The Rrelationship Between Perceived Quality Dimensions and Growth in Distance Education: The Case of External Degree Programme of the University of Nairobi, Kenya

Peter K. Nzuki*
Department of Educational Studies
Email: pnzuki@uonbi.ac.ke

Omondi Bowa
Department of Educational Studies
Email: bowa@uonbi.ac.ke

Prof. Samson O. Gunga
Department of Educational Foundations
Email: gungasamson@googlemail.com

Abstract

Shrinking resources from the exchequer, the demand for a more cost-effective education and competition among Kenyan Public Universities has motivated academic administrators in these universities to launch distance education programmes. However, one major concern has been quality. This study sought to determine the relationship between perceived tangibles dimension of a degree programme and its growth. Further, the study intended to establish the relationship between perceived responsiveness dimension and growth of the programmes. A questionnaire was employed to collect data from students, Distance Education administrators and lecturers. The findings showed that there was no significant relationship between the two quality dimensions and the growth of Distance Education Programme. It was observed that growth occurred in spite of perceived quality dimension deficiencies due to career driven demand for higher education. However, quality variables that were considered as key consisted of adequacy and responsibility of teaching and support staff, clarity of course objectives, and flexibility of programmes. The study recommends that Universities engage sufficient and responsible support staff and lecturers to provide learner support services. Similarly, course objectives should be clear, while programmes should be as flexible as possible for learners.

Introduction

One of the most significant trends in the education marketplace in recent times is the rapid growth in distance education. Mowen and Parks (1997) argue that this growth is due to the fact that academic administrators often view distance education institutions as revenue centers. Other reasons have ranged from the realization that there are many people not reached by classroom-based mode of delivery due to cost and distance constraints.

Distance education is a mode of study that takes place when a content provider and a learner are separated by physical distance. Technology acts as an interface simulating face-to-face communication thereby bridging the instructional gap (Smith and Debenham, 1998). The definition by Hedge (1982) treats distance education as learning in an environment in which tutors and learners are not, for the most part, in a face-to-face situation. According to Hedge, this definition challenges the traditional 'talk and chalk' model of learning.

As distance education becomes more accepted as a legitimate form of education and as colleges and universities attempt to meet the growing demand for courses and programmes for distance learners, one major concern is the aspect of quality. According to Dharanajan (2002), the primary issue for distance learning institutions, like for conventional ones, is quality and the assurance that students are being provided with the best possible education or training with the highest possible standards. The quality of distance education varies, like any other form of education. Its quality can be the result of a variety of factors, some internal and others external to distance education organizations. Some of these factors include the levels of skills and expertise of staff, the amount of resources available, weak or strong leadership, efficiency of its administration systems, or the communications infrastructure in a country (Robinson, 1995).

Quality in open and distance learning (ODL) is often judged in terms of the learning materials whatever the medium (Robinson, 1995). However, a programme is more than just the materials; it is also the totality of experience of the learner. Mowen and Parks (1997) argue that there are serious questions about the integrity of distance education programmes and how students perceive their overall quality. Robinson (1995) argues that the success of distance education programme depends on how well the course production, delivery and student support sub-systems function.

However, an institution's claims to quality may fail to match the performance observed or experienced by those outside and inside of it such as learners, professional bodies and policy makers. For example, excellent materials may be of little help to a learner if not delivered to him/her on time.

In spite of the criticisms cited, the University of Nairobi through its Department of Educational Studies intends to boost its ability to provide distance education through such strategies as the increase in enrolment and extending access to unexploited geographical areas. This implies a growth strategy that is likely to occur during the growth phase of a product lifecycle. A review of the literature shows that the number of students admitted in a semester has been declining. However, the student numbers started rising in the 2009/2010 academic year. The student enrollment for the period 2005 to 2012 is as shown in Table 1.

Table Error! No text of specified style in document.**: Student Enrolment for the Period 2005 – 2012**

Academic Year	Enrollment
2005/2006	747
2006/2007	835
2007/2008	702
2008/2009	687
2009/2010	1,328
2010/2011	995
2011/2012	2,121

(Source: umis/smis.uonbi.ac.ke)

However, the actual number of students admitted over the same period increased from 747 in the academic year of 2005/2006 to 2,121 in the academic year of 2011/2012. The number declined dramatically from a high of 835 to 702 in the academic years 2006/2007 and 2007/2008 respectively. The number dropped further to 687 in the 2008/2009 academic year but picked up in the following year (Umis, 2011). The department responsible for the provision of distance education at the University of Nairobi recognizes that it has certain weaknesses

such as shortage of teaching staff, shortage of physical facilities, and delays in releasing examination results to students (Strategic Plan, 2008-2013). Indeed, the Vice-chancellor of the University of Nairobi has noted that one of the major problems experienced in the external degree programme is perennial delay in the delivery of study materials to students. Added to these weaknesses is the issue of the total cost (measured by the total fees payable by a student per semester). Whereas a growth strategy calls for reduced costs (Best, 2005), the total cost of the external degree programme has been rising over time (UoN, 2011).

As Universities embark on growth strategy, it is not clear whether they have identified the external degree programme characteristics that are most valued by stakeholders and how the Universities perform against the characteristics. Indeed, these are quality issues that the Universities ought to be concerned about in order to function effectively and efficiently in a highly competitive environment (DiDomenico and Bonnici, 1996). While it is important to understand the variables that affect student satisfaction with distance education courses as it leads to significant programme improvements to meet the student needs (Kelsey, Linder and Dooley, 2002), it is equally necessary to measure students' perceptions and make recommendations on the overall quality of a distance education programme. This is also important as it leads to lower student attrition and a greater number of referrals from enrolled students.

