

An Assessment of Teachers' and Students' Attitudes towards the Use of Integrated E-Learning Approach in Business Studies in Secondary Schools in Kenya

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Abstract

Quality education through effective teaching is crucial in any school system. This paper assesses teachers' and students' views about the use of integrated e-learning approach in the teaching of Business Studies in Kenyan secondary schools. The study was undertaken in the selected E-schools in Kenya. Purposive sampling was used to select the teachers and random sampling technique was used to select the students. A total of three Head teachers, eight Business Studies teachers and 127 Business Studies students participated in the study. Questionnaires and face to face interviews were used to collect data from the sample. Both descriptive and inferential statistics were used to analyze the data gathered. Descriptive statistics included use of frequency tables, percentages and mean scores. Inferential statistics involved Analysis of Variance (ANOVA). The study revealed that students perceive the integrated E-learning approach to be an important approach in their learning. Students have positive attitude towards the integrated E-learning approach. Teachers too perceived the approach to be superior to the conventional approach. The use of the E-learning approach demonstrated a great potential to promote cognitive, affective and psychomotor skills. Basing on these findings, the researcher recommends that the new integrated E-learning approach be implemented in the teaching of Business Studies in the Kenyan secondary schools to enhance learner outcomes and enrolment in the subject.

Keywords: Teachers, Students, Attitudes Use, Integrated E-Learning Approach, Business Studies.

Introduction

Quality education is a means to development. It is an essential asset to any country or any individual that is aspiring to develop. This is because it raises people's aspirations to increased social, economic and cultural performances; raises peoples and individuals' level of awareness of their environment and equips them with the necessary knowledge, skills and attitudes in order to solve problems they encounter. Donnelly (1999) argues that:

Education is assigned a priority role for its ability to effect the transformation of the people as individuals and groups, to promote social equality, and to strengthen national identity, thereby fostering the nation's political development and historical maturation.

From the argument, it can be concluded that a country, therefore, can only achieve its national goals through the provision of quality education. Kenya among other African countries continues to be poor and suffers from all the social, economic, and political pathologies that so often accompany poverty.

Education experts in the country and continent at large agree that the surest road out of the poverty trap is to explore the full potential of ICT to facilitate development. It is believed that it is this road that will lead to work, income, dignity and prosperity for the broad mass of Africans. This road requires an expanded and enriched educational system that can provide the skilled workers, the technicians, and the professionals that Kenya will need if it is to compete in the world economy successfully. This expansion and enrichment can only happen if Kenya is able to harness the power of Information Communication Technology (ICT) to connect teachers and learners to the knowledge they need, wherever that knowledge exists.

E-Learning in Kenya (herein referred to as integrated E-learning approach) is an instructional approach that integrates the modern Information Communication Technologies (ICT) with conventional methods of teaching. The approach has been introduced in six secondary schools in Kenya namely Maranda Boys, Chavakali High, Menengai High, Mumbi Girls, Isiolo Girls and Wajir Girls. These schools are referred to as the e-schools.

The technologies currently installed in these schools include Internet, Intra/Extranet, audio-and video tape machines, Digital Satellite TV (DSTV), interactive digital board (Smart Board), CD-ROM's, LCD projector, digital cameras, optic disk players among others. It is hoped that these technologies will enhance learning. It is on this footing that an attempt is being made to investigate the teachers and students perception of the innovation (integrated E-learning approach) in the teaching and learning of Business Studies subject.

Business Studies is a subject offered in the Kenya secondary school curriculum from Form One to Four. Although the subject is optional, its inclusion in the school curriculum is evidence to its importance. This is a subject that is vocational in nature. It prepares an individual to be potentially employable in the job market as well as solve economic problems that confront him/her in the real world situation.

According to the current Business studies syllabus requirements, the major aim of teaching the subject is:
 To provide the learner with opportunities to acquire basic business knowledge, skills and positive attitudes necessary for the development of self and the nation (KIE Education Syllabuses, 2002, p. 41).

The student performance in the subject for the three years since the revision of the syllabus in 2006 shows no significant improvement. A close scrutiny of KNEC reports of 2006, 2007 and 2008 shows a trend of unsatisfactory performance in the subject. Enrolment too has been declining.

