of significance in this review is the importance of how current and former students and practitioners approach the learning and application of Economic knowledge and skills in the world of work. Stakeholders responded positively to a number of module/content areas which could be considered for inclusion in future Economics degree qualifications such as the B Com Economics and the B Com Honours Economics.

3.3.1 Module/content areas for undergraduate curriculum

The quantitative analysis included 48 module/content areas that could be considered for the Economics curriculum review. For this purpose, the questionnaire applied a five-point rating scale (Annexure C) that required respondents to indicate whether a particular module/content area could be regarded as “very important” meaning that the module/content area should definitely be included as a compulsory module/content area. Likewise, an “important” rating designated that the module/content area should be included but should not be compulsory. “Moderately important” denoted module/content areas that could be included while “slightly important” ratings signified the inclusion of module/content areas which are uncertain. Finally, “not important” ratings were used to classify module/content areas which are redundant and should be removed. Against this background, the analysis simplifies this five-point rating scale by reporting the valence or difference between the percentages of participants who responded positively or negatively to a particular module/content area. Valence depicts the positive or negative value of an outcome (Business dictionary, 2019).

Prior to presentation of a detailed discussion, it should be noted that the analysis applied a colour coding approach to assist the Department to identify the relative importance of various module/content areas. For example, module/content areas rated more negatively (below 50%) in relation to others are highlighted in red, while orange defined moderate importance areas. In turn, green represented areas were recommended to be considered for more contemporary Economics curriculum design. To validate this outcome this

classification has been crosschecked with the detailed five-point scale analysis reflected in Annexure C.

Table 3.2 accordingly reflects the difference between the percentages of participants who responded positively or negatively to the module/content areas related to the Economics degree qualifications. Therefore, a nett positive percentage or positive valence is indicated.

Table 3.2: Undergraduate module/content area valence

	Economist	Lecturer	Third year student	Hons Student	Total
	%	%	%	%	%
Macroeconomic theory and variables such as total production and income of a country, economic growth, unemployment, inflation and the balance of payments.	100.0	100.0	83.5	86.5	85.7
The basic economic problem in different economic systems.	100.0	91.7	83.3	88.5	85.6
Measurement of economic activity.	100.0	100.0	81.7	88.3	85.0
Trade theories and trade policy issues, as well as to analyse the motives and effects of international capital flows.	100.0	100.0	82.8	80.6	83.6
How prices are determined through decisions made by individual households and firms under conditions of perfect and imperfect competition.	71.4	91.7	82.6	82.9	83.1
The South African financial system with reference to financial institutions, instruments and markets, and to demonstrate an understanding of the way that the monetary policy is implemented in South Africa.	100.0	83.3	80.6	86.0	82.7
Current issues of the balance of payments, the foreign exchange rates, and the different theories thereof.	71.4	100.0	80.3	84.2	82.5
Core issues in monetary economics. View, reflect on and solve current issues in the light of various theories that have been put forward concerning the roles of money, interest rates and inflation in the economy.	71.4	100.0	79.4	84.5	82.0
Public finance issues and policy within the context of the South African economy and other developing countries.	66.7	83.3	80.0	86.3	81.8
Basic mathematical modelling and computational skills for application in the business world.	100.0	83.3	81.3	79.2	81.2
The relationship between the macro and micro economy, and the natural environment, evaluate frameworks for	100.0	75.0	78.7	86.0	80.9

	Economist	Lecturer	Third year student	Hons Student	Total
	%	%	%	%	%
environmental decision-making and assess the formulation of different policy measures.					
The meaning and interpretation of a wide range of economic indicators.	100.0	100.0	71.9	92.2	79.9
Behaviour of consumers and producers in the economy in a closed and open economy and the role of economic policy in this regard, with special reference to South Africa.	71.4	83.3	77.6	84.5	79.7
Theoretical macroeconomic views on the determination of income in a closed and open economy and the role of economic policy in this regard, with special reference to South Africa.	71.4	75.0	75.4	88.5	79.0
The economic analysis of labour and the labour market with regard to the supply of and demand for labour, education and training of the labour force, unemployment, vacancies and the migration of labour, trade unionism and collective bargaining, and discrimination in the labour market.	71.4	91.7	75.3	84.2	78.8
Economic development issues and policy within the context of developing countries.	42.9	83.3	66.1	90.3	73.6
Using economic theory, mathematical and statistical tools to specify and estimate the coefficients of a regression equation in the most efficient way.	100.0	91.7	67.1	80.4	73.0
The fundamental formulae of financial mathematics.	42.9	50.0	77.5	62.3	70.8
Simple linear regression and correlation, basics of time series analysis and forecasting.	100.0	91.7	47.6	76.9	59.7
Investment in financial assets; the investment environment; the risk return framework; fundamental and technical analysis; portfolio management.	71.4	50.0	63.2	52.9	59.6
Exploratory data analysis as used in graphical and tabular techniques, measures of central location, variability and linear relationships; simple sampling procedures.	66.7	66.7	45.1	76.9	55.8
How economic thinking has developed over the centuries with particular references to famous economists.	-14.3	50.0	44.3	80.4	53.7
The role of the sampling distribution of the mean, a proportion and the difference between two means in statistical inference, interval estimation and hypothesis testing.	100.0	66.7	43.8	69.2	53.4
A primer to a lifetime of critical thinking.	71.4	75.0	52.5	45.6	52.4

	Economist	Lecturer	Third year student	Hons Student	Total
	%	%	%	%	%
Probability as a tool to create discrete and continuous probability distributions, used extensively in statistical inference.	100.0	66.7	39.0	73.1	51.4
Essential approaches and concepts of financial management, analysis and decision-making.	14.3	16.7	62.3	34.0	50.7
Fundamental concepts, standards and principles of financial accounting.	71.4	25.0	62.3	28.3	50.7
Financial management; financial statements and cash flow; analysis of financial statements; overview of financial planning; time value of money, risk and return; value (shares, debentures and options).	71.4	0.0	56.2	37.9	47.7
The development of the Western market economy in South Africa.	14.3	58.3	39.8	52.4	44.0
Strategic management and of the specific management tasks (planning, organising, leadership, and control).	66.7	8.3	47.1	40.4	43.0
Foundation for the study of business management.	-33.3	0.0	47.1	34.0	39.2
Financial Management Techniques; Determine the optimal capital structure; Appraise long-term investment opportunities; Determine working capital and dividend policies and optimise levels of cash and short-term financing. Apply basic techniques to manage exposure to foreign exchange transactions.	71.4	4.3	46.1	27.5	38.7
The application of microeconomic and macroeconomic theory to the tourism environment.	71.4	16.7	33.0	50.0	37.5
Theories, methods and techniques relevant in the accounting field.	71.4	-8.3	50.8	14.3	37.4
Theories, methods, techniques and skills relevant to financial management are introduced and applied in topics such as: Enterprise strategy and strategic financial management; Risk management; Managing and investing of funds.	33.3	0.0	41.9	23.5	33.9
Management accounting principles like cost classification, cost behaviour, cost volume profit analysis, cost estimation, cost objects, and various cost management accounting systems.	71.4	25.0	40.8	15.7	33.3
Investor Psychology; prospect theory; efficient market theory from a psychological perspective; heuristics and framing.	33.3	4.3	26.4	30.7	26.3
Management Accounting Techniques; advanced behavioural aspects of cost; advanced concepts in costing systems; integrated planning and budgeting; standard costing; performance management in	71.4	-4.3	35.9	6.0	25.8

	Economist	Lecturer	Third year student	Hons Student	Total
	%	%	%	%	%
decentralised organisations; relevant decision making in various.					
Functional areas of business management - human resources, marketing, finance, operations and purchasing and supply.	-33.3	-16.7	29.7	9.6	20.1
The development of the modern international economy since 1820.	-14.3	25.0	10.0	40.6	19.3

It is apparent from Table 3.2 that stakeholders responded positively, with a valence of 80% or higher, to the inclusion of 11 of the 40 module/content areas tested for the Economics degree qualifications. More importantly, a high level of unanimity is noticeable between the different stakeholders regarding these module/content areas. The latter suggests that the module/content area should be included and considered as essential module/content areas for the Economics undergraduate curriculum. The green shaded module/content areas consist of first, second and third level module/content areas in terms of content and goals which indicated the following:

- Macroeconomic theory and variables, such as total production and income of a country, economic growth, unemployment, inflation, and the balance of payments. (85.7%).
- The basic economic problem in different economic systems (85.6%).
- Measurement of economic activity (85.0%).
- Trade theories and trade policy issues, as well as to analyse the motives and effects of international capital flows (83.6%).
- How prices are determined through decisions made by individual households and firms under conditions of perfect and imperfect competition (83.1%).