A review of the literature shows that the University of Nairobi has pursued a growth strategy. This has been demonstrated by the opening up of four more study centres in the year 2006 to offer support services to the learners. Best (2005) notes that there is need for the analysis of target market, organizational capabilities, and current and projected environmental forces before a final strategic decision can be made. Similarly, Suganthi and Anand (2004) posit that quality of education has to be evaluated before an organization adopts its strategies. Nevertheless, available literature indicates that no study has been conducted to show the level of students' satisfaction with the University's distance education programme before any strategy was made. Murphy (1997) also posits that before any strategic option is adopted for a programme, an institution must systematically evaluate how consumers are satisfied with the programme.

This paper seeks to answer the question: Is there a relationship between the quality dimensions of a distance education programme and strategy choice for an educational institution or does a distance education programme's quality dimensions influence an educational institution's growth strategy? It was guided by the following objectives: to determine the relationship between tangibles dimension of a degree programme and growth of the External Degree Programme and to determine the relationship between responsiveness of a degree programme and growth of the External Degree Programme

Research Hypothesis

This paper was premised on the following null hypotheses:

H_1. There is no significant relationship between tangibles of a programme and growth of the External Degree Programme.
H_2. There is no significant relationship between programme's responsiveness and growth of the External Degree Programme.

Literature Review

Researchers in distance education in the past ten years have concentrated on rigorous studies that are based on theoretical foundations in the field. Among the researchers are Fulford and Zhang's (1993), and Sherry, Fulford and Zhang's (1998) studies on learner perception of interaction, Gunawardena's (1995) and Gunawardena and Zittle's (1995) study on the implications of social presence theory for community building in computer conferencing at the University of Hong Kong. Other researchers have dealt on interaction in asynchronous video-conferencing environment (Chen and Willit, 1999). A common theme in the studies cited and other distance education research in the past 10 years is the concept of "interaction", which indicates its centrality in conceptualizing the process of teaching and learning. Still, researches have been conducted on access and equity, especially in India (Dutt, 2003).

Recent trends in distance education research indicate a shift in focus from interaction to assessment of student learning at distance campuses (Hu and Kuh, 2002), use of instructional technologies (Brown, 2003; Benson, et al. 2002; Lucal, et al, 2003; Weiss, et al. 2002) and accessibility (Habel, 2010). Other researchers have conducted studies on the relationships between assessment and instruction preferences (Menucha, 2007), assessment of student and faculty satisfaction with DE programmes (Palmer, 2002). It is evident that these studies have focused on online environment.

An emerging trend is the attempt by distance education researchers to understand the good practices in DE and their application to professional education and training in the field of psychology (APA, 2002). In 2006, the United States Department of Education sought to identify some guidelines that would lead to more consistent and thorough assessment of DE programmes. The aim was to formulate some form of best practices to be used by accrediting agencies. More recently, studies have focused on students' perception of academic quality and approaches to study in distance education (Richardson, 2003). However, these attempts have been bedeviled by limitations of the research instruments and the problem of aggregating students' perceptions across different course units.

Studies on quality dimensions emerged around 1980's with Garvin's study on "quality on the line" in 1983. Soon after, a number of studies followed. These were Bell's (1990) study on the management of service quality in education, descriptions of Open and Distance Learning in Developing countries (Daranajan, 2002), evaluative parameters of web-based courses (Brown, et al. 2002), quality indicators for distance education (Chaney, 2007) and quality of Distance Education in preschool teacher training (Gultekin, 2009). These studies have been concentrated in the more developed countries and based on online courses. The countries covered by the studies have well established infrastructure and have a more literate society than is the case in the developing countries.

In Africa and the Commonwealth Countries, studies have been on the achievement of quality in Distance Education (Daniel, et al. 2008) and quality of higher education from the perspective of the university graduates (Abdolrahim, 2009). However, recent developments have seen a shift towards evaluative studies on distance education. In Zimbabwe, a study on students' perceptions on the quality and effectiveness of guidance and counseling services as a support service (Kangai, 2011) found that those students who lived and worked in the rural areas needed quality and effective guidance and counseling and general academic support in the following areas: distribution of learning materials (modules), management of coursework (assignments), tutorials, processing of examinations, communication, and individualized counseling. While this study is instrumental in identifying some of the indicators of the dimensions of quality, it does not define the relationship between the

dimensions of quality and growth (as a strategy). Africa and the rest of developing countries like Kenya are more concerned with strategies to help in addressing the ever increasing problem of large student numbers who fail to secure University admission due to limited bed capacity. It is in this regard that Baraza (2008) carried out a study to determine the challenges of implementing Distance Education in Uganda.

The trend in research towards quality may be explained by the realization that distance education has caused a serious concern to governments and the quality assurance agencies all over the world about the safety of the national systems, legitimacy of the providers, protecting the public from fake providers, quality of the offerings and so on, the common element being 'concern for quality' (Stella and Gnanam, 2004). Many quality assurance agencies have responded to this need and there is considerable dialogue about ensuring quality in distance education.

Studies on quality of distance education have focused on student satisfaction with distance education and the identification of quality indicators of distance education (Kelsey, Linder and Dooley, 2002; DiDomenico and Bonnici, 1996; Chaney, et al, 2007; Hirner, 2008). Garrison (1987) found that immediate and regular interaction with instructors was associated with student satisfaction. Wilkinson and Sherman (1991) shared a similar view when they argued that satisfaction is related to the ability of distance education to meet individual goals and is a strong motivator for student retention. However, an exploratory student satisfaction study by St. Pierre and Olsen (1989) found that constructive and positive feedback, opportunities to apply learning to real situations, accessible and comprehensible learning materials, the relevance and helpfulness of the study guides, and interaction with support staff were positive determinants of satisfaction in an independent learning programme. Their study further established that the most important single variable for predicting student satisfaction was whether or not students would enroll in another distance education course. This variable accounted for up to 50% of the variance in determining satisfaction with distance education. A follow-up study by Tallman (1994) used a similar satisfaction instrument and found that pre-enrolment sessions, communication with support staff, course materials, timely return of assignments, and personnel/processes were the most influential in explaining levels of student satisfaction. However, these studies did not provide an operational definition of the satisfaction concept in distance education.