Table 1: KCSE Overall Performance in Business Studies

Year	Candidature	Total Candidature	Mean score
2006	110,630(46%)	241,983	45.71
2007	118,361(43%)	273,066	55.15
2008	127,500(42%)	300,794	37.73

Source: KNEC 2006-2008 Reports

Table 1 above presents the national performance in Business studies as well as the enrolment levels between the years 2006 and 2008. The table indicates fluctuating mean scores in the subject. Candidates registered an improvement in 2007 achieving a mean score of 55.15. This was followed by a sharp decline in 2008 with a mean score of 37.73. All the three mean scores of 45.71, 55.15 and 37.73 are low compared to the expected mean of 100. This also applies to enrolment levels in the subject. More students enrolled in the year 2006 as compared to the subsequent years. In 2006, the candidature was at 46%. It then declined to 43% and 42% in the years 2007 and 2008 respectively. This is a worrying trend.

A further scrutiny on the student performance in the two papers tested in the KCSE examination revealed that candidates perform well in Paper 1 than in Paper 2 as attested by the mean scores in Table 2.

Table 2: Candidates overall performance in the KNEC Business Studies Examination

Year	Paper	Candidature	Maximum Score	Mean Score	Standard Deviation
2006	1		100	54.46	18.61
	2		100	38.02	18.19
	Overall	110,630	200	92.47	35.00
2007	1		100	64.03	18.76
	2		100	46.27	15.54
	Overall	118,361	200	110.29	32.00
2008	1		100	43.79	15.96
	2		100	31.65	16.81
	Overall	127,500	200	75.45	31.28

Source: KNEC 2007 Report

KNEC (2007) in their report attributed the poor performance in Paper 2 to the teaching methods. They, therefore, advised teachers to use student-centred methods always and give more exercises to students for practice. Can the reasons behind the problem be attributed to the teaching approach?

Statement of the Problem

Development for any country is highly dependent on quality education. Education and access to information is universally recognized as the most important enabler of empowering societies and individuals to manage future challenges on their own. Provision of quality education, on the other hand, is dependent on more than just teachers and classrooms. The quality of the content taught, the materials used to teach it and the skills that are developed are also of great importance.

Many studies conducted across the globe on use of technology in classrooms have reported that technology can be an effective tool in supporting learning and teaching in a classroom situation. School Net programme in South Africa promotes learning and teaching through the use of ICTs. Strydom (2003) says of the e-Education policy white paper:

Every South African learner in the general and education training bands will be ICT capable, that is, use ICTs confidently and creatively to help develop the skills and knowledge they need to achieve personal goals and to be full participants in the global community (p. 13).

This shows that ICT innovations have great potential, particularly with regard to access to information, collaboration and the creation and sharing of ideas.

The realization of these, however, will require new innovations in the methods of teaching. Business Studies is a crucial subject that teaches individuals how to participate in the society in terms of investment of resources. An educated manpower is an essential asset in any country aspiring to attain industrial status.

Good student performance plays a catalytic role in the process of nation development as it presupposes good understanding of how the different structures in business operate. However, enrolment and performance in

the subject have been unsatisfactory. KNEC reports (2006-2008) indicate that an average of 44% students take the subject and the average mean score 46.2% respectively. This kind of performance gives a negative picture on the subject and in turn discourages many students from enrolling. This will mean a high illiterate population in Business knowledge in the country.

KNEC report (2007) has further cited a major weakness in the students' performance as lack of mastery of content. Students do not quite comprehend the Business Studies concepts thus give irrelevant responses. Jepkoech (2002) reveals that teachers of Business Studies do not fully utilize the relevant available resources when teaching and heavily rely on conventional methods of teaching such as the informal lecture and discussion methods. The teachers of the subject, in defence, cited a wide syllabus and less time allocated for its coverage. They lamented, therefore, that they are left with no choice but to teach through the syllabus very fast using the conventional methods.

The problem with Business Studies literacy seems to revolve around the understanding of concepts, its retention, and its presentation in an examination context. The problem is worsened by limited time for syllabus coverage and thorough revision in preparation for the national exam, the KCSE. The probable cause of these problems seems to emanate from the instructional approach the teachers are utilizing.

Therefore, if teachers of Business Studies are to improve students' cognitive and affective abilities in the subject, then they must seek an alternative approach to instruction. Studies carried out in the developed countries by Mayer (2001) provide an example of well-grounded multimedia research. These studies revealed that the use of multi-media approach to teaching led to greater learning by students. The integration of learning technologies into high school classrooms is being promoted and supported around the world. Underlying the promotion and support are claims that successful integration will lead to enhanced learning outcomes (DoE, 1998).

