

Determinants of education quality at tertiary institutions of learning: Perceptions of undergraduate students at BA ISAGO University, Botswana

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ABSTRACT

Tertiary Institutions of Learning are the most important level of education in any country because they develop the manpower that leads the nation in giving insight into future ideals, resources and solutions to problems. Education quality in any tertiary institutions is considered as one of the major elements that guarantee sustainable economic and social development in any country. This study identified the determinants of education quality at Tertiary Institutions of Learning as perceived by BA ISAGO University undergraduate students. This study utilized survey inferential design to explore the perceptions of a representative stratified sample of BA ISAGO undergraduate students with respect to four (4) existing faculties at the university (Faculties of: Education, Commerce, Built and Environment and Law) on quality education at Tertiary Institutions of Learning. The stratified sample consisted of two hundred and fifty (250) undergraduate students in the four faculties. A 30-item questionnaire was used as instrument for data collection. Data collected were analyzed statistically using mean and standard deviations, independent t-test and Analysis of Variance (ANOVA) at 0.05 alpha level. Five (5) determinants emerged accounting for approximately 81.96% of the total variance with eigen values ranging from 11.013 to 1.249. The findings that were perceived to be determinants of education quality were as follows: Lecturers' attributes; Administrative support; Institutional status; Students' characteristics and Academic procedures of the university. Recommendations were made based on these findings.

Keywords: Determinants of quality education, tertiary institutions, students' perceptions.

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INTRODUCTION

All over the world tertiary institutions are recognized as centers for higher learning, which are considered as expedients agents of development in the nation building. It is widely accepted that higher education is a leading instrument in promoting development (Cloete et al., 2011). Education quality in tertiary institutions is considered as one of the major element that guarantees sustainable economic and social development in any country. The future of any country depends largely on the quality of graduates groomed at the Tertiary Institutions of Learning, because these institutions are recognized as key forces for a country's development and should provide good services in terms of education quality. The role of tertiary institutions is to generate, disseminate and

utilize knowledge to produce graduates (scientists, engineers, professionals, technicians, scholars and managers) capable of contributing to the economic growth of a nation. According to Semela (2011), 'as the world becomes more connected, the global economy gets more competitive, and the challenges to be addressed are more complex, education has become the most powerful tool in providing solutions to various challenges'. This shows the importance of tertiary institutions of higher education in any developing country. Tertiary Institutions of Learning have since realized that their long-term survival depends on quality of their services and this quality sets one institution apart from the rest.

Private tertiary institutions in Botswana are those institutions offering tertiary education and/or training services, inclusive of assessment. A tertiary institution must have a comprehensive system of policies and procedures in place to ensure a continuous quality and improvement of programmes of the teaching, learning and assessment offered (TEC, 2008). There are several such institutions in Botswana; most of the institutions were established in the last ten years. Institutions like Limkokwing University, Ba Isago, ABM College, Botswana Accountancy College, NIIT.

Statement of the problem

A lot of studies have tried to conceptualize education quality in higher institutions from either staff's or administrators' perspective which lacks the perspective of students and external quality control agencies. In matters concerning quality in higher education, a lot of people wonder about whose opinion should be taken seriously or is of utmost importance in decision making processes. Students in Tertiary Institutions of Learning are part and parcel of the educational system and therefore, their perceptions or opinions matters in decision making concerning the quality of education they are receiving in tertiary institutions. The process of finding the determinants of education quality in tertiary institutions is to establish an effective quality higher education system driven by number of forces that demand a balanced approach. If a tertiary institution fails to strike the right balance among the competing factors, then it ends up compromising the quality of education. It is therefore necessary to be aware of such determinants of education quality in tertiary institutions to be able to improve the standards of higher education system in any country and especially at BA ISAGO University.

Research questions

1. What are the perceptions of BA ISAGO University undergraduate students on the determinants of education quality in tertiary institutions?
2. Is there significant difference with respect to gender of BA ISAGO University undergraduate students on the determinants of education quality in tertiary institutions?
3. Is there significant difference with respect to students' faculty of BA ISAGO University undergraduate students on the determinants of education quality in tertiary institutions?

Research hypotheses

1. There is no significant difference in perception of BA ISAGO undergraduate students on the determinants of

education quality in tertiary institutions with respect to gender.

2. There is no significant difference in perception of BA ISAGO undergraduate students on the determinants of education quality in tertiary institutions with respect to students' faculty.