- The South African financial system with reference to financial institutions, instruments and markets, and to demonstrate an understanding of the way that the monetary policy is implemented in South Africa (82.7%).
- Current issues of the balance of payments, the foreign exchange rates, and the different theories thereof (82.5%).
- Core issues in monetary economics. View, reflect on and solve current issues in the light of various theories that have been put forward concerning the roles of money, interest rates and inflation in the economy (82%).
- Public finance issues and policy within the context of the South African economy and other developing countries (81.8%).
- Basic mathematical modelling and computational skills for application in the business world (81.2%).
- The relationship between the macro-and micro-economy, and the natural environment, evaluate frameworks for environmental decision-making and assess the formulation of different policy measures (80.9%).

However, when disaggregating the analyses according to different segments, it is apparent among the economist stakeholder group in particular, that certain module/content areas should be regarded as an elective within the curriculum. These module/content areas display a valence of lower than 80% on the overall ratings but were rated as essential by practitioner Economists. These included the following:

- The meaning and interpretation of a wide range of economic indicators;
- Using economic theory, mathematical and statistical tools to specify and estimate the coefficients of a regression equation in the most efficient way;
- Simple linear regression and correlation, basics of time series analysis and forecasting;
- The role of the sampling distribution of the mean, a proportion and the difference between two means in statistical inference, interval estimation and hypothesis testing; and

- Probability as a tool to create discrete and continuous probability distributions, used extensively in statistical inference.

The analysis further depicts a considerable number of module/content areas that were rated negatively with an average valence score of below 50%. It is noticeable that these module/content areas are overall peripheral to the core of the Economics subject discipline with Business Management and Accounting content areas in evidence. An interesting area mentioned in this list represents the ‘development of the western market economy in South Africa, which stakeholders view as non-essential to an Economics curriculum.

3.3.2 Module/content areas for the honours curriculum

Eight module/content areas for the honours Economics curriculum were rated among the various stakeholders to determine the importance of each module/content area. As with the undergraduate analysis, the valence ratings are presented in Table 3.3.

Table 3.3: Honours curriculum module/content area valence

	Economist	Lecturer	Third year student	Hons Student	Total
	%	%	%	%	%
The complexities regarding the role of government in a market economy.	83.3	100.0	87.1	93.8	89.9
The fundamental differences between developed and developing countries to identify underlying problems and challenges that confront developing countries with the aim of formulating appropriate policies for mitigation.	85.7	95.7	86.9	91.5	88.9
A thorough grasp and understanding of the main theoretical aspects of international trade and international monetary systems to explain the theory and principles of international economics	85.7	100.0	86.2	91.7	88.8
Competencies required to plan, execute and write an acceptable academic research paper in Economics.	100.0	95.8	83.5	95.8	88.3
The relevant toolset to practically solve real live economic related problems they may encounter in their work environment. Non-stationary time series analysis which is vital to overcome the problem of spurious regression relationships.	100.0	87.5	85.9	88.4	87.0

The economic behaviour of households, firms and markets as presented in microeconomic theories, such as neoclassical microeconomics and new institutional economics.	71.4	83.3	86.2	90.5	86.9
An advanced understanding of the world of banking and finance.	85.7	79.2	85.3	90.5	86.4
Different schools of thought in macroeconomics. Different theories of the economy as a whole, focusing on economic aggregates such as the level of and changes in national output, income and employment, inflation and interest rates and the relationships.	85.7	100.0	83.9	88.5	86.4

It appears from the analysis that reaction to all module/content areas for the Honours Economics curriculum was positive as displayed in Table 3.3. This suggests that all eight module/content areas should be retained in the Honours Economics curriculum. Furthermore, it is clear that these module/content areas are relevant in preparing students to the world of work. Although, a high level of unanimity is notable among the different stakeholders with regard to the importance of the Honours Economics curriculum being offered by the Department, the Economist stakeholder group in particular rated one module, 'The economic behaviour of households, Firms and markets as presented in microeconomic theories, such as neoclassical microeconomics and new institutional economics (71.4%)', less favourably.

3.3.3 Other related module content areas proposed

Stakeholders were also invited to indicate other possible module/content areas that are currently not part of the curriculum, to be included in the future curriculum. Important considerations appear to be research skills for postgraduate work, statistical and mathematical principles required, a greater focus on applied Economics, Data Science, Business Intelligence, the pricing system, current developments within Economic Theory and Models (Doughnut Economic Model; Wellbeing Economy; Behavioural Economics), Economic Modelling, Econometrics, Investor Psychology, Psychology of trade and Game theory.

It seems apparent that the Economics courses taught at the Department aim at providing students with econometric (statistical) tools to analyse economic data and draw quantitative inference about economic relationships. In the first year, students are taught

descriptive statistics and probability as well as statistical inference (STAT 1501 and STA 1502). Some applications of econometric techniques to economic data are also taught at third year level. Stakeholders do however propose that the Department should streamline the module/content areas to be continuous from first year to third year in order to better grasp the underlying theory. For example, it appears that the STAT 1501 and STA 1502 offered in first year do not prepare the students appropriately for the more formal econometric methods in the third year of their degree.

It should be noted that the undergraduate curriculum is in the main appropriate in terms of breadth and depth of the topics covered. It provides students with a strong foundation in the first and second years of the degree and prepares them well for the study of specialised fields in the third year. Consideration should however be given to current changes in the socio-political landscape, such as the fourth industrial revolution fundamental changes in the leading global economies, African economies and South African economy.

Additional examination of the analysis shows a positive response for the module/content areas for the honours Economics curriculum. It was apparent from the analysis that all stakeholders reached agreement that all module/content areas measured by the 2017 review study should be included in the curriculum.

In designing a future Economics curriculum, it is important to consider (i) the desired balance between developing economic knowledge, skills and attitudes and (ii) the role and function of Economics in the national economy and political decision-making, (iii) wealth distribution and (iv) economic and financial policy. However, it is advisable to add vital areas to ensure the review is robust and comprehensive. In this regard, one of the tasks will be to ensure that students can engage with the subject in a meaningful and practical way, that will enable them to understand economic principles and critique economic policy.

Based on stakeholder groups recommendations, key skills such as critical, innovative and creative thinking can be developed by including learning outcomes that focus on the use of diverse sources of information, on understanding different economic assumptions,

philosophies, models and theories and on evaluating the evidence that supports or contradicts these theories. Reading and writing in Economics can be difficult and include much more such as the social processes in which the world operates (Richardson, 2004). Given these perspectives, the Department of Economics (Unisa) will be challenged to reflect on the outcome of the recommended stakeholder reviews to guide them in the process of identifying appropriate module/content areas which could support the sustainability of the Department.

3.4 Research design, methodology and findings

In order to identify appropriate module/content areas which could support sustainability of the Department of Economics in future, the qualitative analysis was done. This analysis was also done to confirm the findings reached with the BMR survey. Unstructured interviews have mostly been used with key informants by collecting the data through observation and record field notes, and to be involved with study participants. To be precise, an unstructured interview resembles a conversation more than an interview and is always thought to be a “controlled conversation”, which is skewed towards the interests of the interviewer. Non-directive interviews, a form of unstructured interviews, are aimed to gather in-depth information and usually do not have a pre-planned set of questions. Another type of the unstructured interview is the focused interview, in which the interviewer is well aware of the respondent and in times of deviating away from the main issue, the interviewer generally refocuses the respondent towards key subject. Another type of the unstructured interview is an informal, conversational interview, based on an unplanned set of questions that are generated instantaneously during the interview (Fusilier & Durlabhji, 2001). A thematic analysis was done in line with a coding mechanism in order to identify the different themes of importance (Wildemuth, 2009). Coding reduces lots of data into small chunks of meaning. We were concerned with addressing specific research questions and analysed the data with this in mind. Given this, we coded each segment of data that was relevant to or captured something interesting about our research question. We did not code every piece of text. We used open coding; that means we did not have pre-set codes but developed and modified the codes as we worked through the coding (interesting or important phrases) process.

3.4.1 Interviews and meeting

The above-mentioned unstructured interviews and meetings were conducted within the Department of Economics from October 2018 to February 2019 with staff members and executive committee members. The results of the BMR survey were discussed and any potential weaknesses investigated within the interviews, so that it could be established whether support could be lent to the BMR survey (see Annexure B). The demographic profile of participants ranged from junior lecturers to full professor in the Department of Economics, with most of them being female. These audiotaped interviews lasted between 30 and 60 minutes and took place at Unisa. The participants were selected judgements as the researcher understood academics who were involved with the different modules in the Department of Economics. Later a PQM committee was established and definite issues discussed, such as the two-stream qualification path for the Department of Economics. The validity of the interview guide was enriched by the questions being based on the objectives of the study. The permission to conduct the study and ethical clearance were obtained from the Unisa's Ethics Committee (Annexure E).