Whereas this claim has been advanced in a number of studies, it is difficult to justify, according to Honey *et al.* (2000). They claim that research into the impact of learning technologies on the quality of students' learning outcomes is limited and outdated. A limiting factor has been the difficulty of defining and measuring enhanced learning outcomes attributable specifically to the use of learning technologies. More so the various studies and reports at the researcher's disposal indicate no studies on the perception of integrated E-learning approach as regards Business Studies. With this limited knowledge about integrated E-learning approach, it becomes imperative to investigate the integrated E-learning approach in the teaching and learning of Business Studies.

Limitations of the Study

The study was limited to the public E-schools only, which are so far known to utilize the integrated E-learning approach. Time and financial resources did not allow accomplishing the study on a larger scale. The study was limited to Business Studies and therefore the generalization of the findings be limited to the subject.

Materials and Methods

The research was carried out in three counties in Kenya, namely Nakuru County, Vihiga County and Siaya County. It was necessary to use the three counties in Kenya because the three e-schools are situated in those counties. These schools were part of the schools selected for the NEPAD E-learning project in Kenya. These schools were found appropriate because they were fully equipped with the ICTs necessary for the teaching and learning process. The study used a survey research design. The design is deemed appropriate because the researcher could collect more information through the use of samples. This was a specific survey seeking information on the integrated E-learning approach, the independent variable, which is the e-learning innovation, was not introduced. The variable is already under treatment. The introduction of the innovation could not have been possible by the researcher because it is expensive.

To come up with a quality research, the author opted for a mixed research approach that consisted of both quantitative and qualitative attributes. Mixed research is a general type of research in which quantitative and qualitative methods, techniques or other paradigm characteristics are mixed in one overall study. Specifically, the author settled for a mixed model research in which both qualitative and quantitative research approaches were used within the stages of the research process. The author conducted a survey and used a questionnaire that was composed of multiple closed-ended as well as several open-ended. Within the same stage of study the author too conducted an interview. The quantitative and qualitative aspects of the study arose from the questionnaires administered to the teachers and students of Business Studies as well as interviewing the head teachers of the E-schools and focusing on the same phenomenon.

Three secondary schools constituted the target population for this study. These are three of the six E-schools in Kenya. The E-schools utilises the new integrated E-learning teaching approach. Reconnaissance had been done to confirm that the three had similar E-learning resources. Head teachers, teachers and students of Business Studies in those schools constituted the target population. In the study, Head teachers, Form Four teachers and students of Business Studies were identified as potential members of the sample. Form Four

teachers and students of Business Studies were chosen due the fact that the class had utilized the approach longer than any other class. The Form Four Business Studies teachers have had a longer experience using the approach than other teachers in lower classes.

The Form Four students too have used the technologies longer as compared to the other student fraternity. In order to achieve a desired result with minimum costs, the researcher selected all the three Head teachers as well all eight Form Four Business Studies teachers from the three E-schools. A total of 127 Form Four Business Studies students constituted the sample. The sample was 50% of the total Form Four Business Studies students in the three E-schools. The study assumed simple purposive and simple random sampling techniques to get a representative sample. Purposive sampling was used in selecting the three Head teachers and eight Form Four Business Studies teachers. Simple random sampling was used to select the 127 out of the 252 Form Four Business Studies students.

The study used two instruments in collecting primary data, namely questionnaires and interviews. Two types of questionnaires were designed and used. One questionnaire for students was designed and another for the teachers. The instruments were used because they give the respondents adequate time to provide well thought-out responses to questionnaire items. It also makes it possible for large samples to be covered within a short time. Since standardized questionnaires for the study were not available, the author designed the required questionnaires on the basis of objectives, research questions and reviewed literature. The questionnaires used are now presented below.

The questionnaire for the teachers of Business Studies was divided into five themes. Likert types of items were used to solicit responses on the attitudinal statements. Scheduled interviews with the Heads of schools were also used to back up the questionnaires. This target group who is still the subset of the overall target population was presumed to provide a better point of references beyond just teaching due to their insights and work experience. Interviews were carried out for the sole purpose of supplementing the quantitative data from the filled-in questionnaires. Review of literature has revealed that most findings about effects of new technology on learning are derived from quantitative data with very little or no data on direct observation and/or interviews of the learners. There has been lack of sensitivity to concomitant changes that affect the instructional settings as a result of new technology (Park *et al.*, 1993). The students' questionnaire was intended to corroborate and confirm the information obtained from the teacher-respondents. Apart from collecting information given by the teachers, it also focused on the attitudes of students towards Business Studies as a subject when using the new integrated E-learning approach.