LITERATURE REVIEW

The concept of education quality at tertiary institutions of learning

Education quality is a very important and current issue that cannot be overlooked in tertiary institutions of higher education. According to Hirvonen (2007), 'the concept of education quality in higher education is based on considering the needs of the students'. Cheng and Tam (1997) defined education quality as the 'character of the set of elements in the input, process, and output of the education system that provides services that completely satisfy both internal and external strategic constituencies by meeting their explicit and implicit expectations'. This definition included the important characteristics of quality espoused in the management literature: inputs, process, output and multiple constituencies of an educational institution whose expectations may vary. Mavondo et al. (2000) noted that facilities such as library, textbooks, learning and living environment, and other equipment that support teaching and learning processes are relevant to achieving education quality and suggested that education providers must ensure that these facilities are adequate and reliable to meet students' needs. Chen et al. (2007) also stressed that limited access to unreliable equipment prevent students' from learning effectively hence students must have access to reliable equipment and this provide students with education quality.

Chapman and Miric (2009), suggested that education quality refers to achieving cognitive knowledge and developing skills, which is generally accepted. These researchers also identified that an education system has multiple goals, where cognitive knowledge transmission seems to be its principle objective. It can then be summarized from these researchers' point of views that 'Education quality focuses on academic services provided by any tertiary institution of higher learning which should have an impact on the overall students' academic experiences, expectations and development of cognitive abilities and skills to be transmitted into the development of a nation'.

Education quality has been a serious issue for a long time in the educational system and it is gradually becoming issues of concern all over the world. A recent study identifying the dimensions of education quality by Akareem and Hossain (2012) investigated students' perceptions of education quality in Bangladesh private universities. Their study aimed at identifying the

demographic and background information of students that differentiate students' perceptions about quality of higher education. A sample of 432 students was taken from five top private universities of Bangladesh to evaluate their perceptions toward dimensions of high education quality. Multinomial regression analysis was conducted to identify the characteristics of students which made their perceptions about quality of higher education dissimilar. Their findings showed that status of students for scholarship, extracurricular activities, parents' education, age, previous result, and university they studied had significant influence on their perceptions about high quality education. These researchers identified the dimensions of high quality education as; *quality of students in terms of students' qualification and their background, students' characteristics in terms of current status and socio-economic background, faculty credentials, academic features and administrative supports.*

Ashraf et al. (2009) explored students' evaluation of education quality of private higher education sectors in Bangladesh with particular reference to the quality as well as the cost of education. The sample was taken on a random basis from about ten private universities in the Dhaka metropolitan area. The students were asked to evaluate the quality and the cost of education at private universities in Bangladesh. Respondents ranked the attributes according to a number of itemized seven point scale ratings bounded at each end by one of two bipolar adjectives. The results of this study showed that *faculty credentials, the academic calendar, campus facilities, research facilities and cost of education* were associated with education quality, and that the students felt that most of the private universities in Bangladesh provided education quality at unreasonably higher costs.

Gianns et al. (2007) examined undergraduate students' perceptions of quality teaching with respect to education quality. The researchers adapted the "Course Experience Questionnaire (SCEQ)" scale developed by Gianns et al. (2007), and also compared undergraduate students' studying at five faculties of Adiyaman university as well as students from faculties of education at five different universities. Exploratory factor analysis and confirmatory factor analysis were used for reliability and validity of the scale. The Cronbach's alpha was determined as 0.83. The scale was conducted on 1415 undergraduate students studying at five different universities. Students' perceptions did not differ with regards to teaching quality at faculties of education of the universities, whether be a newly founded one or not. Students' perceptions also revealed no significant problem in teaching quality at faculties of education.

Lizzio et al. (2002) researched into the relationship between university students' perceptions of their academic environment, their approaches to study and academic outcomes were investigated at both university and faculty levels with respect to education quality. The

responses of a large, cross-disciplinary sample of undergraduate students were analyzed using higher order path and regression analyses, and the results confirmed students' perceptions as influencing both 'hard' (academic achievement) and 'soft' (satisfaction, development of key skills) learning outcomes, both directly and mediated through their approaches to study. Perceptions of heavy workload and inappropriate assessment influenced students, and perceptions of good teaching. Students' perceptions of their current learning environment were a stronger predictor of learning outcomes at university than prior achievement at school.