Informed consent was obtained from each participant in the study in order to ensure that they understood what they were doing and to verify their willingness to participate. More importantly, participants were informed of their rights, including the right of informed consent, protection from disclosure of information, and respect for their privacy. All the research participants voluntarily participated in the study. Regarding protection from harm, the researcher ensured that the participants were not at any risk by answering questions and would not be exposed to embarrassment, unusual stress, or any demeaning treatment. Anonymity and confidentiality were promised and maintained. The information they provided was not made available to anyone else who was not directly involved in the study and cannot be traced back to the participants. In terms of professional standards, the researcher ensured that the findings were gathered in a professional manner without misrepresenting anyone and/or intentionally misleading the participants about the nature of the study. Furthermore, the researcher ensured that all the findings were presented honestly without fabricating any data to support any particular

finding. The section below presents the findings of the study as they emanated from the interviews.

3.4.2 Themes

The themes that were identified from the interviews (meetings) include the following:

- a) Mathematics and Statistics are crucial in Economics curriculum as also pointed out by the BMR survey. One of the associate professors mentioned that mathematical examples can be done in the different modules with Calculus and Algebra included in the first-year curriculum. A senior lecturer said that coding (programming) needs to be included in the curriculum. An associate professor mentioned that the B Com (Business Informatics) with focus on Economics might become a possibility, creating opportunity to accommodate the fourth industrial revolution
- b) Improved writing skills, critical thinking and problem solving will update the gradueness of the Unisa student, as also shown in the BMR survey. Most of the lecturers agreed with this conclusion.
- c) Most lecturers agreed that the emphasis should be on the content of existing modules as pointed out by the BMR survey also and all modules are up for re-development in 2020. The “gap between university and industry needs to be addressed as far as possible”, albeit said by one of the associate professors especially also in Econometrics.
- d) The assessment methods used in the Department of Economics need to be updated. Some of the main comments regarding the BMR survey is that in future the survey should be made wider, also to include academics from other institutions. However, the Department of Economics did have a peer review exercise in which academics from other institutions were included. Some of the comments from them was that Unisa Economics graduates stand last in line for employment because of the assessment methods used by Unisa. This again relates back to testing writing skills that are regarded crucial by the employers. One of the main comments is that: “Students need to think like economists and assessment needs to be adapted to this”. Already the idea of more frequent, continuous assessment is gaining interest in terms of discussion

forums so that the student can learn how to write academically by the time he/she gets to the B Com Honours Economics.

- e) Although the BMR survey showed that other subjects such as Business Management, Financial Cost Management and Investor Psychology are regarded negatively, some academics (senior lecturers) in the Department of Economics still felt that the curriculum needed to reflect a wider scope than just Economics.
- f) A very strong lamentation was made about the neglect of economic history within the neoclassical economics curriculum, which is largely the case in most universities. In this area, one of the junior lectures said that “UNISA is doing well because our Macro Honours is very theoretical and engages in the debate about different schools of thought. We are also doing well because we have History of Economic Thought; Economic History of South Africa and Economic History of the World”.
- g) The need to promote pluralism in the economics curriculum was uttered and scholars were in general agreement that the “mainstream economics curriculum was largely quantitative with little consideration for discussing current issues or relevant issues for Africa”. The academics raised the point that mathematics was one of the requirements for economics which disadvantage students that are not so proficient, and they viewed mathematics as not central to understanding the core concepts of economics. The academics were also critical of the heavy reliance on econometrics which is represented as the only research methodology. However, they did not completely discount the methodology but were emphasizing that “qualitative methodology is just as relevant and valid”.
- h) Lecturers did take note of the fact that the CORE (https://www.core-econ.org/login/?redirect_to=https://www.core-econ.org/workshops/) initiative, as undergraduate curriculum, has been supported by various leading universities in South Africa and that we will make use of it to improve curriculum and online teaching.

These themes link directly to the design of the curriculum and the way of teaching or pedagogy as described in the next section.

3.5 The way forward in terms of research findings and pedagogy

The aim of the research, namely a curriculum review (evaluation) in Economics has been done. The quantitative and qualitative findings were taken further as part of the themes and triangulation to verify credibility, reliability and validity (Golafshani, 2003). These findings link with the objective of curriculum changes that might be necessary in the Department of Economics. The recommendation was that two streams of qualifications within Economics will have to be offered to align with both local and international universities. On the one hand, an adjusted B Com (Economics) will be included. On the other hand, after doing a document analysis, degree offerings by other leading South African and international institutions, a new degree was suggested, namely BCom (Applied Economics). This BCom (Applied Economics) will make provision for Calculus and Linear Algebra at first year level and Health Economics at third year level also as a new elective. The current BCom (Economics) makes provision for Financial Mathematics and Modelling, but the idea is to have a degree with pure Mathematics so that it can serve as a basis for mathematics applied in the different Economics modules. The degree would also make provision for Statistics up to third year level and addressed the shortcoming mentioned in the BMR report. The latter also related to previous research findings in the International Review of Economics Education (IREE) regarding the redesign of a capstone course (Li & Simonson, 2016). The two streams link with the themes as suggested in the previous section such as including Mathematics. A broadening of Micro- and Macroeconomics to third year level, that will fill the gap and extend the base knowledge of Economics to form a well-rounded individual for the job market, but also ready to pursue postgraduate studies. This also links with the objective of factors determining student success and the Robinson (2018) study that emphasised Micro- and Macroeconomics as determinants of student success. For both degrees, the content of all the levels will be coordinated and revised to improve pedagogy, including assessment at all levels as the modules move to fully online versions. A further recommendation was the introduction of short learning programmes in Econometrics and Economic Indicators for the immediate future. This was crucial to bridge the gap between industry and the university.

A PQM committee was formed within the Department of Economics for the revision of the adjusted BCom (Economics) and the new qualification, BCom (Applied Economics). Close collaboration with the applicable departments and with the Directorate University Teaching and Learning Development (DUTLD) was crucial in this process. The question on how assessment can be improved, and pedagogic intervention be used, led to the decision to improve the current research report module in the BCom (Honours) in Economics. Critical thinking and writing skills were also addressed in this endeavour. This has led to a restructuring of the assignments with initial multiple-choice questions that count towards the year mark so that the student can get proactive in their research efforts. Assessment on all the other levels will also be revised to improve pedagogical intervention as another objective in this article.

Teaching, learning and assessment in Economics as subject has been discussed globally with various debates about pedagogy. Ojo, Booth and Woollacott (2018) published a paper on phenomenography. What became apparent was that students need assistance in thinking like economists. The latter links well with feedback from the focus group interviews, where some of the comments related to students need to think like economists.

In this process to revise the PQM in the Department of Economics, pluralism as pointed out in one of the themes in the interviews was also considered in pedagogical intervention as objective. Pluralism relates to students' ability to "think for themselves" and "reflective judgement" should be a crucial learning outcome of undergraduate economics (Garnett, 2009). "A critical thinking view should be followed in which the aim is to cultivate students' ability to reach reasoned conclusions in the face of analytical, empirical or normative uncertainties" (Freeman, 2009; Dow, 2009; Peterson & McGoldrick, 2009 for various arguments regarding pluralism in Economics education).

As part of a process of striving for excellence, cognisance should be taken of a changing world and resultant demands and expectations of new graduates in the workplace. One such tool is to review the degree curriculum and benchmark versus other international

and national universities, and the requirements of public and private industry. The intention was to efficiently and effectively prepare students for them to be able to 'hit the ground running' in the globalised economy.

4. CONCLUSION AND FUTURE RECOMMENDATIONS

This article is a mixed methods study, in that qualitative interviews inform and confirm the results of a quantitative survey done among alumni, students, faculty and industry on the degree offering within the Department. The survey served as a guide in the curriculum review and the department has ongoing consultations also with government to bridge the gap between industry and the university. The world of work and workplace as such will change as part of the fourth industrial revolution. Improving the graduateness and employability of students has become crucial in line with Unisa's motto of "Define tomorrow". The main findings show that creative and critical writing and numerical skills are key and at the forefront of any change that needs to occur. The main contribution of the aim and this curriculum review is that it has been done in line with pluralist thinking in Economics. In accordance with the findings, the Department of Economics (Unisa) will in future offer two streams of qualifications within Economics. On the one hand, an adjusted B Com (Economics) will be included. On the other hand, after considering degree offerings by other leading South African and international institutions, a new degree was suggested, namely BCom (Applied Economics). This BCom (Applied Economics) will make provision for Calculus and Linear Algebra at first year level, Statistics two and three and Health Economics at third year, which was specifically mentioned by the BMR results, at third year level as a new elective. The degree would also make provision for Statistics up to third year level and addressed the shortcoming mentioned in the BMR report. A broadening of Micro- and Macroeconomics to third year level for both degrees in Economics will fill the gap and extend the base knowledge of Economics to form a well-rounded individual for the job market, but also ready to pursue postgraduate studies. For both degrees, the content of all the levels will be coordinated and revised to improve pedagogy, including assessment at all levels as the modules move to fully online versions.