Both descriptive and inferential statistics were used for data analysis. Data was tabulated and frequency tables were generated. Frequencies were converted to percentages to illustrate the relative levels of opinion on the issued items. Descriptive statistics entailed calculation of means scores using the Likert scale. Under inferential statistics, analysis of Variance (ANOVA) was employed to determine the significant differences in students' and teachers' perception towards the new approach. Thus the analysis was focused on testing the null hypotheses. The raw data collected from the Likert type of items were summarized in tables and coded before they were entered into the computer for analysis using the Microsoft Excel spreadsheet.

Results and Discussion

The analysis of findings on students and teachers attitudes was done in two parts. Analysis of the student' attitudes towards the new approach were presented first followed by the teachers' attitudes towards the approach.

Students' attitude towards the integrated E-learning Approach

Student attitudes towards integrated E-learning approach were examined to assess their feeling towards this new approach. Four attitudinal statements were used to determine these attitudes. A bar graph (Figure 1) was drawn to present the information whereby the statement of reason was on the horizontal axis and the number of students' (in percentage form) reflected on the vertical axis. Students' were expected to support or not to support the supplied statement. A total of one hundred and twenty-three students responded.

Learning through the new Technology is Boring, Dull and Frustrating

A smaller number, 12(9.7%), of the students agreed to the statement while a greater number, 84(68.2%), disagreed and 27(21.9%) of the students were undecided. This indicates that learning through the integrated E-learning approach is not boring, neither is it dull nor frustrating. The students who found learning through the approach boring indicated that they had encountered the technologies for the first time; that is, they lacked the skill to operate the machines hence got discouraged. The undecided students may not have had enough encounters with the machines for them to give an opinion.