Koslowski (2006) classified higher education quality as 'transcendent quality' as the result of reputation of and expertise of academic staff; 'manufacturing-based quality' as the service conforms to specifications and is fit to be used in manner for which it was designed; 'product-based quality' as increased student learning produced by the curriculum and academic staff; 'value-based quality' as acceptable performance at an acceptable price; and 'user-based quality' as students' needs, wants, and preferences.

Baliyan and Moorad (2018) investigated the perceptions of students on teaching effectiveness in private higher education institutions in Botswana. An exploratory and descriptive survey research design was adopted for this study. A valid and reliable questionnaire was used to collect data through a survey of 560 stratified randomly sampled students in private higher education institutions in Botswana. One sample t-test and Independent t-test were used for data analysis. A significant high level of teaching effectiveness was determined. Several items measuring teaching effectiveness contributed significantly negative to teaching effectiveness and therefore, it was recommended that lecturers should use strategies to improve on those areas of teaching to enhance their teaching. No difference in teaching effectiveness was determined with respect to age, gender and nationality of the students. However, there was a significant difference in the students' perceptions on teaching effectiveness between the university and the non- university institutions and, lecturers were found to be more effective in their teaching at the universities as compared to the lecturers in the non -university institutions.

From the literature reviewed, it seems that there is a need for more such studies on the determinants of education quality as perceived by BA ISAGO University undergraduate students in Botswana, in order to improve services provided to these students.

METHODOLOGY

This was a survey inferential research study designed to explore the perceptions of a representative stratified sample of *Gaborone campus* BA ISAGO undergraduate

students with respect to four (4) existing faculties at the university (faculties of Education, Commerce, Built and Environment and Law). The sample consisted of two hundred and fifty (250) undergraduate students as follows, 50 students from Faculty of Education; 21 from Faculty of Law; 107 from Faculty of Commerce and 52 from Faculty of Built Environment. Out of the two hundred and fifty (250) undergraduate students, two hundred and thirty (230) students responded to the questionnaire (73Males and 157 females).

Instrument used for collecting data

A questionnaire was developed to determine the perceptions of BA ISAGO undergraduate students on the determinant of education quality at Tertiary Institutions of Learning. The questionnaire consisted of two sections A and B. In Section A, the selected undergraduates were asked about their background information and in Section B consisted of thirty (30) closed ended questions in statements form on Determinants of Education Quality at Tertiary Institutions of Learning, on a likert scale of 1 (highly disagree) to 9 (highly agree). The questionnaire was used as data collection instrument which was designed after an extensive review of literature on the factors that determines education quality in Tertiary Institutions of Learning. The responses of these undergraduate students were analyzed statistically using Statistical Package for Social Science (SPSS software), the mean and standard deviations of their responses to each item were calculated and tabulated, factor analysis was used to find out the determinants of education quality, independent t-test was used to find out if there was any gender significant difference on the students responses and Analysis of Variance (ANOVA) at 0.05 significant level was used to find if there were significant differences in relation to the different faculties of the undergraduate students. Cronbach Alpha was used to determine the internal consistency of the instrument and co-efficient of 0.83 was obtained. All hypotheses were tested at 0.05 level of significance.

The scree plot analysis showed that five (5) determinants emerged (Figure 1). After the fifth point, all the other points were showing a flatter slope. This showed that the first five factors contributed substantially in extracting variability caused by all the variables, whereas the remaining factors have very little marginal contribution to variable reduction.

From Table 1, factor analysis with principal components method and varimax rotation summarized the underlying determinants. Five (5) determinants emerged accounting for approximate 81.96% of the total variance with eigenvalues ranging from 11.013 to 1.249. The first factor accounted for 19.992% variance which is basically *lecturers' attributes*. The second factor, accounted for 17.590% of variability which is

Presentation of results

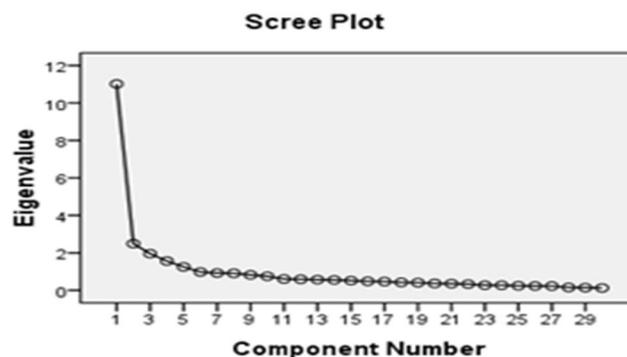


Figure 1. Scree plot analysis.

administrative support. The third factor, accounted for 15.789% of variability which is *institutional status*. The fourth factor, accounted for 14.766% of variability which is *students' characteristics* and the fifth factor accounted for 13.824% of variability which is *academic procedures of the university*.