Using the student satisfaction construct as the students' contentedness with several components of a course and therefore as a measure of the effectiveness of distance courses, Biner, et al (1994) found five variables that predicted student satisfaction: course management, at-site personnel, promptness of material delivery, instructor, quality of instruction and out-of-class communication with the instructor. Other variables that have been found to influence students' satisfaction with distance education programmes are technology (Pilcher and Miller, 2000), interaction with the instructor on a face-to-face basis rather than through technology (Miller,et al, 1993).
Holdford and Anuprita (2003) studied the service quality dimensions of pharmaceutical education provided through distance education. A 37-item educational service quality instrument and a seven-item satisfaction scale were administered to 372 students in their final year of education. Using factor analysis, they identified five dimensions of service quality that were important in determining student satisfaction with pharmaceutical education. The dimensions were administration, resources, faculty member communication, and faculty member expertise. However, a faculty member's interpersonal behaviour was the most important factor in student satisfaction with a programme offered entirely at a distance.

In a study to determine the dimensions of programme quality in web-based adult education, Pamela (2006) found that six factors determined student satisfaction. These were quality of instruction, administration

recognition, advisement, technical support, advance information and quality of course evaluation. These factors captured 65% of the variance observed in the 41 variables that were studied.

Nunan and Calvert (1992) examined quality and standards in distance education using the perceptions of particular stakeholders. Relying solely on documentation provided by institutions studied, their findings showed that development and the use of appropriate technologies, encouragement of excellence in distance teaching, course materials and interaction among lecturers and students were indicators that would foster the achievement of quality in distance education.

In a study to determine the quality indicators of courses and programmes in the field of health education, Chaney, et al (2007) found several indicators. Using desk research, the study focused on recent articles (1987 – 2005) regarding quality of distance education. The search yielded 165 articles and 12 books that were reviewed to gather information on the quality indicators and benchmarks of distance education. The indicators were student-teacher interaction, prompt feedback, student support services, course structure and appropriate tools and media. Myers (2008), in a study to determine the quality indicators within asynchronous distance education courses at accredited institutions, found that technical issues, course design, class procedures and expectations, interaction, and content delivery were factors that identify quality in distance education courses. Hirner (2008) too, carried out a study to determine the quality indicators specific to distance education programmes at community colleges as well as stakeholder's perceived importance of the indicators. He employed the Delphi technique to identify potential indicators. Twenty distance education programme administrators from community colleges and four- year institutions were used for the study. The study's findings identified eight quality indicators, chief among them being timeliness of communication with faculty and feedback on course work, reliability of technology and amount of support. It is important to note that these studies focused on online programmes.

Although the studies aforementioned do not fit the quality dimensions into the categories suggested by Parasuraman, et al (1991), the study by Bell and Shieff (1990) revealed thirteen quality dimensions that determined the nature of service quality at the University of Auckland graduate school of business. The dimensions were tangibles, understanding the client, peer group, qualification credibility, visibility of the school and its programmes, staff academic credibility, staff professional credibility, competence, access, reliability, networking, course content/curriculum, and course process. DiDomenico and Bonnici (1996) used the gap analysis to assess service quality within an educational environment in Midwestern University. Using a three part questionnaire, students were asked in the first part, to mark down on a Likert scale what they expected from an ideal university. The second part, a constant sum scale was used to probe students about ten categories in which they were to rate each category to the service experience by distributing one hundred points between the categories. The third and final part examined the university's actual services using a 1 to 7 scale. Twenty students were used for the study. The results showed that students appreciated tangibility of the university (as measured by the architecture). The other variables scored negative. These variables were reliability, responsiveness and competence.

The works of Bell (2003) identified the dimensions that are critical in higher education institutions and labeled them as critical factors. This study and that of DiDomenico and Bonnici (1996) matched the critical factors against those of the *servqual model* dimensions (gap model) developed by Parasuraman, et al (1991). The critical factors were physical facilities, course materials and personal presentation of staff. These dimensions were linked to the tangibles as a quality dimension. Course content, course processes, course delivery and assessment were associated with reliability. The researcher further fitted staff competence, courtesy and security

into the assurance dimension. Support services, understanding the customer, feedback and access were linked to empathy as a quality dimension. However, the researcher failed to capture the aspect of responsiveness of a programme as a dimension of quality in distance education.

Gultekin (2009) carried out a study to evaluate Anadolu University's Preschool Teacher Training Programme in Turkey to obtain student opinions. A total of 1,026 senior students enrolled in the Preschool Education major at the Open Education Faculty in the University were used as the study subjects. A questionnaire was administered to the students and means (χ) and standard deviation (σ) were calculated to analyze the survey data. The results showed that the opinions of the students were positive on textbooks, television programmes, teaching practices and academic assistance services.

The studies cited in this review have focused on quality in distance education in the developed countries. More importantly, the studies relied on programmes offered online and not those offered using the print media, the commonly used media in the Developing Countries in Africa and Kenya in particular. Webster (1989) argues that measuring service quality in a distance education programme is a prerequisite for delivering action plans such as a growth strategy. However, little is known about the influence that the level of student satisfaction with a programme (as measured by its quality dimensions) delivered entirely at a distance has on the programme's growth. Whereas in India research has been carried out on a wide range of issues such as policy, planning and management, programmes offered, distance learners, instructional processes, and media (Dutt, 2003), research in Kenya is limited.

