

# Factors influencing curriculum implementation in accredited private universities in Botswana

Curriculum in  
accredited  
private  
universities

Norman Rudhumbu

*Curriculum Studies, Bindura University of Science Education, Bindura,  
Zimbabwe, and*

E.C. (Elize) Du Plessis

*University of South Africa, Pretoria, South Africa*

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## Abstract

**Purpose** – The study investigated factors influencing how the curriculum is implemented in accredited private higher education institutions (PHEIs) in Botswana.

**Design/methodology/approach** – The study investigated factors influencing curriculum implementation in accredited private universities (PUs) operating in a highly regulated higher education environment in Botswana. A total of six PUs which have been operating in Botswana for at least five years were purposively selected for the study. The mixed methods approach was used in the study. From the six PUs, a sample of 306 lecturers was selected from a population of 1,500 lecturers using stratified random sampling strategy for the quantitative phase of the study, and 25 academic middle managers (AMMs) were also selected from a population of 273 academic middle managers using purposive sampling strategy for the qualitative phase. A structured questionnaire and a semi-structured interview guide were used for data collection. Principal component analysis (PCA) was performed to test the reliability and validity of the measurements. Descriptive statistics, chi-square, one-way ANOVA and regression analysis were used for quantitative data analysis, while a meta-aggregative approach was used for analysing qualitative data. Results showed that educational level, characteristics of the curriculum, of the institution and of the external environment had a significant influence on how curriculum is implemented in PUs in Botswana, while gender, age and years of teaching experience did not have a significant influence. These results have implications on educational policy formulation by regulatory authorities as well as practice in universities for the purpose of enhancing curriculum implementation.

**Findings** – Results showed that educational level, characteristics of the curriculum, of the institution and of the external environment had a significant influence on how the curriculum is implemented in PUs in Botswana, while gender, age and years of teaching experience did not have a significant influence.

**Research limitations/implications** – Data were collected from lecturers in accredited private higher education institutions in Botswana only which limited the scope of insight into challenges facing accredited private institutions. Future research needs to expand the scope and consider private both private and public higher education institutions in Botswana and beyond so that more insight on the factors affecting curriculum implementation in higher education institutions can be established and appropriate policies and processes could be put in place for effective curriculum implementation.

**Practical implications** – The study provides insight into challenges affecting curriculum implementation in higher education institutions and how regulatory authorities, institutional authorities and lecturers can contribute to effective curriculum implementation in these institutions.

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**Social implications** – The study offers an opportunity for higher education institutions to implement the curriculum in a manner that satisfies its primary customers who are the students by taking cognizance of and satisfying factors that contribute to effective curriculum implementation.

**Originality/value** – There is no study known to the researcher that has been conducted on factors affecting curriculum implementation in accredited private universities in Botswana. This study, therefore, is an eye-opener on such factors and what actions regulatory authorities, institutional management and lecturers should take to promote effective implementation of the curriculum in higher education institutions in Botswana.

**Keywords** Curriculum, Curriculum implementation, Curriculum implementation challenges, External environment, Lecturer factors, Private universities

**Paper type** Research paper

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## 1. Introduction

The purpose of the study was to establish factors affecting effective implementation of the curriculum in accredited private universities (PUs). PUs are universities that are established, owned and managed by individuals and whose funding mostly comes from tuition, investments and private donors (Burrows, 2018; Garnett, 2019; Grove, 2018). Accredited private universities are private institutions that have been registered and given approval by the government education authorities to operate as universities. These universities which have been implementing their various curricular over the last 40 years are required to always seek re-accreditation after every five years in line with the set quality assurance criteria. Effective curriculum implementation is important in universities. Various studies allude to the fact that there are a number of factors that influence effective implementation of the curriculum in universities (Ibenegbu, 2019; Tichnor-Wagner *et al.*, 2018). These factors are linked to issues that include lecturer capacity and motivation, resources, collaboration, institutional and state educational policies, among others (Taguma and Barrera, 2019). Separate studies by Yan (2014) and Madondo (2020) also found that the social structure of institutions, material and human resources, skills development and motivation of lecturers and provision of support by institutional and state authorities have an effect on how curriculum is implemented in PUs. Despite the fact that PUs face a number of challenges that have the potential to affect effective implementation of curriculum, as mentioned above, there is no study known to the researcher that has been conducted to establish curriculum-related, lecturer-related, institution-related and government-related factors that affect how curriculum is implemented in PUs in Botswana. This highlights the need for such a specific study. As a result therefore, establishing, understanding and addressing these factors help lecturers in PUs to implement curriculum consistently, effectively and with confidence (Lochner *et al.*, 2015; McNeill *et al.*, 2016), hence the purpose of this study.

Specific research objectives of the study were to:

- (1) Establish factors that influence curriculum implementation in accredited PUs operating in a highly regulated higher education environment.
- (2) Investigate how these factors influence effective curriculum implementation in accredited PUs in Botswana.
- (3) Identify strategies that can be used to enhance curriculum implementation in PUs.

## 2. Factors influencing curriculum implementation

### 2.1 *The concepts of curriculum and curriculum implementation*

Studies of curriculum, from conceptual frameworks to actual practice, are not new (Ornstein and Hunkins, 2014; Wang, 2006), yet coming up with a cogent and universally agreed definition of curriculum remains elusive. As a result, the term curriculum has assumed many

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different definitions and meanings (Bediaco, 2019; Bovill and Woolmer, 2018; Nevenglosky, 2018) because it is widely used by students, academics, institutional management and policymakers across different contexts (Fotheringham *et al.*, 2012). The term curriculum can be understood in two ways. The first way is to interpret it as fact, practice or social conflict “in terms of political power thus taking curriculum as a center of conflict” Brown (2014, p. 4). The second approach to understanding curriculum is by “analysing the nature of what is taught in schools thus taking curriculum as currere, a race, gender, aesthetic, institutionalised or poststructuralist texts” Brown (2014, p. 4). Given such a context, curriculum therefore assumes various meanings as already alluded to above. Using these different perspectives, curriculum is viewed variously as either a product, content or subject matter (the Tylerian view) thus taking curriculum as content in documents (Tabaundule, 2014); as programme of planned activities therefore taking curriculum as course of study (Carl, 2012); as intended learning outcomes hence taking curriculum as a set of learning objectives (Tabaundule, 2014); as all the experiences of the learner (the Dewean conception) consequently taking curriculum as all that students learn inside and outside the classroom (Brown, 2014); as currere as a result taking curriculum as lived experiences of the learner or a course they must complete (Lee *et al.*, 2013); as praxis therefore taking curriculum as agenda for social restructuring (Ornstein *et al.*, 2011) and as change as a result taking curriculum as a response to a change (Glatthorn, 2005). This study assumes the meaning of curriculum as all experiences of the learner as it is a definition that captures all that students do at universities. It is a definition that alludes to the fact that what students learn (experience) in schools is “as a result of a complex web of interactions and transactions between the actors (teachers and students) in the classrooms and the physical environment, and between actors and the materials such as textbooks, as well as between actors and the values and social norms adopted by the different actors” (Chin and Poon, 2014, p. 19).

The above definitions or understandings of curriculum have implications on how curriculum is implemented in universities as argued by Tabaundule, 2014 who asserted that the way lecturers understand a curriculum determines how they implement it. As a theoretical concept, however, implementation is viewed as the carrying out of something or the practical application of a method, procedure or desired purpose (Nevenglosky, 2018; Yang, 2013). Nevenglosky *et al.* (2019, p. 5) define curriculum implementation as “how teachers deliver instruction and assessment through the use of specified resources provided in a curriculum”. Curriculum implementation is also defined as the process of translating the intended curriculum into the operational curriculum (classroom practice) (Fullan, 2001) and is considered the most crucial and sometimes the most difficult phase of the curriculum development process (Ornstein and Hunkins, 2014). Effective implementation of the curriculum, therefore, is implementing a curriculum in ways that ensure student learning outcomes are achieved (Nevenglosky *et al.*, 2019) or is the putting into operation of a curriculum in a way that leads to the achievement of intended learning outcomes (Hall and Hord, 2015; Mandukwini, 2016). Effective implementation of the curriculum, therefore, and according to Margolis *et al.* (2017), must be interactive and experiential through the use of enquiry-based approaches.