Although the BCom (Honours) stays unchanged, the research report module has been improved through improved assessment and extending the research methodology. Online short learning programmes will be explored to extend the curriculum to include panel data Econometrics including the use of STATA as pointed out by the BMR report. Cooperation with a government agency for a needs analysis and possible higher certificate and postgraduate diploma will be investigated.

In designing new modules such as the third year Micro- and Macroeconomics curriculum, module leaders will take cognisance of curriculum development and other levels' curriculum and coordinate efforts around feedback as also provided by the BMR report. Improved assessment at all levels will become paramount, with a view to extend pluralism and critical thinking by the student. The two-stream qualifications route of the Department of Economics will bring the department in line with international trends, echoing the motto of Unisa, of 'Define tomorrow' for generations to come. This article serves to inform other curriculum reviews and pedagogy of various disciplines locally and internationally, making South Africa the emerging market hub for future generations.

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LIST OF REFERENCES

Anderson, T., 2010. Theories for learning with emerging technologies. In G. Veletsianos (Ed.), *Emerging technologies in distance education* (pp. 23–39). Athabasca, Edmonton, Canada: Athabasca University Press.

Anon., 2016. Flying high. Economist, 2016.

Retrieved from <http://www.economist.com/news/international/21701081-new-crop-hands-universities-transforming-how-students-learn-flying-high>.

Athey, S.; Katz, L.E.; Krueger, A.B.; Levitt, S. & Poterba, J., 2007. What does performance in graduate school predict? Graduate Economics education and student outcomes. *AEA papers and proceedings*, 97(2):512-518.

Baran, M. L., & Jones, J.E., 2016. Mixed Methods Research for Improved Scientific Study. IGI Global. Accessed on 19 Apr. 2018 at doi:10.4018/978-1-5225-0007-0

Bates, T., 2011. Models for selecting and using technology: Synchronous or Asynchronous? Retrieved from <http://www.tonybates.ca/2011/06/29/models-for-selecting-and-using-technology-4-synchronous-or-asynchronous/>

Bates, T., 2018. Review of online learning 2018: weak leadership. Accessed on 7 January 2019 at <https://www.tonybates.ca/2018/12/21/2018-review-of-online-learning-weak-leadership/>

Belbase, S., 2011. Philosophical Foundations for Curriculum Decision: A Reflective Analysis. College of Education, University of Wyoming. Accessed on 13 February 2017 at <http://files.eric.ed.gov/fulltext/ED524740.pdf>

Bieger, G.R., 2014. Philosophical orientations and their relevance to education. Accessed at <http://www.jeffbloom.net/docs/PhilOrientations-Education.pdf> on 24/04/2014

Broadbent, J., 2016. 'Academic success is about self-efficacy rather than frequency of use of the learning management system', *Australasian Journal of Educational Technology*, 32(4), pp. 38–49. doi: 10.14742/ajet.2634.

Bureau of Market Research (BMR)., 2017. Degree offering of the Department of Economics (Unisa) – Curriculum review. Unpublished report.

Burger, P., 2018. *Getting it right: A new economy for South Africa*. Sandton: KMM Review Publishing.

Burgess, R.G. (ed.) 2005. *Field research: A Sourcebook and Field manual*. London: Routledge.

Business Dictionary. 2019. Valence. Accessed and retrieved on 6 November 2019 from <http://www.businessdictionary.com/definition/valence.html>

Cameron, E. & Green, M., 2015. *Making sense of change management*. 4th Edition. London: Kogan Page.

Carl, A.E., 2009. Teacher empowerment through curriculum development: Theory into Practice. Accessed on 2 May 2018 online.

Chen, J. & Lin, T., 2012. Do supplemental online recorded lecturers help students learn microeconomics? *International Review of Economics Education*, 11(1): 6-15.

Cho, M-H. & Heron, M.L., 2015. Self-regulated learning: the role of motivation, emotion, and use of learning strategies in students' learning experiences in a self-paced online mathematics course. *Distance Education*, 36(1): 80-99.

Coetzee, M.; Botha, J-A.; Eccles, N.; Holtzhausen, N. & Nienaber, H., 2012. *Developing student gradueness and employability*. Randburg: Knowres Publishing.

Conradie, P. W., 2014. Supporting Self-Directed Learning by Connectivism and Personal Learning Environments. *International Journal of Information and Education Technology*, 4(3), 254–259. <http://doi.org/10.7763/IJiet.2014.V4.408>.

Danilowicz-Gösele, K., Lerche, K., Meya, J & Schwager, R. 2017. 'Determinants of students' success at university', *Education Economics*. Taylor & Francis, 0(0), pp. 1–20. doi: 10.1080/09645292.2017.1305329.

Dow, S., 2009. 'History of Thought and Methodology in Pluralist Economics Education', *International Review of Economics Education*. Elsevier, 8(2), pp. 41–57. doi: 10.1016/S1477-3880(15)30069-4.

Freeman, A., 2009. 'The Economists of Tomorrow: The Case for a Pluralist Subject Benchmark Statement for Economics', *International Review of Economics Education*. Elsevier, 8(2), pp. 23–40. doi: 10.1016/S1477-3880(15)30070-0.

Fusilier, M. & Durlabhji, S., 2001. 'Cultural values of Indian managers: An exploration through unstructured interviews', *International Journal of Value-Based Management*, 14(3), pp. 223–236. doi: 10.1023/A:1017525822608.

Garnett, R. F., 2009. 'Rethinking the Pluralist Agenda in Economics Education', *International Review of Economics Education*. Elsevier, 8(2), pp. 58–71. doi: 10.1016/S1477-3880(15)30068-2.

Gikandi, J.W., Morrow, D. & Davis, N.E., 2011. Online formative assessment in higher education. *Computers and Education*, 57(4): 2333-2351. <https://doi.org/10.1016/j.compedu.2011.06.04>.

Golafshani, N., 2003. Understanding Reliability and Validity in Qualitative Research. *The Qualitative Report*, 8(4): 597-607.

Guri-Rosenblit, S. 2009. Digital Technologies in Higher Education: Sweeping Expectations and Actual Effects. New York: Nova Science.

Hahs-Vaughn, D.L. & Onwuegbuzie, A.J., 2010. Quality of abstracts in articles submitted to a scholarly journal: A mixed methods case study of the journal *Research in the Schools*. *Library and Information Science Research*, 32:53-61.

Hase, S., & Kenyon, C., 2000. *From andragogy to heutagogy*. In UltiBase Articles. Retrieved from <http://www.psy.gla.ac.uk/~steve/pr/Heutagogy.html>.

Horn, P. & Jansen, A., 2008. 'Improving success rates of first-year Economics students by means of a summer school programme — an evaluation', *Education as Change*, 12(1), pp. 67–79. doi: 10.1080/16823200809487195.

Keeve, A.; Naude, L. & Esterhuyse, K., 2012. Some predictors of academic performance of first-year students in three- and four-year curricula. *Acta Academica*, 44(1): 121-158.

Kizito, R.N., 2016. Connectivism in learning activity design: Implications for pedagogically-based technology adoption in African higher education contexts. *International Review of Research in Open and Distance Learning*, 17(2), 19–39.

Kop, R., Fournier, H., & Mak, J., 2011. A pedagogy of abundance or a pedagogy to support human beings? Participant support on massive open online courses. *The International Review of Research In Open And Distance Learning*, 12(7), 74-93. Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/1041/2025>

Letseka, M., & Pitsoe, V., 2013. The challenges and prospects of access to higher education at UNISA. *Studies in Higher Education*, 39(10), 1942–1954. <http://doi.org/10.1080/03075079.2013.823933>.

Li, I. & Simonson, R. D., 2016. 'The value of a redesigned program and capstone course in economics', *International Review of Economics Education*. Elsevier Ltd, 22, pp. 48–58. doi: 10.1016/j.iree.2016.05.001.

Luiz, J.M., 2009. Evaluating the performance of South African economics departments. *South African Journal of Economics*, 77(4), pp.591–602. doi: 10.1111/j.1813-6982.2009.01228.x

Macdonald, I. & Chiu, J., 2011. Evaluating the Viability of Mobile Learning to Enhance

Management Training. *Canadian Journal of Learning and Technology*, 37(1), Canadian Network for Innovation in Education.

Makhanya, M, Mays, T & Ryan, P., 2013. Beyond access : Tailoring ODL provision to advance social justice and development. *SAJHE*, 27(6), 1384–1400.

McGonigal, J., 2010. Gaming can make a better world. TED Talks.
http://www.ted.com/talks/jane_mcgonigal_gaming_can_make_a_better_world.html

Mishra, A, Vijayshri & Garg, S., 2009. Evaluation of an undergraduate Physics programme at the Indira Gandhi Open University: A Case Study. *International Review of Research in Open and Distance Learning*, 10(6), pp. 106–123. doi: 10.19173/irrodl.v10i6.753.