Most of the studies in Kenya and at the University of Nairobi have focused on learner support services (Bowa, 2008), perceptions on the affordability of distance learning programmes (Rambo and Odundo, 2007), lecturer's attitude towards adoption of DE and the use of e – Learning in teaching (Gakuu, 2007), comparison studies on the performance between DE students and traditional orthodoxy (Mboroki, 2008) and the challenges of quality assurance in the integration of ICT in Open and Distance learning (Kidombo, 2008). No study has been conducted in Kenya on the quality of Distance Education, let alone the measurement of student satisfaction with a distance education program.

Conceptual Framework

Literature review has demonstrated that there are certain factors that students use to evaluate the quality of a degree offered at a distance. It has emerged that tangibles and responsiveness dimensions are some of the critical factors to the success of an external degree programme. Students' experiences of the said factors can be useful to a distance education institution in pursuing a growth strategy such as increasing enrolments, support centres and support staff. The relationships are illustrated in Figure 1.

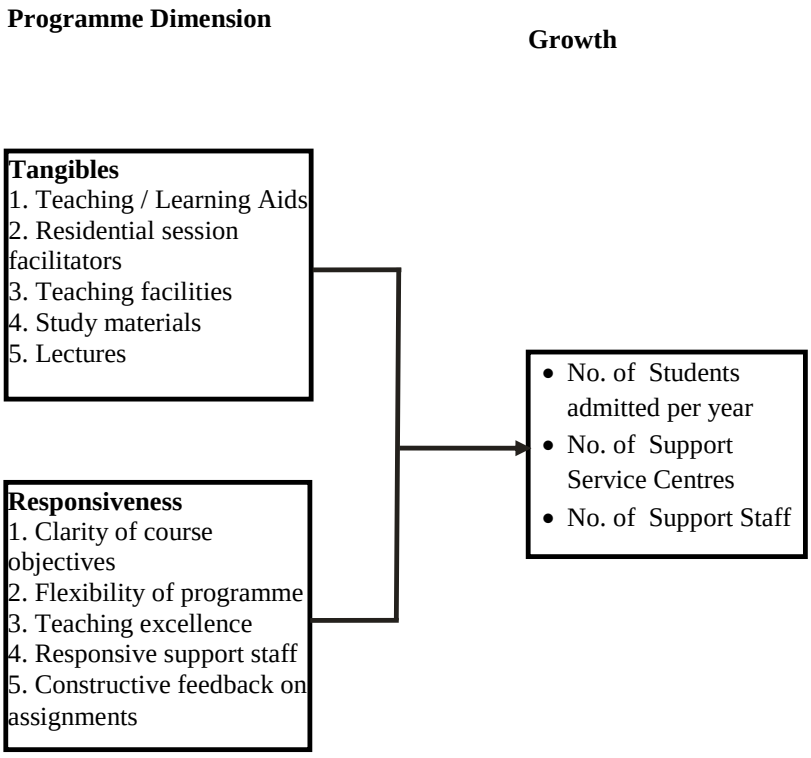

Figure 1: Model for Quality Dimension and Growth

Methodology

The sample consisted of 327 students enrolled in the Bachelor of Education degree (Arts) by distance learning at the University of Nairobi and in their second and third year of study. The students were first stratified in accordance to study centres and then randomly selected. Two administrators were also targeted. In addition, 92 lecturers constituted another population. Two categories of lecturers formed part of this population: staff formally attached to distance education centres (resident lecturers) and subject coordinators. The lecturers were purposively sampled.

A self – administered questionnaire was used to collect data from the respondents. The questionnaire was divided into three sections: A, B, and C. Section A was for the students while sections B and C were for the Regional staff and lecturers and administrators respectively. An observation schedule was also used to capture the key variables of study.

To ensure that the instrument did not lead to misleading measurement, pre-testing the instrument among a representative group of 30 students was done to ensure face validity. Coefficient alpha (Cronbach, 1951) was computed in accordance with Churchill (1979) recommendation. Because of the multidimensionality of the service – quality construct, coefficient alpha was computed for each of the dimensions to ascertain the extent to which items making up a dimension shared a common score. The lecturers' questionnaire had a coefficient of 0.938 and that of learners was slightly lower than 0.7 as it stood at 0.62. Cronbach alpha values are, however, quite sensitive to the number of items in a scale. With short scales (scales with fewer than thirty items), it is common to find quite low Cronbach values such as 0.5. The items making up the student questionnaire were only twenty-two and thus the coefficient of 0.6 2 was acceptable.

To ensure reliability of the questionnaire, split-half method was used. The two piles were then correlated and the correlation coefficient of the two sets of data was computed. The correlation coefficient was 0.828 for the lecturer's questionnaire and that of students' questionnaire stood at 0.556.

The data was analyzed using the Pearson's product – moment correlation to test the hypotheses. The findings are presented in tables.

Research Findings

The findings are presented in two thematic areas in accordance with the objectives of the study.

Tangibles and Growth

It had been postulated that if the tangibles dimension does not satisfy the learners, then growth cannot be realized since the learners would neither register for a programme nor recommend a colleague/friend to join in the programme. The following null hypothesis was formulated to aid in the achievement of the stated objective: H_o: There is no significant relationship between tangibles dimension of an External Degree Programme and its growth. From this key hypothesis, three other sub-hypotheses were generated based on the number of growth strategy variables. The test results of these sub-hypotheses are presented and described in the sections that follow.