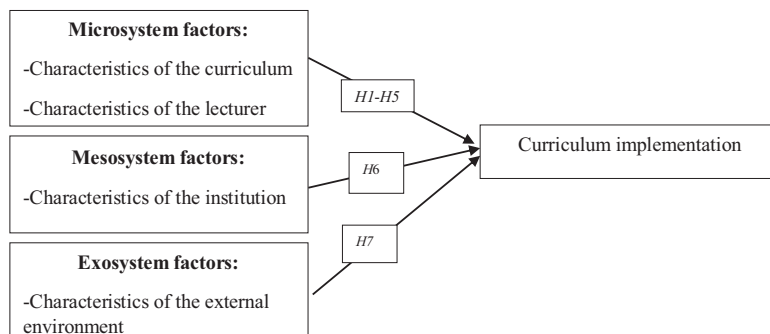
## *2.2 Research model and hypotheses formulation*

Curriculum implementation is influenced by a number of factors which include characteristics of the curriculum, of the external environment, of the institution and of the lecturers (Essays UK, 2018; Ibenegbu, 2019; Luo, 2016). Based on these factors, this study is therefore informed by the ecological systems theory developed by Bronfenbrenner (1979). The theory argues that education is a complex system that has layered levels that interact to influence curriculum implementation. According to the ecological systems theory, decisions, processes, structures and policies emanating from institutions and government educational agencies have both a direct and indirect influence on how curriculum is implemented in

learning institutions (Taguma and Barrera, 2019). Arguing from a position that curriculum implementation in universities occurs in a nested environmental context, the theory highlights the influence of multiple nested systems that include the microsystem, mesosystem, exosystem, macrosystem and chronosystem that have factors that either constrain or enable effective implementation of curriculum in learning institutions. This study only focussed on the first three systems which are relevant to the study hence, for the purpose of the study, Figure 1 is an adaptation of the nested system in which curriculum implementation takes place.

**2.2.1 Microsystem level factors.** The microsystem level relates to the classroom in terms of what is taught (the curriculum) and how it is taught (the instruction) in the classroom. According to the ecological systems theory, the manner in which students interact with the curriculum is determined, at this level, by the characteristics of the curriculum, the way lecturers understand that curriculum as well as their readiness (motivation and preparedness) to implement it (Taguma and Barrera, 2019). The theory further argues that interactions that take place in the classroom during curriculum implementation, in terms of lecturer instruction, learning activities and materials as well as assessment have a direct impact on how a curriculum is viewed (relevance and practicality) and eventually how it will be implemented.

**2.2.1.1 Curriculum-related factors.** Characteristics of a curriculum or curriculum-related factors can either hinder or promote its successful implementation (Bediaco, 2019; Spreen and Knapczyk, 2017; Taylor *et al.*, 2016). These characteristics include the need for the curriculum, clarity, complexity and quality or practicality of the curriculum. In his study, Schagen (2011) found that many curricula fail at the implementation stage because of the characteristics of the curriculum. In their separate studies, Abadie and Bista (2018), Chapman *et al.* (2018) found that if lecturers feel that the innovation or curriculum has clear goals and implementation strategies, is implementable and is relevant to their own needs as well as to the students' needs, they usually will always be more willing and enthusiastic to implement it. Separate studies by Tichno-Wagner *et al.* (2018) and Marz and Kelchtermans (2013) found that for lecturers to be able to effectively implement a curriculum they must have a full understanding of the curriculum, its goals and objectives. Other studies by Cheung and Wong (2012) and Smith and Thier (2017) also found that a lack of curriculum clarity makes it difficult for lecturers to understand and effectively implement it. In their studies also, Abadie and Bista (2018) and Tikkanen *et al.* (2017) and found that for a curriculum to be effectively implemented lecturers need to be given adequate time to understand and appreciate its relevance as well as develop confidence that they can successfully implement it.



**Figure 1.** Research model adapted from the ecological systems theory (Bronfenbrenner, 1979)

*H0.* There is no significant relationship between curriculum-related factors and curriculum implementation in private universities.

*H1.* There is a significant relationship between curriculum-related factors and curriculum implementation in private universities.

2.2.1.2 Lecturer-related factors. Lecturer-related factors also called characteristics of lecturers include those qualities such as level of education, gender, age and years of teaching experience that have an impact on how lecturers perform their duties (Seehorn, 2012). Lecturers are viewed as instrumental to effective implementation of curriculum in universities (Nevenglosky *et al.*, 2019), and hence an understanding of these qualities to curriculum implementation is important. A study by Nevenglosky (2018) found that if lecturers are adequately prepared through training and resource provision, they tend to develop positive attitudes and confidence and become more effective in the implementation of the curriculum. A study by Jess *et al.* (2016) found that lecturer characteristics that include level of education, age, gender and years of teaching experience have an influence on the implementation of a curriculum. This confirmed results of an earlier study by Seehorn (2012) which found that characteristics of lecturers which include educational level, age, gender and teaching experience influenced the quality of instruction as well as the quality of the students' educational experiences and hence had a positive influence on curriculum implementation. In his study, Bouck (2008) found that lecturers most define and shape how curriculum is enacted in classrooms because they play a more direct role than textbooks since they are the ones who make the final decisions about what gets taught and what is not. Lecturer characteristics fall under the technical dimension of curriculum implementation. The technical dimension relates to the level of education (knowledge) and skill lecturers have in their area of specialization (Essays UK, 2018; Roman, 2019).

Availability of adequately and technically qualified and experienced staff is critical to the successful implementation of a curriculum (Kyndt *et al.*, 2016; Polikoff and Porter, 2014). In a study by the Education Review Office (2010), it was found that experienced staff had an extensive and deeper knowledge of both the curriculum and strategies of implementing it and hence implement the curriculum better than the less experienced lecturers. Rogan and Grayson (2003) in their earlier study also found that lecturers who have not received adequate training failed to effectively and sufficiently implement the curriculum in their institutions. In their separate studies, MacDonald *et al.* (2016) and Margolis *et al.* (2017) found that age and gender of lecturers had significant influence on how lecturers implement curriculum in universities.

*H0.* There is no significant relationship between gender of the lecturer and curriculum implementation.

*H2.* There is a significant relationship between gender of the lecturer and curriculum implementation.

*H0.* There is no significant relationship between educational level of the lecturer and curriculum implementation.

*H3.* There is a significant relationship between educational level of the lecturer and curriculum implementation.

*H0.* There is no significant relationship between age of the lecturer and curriculum implementation.

*H4.* There is a significant relationship between age of the lecturer and curriculum implementation.

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- H0.* There is no significant relationship between years of teaching experience of the lecturer and curriculum implementation.
- H5.* There is a significant relationship between years of teaching experience of the lecturer and curriculum implementation.

*2.2.2. Mesosystem level factors.* The mesosystem level is also referred to as the institutional level and signifies the arena in which curriculum implementation takes place. [Taguma and Barrera \(2019\)](#) argue that characteristics of the institution that include attributes such as collaboration among institutional staff, level of institutional support and adequacy of appropriate resources have a direct impact on effective implementation of curriculum in universities.

*2.2.2.1 Institution-related factors.* Institution-related factors also called institutional influences or characteristics of the institution that affect curriculum implementation fall into two categories namely the political and cultural dimensions of the implementation process. The political dimension relates to power and influence and deals with issues such as administrative support, leadership, collaboration, negotiation and conflict resolution in the institutions ([Essays UK, 2018](#); [McShane and Eden, 2015](#); [Roman, 2019](#)). In their study, [Morgan and Xu \(2011\)](#) found that where the political dimension is not conducive and supportive the staff tend to feel demoralized and demotivated that they find it difficult to effectively implement the curriculum. On the other hand, a study by [Hall and Hord \(2015\)](#) found that the cultural dimension which “relates to the values, beliefs and norms, both consensual and competing in individuals, groups, departments and institutions” ([Hall and Hord, 2015](#), p. 15) has also an impact on how the curriculum is implemented in learning institutions. The role of institutional management therefore is critical in ensuring that both the political and cultural dimensions of curriculum implementation are satisfied. In separate studies by [Budak \(2015\)](#), [Chapman et al. \(2018\)](#), [Cheung and Yuen \(2017\)](#) and [Simons and MacLean \(2018\)](#), results showed that strong leadership support, shared vision, provision of adequate resources and the establishment of a strong collaborative team culture in an institution are important ingredients for effective curriculum implementation. Also, separate studies by [Hall and Hord \(2015\)](#) and [Park and Ham \(2016\)](#) found that institutional management’s attitude towards and their perceptions of the curriculum have an influence on implementing lecturers’ perceptions of and attitudes towards the curriculum as well as towards how they eventually implement the curriculum.