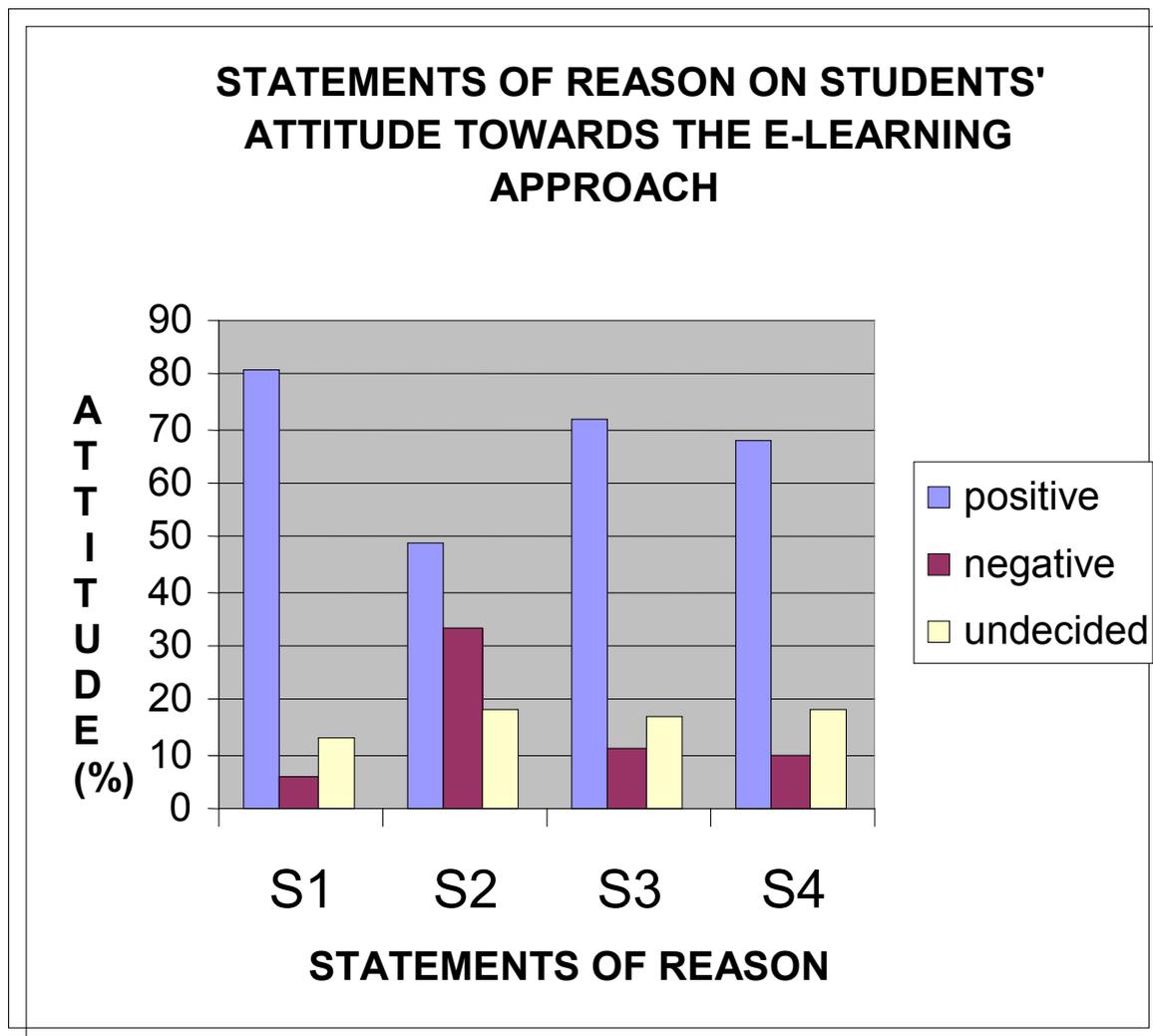


Figure 1: Students' attitudes towards statements of reason about the integrated E-learning approach

KEY:

- S1: Learning through the new technology is boring, dull and frustrating
- S2: Learning through the new technology is fun, stimulating and satisfying
- S3: The new technology is informative and useful
- S4: Learning through the new technology is hard, involving and challenging

Learning through the New Technology is Fun, Stimulating and Satisfying

A large proportion, 89(72.3%), of the students agreed with the statement, a small proportion, 14(11.3%), disagreed while 20(16.2%) were undecided. That was a good indication that learning through the technology is interesting. The 11% that felt otherwise could be finding difficulties using the technologies and the undecided students could still be adjusting to the machines.

The new Technology is Informative and Useful

A big number, 102(82.9%), of the students agreed with the statement, 8(6.2%), disagreed with the statement while 13(10.5%) remained undecided. This seems to indicate that a large number of students find the new technology valuable despite the challenges that they face. The small proportion who disagreed may not have used it to learn the subject hence do not see the value. The undecided group may not have seen any difference with what they have been using before.

Learning through the New Technology is Hard, Involving and Challenging

A greater percentage, 60(48.7%), of the students disagreed with the statement, 40(32.5%) agreed with the statement while 23(18.6%) were undecided. The large proportion who did not find the new approach to be difficult to learn with is an indication that students appreciate the technology. The 33% who felt otherwise may not have had enough exposure on the use of the machines and still require time to learn. The undecided group may still be adjusting to the use of the machines fairly. Familiarity with the technical operations is a necessary condition for use of the technology.

The main purpose of collecting this information was to establish student's willingness to learn through

the new approach. Attitude can alter every aspect of a person's life, including their education. Student attitudes on learning determine their ability and willingness to learn. Changing students' negative attitudes towards learning is a process that involves determining the factors driving the attitude and using this information to bring about change. A study by Harris (1995) documents the following comments on attitudes and motivations toward learning: that when children lack motivation, they fail to grasp the material. The response is often anger, rebellion and even physical symptoms such as anxiety and illness. At the least, students must want to learn, be receptive and participate in the learning process to ultimately experience satisfaction from learning. A positive learning attitude requires motivation and gratification. Students' attitude towards learning affects not only the amount of education but their desire for education.

Methods of teaching specifically the conventional teaching and independent learning show how students are either motivated or discouraged. Conventional teaching is used to instil facts and master basic skills. The instructor outlines what will be taught, teaches the material and reiterates what is learned. This form of teaching, however, can discourage creativity and participation as part of the learning process. Integrated E-learning approach is an example of independent learning methods and may therefore explain students' positive attitude towards it. This will in turn affect their learning outcomes positively. To have a clear summary of the above analyses, mean scores of the responses were computed. The mean scores computed are found in Table 3.