The first sub - hypothesis was to determine whether there was a relationship between the tangibles dimension of the External Degree Programme and the number of students registered in the programme.

Data was collected to test this research hypothesis from the study materials, availability of learning facilities, learning aids, support staff and lecturers. A five-point scale was used to determine the extent to which these indicators of the tangibles dimension were rated by the lecturers or tutors as either being excellent or failing to meet criterion. The learners too, were to rate the extent to which the variables were adequate or inadequate in the provision of the degree programme at the University. The relationship between the tangibles and growth strategy (as measured by the number of students) was investigated using Pearson's product – moment correlation. It had been hypothesized that there was no significant relationship between tangibles and the growth as measured by the number of students enrolled. A significance level of $p<0$ .05 was utilized. The results of this regression analysis are as shown in Table 4.1

Table Error! No text of specified style in document.**.1: Regression for Tangibles and the Number of Students Registered.**

	Lecturers	Support Staff	Learning Aids	Learning Facilities	Study Units
Pearson's Correlation	.102	.010	.062	-.060	.047
Sig. (2-tailed)	.076	.861	.280	.302	.418
n	302	302	302	302	302

Table 4.1 shows that there was a weak positive relationship between the number of students registered in the programme and the lecturers employed (r = .102, n = 302, p=.076), support staff (r = .010, n = 302, p = .861), learning aids (r = .062, n = 302, p = .280) and study units (r = .047, n = 302, p = .418). However, there was a weak negative correlation between the number of students and the learning facilities (r = -.060, n = 302, p = .302). The total correlation coefficient was 0.161 at 95% significance level. This implies that the number of students registered in the programme explains only 2 per cent of the variance in respondents' scores on the tangibles dimension scale. Thus, at the statistical significance level of $p<.05$, it can be concluded that there is no significant relationship between the students registered into the External Degree Programme and the tangibles dimension.

The relationship between the tangibles dimension (as measured by the adequacy of lecturers, support staff, learning aids, learning facilities and study units) and the growth of External Degree Programme (measured by the number of regional centres) was evaluated to test the following null hypothesis.

H_o: There is no significant relationship between the tangibles dimension of the External Degree Programme and the number of regional centres.

The result of the Pearson's correlation coefficient is as presented in Table 4.2.

Table Error! No text of specified style in document.**.2: Regression results for Tangibles and Number of Regional Centres**

	Lecturers	Support Staff	Learning Aids	Learning Facilities	Study Units
Pearson's Correlation	-.047	.060	-.062	-.102	-.010
Sig. (2-tailed)	.418	.302	.280	.076	.861
n	302	302	302	302	302

The correlation coefficient for study units (r = -.047, p =.418), learning aids (r = -.062, p = .280), lecturers (r = -.102, p = .076) and support staff (r = -.010, p = .861) is negative but very weak. The coefficient for learning facilities is positive but also weak (r = 060, p = .280). The implication is that there is a weak relationship between the number of regional centres that have been established to offer support services to students registered in the External Degree Programme and each of the tangibles dimension variable at the p<.05 significance level. Hence it can be implied that there is no significant relationship between the tangible dimension and the number of regional centres established to offer support services to students.

The relationship between the tangibles dimension and the number of resident lecturers employed to offer academic support to students was also investigated using the Pearson's product-moment correlation coefficient to test the following hypothesis.

> *H_o: There is no significant relationship between the tangibles dimension and the number of resident lecturers employed to offer academic support.*

This hypothesis was stated to help in determining whether there was a significant relationship between the tangibles dimension and growth (measured using the number of resident lecturers. There was a weak negative relationship between the number of resident lecturers employed at the regional centres and the tangibles dimensions of study units, learning aids, support staff and lecturers. There was also a weak positive relationship between the number of resident lecturers and the tangibles dimension of learning facilities. The results are as shown in Table 4.3.

Table Error! No text of specified style in document.**.3: Regression results for the Tangibles and Number of Resident Lecturers**

	Lecturers	Support Staff	Learning Aids	Learning Facilities	Study Units
Pearson's Correlation	-.047	.060	-.062	-.010	-.102
Sig. (2-tailed)	.418	.302	.280	.861	.076
n	302	302	302	302	302

Table 4.3 shows that the significance test values for all the growth variables fall below 0.5 except for the support staff. Since the strength of the relationship between the tangibles dimension variables and growth at p<.05 significance level is weak, we conclude that there is no significant relationship between the tangibles dimension and the number of resident lecturers employed to offer academic support services at the regional centres.

Responsiveness and Growth

The third objective of the study was achieved by answering the question on whether there is a relationship between the responsiveness dimension and the growth of EDP. From this research question, hypotheses were generated as presented in the sections that follow.

The first hypothesis to be tested is stated as follows.
H_o: There is no significant relationship between the number of students registered in the External Degree Programme and the responsiveness dimension.
*D*ata for this hypothesis was collected on course objectives, course flexibility, teaching excellence, responsiveness of support staff and feedback on assignments. The results of the Pearson's product-moment correlation analysis are as shown in Table 4.4.