- H0.* There is a significant relationship between characteristics of the institution and curriculum implementation in private universities.
- H6.* There is a significant relationship between characteristics of the institution and curriculum implementation in private universities.

*2.2.3. Exosystem level factors.* The exosystem level refers to external variables that have an impact on curriculum implementation. Such variables include issues of policies that local, provincial and national education agencies promulgate as well as the behaviour of regulatory authorities that potentially affect issues such as curriculum development, staff recruitment, training, learning time, resource mobilization that ultimately affect how curriculum is implemented in PUs ([Taguma and Barrera, 2019](#)).

*2.2.3.1 External environment-related factors.* External environment-related factors also called characteristics of the external environment relate to regulatory officials and the educational policies they promulgate that impact how curriculum is implemented in PUs. Two critical external influences of curriculum implementation in PUs in the context of Botswana are the government or government regulatory authorities and policies they develop and expect PUs to implement. These regulators and their policies exert pressure on

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institutions to implement curriculum in a certain prescribed way (Roman, 2019; Toma *et al.*, 2015). In highly regulated higher education environments such as in Botswana, a top-down chain of government command structures is used for determining what and how it must be taught in PUs. Such a situation according to Taguma and Barrera (2019) leads to implementing staff and their institutions being left with very little room for flexibility in the way they prefer to implement the curriculum thus affecting how effectively the curriculum is implemented. Separate studies by Kwok (2014), Smith and Thier (2017), Taole (2015) as well as by Taylor *et al.* (2016) found that if educational policies from government education regulators are not aligned with the contexts of implementing institutions, effective curriculum implementation becomes very difficult for implementing institutions and their lecturers.

*H0.* There is no significant relationship between characteristics of the external environment and curriculum implementation in private universities.

*H7.* There is a significant relationship between characteristics of the external environment and curriculum implementation in private universities.

### 3. Methodology

#### 3.1 Research design

The study employed a mixed methods approach that used a parallel or concurrent triangulation design. A mixed method research approach is “a type of research in which a researcher or team of researchers combine elements of quantitative and qualitative research approaches (e.g. use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration” (Zandvamaru and Daryapoor, 2013, p. 2). In the current study, during the use of the concurrent triangulation design, both qualitative and quantitative data were collected and analysed in one single phase to provide confirmatory or conflicting findings that may enrich the study (Da Guetterman *et al.*, 2017). The triangulation of both quantitative and qualitative data was done at the analysis phase of the study.

#### 3.2 Data collection

A structured questionnaire was used to collect quantitative data from a sample of 306 lecturers selected using a stratified random sampling strategy from a population of 1,500 lecturers from the six PUs. The structured questionnaire had four sections excluding biographic data. The four sections were as follows: characteristics of the curriculum with 16 items, characteristics of the lecturer with 14 items, characteristics of the institution with 22 items and characteristics of the external environment with 15 items. The total number of scale items in the questionnaire was 67. The questionnaire also used a 5-point Likert scale whose scale dimensions ranged from strongly agree (SA)-5; agree (A)-4; neutral (N)-3, disagree (DA)-2; to strongly disagree (SDA)-1. For ease of analysis, criterion mean (CM) was calculated as the average of the Likert scale dimension measures, that is,  $CM = (1 + 2 + 3 + 4 + 5) / 5 = 3$ . Using the CM of 3, any response whose mean was less than 3 signified a disagreement with a given assertion, while a response with a mean above 3 signified agreements with a given assertion. A response with a mean of 3 signified a neutral position. A pilot test was conducted on the questionnaire using 18 randomly selected lecturers (three lecturers from each of the universities) to measure internal consistency, and expert opinion was sought for content validity of the scale items. Pilot test results showed a high internal consistency reliability result of a Cronbach alpha value of 0.839 which was above the internal consistency reliability bench mark alpha value of 0.7 (Goforth, 2015; Griffith, 2015). With regard to content validity, the questionnaire was subjected to expert opinion using six experts (one from

each of the six PUs), and their recommendations were incorporated into the questionnaire before administration. Using the stratified random sampling strategy, each stratum (institution and its academic faculties) had a random sample proportionately selected into the study sample. Of the six PUs, five had five academic faculties, while one had six academic faculties, and lecturers to participate in the study were selected from all academic faculties in each of the universities.

To collect qualitative data, a semi-structured interview guide was used on a sample of 25 academic middle managers selected using purposive sampling strategy from a population of 273 academic middle managers from six PUs. The semi-structured interview guide had four sections in line with the ecology systems theory levels in the research model designed by the researcher as well as in line with the questionnaire structure used. The four sections sort views of lecturers on factors affecting curriculum implementation in PUs. The first part of the guide was introductory where participants were asked their views about what a curriculum meant to them. Each participant took between 45 min and one hour to answer questions during the interviews.

### 3.3 Data analysis

For the analysis of quantitative data, chi-square, one-way ANOVA and regression analysis were used to determine whether and to what extent the independent variables contributed to effective curriculum implementation. PCA was also used for data purification. PCA is a dimensionality-reduction method that is often used to reduce the dimensionality of large data sets, by transforming a large set of variables into a smaller one that still contains most of the information in the large set (Eriksson, 2018; Jaadi, 2019). For the current study, PCA employed the orthogonal rotation procedure using varimax with Kaiser normalization to summarise original data with minimum factors and maximum coverage. According to Jolliffe and Cadima (2016), varimax rotation creates a situation in which factors are orthogonal (uncorrelated with one another), which can make results easier to interpret and to replicate with future samples. Statistical Package for Social Sciences (SPSS) was used for conducting PCA on four factors with 67 items to ensure simplified data reduction by identifying a small set of factors which, according to Jolliffe and Cadima (2016), helps to explain most of the variance observed in much larger manifested variables. The above is also confirmed by Jaadi (2019) and Lever *et al.* (2017) who both argued that PCA is most effective for the purpose of reducing a relatively large number of variables to a smaller number of variables that captures the same information (variance and covariance) as the larger number of variables. Descriptive statistics were also used for summarizing data.

For the analysis of qualitative data, a meta-aggregative approach was used. Since qualitative data is inherently interpretive (Cohen *et al.*, 2011), a meta-aggregative approach which employs a three-step process namely extraction, categorizing and synthesizing of findings as articulated by Hannes *et al.* (2010) was used for data analysis. Using this three-step data analysis process ensured that data were accurately captured, categorized and represented as a true reflection of the findings.

## 4. Results

With regard to administration of the instrument, 306 questionnaires were hand-delivered to the respondents, and 258 were returned giving a return rate of 84.3%. To measure the constructs and for the purpose of data purification, principal component analysis and KMO–Keiser–Olkin measure of sampling adequacy on independent variables were conducted.

### 4.1 Demographic characteristics of lecturers

Results in Table 1 show that 62.8% of the lecturers in PUs in Botswana are 40 years and below in age, while only 37.2% are above 40 years. This shows that the universities have a



Lecturer characteristic	Items	Number	%
Age	21–25	34	13.2
	26–30	75	29.1
	31–35	39	15.1
	36–40	14	5.4
	More than 40	96	37.2
Gender	Male	161	62.4
	Female	97	37.6
Educational level	Masters	192	74.4
	PhD holders	46	17.8
	Others	20	7.8
Teaching experience	less or equal to 5	40	15.5
	6–10	89	34.5
	11–15	43	16.7
	16–20	31	12.0
	More than 20 years	55	21.3

**Table 1.**  
Demographic  
information

relatively young group of lecturers. 62.4% of the lecturers are male, while 37.6% are female showing a gender imbalance. Most of the lecturers (74.4%) in the universities have a masters degrees as highest qualifications, while 17.8% of lecturers have doctor of philosophy (PhD) degrees showing that the universities in Botswana still have challenges attracting doctoral staff. In terms of teaching experience, there is a fair balance between those with 10 years and below (50%) and those with above 10 years (50%) of teaching experience.