Table 3: Students attitude towards the Integrated E-Learning Approach

Attitude	Mean Score
Informative	4.39
Hard	2.82
Fun	4.00
Boring and frustrating	2.23

From Table 3, it is evident that positive statements had the highest mean scores of 4.39 and 4.00 while negative statements had low mean scores of 2.82 and 2.23 respectively. Students' perceive the integrated approach as being quite informative as well as generating a lot of fun when learning through it. A smaller proportion perceives the method to be hard to learn with as well as boring and frustrating.

From the foregoing analyses, it is possible to deduce that students have positive attitude towards the integrated E-learning approach. These findings concur with what Hennessy *et al.* (2005) observe, that students welcomed opportunities for independent working mediated by ICT in which they could engage more directly with appropriately challenging tasks. Computer-based tools and resources help not just to affect tasks and improve presentation, but also to refine work and trial options.

The use of ICT tools and resources assisted students in working ambience and classroom relations, as well as raising interest and increasing motivation on their part. This can confirm the adoption of the approach in the teaching and learning of our subject Business Studies.

Teachers' Attitudes towards Integrated E-Learning Approach

Teachers' attitudes towards integrated E-learning approach were examined to assess their feeling towards the new approach in teaching Business Studies. Two attitudinal questions were posed to determine their attitudes. Teachers' were expected to agree or not to agree to the supplied statement. A total of eight subject teachers and three head teachers responded. The first question sought information on the teachers' initial feeling towards the new approach.

The findings of the study show that teachers were very excited on the introduction of the integrated E-learning Approach. All the 8(100%) teachers who took part including their head teachers 3(100%) were excited. On being probed further on their initial excitement, teachers' gave the following reasons: Firstly, the fact that they were the first schools to have such an opportunity in the country elicited a lot of excitement. They marvelled at their luck of being chosen as the pilot schools. It was also a new experience altogether. They were going to learn on how to use the new facilities putting them a step ahead of their counterparts in the neighbouring schools. They were also anticipating on improved content delivery which meant a change of their traditional styles of teaching.

They also hoped that the new technologies would simplify their lesson preparation. They reiterated that from time immemorial they have had to handwrite the lesson notes and lesson plans. The new technologies would relieve them the burden of reproducing the same documents manually and be able to have them efficiently only by a touch of a button. They were optimistic that they together with their students would get access to wider information. This positive reaction of the teachers' together with that of the students' may assist to rubber stamp the adoption efforts of the new innovation.

Regarding the second question on their feelings after using the approach for a while, 7(87.5%) still found the approach to be very informative and stimulating while 1(12.5%) gave the response that the approach was hard and frustrating. The responses are graphically represented in Figure 2. This finding is encouraging because the researcher expected many teachers to be negative towards the innovation. This is because of its nature as a new initiative that required new skills. The finding contradicts a recent study conducted by the

Association of Professional Teachers in Kenya as reported in the local dailies (*Daily Nation*, 2010, January 15). The study rated teachers to be computer-shy.

Today's lifestyle is more dependent on the new technologies and it would be sad that teachers are left behind. In the study, the frustrated teacher gave the reason that the method was quite involving to both the teacher and the learner. This response indicates that the method might be quite interactive. This then is a gain because it suggests that the method is student-centred. Allowing learners to be involved practically and less teacher talk has been considered as an evidence of modern teaching.