RESULTS AND DISCUSSION

What are the perceptions of BA ISAGO undergraduate students on the determinants of quality education in tertiary institutions?

From Table 2, the determinants of quality education as perceived by BA ISAGO University undergraduate students were as follows: Lecturers' attributes; Administrative support; Institutional Status; Students' Characteristics and Academic procedures of the university.

Lecturers' attributes: Five attributes of lecturers were identified by the undergraduate students as follows: *Knowledge of lecturers' about the subject matter*; *Presentation skills of lecturers*; *Educational qualification of lecturers*; *Lecturers' relationship with students*; *Lecturers' personality*, which is supported by Arnon and Reichel (2007) study, that revealed students perceived personal qualities and professional knowledge of their lecturers to be the most significant qualities needed to be an ideal lecturer, which could have impart on quality education. The personal qualities alighted in the study, included kindness, leadership, attitude towards the profession, knowledge of the subject matter and didactic knowledge. Ashraf et al. (2009) emphasized that one of the most important determinants of education quality is faculty characteristics. According to the researcher, "the major responsibility of the faculties is to prepare the students for their future life with the necessary knowledge and capabilities". This meant that educational institutions

Table 1. Eigenvalues of the determinants.

Determinants	Total	% of Variance	Cumulative %
1	11.013	19.992	19.992
2	2.492	17.590	37.582
3	1.956	15.789	53.371
4	1.563	14.766	68.137
5	1.249	13.824	81.961

Table 2. The five (5) determinants that emerged from factor analysis.

Determinants	Factor loadings	Mean response	Standard deviation
1. Lecturers' attributes			
Knowledge of lecturers' about the subject matter	.773	7.22	2.193
Presentation skills of lecturers	.707	7.03	2.366
Educational qualification of lecturers	.658	7.04	2.422
Lecturers' relationship with students	.647	6.86	2.307
Lecturers' personality	.582	6.57	2.258
2. Administrative support			
Adequate guidance and counseling	.726	6.70	2.106
Good environmental influences	.713	6.38	2.222
Admission procedure should be up-to-date	.657	6.11	2.366
Proper communication with students.	.584	6.07	2.295
Monitoring of students	.563	5.96	2.271
3. Institutional Status			
Research works within the university	.739	6.79	2.285
Infrastructure within the university	.710	7.06	2.550
The type of programmes offered by the university	.691	6.56	2.308
Small student lecturer ratio	.598	6.61	2.350
Extra-curricular activities	.543	6.12	2.213
4. Students' characteristics			
Previous result of students	.733	5.91	2.496
Objectivity of students/ lecturers evaluation system	.667	6.59	2.122
Parents' economic status	.592	5.12	2.689
5. Academic procedures of the university			
Curriculum design and planning with broad coverage	.827	6.45	2.271
Student evaluation system in examinations and tests	.794	6.65	2.443
Flexi class schedules	.691	6.43	2.399

need to recruit and retain qualified and talented faculties.

Administrative support: Five administrative support factors were identified by the undergraduate students that could provide quality education as follows: *adequate guidance and counseling services; good environmental influences; admission procedure should be up-to-date; proper communication with students and monitoring of students.* The findings supported Nadiri et al. (2009) study. These researchers examined the perceived

service quality provided by administrative units, that is, services provided by the registrar, library, faculty office sports dormitory and health care center, and found two fundamental dimensions, tangible and intangibles to measure the service quality. Both tangible and intangible factors have a positive effect on student satisfaction. Kohont and Nadoh Bergoc (2010) stated that human resource management tools play important roles in developing the teachers, supporting changes in the organizational culture, and preparing managers, leaders

and academic personnel for the higher education institutions.