#### 4.2 Data purification through principal component analysis (PCA) of independent variables

Table 2 shows the results of the PCA conducted using SPSS version 24, demonstrating the reliability and validity of the data. Items with factor loadings of less than 0.7 and eigenvalues of less than 1.0 were omitted from further analysis to improve data clarity in line with the assertion of Hair *et al.* (2010). Based on the analysis, 67 items from the four factors were reduced to 54 items. The percentage variance explained by all factors ranged between 67 and 79%. Since PCA makes the assumption that there is no unique variance (de Bruin and Buchner, 2010), the total variance was therefore considered as being equal to the common variance of all item factors. The total variance explained (VE) in this study after conducting

Factors (independent variables)	Mean values	SD	Rotated factor loading	% Variance explained (VE)	KMO values	Cronbach's alpha	Eigen values
Characteristics of the curriculum	4.15	0.742	0.819	67.372	0.828	0.805	3.715
Characteristics of the lecturer	3.79	0.650	0.755	71.169	0.763	0.729	4.804
Characteristics of the institution	3.91	0.616	0.833	68.301	0.910	0.815	2.781
Characteristics of the external environment	4.28	0.581	0.904	79.366	0.759	0.904	3.447
Total variance explained (VE)				71.379			

**Table 2.**  
Principal component  
analysis

the PCA was 71.38% demonstrating good construct validity. The positive correlation matrix between scale items demonstrated good convergent validity. For content validity, expert opinion was sought, and recommendation was incorporated into the scale. The reliability of collected data was measured through Cronbach’s alpha as a measure of internal consistency reliability. Reliability coefficients in this study showed high values of alpha (0.805 for characteristics of the curriculum, 0.729 for characteristics of the lecturer, 0.815 for characteristics of the institution and 0.904 for characteristics of the institution). The Kaiser–Meyer–Olkin (MKO) measure of sampling adequacy showed high values as demonstrated by the values between 0.763 and 0.910 generated by the four dimensions. The eigenvalues which are a measure of the variation of the total sample accounted for by each factor (Neill, 2017) are all above the bench mark of  $\geq 1$  and hence explained more variance than a single observed variable (Neill, 2017).

4.2.1 Hypotheses testing.

H0. There is no significant relationship between the characteristics of curriculum and curriculum implementation in private universities.

H1. There is a significant relationship between the characteristics of curriculum and curriculum implementation in private universities.

Results in Table 3 show that there is a significant relationship between characteristics of the curriculum and curriculum implementation in PUs ( $F(4, 203) = 3.434; p = 0.000; p < 0.05$ ). These results show that the way curriculum is developed has an impact on how it is implemented in PUs.

The above quantitative results are confirmed by qualitative results. AMMs believed that clear curriculum goals and objectives are critical for effective implementation of the curriculum as they act as guides to what should be achieved. It also emerged from interviews with AMMs that a curriculum that has well-organized content that is not too loaded makes its implementation effective. Other AMMs also spoke about the relevance of the curriculum as a critical factor in its effective implementation since the tendency of people is to expend effort on something this relevance from. There was therefore consensus among AMMs on the fact that if curriculum goals and objectives are clear and content is not tool loaded but is well organized, curriculum will be effectively implemented. A summary of some of the responses is as shown below:

... if a curriculum is characterized by poor design with unclear goals and objectives and loaded content such as is the case with the one we are currently using; this makes curriculum implementation difficult AMM1

If the characteristic of the curriculum is that its goals and objectives are not clear from the word go, then your curriculum implementation is not going to be able to achieve desired results or outcomes as lecturers will be conceiving the curriculum in so many different and confusing ways. AMM4

**Table 3.** One-way ANOVA on characteristics of the curriculum and curriculum implementation

ANOVA <sup>b</sup> Source	Sum of squares	df	Mean square	F	Sig.
<i>Effective curriculum implementation</i>					
Between groups	798.911	4	192.228	3.434	0.000 <sup>a</sup>
Within groups	11364.271	203	55.982		
Total	12163.182	207			
<b>Note(s):</b> Sig. $p < 0.05$					

In my department lecturers have a good and clear conception of the curriculum as relating to all experiences of the learners and also the characteristics of the curriculum are that it has clear objectives and goals as well as good content. AMM3

Table 4 tests the relationship between the biographic factors of lecturers (lecturer-related factors) and curriculum implementation in PUs.

H0. There is no significant relationship between gender of lecturers and curriculum implementation in PUs.

H2. There is a significant relationship between gender of lecturers and curriculum implementation in PUs.

Results in Table 4 show that there is no significant relationship between gender of a lecturer and curriculum implementation in PUs ( $\chi^2(1) = 3.15; p = 0.072; p > 0.05$ ). These results show that there is no significant difference on how curriculum is implemented by male and female lecturers in PUs.

Most of the AMMs who were interviewed were of the view that gender has no influence on how curriculum is implemented in PUs thus confirming results from the quantitative phase. AMMs believed that gender is just a socially assigned characteristic which on its own has no influence on how men and women perform their functions, all being equal. According to most

Variable	Characteristics	Agree/ Disagree	Total	$\chi^2$	<i>p</i> -value	Decision
Gender	Male	92/69 57.1/42.9%	161/ 62.4%	3.15	0.072	Reject; <i>p</i> > 0.05
	Female	53/44 58.2/41.8%	97/37.6%			
Age (Years)	21–25	20/14 58.8/41.2%	34/13.2%	0.206	0.581	Reject <i>p</i> > 0.05
	26–30	51/24 68/32%	75/29.1%			
	31–35	23/16 59/41%	39/15.1%			
	36–40	9/5 64.3/35.7%	14/5.4%			
	Above 40	59/37 61.5/38.5%	96/37.2%			
Educational level	Masters	102/90 53.1/46.9%	192/ 74.4%	6.454	0.036*	Accept <i>p</i> < 0.05
	Doctoral	30/16 71.4/28.6%	46/17.8%			
	Other	13/7 65/35%	20/7.8%			
Years of experience	less or equal to 5	21/19 52.5/47.5%	40/15.5%	1.365	0.813	Reject <i>p</i> > 0.05
	6–10	53/36 59.6/40.4%	89/34.5%			
	11–15	26/17 60.5/39.5%	43/16.7%			
	16–20	18/13 58.1/41.9%	31/12%			
	More than 20 years	31/24 56.4/43.6%	55/21.3%			

Note(s): \*Significant *p* < 0.05

**Table 4.**  
Descriptive statistics  
and cross-tabulation of  
chi-square test on  
lecturer factors

of the AMMS, what can only distinguish how female lecturers implement curriculum from how male lecturers implement curriculum are levels of training and teaching experience and not gender. Among some of the responses from AMMs were the following:

I don't think so that gender has an influence on how we implement curriculum. What is important is having a solid understanding of the curriculum and how to implement it. (AMM2)

It doesn't matter that you are a female or male, performance during curriculum implementation is the same. (AMM15)

My view is that gender is not an issue as effective curriculum depends on the personality and drive one has got. I know there are always those biases and female lecturers have to go an extra mile with regards to how they teach but I am convinced they perform the same as male lecturers with regards to curriculum implementation, if we remove any biases against them. (AMM18)

*H0.* There is a significant relationship between age of lecturers and curriculum implementation in PUs.

*H3.* There is a significant relationship between age of lecturers and curriculum implementation in PUs.

Results in Table 4 show that there is no significant relationship between the age of lecturers and curriculum implementation in PUs ( $\chi^2(4) = 0.206; p = 0.581; p > 0.05$ ). These results therefore indicate that there is no significant difference between how lecturers of different ages implement the curriculum in PUs.

Results from interviews with AMMs showed that age does play a significant role on how curriculum is implemented in PUs thereby disconfirming earlier results from lecturers. This could be because most of the AMMs were older lecturers who felt that age enabled them to perform their curriculum implementation responsibilities better than the younger lecturers. Most AMMs believed that as the lecturers become older they grow in tacit knowledge and ability to handle students as well as become more patient and more focussed on their jobs when compared to younger lecturers, hence implement the curriculum better. Among some of their responses were the following:

Age also matters as students may perceive young lecturers as not being knowledgeable enough to be able to competently implement the curriculum. (AMM7)

I believe the more mature you become in terms of age, the more positioned you also become to be a better lecturer when compared to a younger lecturer. Age is very pertinent for one to be able to apply oneself with patience, calmness and wisdom. (AMM8)

Yes, age has an influence in terms of focus as an older person is more focused on his/her job when compared to a younger person. (AMM10)

Yes. I would say yes because age contributes to accumulation of knowledge and experience. (AMM12)

*H0.* There is no significant relationship between educational level of lecturers and curriculum implementation in PUs

*H4.* There is a significant relationship between educational level of lecturers and curriculum implementation in PUs.