Noesgaard, S.S. & Orngreen, R., 2015. The effectiveness of e-learning: An explorative and integrative review of the definitions, methodologies and factors that promote e-Learning effectiveness. *Electronic Journal of E-Learning*, 13(4), 278–290.

Ojo, E., Booth, S. and Woollacott, L., 2018. 'Faculty's conceptions of teaching introductory economics in higher education: A phenomenographic study in a South African context', *International Review of Economics Education*. Elsevier. doi: 10.1016/j.iree.2018.05.001.

Peters, O., 2010. *Distance education in transition, developments and issues*. (5th ed), (pp. 11 – 93). Oldenburg, Germany: BIS verlag der Carl von Ossietzky Universität Oldenburg.

Peterson, J. & McGoldrick, K., 2009. 'Pluralism and Economic Education: A Learning Theory Approach', *International Review of Economics Education*. Elsevier, 8(2), pp. 72–90. doi: 10.1016/S1477-3880(15)30067-0.

Pretorius, A.M.; Prinsloo, P. & Uys, M.D., 2009. Student performance in Introductory Microeconomics at an African open distance learning institution. *Africa Education Review*, 6(1): 140-158, 2009.

Richardson, P. W., 2004. 'Reading and writing from textbooks in higher education: A case study from Economics', *Studies in Higher Education*, 29(4), pp. 505–521. doi: 10.1080/0307507042000236399.

Risenga, A., 2010. Attributes of students' success and failure in typical ODL institutions. *Progressio*, 32(2): 85-101.

Robinson, Z. 2018. Predicting student success in Public Economics. *International Journal of Economics and Finance*, 10(2):55-72.

Royal Bank of Canada, 2018. *Humans Wanted*. Toronto ON: Royal Bank of Canada. Accessed on 17 April 2018 at https://www.rbc.com/dms/enterprise/futurelaunch/_assets-custom/pdf/RBC-Future-Skills-Report-FINAL-Singles.pdf

Rudansky-Kloppers, S., Metz, N De, Cohen, T., Bester, P. & Da Silva-Esclana, N., 2014. The perceptions of first-year Business Management students of an online self-assessment tool within an ODL context. *Progressio*, 36(1), 129–156.

SAQA, 2000. The National qualifications framework and curriculum development. Accessed on 12 December 2018 at http://www.saqa.org.za/docs/pol/2000/curriculum_dev.pdf

Slade, S. & Prinsloo, P., 2013. Learning analytics: Ethical issues and dilemmas. *American Behavioural Scientist*, 57(10): 1510-1529.

Siemens, G., 2005. Connectivism: A learning theory for the digital age. *International Journal of Instructional Technology & Distance Learning*, 2(1).

Smith, L. & Edwards, L., 2007. A multivariate evaluation of mainstream and academic development courses in first-year microeconomics. *South African Journal of Economics*, 75(1): 99-117.

Smith, L.C., 2009. An analysis of the impact of pedagogic interventions in first-year academic development and mainstream courses in microeconomics. *South African Journal of Economics*, 77(1): 162-178.

Smith, L.C. & Ranchhod, V. 2012. 'MEASURING THE IMPACT OF EDUCATIONAL INTERVENTIONS ON THE ACADEMIC PERFORMANCE SECOND-YEAR MICROECONOMICS', *South African Journal of Economics*, 80(3), pp. 431–448.

Tait, A., 2015. *Student success in open, distance and e-learning*. The ICDE Report Series. ICDE: Norway.

The Guardian, 2016. Has the way universities teach economics changed enough? Available at: <https://www.theguardian.com/higher-education-network/2016/apr/28/has-the-way-universities-teach-economics-changed-enough>.

Unisa, 2010(a). Curriculum policy. Unpublished policy document.

Unisa, 2010(b). Vision and mission statement. Retrieved from http://www.unisa.ac.za/contents/courses/calendars/2010/pdf7/7_2010_e.pdf

Unisa. 2016. Strategic plan. Unpublished policy document.

Van Niekerk, L.J. Heydenrych, J.F. & Higgs P., 2003. Implementing the Online Learning Community in Africa: A Unisa Case Study. *African and Asian Studies*, 2(4), 421–474. <http://doi.org/10.1163/156920903773004013>

Voogt, J. & Roblin, N. P. 2012. 'A comparative analysis of international frameworks for 21st century competences: Implications for national curriculum policies', *Journal of Curriculum Studies*, 44(3), pp. 299–321. doi: 10.1080/00220272.2012.668938.

Wagemans, L.J., Valcke, M. & Dochy, F., 1991. Learning Economics at a distance: Quality and impact of expertise. A study with Open University students. *Distance Education*, 12(2).

Wildemuth, B.M. ed. 2009. *Applications of social research methods*. Santa Barbara: Libraries Unlimited.

World Economic Forum (WEF), 2017. Realizing human potential in the Fourth Industrial Revolution. Retrieved from https://www.weforum.org/whitepapers/realizing-human-potential-in-the-fourth-industrial-revolution_on 14 May 2018.

Yu, D., Kasongo, A. & Moses, M. 2017. 'Examining the performance of the South African economics departments, 2005-2014', *South African Journal of Economics*, 85(1), pp. 138–158. doi: 10.1111/saje.12139.

ANNEXURE A: TERMS OF REFERENCE FOR THE 60 CREDIT RESEARCH COMPONENT OF THE MEd IN ODL

Introduction

According to Unisa's Open Distance Learning (ODL) Policy (2008), ODL is an approach to learning that gives students flexibility and choice over what, when, where, at what pace and how they learn. In order to model this approach, the MEd in ODL is structured to offer students as much flexibility and choice with regard to teaching learning and assessment as possible, not only to meet their individual expectations, but also to enable them to use what they have learned and gained in practice.

Braun, Kanjee, Bettinger, and Kremer (2006) argue that assessment should not be seen as an end in itself, but as a vehicle for educational improvement. They state that assessment is not focused on knowledge alone, but also on the students' ability to demonstrate what they can do with the knowledge gained. Assessment should also focus on values, attitudes and habits of mind that affect both academic success and performance beyond and outside the educational environment (Oliver 2014).

Assessment should therefore consist of a diverse array of methods in order to reveal change and growth providing students with a choice regarding the form and content of the research component of this qualification. This means that based on research, the following options are available, and the terms of reference thereof should be available to students, supervisors and external examiners:

- Option A: Dissertation of limited scope
- Option B: Article ready to be submitted to a peer reviewed accredited journal
- Option C: Development of an online programme/course/module/modules

All the options should to be preceded by an approved research proposal and a supervisor needs to be appointed to ensure supervised research.

The different options will be discussed below.

Option A: Dissertation of limited scope

Emphasis: The dissertation is of limited scope and not as comprehensive in terms of research as in a full dissertation. This is partial fulfilment of the MEd in ODL degree, consisting of 60 credits of the total of 180 credits for the qualification. The research may be theoretical in nature and can consist of a literature study, such as a metasynthesis (for qualitative research) or a systematic review (for qualitative research).

Length: Between 70 and 80 pages, excluding the bibliography/list of references and annexures.

Format: Research report (as indicated on the MPEDU91 myUnisa website) and in the procedures for master's and doctoral studies

Focus: 1-3 research question/s and objective/s with a very specific focus. It does not need to be an original research but must be individually unique (targeted audience, setting, methods and research question/s).

Need to Illustrate: Independent research under supervision, a proper understanding of the basic steps of the research process, appropriate application of qualitative or quantitative methodologies, appropriate and recent materials from leading authors and researchers in the field must be traced, collected and documented in a critical narrative literature review, empirical data (if applicable) collected must be processed into a meaningful and logical whole in line with the research question(s), with proper conclusions and recommendations in the last chapter. An appropriate reference list with all references utilised included, should be provided as well as appendices where applicable. A wider understanding of international and specifically the African content and context should be evident.

Criteria
Formulation of research question(s), aim and objectives, based on the problem statement
Critical understanding of the applicable field of study
Illustration of independent research skills including the ability to select, find and apply sources
Ability to correctly and critically analyse, integrate and evaluate information
Ability to use original, well-structured and logical arguments to arrive at a scientifically acceptable answer to the research question
Professional presentation and effective transfer of information through the use of suitable language, correct terminology and adherence to conventions (accepted practices in the writing of a research document as expected by the College of Education – students and supervisors should refer to the proposal module MPEDU91 on myUnisa)

Consistent and correct application of the prescribed reference style
Evidence of ethical clearance, Turn-it-in (check for plagiarism)

Option B: Article ready to be submitted to a peer reviewed accredited journal

Because of the waiting periods of some journals, articles should be submitted in the format of a research report. The style and headings should be according to the guidelines of the journal. The latter should be attached to the article as an appendix.