Institutional status: The findings as perceived by the undergraduates as determinant of quality education were as follows: *research works / output within the university; infrastructure within the university; the type of programmes offered by the university; small student lecturer ratio and extra-curricular activities*. This is in-line with research study by Rowley (as cited in Ashraf et al., 2009) who identified developmental environment as contributing factor to education quality. According to the researcher, developmental environment comes from the institutional characteristics such as institutional status (ranking), environmental influences, tuition and other fees, financial support (scholarships), infrastructure and resources, supporting human resources, job prospects and promotional exposure.

Students' characteristics: The following were perceived to be attributes of students that could affect education quality within the tertiary institutions: *previous result of students; objectivity of students in assessing lecturers evaluation system; parents' economic status*. These findings were supported by Akareem and Hossain (2012) study that focused on the demographic and other background information of students and their impact on perception about quality of higher education. These researchers suggested that the quality of students entering the higher institution have effect on education quality.

Academic procedures of the university: The following procedures of the university could affect education quality

as perceived by the undergraduate students such as: *curriculum design and planning with broad coverage; student evaluation system in examinations and tests; flexi class schedules*. The findings were in line with Rahman and Uddin (2009) study that identified many factors associated with academic aspects for education quality. The examination procedure and current curriculum of education were significant indicators of immediate satisfaction, which had long term implications on education quality. The researchers also found out that most influential academic procedures on education quality were admission procedure, class and examination schedule, curriculum design, which were significant indicators for education quality.

Is there significant difference with respect to gender of BA ISAGO undergraduate students on the determinant of education quality in tertiary institutions?

H₀: There is no significant difference in perception of BA ISAGO undergraduate students on the determinants of education quality in tertiary institutions with respect to gender.

The above question was answered by testing hypothesis (Table 3). The hypothesis was tested using independent t-test at 0.05 significant level. The result of the findings in the above analysis of the hypothesis revealed that there were significant differences with respect to gender among undergraduate perceptions from the four (4) faculties on the identified determinants (from factor analysis output) of education quality.

Table 3. Results of analysis of variance to establish significant difference with respect to gender.

Determinants	Group statistics/ significance difference
Administrative support	There is a significant difference with respect to gender at $t(2.181)$, $p=0.030$ and degree of freedom (df) is 228.
Institutional status	There is a significant difference with respect to gender at $t(2.751)$, $p=0.006$ and degree of freedom (df) is 228.
Academic procedures	There is a significant difference with respect to gender at $t(2.361)$, $p=0.019$ and degree of freedom (df) is 228.
Lecturers' characteristics	There is a significant difference with respect to gender at $t(2.392)$, $p=0.018$ and degree of freedom (df) is 228.

Is there significant difference with respect to students' faculty of BA ISAGO undergraduate students on the determinants of education quality in tertiary institutions?

H₀: There is no significant difference in perception of BA

ISAGO undergraduate students on the determinants of education quality in tertiary institutions with respect to students' faculty.

The above question was answered by testing hypothesis. The hypothesis was tested by analysis of

variance (ANOVA) at 0.05 significant level. The result of the finding in the above analysis of the hypothesis revealed that there is significant differences among undergraduate perceptions from the four (4) faculties on the identified determinants (from factor analysis output) of education quality at tertiary institutions as follows: Academic procedures $F(3,226) = 2.936$ at $p = .034$; Institutional Status $F(3, 226) = 5.462$ at $p = .001$ and Administrative Support $F(3, 226) = 2.733$ at $p = .007$.

CONCLUSION AND RECOMMENDATION

From the outcome of the research study, undergraduate students' perceptions of education quality in Tertiary Institutions of Learning, were influenced by the following: *Institutional Status; lecturers' attributes; Students characteristics; Administrative Support and Academic procedures of the university*. These findings should have implications for tertiary institutions in improving the current academic practices provided to undergraduate students.

Based on the findings of this study, it can be recommended that:

- Education providers in Tertiary Institutions of Learning should conduct periodic follow-up tracer studies to assess the level of satisfaction of their stakeholders (parents, employers, alumni etc) with regards to education quality.
- Ministry of Education, management and policy makers of any tertiary institutions of higher education should be up-to date with new curriculum designs and develop relevant curriculum that matches with current skills in the society.
- With the knowledge of these determinants, any Tertiary Institutions of Learning should be able to improve their services to university undergraduate students.
- The management of Tertiary Institutions of Learning should identify and address the root causes of the weak academic culture that tend to affect their institutions' educational quality negatively.

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