Results in Table 4 show that there is a significant relationship between educational level and curriculum implementation in PUs ( $\chi^2(2) = 6.454; p = 0.036; p < 0.05$ ). These results therefore show that there is a significant difference in the way curriculum is implemented by lecturers of different levels of education in PUs.

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It was unanimously agreed among AMMs in the interviews that educational level had an influence on how curriculum is implemented in PUs. AMMs believed that higher educational levels improves lecturers' mental and thinking process that helped them implement curriculum in more structured ways and effectively than lecturers with lower educational levels. Most AMMs also believed that higher educational levels led to the development in lecturers of more confidence and motivation to implement a curriculum. Among some of their responses were the following:

Absolutely educational level can influence the way a person implements curriculum. Education is structured such that you start from the simpler levels of concepts and as you go up the highest echelons of education, you begin to deal progressively with more complex concepts and ways of doing things which help you to comprehend and implement the curriculum better. AMM16

If your level of education is high, for example, a masters or doctoral qualification, the way you approach your teaching, your teaching methods, and your curriculum planning, will demonstrate high order thinking and processing skills as well as higher order knowledge levels critical for effective implementation of the curriculum. AMM9

*H0.* There is no significant relationship between years of teaching experience of lecturers and curriculum implementation in PUs.

*H5.* There is a significant relationship between years of teaching experience of lecturers and curriculum implementation in PUs.

Results in [Table 4](#) also show that there is no significant relationship between years of teaching experience and curriculum implementation in PUs ( $\chi^2(4) = 1.365; p = 0.813; p > 0.05$ ). These results indicate that there is no significant difference on the way curriculum is implemented by lecturers of different years of teaching experience in PUs.

Responses from AMMs during interviews contradict results from the quantitative phase of the study as AMMs believed that years of teaching experience have an influence on how curriculum is implemented in PUs. Most of the AMMs argued that background knowledge of teaching that lecturers acquire over the years enables them to effectively plan and implementation curriculum. Interview results also showed that most AMMs believed that years of experience bring in a wealth of teaching knowledge, lessons learnt that are critical for effective curriculum implementation. Among some of the responses of AMMs were the following:

With more years of experience, you become more aware of those things that make you implement curriculum better and better all the time. So, I really believe that years of experience have a big bearing on curriculum implementation. AMM2

Yes, years of experience is very important because you begin to have confidence, have background knowledge of teaching that you acquire over the years that enable you to effectively plan and implementation curriculum. AMM7

Years of experience bring in a wealth of teaching knowledge, lessons learnt and teaching skills that helps a lecturer implement a curriculum more effectively. AMM15

*H0.* There is no significant and statistical relationship between characteristics of the institution and curriculum implementation in private universities.

*H6.* There is a significant and statistical relationship between characteristics of the institution and curriculum implementation in private universities.

Results in [Table 5](#) show that there is a significant relationship between characteristics of the institution and curriculum implementation in PUs ( $F(4, 207) = 2.409; p = 0.008; p < 0.05$ ).

These results therefore show the ecosystem of the institutions with regard to issues such as resource provision, leadership style and collaboration among some of the factors have a significant impact on how curriculum is implemented in PUs.

The above results were also confirmed in interviews with AMMs. Most of the AMMs were of the view that the institutional environment is very important for effective implementation of the curriculum. Most AMMs believed that if an institution is characterized by a collaborative culture, opportunities for staff development, a supportive institutional management and teaching resources provided on time, then the curriculum will be effectively implemented. Among some of the AMMs' responses were the following:

In my current organisation I would say a big yes that the institutional environment is very important for effective curriculum implementation. The work environment in an institution should be very conducive by allowing staff to share knowledge and to interact with management every time. AMM7

At my institution unfortunately, management support is very little, and this affects effective curriculum implementation. AMM11

To me characteristics of an institution relate to the ecosystem of the institution, ie, everything that goes on within the institution. My institution is an institution that has systems and processes that enable staff to effectively implement curriculum from ICT to processes and procedures that facilitate effective curriculum implementation. Leadership at my institution is very supportive in terms of resources, professional growth of staff, research publications, and conferences. AMM22

*H0.* There is no significant relationship between characteristics of the external environment and curriculum implementation in private universities.

*H7.* There is a significant relationship between characteristics of the external environment and curriculum implementation in private universities.

Results in Table 6 show that there is a significant relationship between characteristics of the external environment and curriculum implementation in PUs ( $F(4, 205) = 2.084; p = 0.015; p < 0.05$ ). These results show that the external environment as defined by the education

**Table 5.**  
One-way ANOVA on characteristics of the institution and curriculum implementation

ANOVA <sup>b</sup> Source	Sum of squares	df	Mean square	<i>F</i>	Sig.
<i>Effective curriculum implementation</i>					
Between groups	501.774	4	125.443	2.409	0.008 <sup>a</sup>
Within groups	10,781.034	207	52.082		
Total	11,282.808	211			
<b>Note(s):</b> Sig. $p < 0.05$					

**Table 6.**  
One-way ANOVA on characteristics of the external environment and curriculum implementation

ANOVA <sup>b</sup> Source	Sum of squares	df	Mean square	<i>F</i>	Sig.
<i>Effective curriculum implementation</i>					
Between groups	617.181	4	154.295	2.084	0.015 <sup>a</sup>
Within groups	15,029.952	205	74.039		
Total	15,647.133	209			
<b>Note(s):</b> Sig. $p < 0.05$					

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regulatory agencies and the education policies they promulgated have a significant influence on whether curriculum is effectively implemented or not in PUs.

The above results are also confirmed in interviews with AMMs. Most AMMs were in the agreement with the view that while the external regulatory environment was too strict on the PUs and limited flexibility in the way these institutions implemented their curricular, that level of regulation was good to ensure the PUs produced quality services. Most AMMs also believed that interaction between regulatory authorities and PUs during policy formulation was important to ensure the institutions took ownership of and also understood the policies that govern how curriculum should be implemented in PUs AMMs felt such interaction, which was not currently happening, would lead to effective implementation of the curriculum. Among some of the responses from AMMs were the following:

While I agree that the PUs operate in a highly regulated environment, I feel that the government has a right to protect its citizens, to protect learners, and to protect the investments (time and money) people are putting in education. Government therefore needs to regulate PUIs to ensure that people get quality education. AMM25

Yes, it is true that PUs are highly regulated and operating in a very strict external environment. I take this in a positive sense because when the PUs are able to abide by what the regulators say, the issue of quality in these institutions will be assured since regulatory bodies are there to deal with issues of quality particularly in the implementation of curriculum. AMM4

#### 4.3 Multiple regression model

Table 7 shows that the independent variables namely characteristics of curriculum, characteristics of external environment, characteristics of the institution and characteristics of lecturer and conception of curriculum accounted for 78.1 % of variation in the effective implementation of curriculum in accredited PUs. The Durbin Watson value which was used for supporting the adjusted  $R^2$  had a value of 2.816, hence also provided parallel support to the assertion espoused above.

### 5. Discussion

The above results show that the following factors, characteristics of the curriculum, characteristics of the institution, characteristics of the external environment and characteristics of the lecturer have an influence on curriculum implementation in PUs. With regards to the characteristics of the curriculum, results showed that if a curriculum is well developed with clear goals and implementation plans, it will be effectively implemented by lecturers in PUs. Results further showed that how a curriculum is understood or conceived by the implementers had an effect on how it is implemented. If for example, according to [Tabaundule, 2014](#), lecturers understood or conceived a curriculum as a syllabus, product or content instead of as experiences for the learners, such lecturers would tend to implement that curriculum using lecturer-centred approaches affecting the curriculum implementation process and the achievement of student outcomes. Such a view was supported by [Hamilton \(2014\)](#) who argued that understanding a curriculum as content, syllabus or subject matter (the rationalization or Tylerian view) meant that the focus of a lecturer would only be on content to be taught with emphasis being on intellectual growth, hence the use of lecturer-centered approaches.