Emphasis: A single authored article based on new original research in order to make a contribution to the field. The article should not have been submitted or accepted to a journal before. This is partially fulfilment of the MEd in ODL degree, consisting of 60 credits of the total of 180 credits for the qualification.

Length: Between 15 and 25 pages (in line with the requirements of the specific journal). In line with articles published in peer-reviewed accredited journals, the style is different and on a higher level than that of the mini-dissertation.

Format: Research report (as indicated on the MPEDU91 myUnisa website) but the format (after the title page and page of contents) should be that of an article (headings according to the authors' guidelines of the journal, which should be attached to the research report as an appendix)

Focus: 1-3 research question/s and objective/s with a very specific focus. Original research contributing to the body of knowledge in the field is required.

Need to Illustrate: Independent research under supervision, steps followed in the research process, appropriate application of qualitative or quantitative methodologies, appropriate and recent materials from leading authors and researchers in the field must be traced, collected and documented in a critical narrative literature review, empirical data collected (if applicable) must be processed into a meaningful and logical whole in line with the research question(s), with proper conclusions as required by the journal. An appropriate and reference list with all references included should be provided as well as appendices where applicable. A wider understanding of the

international and specifically the African content and context should be evident.

Criteria
Formulation of research question(s), the aim and objectives based on problem statement
Critical understanding of the applicable study field
Illustration of independent research skills including the ability to select, find and apply sources
Ability to correctly and critically analyse, integrate and evaluate information
Ability to use original, well-structured and logical arguments to arrive at a scientifically acceptable answer to the research question
Professional presentation and effective transfer of information through the use of suitable language, correct terminology and adherence to conventions (accepted practices in the writing of a research document for example avoiding plagiarism)
Consistent and correct application of the prescribed reference style
Evidence of ethical clearance, Turn-it-in report (check for plagiarism)
The research report is on the required level and consistent with the journal guidelines

Option C: Development of an online programme/course/module(s)

In exceptional cases, after consultation with a supervisor, a student will be allowed to develop an online programme/course/module(s). It should be emphasised that the focus of this option is not on teaching and learning but should clearly be on research with regards to the development of an online programme/course/module(s).

Emphasis: The dissertation is of limited scope and not comprehensive like research in a full dissertation. This is partially fulfilment of the MEd in ODL degree, consisting of 60 credits of the total of 180 credits for the qualification.

Length: Between 70 and 80 pages

Format: Research report (refer to the MPEDU91 myUnisa website)

Focus: 1-3 research question/s and objective/s with a very specific focus. It does not need to be original research but must be individually unique (targeted audience, setting, methods and research question/s).

Need to Illustrate: Independent research under supervision, basic steps of the research process, with a proper theoretical component by means of a literature review.

The development of the online programme/course/module(s) will form the last part of the research report and should be based on findings of the literature review. An appropriate reference list with all references included should be provided as well as appendices where applicable. A wider understanding of the international, and specifically the African content and context should be evident.

Criteria
Formulation of research purpose, objectives, question(s) based on the problem statement
Critical understanding of the applicable study field
Illustration of independent research skills including the ability to select, find and apply sources
Ability to correctly and critically analyse, integrate and evaluate information
Ability to use original, well-structured and logical arguments to arrive at a scientifically acceptable answer to the research question(s)
Professional presentation and effective transfer of information through the use of suitable language, correct terminology and adherence to conventions (accepted practices in the writing of a research document for example avoiding plagiarism)
Evidence of the planning of an online programme/course/module(s), based on the literature review
Consistent and correct application of the prescribed reference style

Conclusion

The options as explained should provide students with flexibility and choice and they are encouraged to choose the option that will best suit their needs in order to meet their individual expectations. Because this is the research component of the qualification, consisting of 60 credits (assuming 600 hours of study/research), the focus in all options

should be on research in a particular aspect or specialisation in the field of open distance learning. As per Unisa policy, the research reports will be assessed by external examiners.

ANNEXURE B: QUESTIONS (BMR SURVEY)

Q1.1 Dear sir/madam, as an important stakeholder in the field of Economics, you are hereby invited to participate in a study investigating the collective opinion on the relevance and importance of the B Com Economics degree offerings at Unisa.

Your consent to participate in the study will be highly valued. Please note that your identity and responses will remain confidential. The findings of the study will be presented in a research report and will be shared with any interested party who participated in the opinion survey. Once you have consented to participate, please continue with the survey which should take no longer than 10 minutes of your time. Should you require further information, please contact Prof Pierre Joubert (joubejpr@unisa.ac.za or 012 429 8086) and/or Prof Deon Tustin (tustidh@unisa.ac.za or 012 3156). Regards, Prof DH Tustin: Head: Bureau of Market Research.

Q2.1 Please indicate your fellowship with Economics at Unisa

- Practicing Economist (1)
- Lecturer at Unisa (2)
- Lecturer at another university (3)
- Unisa third year or undergraduate student (4)
- Unisa honours or postgraduate student (6)
- Unisa Tutor (5)
- Other: Please specify (7)

Q2.2 Please indicate the importance of including the following fields of study/modules in the B Com Economics degree where a rating of “**very important**” means that the module should definitely be included as a compulsory module, “**important**” means that the module should be included but should not be compulsory, “**moderately important**” means that the module could be included, “**slightly important**” means that it is uncertain on whether the module should be included and “**not important**” means that the module is redundant and should be removed.

	Very important (1)	Important (2)	Moderately important (3)	Slightly important (4)	Not at all important (5)
Basic mathematical modelling and computational skills for application in the business world. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The fundamental formulae of financial mathematics (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The basic economic problem in different economic systems (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Measurement of economic activity (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How prices are determined through decisions made by individual households and firms under conditions of perfect and imperfect competition. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

<p>Macroeconomic theory and variables such as total production and income of a country, economic growth, unemployment, inflation and the balance of payments. (6)</p>	○	○	○	○	○
<p>Fundamental concepts, standards and principles of financial accounting (7)</p>	○	○	○	○	○
<p>Theories, methods and techniques relevant in the accounting field (8)</p>	○	○	○	○	○
<p>Foundation for the study of business management (9)</p>	○	○	○	○	○

<p>Strategic management and of the specific management tasks (planning, organising, leadership, control) (10)</p>	○	○	○	○	○
<p>Functional areas of business management Human resources, Marketing, Finance, Operations and Purchasing and Supply (11)</p>	○	○	○	○	○
<p>Exploratory data analysis as used in graphical and tabular techniques Measures of central location, variability and linear relationships; simple sampling procedures. (12)</p>	○	○	○	○	○

<p>Probability as a tool to create discrete and continuous probability distributions, used extensively in statistical inference. (13)</p> <p>The role of the sampling distribution of the mean, a proportion and the difference between two means in statistical inference, interval estimation and hypothesis testing. (14)</p>	○	○	○	○	○
<p>Simple linear regression and correlation, basics of time series analysis and forecasting. (16)</p>	○	○	○	○	○

Q2.3 Please indicate the importance of including the following fields of study/modules in the B Com Economics degree where a rating of “**very important**” means that the module should definitely be included as a compulsory module, “**important**” means that the module should be included but should not be compulsory, “**moderately important**” means that the module could be included, “**slightly important**” means that it is uncertain on whether the module should be included and “**not important**” means that the module is redundant and should be removed.

	Very important (1)	Important (2)	Moderately important (3)	Slightly important (4)	Not at all important (5)
A primer to a lifetime of critical thinking. (17)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Essential approaches and concepts of financial management, analysis and decision-making. (18)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Behaviour of consumers and producers in the economy in a closed and open economy and the role of economic policy in this regard, with special reference to South Africa. (19)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

<p>Theoretical macroeconomic views on the determination of income in a closed and open economy and the role of economic policy in this regard, with special reference to South Africa. (20)</p>	○	○	○	○	○
<p>The meaning and interpretation of a wide range of economic indicators (21)</p>	○	○	○	○	○
<p>Financial management; financial statements and cash flow; analysis of financial statements; overview of financial planning; time value of money, risk and return; value (shares, debentures and options). (22)</p>	○	○	○	○	○

<p>Investment in financial assets; the investment environment; the risk-return framework; fundamental and technical analysis; portfolio management. (23)</p>	○	○	○	○	○
<p>Management accounting principles like cost classification, cost behavior, cost-volume-profit analysis, cost estimation, cost objects, and various cost management accounting systems (24)</p>	○	○	○	○	○

<p>Theories, methods, techniques and skills relevant to financial management are introduced and applied in topics such as:</p> <p>Enterprise strategy and strategic financial management</p> <p>Risk management</p> <p>Managing and investing of funds (25)</p>	○	○	○	○	○
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<p>The economic analysis of labour and the labour market with regard to the supply of and demand for labour, education and training of the labour force, unemployment, vacancies and the migration of labour, trade unionism and collective bargaining, discrimination in the labour market, and to apply this knowledge to the South African labour market. (26)</p>	○	○	○	○	○
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<p>The South African financial system with reference to financial institutions, instruments and markets, and to demonstrate an understanding of the way that the monetary policy is implemented in South Africa. (27)</p>	○	○	○	○	○
<p>The relationship between the macro- and micro-economy, and the natural environment, evaluate frameworks for environmental decision-making and assess the formulation of different policy measures. (28)</p>	○	○	○	○	○

The application of microeconomic and macroeconomic theory to the tourism environment (29)	○	○	○	○	○
The development of the modern international economy since 1820 (30)	○	○	○	○	○

Q2.4 Please indicate the importance of including the following fields of study/modules in the B Com Economics degree where a rating of “**very important**” means that the module should definitely be included as a compulsory module, “**important**” means that the module should be included but should not be compulsory, “**moderately important**” means that the module could be included, “**slightly important**” means that it is uncertain on whether the module should be included and “**not important**” means that the module is redundant and should be removed.