Table 4.4: Correlation between Responsiveness and Number of Students

Clarity of Course Objectives	Flexibility of Course	Teaching Excellence	Responsiveness of staff	Feed-back
Pearson's Correlation	.011	-.118	-.022	-.008	.095
Sig. (2 – tailed)	.845	.041	.701	.885	.100
n	302	302	302	302	302

For all the responsiveness dimension variables, only constructive feedback and course objectives had a positive relationship with the number of students enrolled in the programme although it was weak (r = .095 and r = 0.011 respectively). These variables explained only 2.2% of the number of students. The other responsiveness dimensions variables had a weak negative relationship to the number of students enrolled in the programme and explained only 2.2% of the number of students registered in the programme. The weak relationship as demonstrated by the significance value of less than .5 at the significant level of $p<0.05$ shows that the number of students enrolled in the programme is not influenced by the course objectives, course flexibility, teaching excellence, support staff responsiveness to the provision of services and feedback on assignments. We therefore conclude that there is no significant relationship between the responsiveness dimension variables and growth as measured by the number of students registered in the programme.
The second hypothesis was tested to determine whether there was any relationship between the numbers of regional centres established to offer support services to learners at a distance and their responsiveness in providing services, teaching excellence and constructive feedback on assignments. The hypothesis was stated as follows
H_o: There is no relationship between the number of Regional Centres and the responsiveness dimension.

Regional Centres are the points located in the country to offer academic services among other services to the distance learner. As such, it is assumed that the fewer the number of Regional Centres, the lower is the quality of the Distance Education Programme as measured by the responsiveness dimension. Similarly, the higher the

quality of the responsiveness dimension, the more the number of Regional Centres to be established to cater for the increasing number of students. The correlation analysis results are depicted in Table 4.5.

Table Error! No text of specified style in document..**5: Correlation between Number of Regional Centres and Responsiveness**

	Clarity of Course Objectives	Flexibility of Course	Teaching Excellence	Responsiveness of staff	Feedback
Pearson's Correlation	.011	.118	.022	.008	-.095
Sig. (2 – tailed)	.845	.041	.701	.885	.100
n	302	302	302	302	302

The Pearson's product – moment correlation coefficient for all the five indicators of responsiveness is positive except for the clarity of objectives and feedback on assignments. The relationship between these two variables and the number of regional centres is negative and weak (r = -0.011 and r = -0.095 respectively). There was a positive and weak relationship between the number of regional centres and the responsiveness dimension variables of flexibility of programme (r = 0.118), teaching excellence (r = 0.022) and support staff responsiveness to students' enquiries (r = 0.008). The weak relationship as demonstrated by values that are less than $p<0.05$ implies that there is no significant relationship between the number of regional centres and the responsiveness dimension.

The third and final hypothesis on the responsiveness indicators tested was:
H_o: There is significant relationship between the number of support staff employed and the responsiveness dimension

The relationship between the responsiveness dimension (as measured by the clarity of course objectives, flexibility of the course, teaching excellence, responsiveness of support staff and constructive feedback) and the growth strategy (as measured by the number of resident lecturers employed) was investigated using Pearson's product – moment correlation technique. The result of this analysis is as shown in Table 4.6.

Table Error! No text of specified style in document.**.6: Correlation between Responsiveness and Number of Resident Lecturers**

	Clarity of Course Objectives	Flexibility of Course	Teaching Excellence	Responsiveness of staff	Feed-back
Pearson's Correlation	.011	.118	.022	.008	- .095
Sig. (2 – tailed)	.845	.041	.701	.885	.100
N	302	302	302	302	302

The results show that there was a weak negative relationship between the number of resident lecturers and the clarity of objectives (r = -0.011) as well as the between the number of resident lecturers and constructive feedback (r = -0.095). However, the relationship between the numbers of resident lecturers employed at the regional centres is positive though weak for course flexibility (r = 0.118), teaching excellence (r = 0.022) and support staff responsiveness (r = 0.008). The weak relationship as shown by the values at the $p<0.05$ significance level means that there is no significant relationship between the responsiveness dimension of an External Degree Programme and the number of resident lecturers employed at the regional centres to offer support services to the distance learner.

Discussion of the Findings

The results of this study have reinforced much of the previous research findings in distance education surveys of students and faculty staff (Gultekin, 2009; Hirner, 2008; Chaney, et al, 2007; Koul, 1988; Nunan & Calvert, 1992). In addition, the perceptions of student and staff (tutors and resident lecturers) were similar to those identified in previous studies (Stevenson, MacKeogh & Sander, 2006; Kelsey, Linder & Dooley, 2002; DiDemenico, 1996).

The following sections describe the results of the study and the literature. The dimensions of tangibles and responsiveness are discussed. Research on the dimensions of quality in distance education has concentrated on the identification of the indicators of quality.

Tangibles and Growth

Previous studies on tangibles have shown that students placed a great deal of importance on course materials (Bell and Shieff, 1990; Nunan and Calvert, 1992; Tallman, 1994), instructor (Biner, et al, 1994), resources (Holdford and Anuprita, 2003), technology, appropriate technologies and appropriate tools and media (Nunan and Calvert, 1992; Pilcher and Miller, 2000; Chaney, 2007) and physical facilities (Bell, 2003). This study has confirmed that tangibles contribute to the quality of a distance education programme. Indeed, among the other dimensions of quality, it was highly ranked with a mean score of 4.43. Tangibles dimension had one of the minimal perceived-expected service gap as assessed by students.

The respondents indicated that study materials were inadequate or unsatisfactory and that learning facilities were inadequate. Learning aids were also said to be unsatisfactorily provided in the External Degree Programme. However, support staff and the number of tutors employed to offer tutorials during the face-to-face residential sessions were found to be adequate.

The findings on the question of whether there was a relationship between the tangibles dimension indicators and growth of the programme showed that there was a weak and insignificant relationship between each of the tangible dimension indicator and the number of students registered, the number of regional centres and the number of resident lecturers. This finding is not supported by literature. Past studies have shown that when students are dissatisfied with a programme (quality of a programme), they drop out. This implies that the number of registered students has to go down and subsequently low enrolment leading to fewer regional centres and resident lecturers. The finding may be attributed to the need for promotion by the learners at their places of work.