With regard to the relationship between the characteristics of the institution and curriculum implementation, results showed that the ecosystem of an institution that includes the leadership style, the work conditions, resources available, availability of trainings and issues of teamwork and knowledge sharing was critical for effective implementation of

**Table 7.**  
Regression model  
showing the nexus of  
relationship between  
dependent and  
independent variables

Model	R	R square	Adjusted R square	Std. Error of the estimate	R square change	Change statistics			Durbin-watson
						F change	df1	df2	
Model summary <sup>b</sup> dimension 1	0.887 <sup>a</sup>	0.786	0.781	1.47862	0.786	150.560	4	205	2.816

**Note(s):** a. Predictors: (Constant), CHACURR, CHAEXTENV, CHAINST, CHALEC  
b. Dependent Variable: CURRIMPLEM



curriculum in accredited PUs. When the lecturers feel that they are adequately supported through the leadership style employed by top management, provision of adequate resources and opportunities for professional growth and knowledge sharing, they will effectively and successfully implement the curriculum (Essays UK, 2018; Roman, 2019). This is supported by Morgan and Xu (2011) who argued that institutional factors as part of the mesosystem (Chapman *et al.*, 2018; Cheung and Yuen, 2017) have an influence on curriculum implementation. In their study, Simons and MacLean (2018) found that administrative support, effective leadership, collaboration, negotiation and conflict resolution in the institution as well as shared values, beliefs and norms were important for effective curriculum implementation in universities. A delicate balance of these dimensions according to Morgan and Xu (2011) could create a conducive and supportive environment for effective implementation of curricula in PUs.

It also emerged from the study that characteristics of the external environment (the exosystem) play a critical role in the effective implementation of the curriculum. The external environment relates to regulatory authorities and the regulations or policies they promulgate, which have an influence on how curriculum is implemented in PUs (Roman, 2019; Taguma and Barrera, 2019; Toma *et al.*, 2015). Results of the current study showed that regulations promulgated by regulatory authorities particularly had a major impact on the effective implementation of the curriculum if they are aligned to context of institutions. In their separate studies, Oloo (2010) and also Hitendra and Megan (2009) found that if regulations focus mostly on monitoring where the emphasis is on ensuring fidelity of implementation of processes and less on how the institutions could be assisted to improve in their provision of higher education, then curriculum implementation will not be effective.

Separate studies by Smith and Thier (2017) and Taole (2015) found that effective curriculum implementation required regulations that are flexible enough to allow institutions to do some mutual adaptation so that within the constraints of their contexts, institutions are still able to effectively implement their curricula. In many cases in Botswana, it is found that regulatory authorities attempt to enforce one-size-fit-all policies and regulations in the accredited PUs, and this affects how curriculum is implemented.

Finally, results also showed that with regard to characteristics of the lecturer, only educational level had a significant influence on how curriculum is implemented in PUs while age, gender and years of teaching experience did not. A study by Cetin (2016) found that if a lecturer is not adequately trained in the curriculum area to be implemented, then he or she will have difficulties implementing the curriculum due to less knowledge levels. A study by Margolis *et al.* (2017) also found that highly trained lecturers tended to use interactive teaching approaches such as enquiry-based teaching approaches which are important for effective curriculum implementation. Fullan (2007) also in his works found that professional adequacy (adequate training and knowledge) was critical for effective implementation of curriculum by lecturers.

## 6. Conclusion and recommendations

The paper examined factors that influence curriculum implementation in accredited PUs. Based on the results, a number of conclusions were drawn. It established that characteristics of the external environment, of the institution, of the lecturer and of the curriculum were the factors that influenced curriculum implementation in PUs. It was also established that the influence of all these factors on effective implementation of the curriculum in accredited PUs is significant. The study further established that the significant role that all these factors play on curriculum implementation was being affected by the nature of educational policies promulgated by regulatory authorities, a lack of institutional support and a lack of training in curriculum development among others. Based on these results, a number of

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recommendations to improve the implementation of curriculum in PUs in the context of the four factors are proposed. With regard to the curriculum itself, it is recommended that for effective curriculum implementation the curriculum goals and objectives needed to be clear and achievable for lecturers to be able to view them as realistic and achievable and also that the curriculum content needed to be well organized. It is also recommended that the external environment as exemplified by the regulators and regulations they promulgate should be more supportive of and flexible to the PUs by ensuring the alignment of regulations with contextual realities of institutions instead of using one-size-fit-all regulations. The regulators also needed to invest more in providing training opportunities and resources to the PUs for effective implementation of the curriculum. It is further recommended that PUs themselves needed to invest in upgrading the academic qualifications of their lecturers through professional development programs as the level of education had a significant influence on how lecturers implemented the curriculum in PUs. The PUs as learning institutions also needed to cultivate a more supportive culture by providing lecturers with adequate and timely materials as well as by promoting a spirit of collaboration in the institution for the curriculum to be effectively implemented.

#### *6.1 Limitations of the study*

The study only focussed on PUs in Botswana with regard to factors affecting curriculum implementation. The study could perhaps have been more informative if more higher education institutions in the country that include state universities participated in the study.

#### *6.2 Opportunities for future studies*

A study that uses all universities in Botswana or that also considers other universities outside Botswana will provided more insightful findings with regard to factors influencing curriculum implementation in universities. The study can also include colleges as part of higher education institutions.

### **References**

- Abadie, M. and Bista, K. (2018), "Understanding the stages of concerns: implementation of the common core state standards in Louisiana schools", *Journal of School Administration Research and Development*, Vol. 3 No. 1, pp. 57-66.
- Bediaco, A. (2019), *Models and Concepts of Curriculum Implementation, Some Definitions and Influence of Implementation*, available at: <https://www.researchgate.net/project/curriculum-researchers> (accessed 23 March 2020).
- Bouck, E.C. (2008), "Exploring the enactment of functional curriculum in self-contained Cross-categorical programs: a case study", *The Qualitative Report*, Vol. 13 No. 3, pp. 495-530.
- Bovill, C. and Woolmer, C. (2018), *How Conceptualisations of Curriculum in Higher Education Influence Student-Staff Co-creation in and of the Curriculum*, available at: <https://link.springer.com/article/10.1007/s10734-018-0349-8> (accessed 13 March 2020).
- Bronfenbrenner, U. (1979), *The Ecology of Human Development*, Harvard University Press, Cambridge, MA.
- Brown, G.T.L. (2014), "Conceptions of curriculum: a framework for understanding New Zealand's curriculum framework and lecturers' opinions", *Curriculum Matters*, Vol. 2, pp. 164-181.
- Budak, A. (2015), "The impact of a standards-based mathematics curriculum on students' mathematics achievement: the case of investigations in number, data, and space", *Eurasia Journal of Mathematics, Science and Technology Education*, Vol. 11 No. 6, pp. 1249-1264.
- Burrows, B. (2018), *What is the Difference between a Public and Private University?*, available at: <https://www.studyusa.com/en/a/1290/what-is-the-difference-between-a-public-and-private-university> (accessed 10 August 2020).