	Very important (1)	Important (2)	Moderately important (3)	Slightly important (4)	Not at all important (5)
The development of the Western market economy in South Africa (31)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Essential approaches and concepts of financial management, analysis and decision-making. (32)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Behaviour of consumers and producers in the economy in a closed and open economy and the role of economic policy in this regard, with special reference to South Africa. (33)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

<p>Theoretical macroeconomic views on the determination of income in a closed and open economy and the role of economic policy in this regard, with special reference to South Africa. (34)</p>	○	○	○	○	○
<p>The meaning and interpretation of a wide range of economic indicators (35)</p>	○	○	○	○	○
<p>Financial management; financial statements and cash flow; analysis of financial statements; overview of financial planning; time value of money, risk and return; value (shares, debentures and options). (36)</p>	○	○	○	○	○

<p>Investment in financial assets; the investment environment; the risk-return framework; fundamental and technical analysis; portfolio management. (37)</p>	○	○	○	○	○
<p>Management accounting principles like cost classification, cost behavior, cost-volume-profit analysis, cost estimation, cost objects, and various cost management accounting systems (38)</p>	○	○	○	○	○

<p>Theories, methods, techniques and skills relevant to financial management are introduced and applied in topics such as:</p> <ul style="list-style-type: none"> Enterprise strategy and strategic financial management Risk management Managing and investing of funds (39) <p>Core issues in monetary economics. View, reflect on and solve current issues in the light of various theories that have been put forward concerning the roles of money, interest rates and inflation in the economy. (40)</p>	○	○	○	○	○
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<p>Trade theories and trade policy issues, as well as to analyse the motives and effects of international capital flows. (41)</p>	○	○	○	○	○
<p>Current issues of the balance of payments, the foreign exchange rates, and the different theories thereof. (42)</p>	○	○	○	○	○
<p>Public finance issues and policy within the context of the South African economy and other developing countries. (43)</p>	○	○	○	○	○
<p>How economic thinking has developed over the centuries with particular references to famous economists (44)</p>	○	○	○	○	○

<p>Using economic theory, mathematical and statistical tools to specify and estimate the coefficients of a regression equation in the most efficient way. (45)</p>	○	○	○	○	○
<p>Economic development issues and policy within the context of developing countries. (46)</p>	○	○	○	○	○
<p>Investor Psychology; Prospect theory; Efficient market theory from a psychological perspective; Heuristics and Framing. (47)</p>	○	○	○	○	○

<p>Management Accounting Techniques - Advanced behavioural aspects of cost; advanced concepts in costing systems; integrated planning and budgeting; standard costing; performance management in decentralised organisations; relevant decision making in various scenarios; price setting for internal and external purposes; advanced aspects of sensitivity analysis (48)</p>	○	○	○	○	○
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<p>Financial Management Techniques; Determine the optimal capital structure; Appraise long-term investment opportunities; Determine working capital and dividend policies and optimise levels of cash and short-term financing. Apply basic techniques to manage exposure to foreign exchange transactions. Apply information technology (spreadsheet programmes) where suitable. (49)</p>	○	○	○	○	○
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Q2.5 Please indicate any other subjects/modules that you think should be included in the B Com Economics degree that is currently not part of the offering

Q3.1 Please indicate the importance of including the following fields of study/modules in the B Com Honours Economics degree where a rating of “**very important**” means that the module should definitely be included as a compulsory module, “**important**” means that the module should be included but should not be compulsory, “**moderately important**” means that the module could be included, “**slightly important**” means that it is uncertain on whether the module should be included and “**not important**” means that the module is redundant and should be removed.

	Very important (1)	Important (2)	Moderately important (3)	Slightly important (4)	Not at all important (5)
<p>Different schools of thought in macroeconomics. Different theories of the economy as a whole, focusing on economic aggregates such as the level of and changes in national output, income and employment, inflation and interest rates and the relationships between them. The role economic policy to influence the economy, especially the role of monetary and fiscal policy. (1)</p>	○	○	○	○	○
<p>The economic behaviour of households, firms and markets as presented in microeconomic theories, such as neoclassical microeconomics and new institutional economics. (2)</p>	○	○	○	○	○

<p>The relevant toolset to practically solve real live economic related problems they may encounter in their work environment. Non-stationary time series analysis which is vital to overcome the problem of spurious regression relationships. Time series characteristics of data Estimation in a non-stationary environment The concept of co-integration. Different modelling techniques using different types of data, including qualitative data as well as situations where there is a two-way flow of influence among economic variables. (3)</p>	○	○	○	○	○
---	---	---	---	---	---

<p>Competencies required to plan, execute and write an acceptable academic research paper in Economics. (4)</p>	○	○	○	○	○
<p>An advanced understanding of the world of banking and finance. (5)</p>	○	○	○	○	○
<p>A Thorough grasp and understanding of the main theoretical aspects of international trade and international monetary systems to explain the theory and principles of international economics (6)</p>	○	○	○	○	○
<p>The complexities regarding the role of government in a market economy. (7)</p>	○	○	○	○	○

<p>The fundamental differences between developed and developing countries so as to identify underlying problems and challenges that confront developing countries with the aim of formulating appropriate policies for mitigation. (8)</p>	○	○	○	○	○
--	---	---	---	---	---

Q3.2 Please indicate any other fields of study/subjects that you think should be included in the B.Com Honours Economics degree that is currently not part of the offering:

Q4.1 What professional and community trends, with regards to what economists do and what they are expected to do, influence you the most?

Q4.2 What other emerging economic trends and topics do you believe should be considered for future course and curriculum content and design?

ANNEXURE C: DETAILED FIVE-POINT SCALE ANALYSIS OF COURSE/MODULE AREAS

UNDERGRADUATE	Very important	Important	Moderately important	Slightly important	Not at all important
Macroeconomic theory and variables such as total production and income of a country, economic growth, unemployment, inflation and the balance of payments. (1)	75.4%	17.5%	6.3%	0.5%	0.3%
Basic mathematical modelling and computational skills for application in the business world.	68.1%	22.5%	7.3%	1.6%	0.5%
Measurement of economic activity	67.4%	25.1%	6.4%	0.8%	0.3%
The basic economic problem in different economic systems	66.4%	26.4%	5.9%	0.8%	0.5%
Current issues of the balance of payments, the foreign exchange rates, and the different theories thereof.	66.0%	25.2%	7.1%	0.3%	1.4%
How prices are determined through decisions made by individual households and firms under conditions of perfect and imperfect competition.	65.6%	25.9%	6.3%	1.9%	0.3%
Trade theories and trade policy issues, as well as to analyse the motives and effects of international capital flows.	63.9%	27.9%	6.0%	1.1%	1.1%
Public finance issues and policy within the context of the South African economy and other developing countries.	63.8%	27.1%	7.7%	1.1%	0.3%
Core issues in monetary economics. View, reflect on and solve current issues in the light of various theories that have been put forward concerning the roles of money, interest rates and inflation in the economy.	63.5%	27.5%	7.4%	1.1%	0.5%
Behaviour of consumers and producers in the economy in a closed and open economy and the role of economic policy in this regard, with special reference to South Africa.	62.1%	27.7%	8.3%	1.3%	0.5%
The relationship between the macro-and micro-economy, and the natural environment, evaluate frameworks for environmental decision making and assess the formulation of different policy measures.	61.0%	29.5%	7.9%	1.1%	0.6%
The South African financial system with reference to financial institutions, instruments and markets, and to demonstrate an understanding of the way that the monetary policy is implemented in South Africa.	60.9%	30.4%	6.7%	1.4%	0.6%
The economic analysis of labour and the labour market with regard to the supply of and demand for labour, education and training of the labour force, unemployment, vacancies and the migration of labour, trade unionism and collective bargaining, discriminate	59.9%	29.5%	8.9%	0.6%	1.1%
The meaning and interpretation of a wide range of economic indicators	59.8%	30.2%	8.2%	1.4%	0.5%
Theoretical macroeconomic views on the determination of income in a closed and open economy and the role of economic policy in this regard, with special reference to South Africa.	59.3%	30.2%	8.1%	1.6%	0.8%
The fundamental formulae of financial mathematics	57.3%	28.1%	11.4%	2.4%	0.8%