Responsiveness and Growth

The third objective was to determine the relationship between responsiveness of a degree programme and its growth. This study utilized clarity of course objectives, flexibility and customization of programme to individual needs, teaching excellence, support staff responsiveness in offering services and constructive feedback on assignments. The findings showed that responsiveness was ranked the most important quality dimension valued by students in the provision of distance education programme. The respondents found this dimension as producing the lowest gap on the perceived-expected service scale. This was reinforced by the high percentage of respondents who observed that the clarity of objectives was good as well as the flexibility of the programme structure. Similarly, the learning or teaching methods were found to be excellent. The responsiveness of staff to student enquiries was rated good as well as the constructiveness of the feedback on assignments.

Past studies have also found that these quality indicators provide satisfaction to students. For instance, constructive and positive feedback (St. Pierre and Olsen, 1989), course management, quality of instruction and promptness of material delivery (Biner, et al, 1994), quality of instruction (Pamela, 2006), course structure (Chaney, 2007), course design and content delivery (Myers, 2008), feedback on coursework (Hirner, 2008) and support services, feedback and understanding customer (Bell, 2003).

Conclusions

This study tested the conceptual model on the relationship between perceived quality dimensions of an External Degree Programme and its growth factors. The data was collected from a cross-section of students, tutors and resident lecturers. The results showed that the most important quality dimensions in the external degree programme stated by students include responsiveness and reliability. The findings revealed that there is a weak relationship between all the quality dimensions and the growth measures such as the number of students registered in the programme, the number of resident lecturers employed to offer support services and the number of regional study centres that have been established. The results do not lend themselves to theory since the dimensions of a programme are considered as key factors in its growth. This could be due to the overwhelming desire of distance learners to obtain a qualification which will enhance their chances for upward mobility in their places of work.

Recommendations

The purpose of this study was to determine the relationship between perceived quality dimensions of the External Degree Programme and its growth. Although the measures for the characteristics of effective quality dimensions have not been developed, this study has made a step towards establishing measurement scales for future research. This study has made use of the various indicators for a distance education prgramme offered through face-to-face tutorials and independent study as well as those used for the web-based programmes in higher education. The results are of important practical value to managers of distance education at higher institutions for evaluation of growth of distance education programmes**.**

The evidence presented by the data implies that there is no significant relationship between a programme's quality dimensions and its growth. This has implications to managers of distance education. The managers of distance education realize increased student numbers irrespective of the quality dimensions of the programme. Arising from these findings this study offers the following recommendations.

First, the education regulatory body(ies) and education managers of distance education should not take increased enrolments as evidence of quality of a programme as this can happen even when there is insufficient learning materials and insufficient learning aids.

Secondly, the regulatory bodies and education managers also note that increased enrolments in distance education programmes may be realized as long as the institution has sufficient support staff and lecturers. It is important to consider learning materials as perceptions of inadequate study materials seemed to cause dissatisfaction among learners as demonstrated in this study.

Thirdly, institution of higher learning should take cognizance of prompt marking of assignments and currency of learning materials. The findings from the study have shown that there was a weak positive relationship between the numbers of students enrolled in the distance education programme.

Fourthly, distance education programme providers should ensure that the course objectives are clearly spelled out, programme is made as flexible as possible and the staff is responsible to student enquiries. The study has established that there is a positive relationship between these responsiveness quality dimension variables and the growth indicators.

While the results of this study have expanded the knowledge that distance learners are not influenced by the perceived quality dimensions, it is important to find out what motivates learners to pursue a distance education programme – professional advancement, the need to ensure their jobs are safe, and so on.

References

American Psychological Association *Publication Manual* Washington, DC, 2005

Baraza, C. N, Natalie, B. M, and Clayton, R. W (2010). The Challenges of Implementing Distance Education in Uganda: A Case Study. *The International Review of Research in Open and Distance Learning* Vol. 11 No. 2

Bell D. (2003) "An Evaluation of the Effectiveness of the Gap Model as a Framework for Assessing the Quality of Higher Education" *Journal of Tertiary Education Administration* Vol. 14 (2)

Bell D, R and Sheiff, D. S. E (1990) "Managing Service Quality for Improved Competitive Performance" *New Zealand Journal of Business* Vol. 12 pp 1 – 12

Best, R. J (2005) Market – Based Management: Strategies for Growing Customer Value and Profitability New Jersey: Pearson Prentice Hall

Biner P.M, Dean R.S and Mellinger A.E (1994) "Factors Underlying Distance Learner Satisfaction with Televised College-level Courses" *The American Journal of Distance Education 8(1) pp 60-71*

Bowa, O (2008). The Influence of Learner Support Services on academic performance of distance learners: The case of external degree programme of the University of Nairobi in Kenya. (Unpublished Ph. D Thesis), University of Nairobi.

Brown, F. B and Yvonne, B.(2010). Distance Education around the World. *Education and Technology.*

Chaney, B. H, Eddy, J. M and Steve M. Dorman (2007) A Primer on Quality Indicators of Distance Education, Health Promotion Practice, Vol. 10 No. 2.

Cronbach, Lee J. (1951) "Coefficient Alpha and the Internal Structure of Tests" Psychometrika, 16 (October), 297 – 334

Daniel, J .S, Stroud, M. A and Thompson, T. R (1996) Learning at a distance: A world perspective. Edmonton, Alberta: Athabasca University. Retrieved on February, 2012 from http://books.google.ac.ke/books

Daranajan, G (2002) *"Open and Distance Learning in Developing Economies"* UNESCO Conference of Ministers of Education of African Member States, December 6

Department of Educational Studies Strategic Plan 2008 – 2013

Department of Educational Studies (2007). List of External Degree Programme Resident Lecturers.