- 
- Carl, A.E. (2012), *Teacher Empowerment Through Curriculum Development: Theory into Practice*, Junta & Company, Cape Town.
- Cetin, N. (2016), "Effects of a teacher professional development program on science teachers' views about using computers in teaching and learning", *International Journal of Environmental and Science Education*, Vol. 11 No. 15, pp. 8026-8039.
- Chapman, S., Wright, P. and Pascoe, R. (2018), "Arts curriculum implementation: 'adopt and adapt' as policy translation", *Arts Education Policy Review*, Vol. 119 No. 1, pp. 12-24.
- Cheung, A.C.K. and Wong, P.M. (2012), "Factors affecting the implementation of curriculum reform in Hong Kong, China: key findings from a large-scale survey study", *International Journal of Educational Management*, Vol. 26 No. 1, pp. 39-54.
- Cheung, A.C.K. and Yuen, T.W.W. (2017), "Examining the perceptions of curriculum leaders on primary school reform: a case study of Hong Kong, China", *Educational Management Administration and Leadership*, Vol. 45 No. 6, pp. 1020-1039.
- Chin, T. and Poon, C. (2014), *Design and Implementation of the National Primary Science Curriculum: A Partnership Approach in Singapore*, available at: [www.springer.com/cda/content/document/cda/9789814585774-c2.pdf?sgwid=0](http://www.springer.com/cda/content/document/cda/9789814585774-c2.pdf?sgwid=0) (accessed 16 August 2016).
- Cohen, L., Manion, L. and Morrison, K. (2011), *Research Methods in Education*, 7th ed., Routledge, New York.
- Da Guetterman, T.C., Creswell, J.W., Wittink, M., Barg, F.L., Castro, F.G., Dahlberg, B., Watkins, D.C., Deutsch, C. and Gallo, J.J. (2017), "Development of a self-rated mixed methods skills assessment: the national institutes of health mixed methods research training program for the health Sciences", *Journal of Continuing Education in the Health Professions*, Vol. 37, pp. 76-82.
- De Bruin, G.P. and Buchner, M. (2010), "Factor and item response theory analysis of the protean and boundaryless career attitude scales", *South African Journal of Industrial Psychology*, Vol. 36 No. 2, pp. 1-11.
- Education Review Office (2010), *Preparing to Give Effect to the New Zealand Curriculum*, available at: <http://thehub.superu.govt.nz/project/readiness-implement-new-zealand-curriculum-2-2> (accessed 30 November 2017).
- Eriksson, L. (2018), "What is principal component analysis (PCA) and how it is used?", available at: <https://blog.umetrics.com/what-is-principal-component-analysis-pca-and-how-it-is-used> (accessed 6 June 2020).
- Essays, U.K. (2018), *Factors Which Make Implementation of the New Curriculum a Challenge*, available at: <https://ukdiss.com/examples/challenges-to-implementing-curriculum-change.php?vref=1> (accessed 21 May 2019).
- Fotheringham, J., Strickland, K. and Aitchison, K. (2012), *Curriculum: Directions, Decisions and Debate*, The Quality Assurance Agency for Higher Education, available at: <http://www.enhancementthemes.ac.uk/docs/publications/curriculum-directionsdecisions-and-debate.pdf?sfvrsn=8> (accessed 20 October 2016).
- Fullan, M. (2001), "Implementing change at the building level. Paper prepared for", in Owings, W. and Kaplan, L. (Eds), *Critical and Emerging Issues in Educational Leadership*, available at: [www.Michaelfullan.ca/wp-content/uploads/pdf](http://www.Michaelfullan.ca/wp-content/uploads/pdf) (accessed 17 May 2015).
- Fullan, M. (2007), *The New Meaning of Educational Change*, 4th ed., Lecturers College Press, New York.
- Garnett, G. (2019), *What's the Difference between a Public and Private University?*, available at: <https://www.edmit.me/blog/whats-the-difference-between-a-public-and-private-university> (accessed 10 August 2020).
- Glatthorn, A.A. (2005), *Curriculum Leadership: Development and Implementation*, available at: [www.goodreads.com/book/show/783570](http://www.goodreads.com/book/show/783570) (accessed 17 October 2016).
- Goforth, C. (2015), *Using and Interpreting Cronbach's Alpha*, available at: <http://data.library.virginia.edu/using-and-interpreting-cronbach's-alpha/on> (accessed 9 June 2020).
-

- 
- Griffith, M. (2015), *Item Analysis with Cronbach's Alpha for Reliable Surveys*, available at: <http://blog.minitab.com/blog/meredith-griffith/item-analysis-with-cronbachs-alpha-for-reliable-surveys> (accessed 14 October 2017).
- Growes, A. (2018), *What Is a Private University?*, available at: <https://www.thoughtco.com/what-is-a-private-university-788439> (accessed 10 August 2020).
- Hair, J., Black, W.C., Babin, B.J. and Anderson, R.E. (2010), *Multivariate Data Analysis*, 7th ed., Pearson Education International, Upper saddle River, New Jersey.
- Hall, G. and Hord, S. (2015), *Implementing Change: Patterns, Principles, and Potholes*, 4th ed., Pearson, Upper Saddle River, NJ.
- Hamilton, D. (2014), *Towards a Theory of Schooling*, Routledge, East Sussex.
- Hannes, K., Lockwood, C. and Pearson, A. (2010), "A comparative analysis of three online appraisal instruments' ability to assess validity in qualitative research", *Qualitative Health Research*, Vol. 20, pp. 1736-1743.
- Hitendra, P.K. and Megan, K. (2009), "Quality assurance in higher education: for whom and of what?", *International Journal of Management in Education*, Vol. 3 Nos 3-4, pp. 270-281.
- Ibenegbu, G. (2019), *Factors Affecting Curriculum Implementation in Nigeria*, available at: <https://www.legit.ng/1167582-factors-affecting-curriculum-implementation-nigeria.html> (accessed 10 April 2020).
- Jaadi, Z. (2019), *A Step by Step Explanation of Principal Component Analysis*, available at: <https://builtin.com/data-science/step-step-explanation-principal-component-analysis> (accessed 5 June 2020).
- Jess, M., Carse, N. and Keay, J. (2016), "The physical education curriculum process: more complex than you think!", *Education*, Vol. 4 No. 5, pp. 502-512.
- Jolliffe, I.T. and Cadima, J. (2016), *Principal Component Analysis: A Review and Recent Developments*. doi: [10.1098/rsta.2015.0202](https://doi.org/10.1098/rsta.2015.0202) (accessed 5 June 2020).
- Kwok, P. (2014), "The role of context in teachers' concerns about the implementation of an innovative curriculum", *Teaching and Teacher Education*, Vol. 38, pp. 44-55.
- Kyndt, E., Gijbels, D., Grosemans, I. and Donche, V. (2016), "Teachers' everyday professional development", *Review of Educational Research*, Vol. 86 No. 4, pp. 1111-1150.
- Lee, J.C., Zhang, Z., Song, H. and Huang, X. (2013), "Effects of epistemological and pedagogical beliefs on the instructional practices of teachers: a Chinese perspective", *Australian Journal of Teacher Education*, Vol. 38 No. 12, pp. 120-146.
- Lever, J., Krzywinski, M. and Altman, N. (2017), "Principal component analysis", *Nature Methods*, pp. 641-642.
- Lochner, B., Conrad, R. and Graham, E. (2015), "Secondary teachers' concerns in adopting learning management systems: a US perspective", *TechTrends: Linking Research and Practice to Improve Learning*, Vol. 59 No. 5, pp. 62-70.
- Luo, Y. (2016), "Gender and job satisfaction in urban China: the role of individual, family, and job characteristics", *Social Indicators Research*, Vol. 125 No. 1, pp. 289-309.
- MacDonald, A., Barton, G., Baguley, M. and Hartwig, K. (2016), "Teachers' curriculum stories: perceptions and preparedness to enact change", *Educational Philosophy and Theory*, Vol. 48 No. 13, pp. 1336-1351.
- Madondo, F. (2020), "Perceptions on curriculum implementation: a case for rural Zimbabwean early childhood development teachers as agents of change", *Journal of Research in Childhood Education*, pp. 1-18, doi: [10.1080/02568543.2020.1731024](https://doi.org/10.1080/02568543.2020.1731024).
- Mandukwini, N. (2016), *Challenges Towards Curriculum Implementation in High Schools in Mount Fletcher District, Eastern Cape*, Masters Dissertation Submitted to the University of South Africa, Pretoria, South Africa.