UNDERGRADUATE	Very important	Important	Moderately important	Slightly important	Not at all important
Economic development issues and policy within the context of developing countries.	57.1%	29.7%	9.9%	1.4%	1.9%
Using economic theory, mathematical and statistical tools to specify and estimate the coefficients of a regression equation in the most efficient way.	54.3%	32.2%	9.9%	2.8%	0.8%
Investment in financial assets; the investment environment; the risk return framework; fundamental and technical analysis; portfolio management.	50.1%	29.6%	15.2%	3.9%	1.1%
Simple linear regression and correlation, basics of time series analysis and forecasting.	48.0%	31.9%	14.2%	4.9%	1.1%
Financial management; financial statements and cash flow; analysis of financial statements; overview of financial planning; time value of money, risk and return; value (shares, debentures and options).	43.3%	30.5%	17.4%	7.1%	1.6%
Exploratory data analysis as used in graphical and tabular techniques Measures of central location, variability and linear relationships; simple sampling procedures.	42.3%	35.6%	18.3%	3.5%	0.3%
How economic thinking has developed over the centuries with particular references to famous economists	40.8%	36.1%	15.4%	5.2%	2.5%
Fundamental concepts, standards and principles of financial accounting	40.7%	34.6%	18.4%	4.7%	1.6%
Essential approaches and concepts of financial management, analysis and decision making.	40.5%	34.9%	16.4%	6.7%	1.6%
Strategic management and of the specific management tasks (planning, organising, leadership, control)	40.3%	31.2%	18.5%	7.3%	2.7%
Probability as a tool to create discrete and continuous probability distributions, used extensively in statistical inference.	39.2%	36.5%	19.2%	4.9%	0.3%
The application of microeconomic and macroeconomic theory to the tourism environment	38.9%	29.9%	21.1%	6.8%	3.4%
The role of the sampling distribution of the mean, a proportion and the difference between two means in statistical inference, interval estimation and hypothesis testing.	38.8%	37.9%	17.1%	4.9%	1.4%
Theories, methods and techniques relevant in the accounting field	37.9%	30.8%	20.3%	8.7%	2.4%
A primer to a lifetime of critical thinking.	37.4%	38.8%	18.4%	3.5%	1.9%
The development of the Western market economy in South Africa	35.9%	36.1%	20.4%	4.2%	3.4%
Financial Management Techniques; Determine the optimal capital structure; Appraise long-term investment opportunities; Determine working capital and dividend policies and optimise levels of cash and short-term financing. Apply basic techniques to manage ex	33.4%	35.9%	19.6%	8.3%	2.8%
The development of the modern international economy since 1820	33.0%	26.7%	27.0%	9.1%	4.3%
Theories, methods, techniques and skills relevant to financial management are introduced and applied in topics such as:	32.8%	34.2%	21.3%	9.8%	1.9%

UNDERGRADUATE	Very important	Important	Moderately important	Slightly important	Not at all important
Enterprise strategy and strategic financial management Risk management Managing and investing of funds					
Management accounting principles like cost classification, cost behaviour, cost-volume-profit analysis, cost estimation, cost objects, and various cost management accounting systems	32.2%	34.4%	19.4%	9.6%	4.4%
Foundation for the study of business management	31.5%	38.1%	21.9%	6.7%	1.9%
Management Accounting Techniques Advanced behavioural aspects of cost; advanced concepts in costing systems; integrated planning and budgeting; standard costing; performance management in decentralised organisations; relevant division making in various	30.5%	32.4%	21.1%	11.4%	4.7%
Investor Psychology; Prospect theory; Efficient market theory from a psychological perspective; Heuristics and Framing.	28.5%	34.6%	24.4%	9.1%	3.3%
Functional areas of business management Human resources, Marketing, Finance, Operations and Purchasing and Supply	26.8%	33.2%	25.5%	9.9%	4.6%

HONOURS	Very important	Important	Moderately important	Slightly important	Not at all important
Competencies required to plan, execute and write an acceptable academic research paper in Economics.	63.4%	24.9%	9.0%	2.1%	0.6%
Different schools of thought in macroeconomics. Different theories of the economy as a whole, focusing on economic aggregates such as the level of and changes in national output, income and employment, inflation and interest rates and the relationships b	62.0%	24.3%	10.7%	2.1%	0.9%
The fundamental differences between developed and developing countries so as to identify underlying problems and challenges that confront developing countries with the aim of formulating appropriate policies for mitigation.	61.6%	27.2%	7.7%	2.8%	0.6%
The economic behaviour of households, firms and markets as presented in microeconomic theories, such as neoclassical microeconomics and new institutional economics.	61.1%	25.8%	10.6%	1.8%	0.6%
The relevant toolset to practically solve real live economic related problems they may encounter in their work environment. Nonstationary time series analysis which is vital to overcome the problem of spurious regression relationships. Time series character	59.9%	27.1%	10.2%	2.4%	0.3%
The complexities regarding the role of government in a market economy.	59.8%	30.2%	8.2%	1.2%	0.6%
A Thorough grasp and understanding of the main theoretical aspects of international trade and international monetary systems to explain the theory and principles of international economics	59.4%	29.4%	7.6%	2.7%	0.9%
An advanced understanding of the world of banking and finance.	57.9%	28.5%	9.7%	3.3%	0.6%

ANNEXURE D: INTERVIEW QUESTIONS

The following questions were kept in mind with the interviews (meetings) to ensure validity of results as seen by Golafshani (2003: 599) and directly connects with the BMR survey:

- e) Do you see the current BCom and BCom (Hon) in Economics degrees as fulfilling in the market's needs and if not, which areas would you consider strengthening?
- f) Do you believe that a postgraduate diploma or then rather workshops in Economics or Econometrics adds value?
- g) What professional and community trends, with regards to what economists do and what they are expected to do, influence you the most?
- h) Do you have any other comments that would add value with this process?

ANNEXURE E: ETHICAL CLEARANCE



UNISA COLLEGE OF EDUCATION ETHICS REVIEW COMMITTEE

Date: 2018/11/14

Dear Prof Robinson

Decision: Ethics Approval from
2018/11/14 to 2021/11/14

Ref: **2018/11/14/64069370/73/MC**

Name: Prof ZN Robinson

Student: 64069370

Researcher(s): Name: Prof ZN Robinson
E-mail address: robinz@unisa.ac.za
Telephone: +27 828355282

Supervisor(s): Name: Prof G van den Berg
E-mail address: vdberg@unisa.ac.za
Telephone: +27 12 429 4033

Title of research:

Curriculum review in Economics: Re-thinking pedagogy

Qualification: M. Ed in Curriculum and Instructional 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 2018/11/14 to 2021/11/14.

*The **low risk** application was reviewed by the Ethics Review Committee on 2018/11/14 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 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.




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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 **2021/11/14**. Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

Note:

The reference number **2018/11/14/64069370/73/MC** should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.

Kind regards,


Prof MT Gumbo
CHAIRPERSON: CEDU RERC
Gumbomt@unisa.ac.za


Prof V McKay
EXECUTIVE DEAN
Mckayvi@unisa.ac.za

 Approved - decision template – updated 16 Feb 2017

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ANNEXURE F: AUTHOR GUIDELINES



INTERNATIONAL REVIEW OF ECONOMICS EDUCATION

AUTHOR INFORMATION PACK

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ISSN: 1477-3880

DESCRIPTION

The *International Review of Economics Education* is dedicated to enhancing learning and teaching in the higher education economics community. It provides a forum for high quality research in the areas of curriculum design, pedagogy, assessment, teaching and learning innovation. The journal seeks to promote critical dialogue on educational theory and practice in economics and to demonstrate the relevance of research to good professional practice.

Examples of issues that contributors are encouraged to focus on:

- How do economics students learn?
- What economics should be taught?
- What are the constraints in improving economics teaching and learning?
- How can current practice be improved?
- How is economics taught internationally and what can we learn from this?
- How can electronic learning technologies be used to improve student learning in economics?

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Introduction

The *International Review of Economics Education* is dedicated to enhancing learning and teaching in the higher education economics community. It provides a forum for high quality research in the areas of curriculum design, pedagogy, assessment, teaching and learning innovation. The journal seeks to promote critical dialogue on educational theory and practice in economics and to demonstrate the relevance of research to good professional practice.

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