Department of Educational Studies (2011). List of External Degree Programme Tutors and Subject Coordinators. DiDomenico, E and Bonnici J (1996) "Assessing Service Quality within the Educational Environment" Education, Spring

DiDomenico, E and Bonnici J (1996) "Assessing Service Quality within the Educational Environment" Education, Spring

Dutt, R (1986) "Distance Education in India" Journal of Higher Education Vol. II No. 2

Gakuu, C. M (2007) Lecturer's attitude towards adoption of DE and the use of e – Learning in teaching, Unpublished Ph. D Thesis, University of Nairobi

Garrison, D (1987) "Researching Dropout in Distance Education" Distance Education 8(1) 95-101

Gultekin, Mehmet (2009) Quality of Distance Education in Turkey: Preschool Teacher Training Case. *International Review of Research in Open and Distance Learning, Vol. 10 Number 2.*

Gunawardena, Charlotte, N and McIsaac Marina, S (2008). Distance Education. In *Proceedings of the Distance Education Conference,* Portland: Oregon.

Hedge N (1996*)* "Balancing the Elements: A Way of Looking at Issues in Distance Education" in Going the Distance: Teaching, Learning and Research in Distance Education

Hirner, Leo J (2008) Quality Indicators for Evaluating Distance Education Programmes at Community Colleges, (Unpublished Ph. D Thesis), University of Missouri, Columbia

Holdford D. A and Anuprita P (2003) "Identification of the Service Quality Dimensions of Pharmaceutical Education" *American journal of Pharmaceutical Education* Vol 65

Kelsey, D. K, James R. Lindner, and Kim E. Dooley (2002) "Agricultural Education at a Distance: Let's Hear from the Students", *Journal of Agricultural Education Vol.43 No. 4*

Kidombo, H.J (2007) Human Resource Strategic Orientation, Organizational Commitment and Firm Performance in Large Private Manufacturing Firms in Kenya, (Unpublished Ph. D Thesis), University of Nairobi

Mboroki G (2008) **C**omparison studies on the performance between DE students and traditional orthodoxy, Unpublished Ph.D Thesis, Moi University.

Miller, J.W; McKenna, M.C and Ramsey, P (1993) "An Evaluation of Student Content Learning and Affective Perceptions of a two-way interactive video learning experience" *Educational Technology 33(6)* 51-55

Mowen Andrew. J and Sara C. Parks (1997) "Competitive Marketing of Distance Education: A Model for Placing Quality Within a Strategic Planning Context" *The American Journal of Distance Education Vol. 11 No. 3* pp 27 – 39

Murphy (1997) "Key Issues in Transiting from Distance Education to Distributed Learning". *Outlining Chronicle of Distance Education and Communication, 12 No. 1 Spring.*

Myers, D. J (2008), Assessing Quality Indicators in Asynchronous Undergraduate Distance Education Courses, Dissertation, Nova Southeastern University.

Nunan, Ted and Calvert Jocelyn (1992) Quality and Standards in Distance Education Report to the National Distance Education Conference, Deakin University, Victoria.

Pamela H (2006) "Dimensions of Program Quality in Web-based Adult Education" *American Journal of distance Education Vol. 20(1).*

Parasuraman, A et al (1991) "Understanding Customer Expectations of Service" Sloan Management Review, Spring pp 1 – 11.

Parasuraman, A et al (1990) "Guidelines for Conducting Service Quality Research" *Marketing Research December* pp 34 – 44.

Parasuraman A (1985) "A Conceptual Model of Service Quality and Its Implications for Conducting Service Quality Research" *Journal of Marketing Vol. 49* pp 41 – 50.

Parasuraman A et al (1988) "SERVQUAL: A Multi-Item Scale for Measuring Consumer Perceptions of Service Quality" *Journal of Retailing Vol. 64 No. 1.*

Pilcher C and Miller C. (2000) "Learning Strategies for Distance Education Students" *Journal of Agricultural Education 41 (1)* pp 60-68.

Rambo, C and Paul Odundo (2011). Factors that influence learner's perceptions of the distance learning programme at the University of Nairobi. Retrieved on May 21, 2012 from http://archives.uonbi.ac.ke

Robinson B. (1995) "The Management of Quality in Open and Distance Learning" in Indira Gandhi Open University, Structure and Management of Open Learning Systems. Proceedings of the Eighth Annual Conference of the Asian Association of Open Universities, New Delhi February 20 – 22 Vol. 1 pp 95 – 109

Smith, Gerald and Jerry Debenham (1998) "Automating University Teaching by the Year 2000" *T.H.E Journal, 21.1 (August),* pp 71-75

St. Pierre S and L. K Olsen (1989) "Student Perspectives on the Effectiveness of Correspondence Instruction" *The American Journal of Distance Education Vol.5 No.3*

Stevenson K, Kay Mackeogh and Paul Sander (2006) Working with Student Expectations of Tutor Support in Distance Education: Testing an expectations-led quality assurance model. Open Learning, Vol. 21, No. 2 July

Stella Antony and Gnanam, A (2004) Quality Assurance in Distance Education: The Challenges to be Addressed, Higher Education, Vol. 47 No. 2

Suganthi, L and Anand A. Samuel (2004) Total Quality Management, New Delhi: Prentice-Hall of India

Tallman, F.D (1994) "Satisfaction and Completion in Correspondence Study: The Influence of Instructional and Student-Support Services" *The American Journal of Distance Education 8(20),* pp 43-57.

Umis/smis.uonbi.ac.ke. Retrieved on March 2011.

Wilkinson, Thomas W & Thomas M. Sherman (1991) "Telecommunications-Based Distance Education: Who's Doing What?" *Educational Technology, November, 54 – 59.*