- 
- Margolis, J., Durbin, R. and Doring, A. (2017), "The missing link in teacher professional development: student presence", *Professional Development in Education*, Vol. 43 No. 1, pp. 23-35.
- Marz, V. and Kelchtermans, G. (2013), "Sense-making and structure in teachers' reception of educational reform. A case study on statistics in the mathematics curriculum", *Teaching and Teacher Education: An International Journal of Research and Studies*, Vol. 29, pp. 13-24.
- McNeill, K.L., Katsh-Singer, R., Gonzalez-Howard, M. and Loper, S. (2016), "Factors impacting teachers' argumentation instruction in their science classrooms", *International Journal of Science Education*, Vol. 38 No. 12, pp. 2026-2046.
- McShane, M. and Eden, M. (2015), "Encouraging efficiency, rewarding quality: lessons for school choice policy and practice", *Journal of School Culture*, Vol. 9 No. 1, pp. 97-114.
- Morgan, C. and Xu, G.R. (2011), *Reconceptualising obstacles to Lecturer Implementation of Curriculum Reform: Beyond Beliefs*, Paper presented at the Manchester Metropolitan University Conference, 17-19 July 2011, available at: <http://webcache.googleusercontent.com> (accessed 23 May 2016).
- Neill, J. (2017), *Survey Research in Psychology*, available at: <https://www.slideshare.net/jtneill/exploratory-factor-analysis> (accessed 14 June 2020).
- Nevenglosky, E. (2018), *Barriers to Effective Curriculum Implementation*, Doctoral Dissertation Submitted to the Malden University.
- Nevenglosky, E.A., Cale, C. and Aguilar, S.P. (2019), "Barriers to effective curriculum implementation", *Research in Higher Education Journal*, Vol. 36, pp. 1-31.
- Oloo, J.A. (2010), "Quality assurance of higher education in alberta, Kenya and Norway", *Current Issues in Education*, Vol. 13 No. 4, pp. 1-22.
- Ornstein, A.C. and Hunkins, F.P. (2014), *Curriculum: Foundations, Principles and Issues*, 6th ed., Pearson Educational, Boston.
- Ornstein, A.C., Pajak, E.F. and Ornstein, S.B. (2011), *Contemporary Issues in Curriculum*, 5th ed., Pearson Education, Upper Saddle River, New Jersey.
- Park, J. and Ham, S. (2016), "Whose perception of principal instructional leadership? Principal teacher perceptual (dis)agreement and its influence on teacher collaboration", *Asia Pacific Journal of Education*, Vol. 36 No. 3, pp. 450-469.
- Polikoff, M.S. and Porter, A.C. (2014), "Instructional alignment as a measure of teacher quality", *Educational Evaluation and Policy Analysis*, Vol. 36 No. 4, pp. 399-416.
- Rogan, J. and Grayson, D. (2003), "Towards a theory of curriculum implementation with particular reference to science education in developing countries", *International Journal of Science Education*, Vol. 25 No. 10, pp. 1171-1204.
- Roman, A.G. (2019), *Curriculum Implementation and Performance of Mathematics Education Students in One State University in the Philippines*, available at: <https://www.semanticscholar.org/paper/Curriculum-Implementation-and-Performance-of-in-One-Roman/347463cbc3021a7737ba4dc34b0abf69827084dc> (accessed 12 March 2020).
- Schagen, S. (2011), *Implementation of the New Zealand Curriculum: Synthesis of Research and Evaluation*, Ministry of Education, New Zealand.
- Seehorn, A. (2012), *Common Barriers to Curriculum Change*, available at: [www.ehow.com/info\\_8019688\\_commo-barriers-curriculum-change.html](http://www.ehow.com/info_8019688_commo-barriers-curriculum-change.html) (accessed 25 January 2018).
- Simmons, J. and MacLean, J. (2018), "Physical education teachers' perceptions of factors that inhibit and facilitate the enactment of curriculum change in a high-stakes exam climate", *Sport, Education and Society*, Vol. 23 No. 2, pp. 186-202.
- Smith, J. and Thier, M. (2017), "Challenges to common core state standards implementation: views from six states", *NASSP Bulletin*, Vol. 101 No. 3, pp. 169-187.
- Spreen, C.A. and Knapczyk, J.J. (2017), "Measuring quality beyond test scores: the impact of regional context on curriculum implementation (in northern Uganda)", *Fire: Forum for International Research in Education*, Vol. 4 No. 1, pp. 1-31.

- 
- Tabaundule, G.M. (2014), *Evaluative Research of the Implemented Secondary School Curriculum in Namibia*, PhD Thesis Submitted to the University of the Free State, Bloemfontein, South Africa.
- Taguma, M. and Barrera, M.F. (2019), *Draft Change Management: Facilitating and Hindering Factors of Curriculum Implementation*, available at: [https://www.oecd.org/education/2030-project/contact/Change\\_management\\_for\\_curriculum\\_implementation\\_Facilitating\\_and\\_hindering\\_factors\\_of\\_curriculum\\_implementation.pdf](https://www.oecd.org/education/2030-project/contact/Change_management_for_curriculum_implementation_Facilitating_and_hindering_factors_of_curriculum_implementation.pdf) (accessed 17 May 2020).
- Taole, M.J. (2015), "Towards a meaningful curriculum implementation in South African schools: senior phase teachers' experiences", *Africa Education Review*, Vol. 12 No. 2, pp. 266-279.
- Taylor, C., Rhys, M. and Waldron, S. (2016), "Implementing curriculum reform in wales: the case of the foundation phase", *Oxford Review of Education*, Vol. 42 No. 3, pp. 299-315.
- Tichnor-Wagner, A., Allen, D., Socol, A.R., Cohen-Vogel, L., Rutledge, S.A. and King, Q.W. (2018), "Studying implementation within a continuous continuous-improvement process: what happens when we design with adaptations in mind?", *Teachers College Record*, Vol. 120 No. 5, pp. 9-16.
- Tikkanen, L., Pyhältö, K., Soini, T. and Pietarinen, J. (2017), "Primary determinants of a large-scale curriculum reform: national board administrators' perspectives", *Journal of Educational Administration*, Vol. 55 No. 6, pp. 702-716.
- Toma, S., Alexa, I.V. and Sarpe, D.A. (2015), "Identifying the risk in higher education institutions", *Procedia Economics and Finance*, Vol. 15, pp. 342-349.
- Wang, H. (2006), *An Implementation of the English as a Foreign Language Curriculum Policies in the Chinese Tertiary Context*, PhD Thesis Submitted to the Queen's University, Kingston, Ontario Canada.
- Yan, C. (2014), "We can't change much unless the exams change: teachers' dilemmas in the curriculum reform in China", *Improving Schools*, Vol. 18 No. 1, pp. 5-19.
- Yang, X. (2013), "Research on high school students' everyday life in the new curriculum reforms implementation progress in China", *Creative Education*, Vol. 4, pp. 93-99.
- Zandvamar, A. and Daryapoor, E. (2013), "Mixed methods research: a new paradigm in educational research", *Journal of Educational and Management Studies*, Vol. 3 No. 4, pp. 525-531.

### Further reading

- American Institute for Research (AIR) (2016), *Concerns-based Adoption Model (CBAM)*, available at: [www.sedl.org/cbam/on](http://www.sedl.org/cbam/on) (accessed 3 June 2020).
- Fullan, M. (1994), "Implementation of innovations", in Husen, T. and Postlethwaite, T.N. (Eds), *The International Encyclopedia of Education*, 2nd ed., Pergamon, Oxford, pp. 2839-2847.
- Koo, C.N.A. (2009), *The Implementation of a Curriculum Innovation: A Study of Using Information Technology for Teaching and Learning in the Hong Kong Institute of Vocational Education*, PhD Thesis Submitted to the University of Wollongong, Hong Kong.
- Stander, E. and Herman, C. (2017), "Barriers and challenges private higher education institutions face in the management of quality assurance in South Africa", *South African Journal of Higher Education*, Vol. 31 No. 5, pp. 206-224.

### About the authors

Prof. Norman Rudhumbu has 30 years of experience in teaching, management, research and community service in schools, colleges and universities. Acted in the capacities of school head, principal lecturer, HOD, assistant dean and dean. Holds the following academic and professional qualifications: PhD, D.Ed., MPhil, MSc, MBA, M.ED, B.ED, Dip Ed. He has published 35 papers in peer-reviewed journals and presented in seven regional and international conferences. He is an author of one business management textbook and nine mathematics textbooks, a number of which have been prescribed for use in Botswana schools. His three main research interests are: (1) critical studies in curriculum and pedagogy, (2) learning, schools and innovations as well as (3) teaching and teacher education. Norman Rudhumbu is the corresponding author and can be contacted at: [nrudhumbu@buse.ac.zw](mailto:nrudhumbu@buse.ac.zw)

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E.C. (Elize) Du Plessis experience in distance teaching. She is a full professor in the Department of Curriculum and Instructional studies at the University of South Africa (Unisa) and is also involved in curriculum development in its School of Teacher Education. Her field of specialization is curriculum development, teaching and learning and distance education. She is currently the programme coordinator of the Post Graduate Certificate in Education programme (senior and FET phase). She is an experienced developer of course material for student teachers. She has made contributions to several books and a variety of journals and presented papers at both national and international conferences. Elize is also a national and international reviewer for several academic journals and acts as supervisor for MEd and DEd students.

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