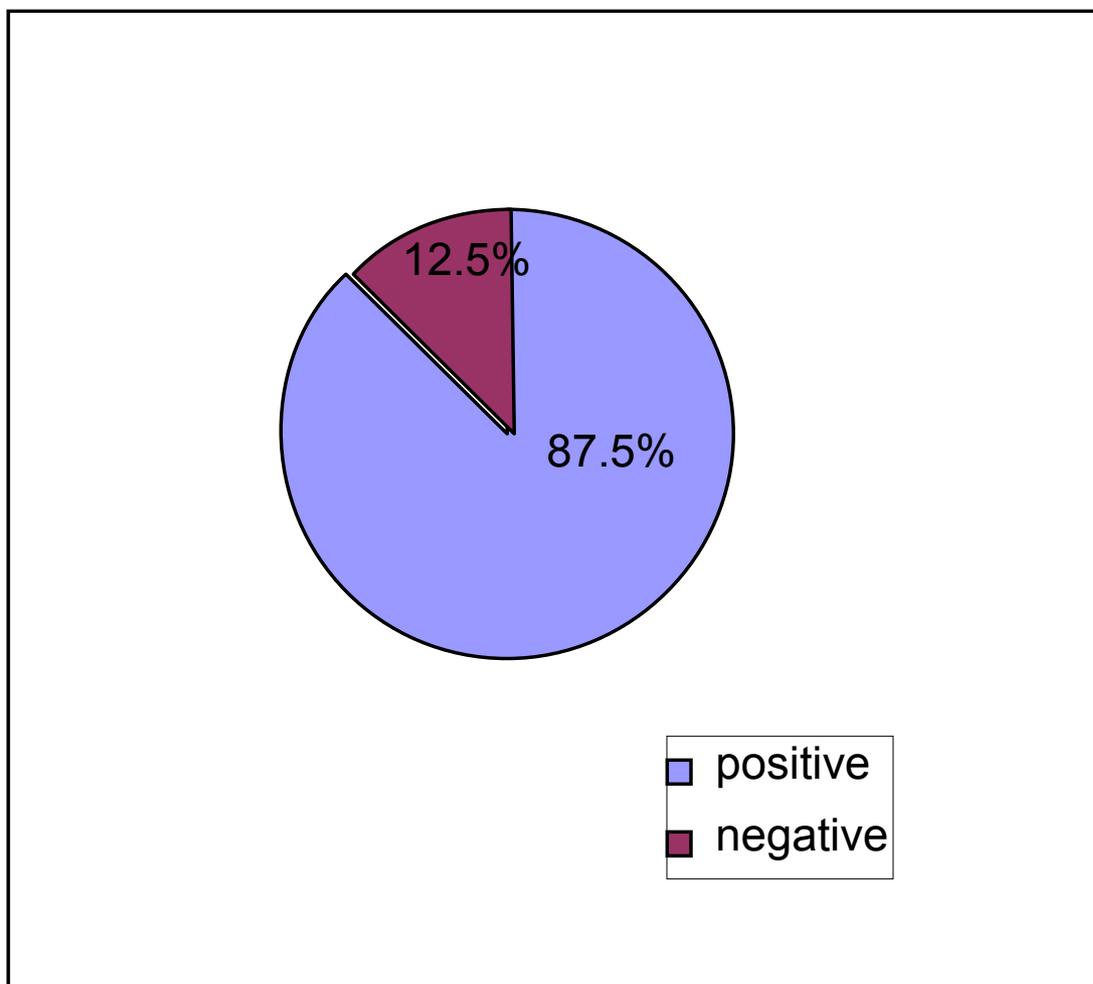


Figure 2: Teachers' feelings after using the integrated E-learning approach

In order to draw a fair conclusion on the teachers' attitude, the author asked the teachers whether or not the new approach is important. The study revealed an immense positive response. All the teachers once more together with their head teachers confirmed its importance. It can therefore be inferred from the foregoing analyses that teachers have positive attitude towards E-learning approach.

Teachers and students' positive attitudes have an effect on the adoption of the new approach in the teaching and learning of Business Studies countrywide and globally. In support of this finding are earlier discussions by Cope and Ward (2002) who had reiterated that individual attitudes, influences their voluntary participation in the use of ICT. These individuals are both the teachers and students and who are the key players in the teaching and learning process.

Conclusion

Students perceive the integrated E-learning approach to be an important approach in their learning. Students have positive attitude towards the integrated E-learning approach. The interactive, multimedia and communication characteristics of ICT may be used to provide more motivating and challenging learning experiences that encourage students to be more engaged with their learning. Software developers have increasingly used interactive, multimedia and communication characteristics of ICT to provide more stimulating features and a wide range of interesting learning experiences.

Teachers too perceived the approach to be superior to the conventional approach. The use of the E-

learning approach demonstrated a great potential to promote cognitive, affective and psychomotor skills. The integration of ICT into education can do more than just lower the cost of education but support students in being more active as participants in their own learning and learn by doing rather than just listening or reading. Teachers have a positive attitude towards the integrated E-learning approach. Teachers' attitude is more attributed to the advantages that ICT have in the teaching and learning process.

Recommendations

Classroom teachers should take advantage of the students' interest in the integrated E-learning approach by planning for the learner-centred lessons. Through the use of ICT, students develop an appropriate level of capability, become more engaged with their own learning, and achieve learning outcomes across the curriculum at a higher level. Teachers should also tap the benefits of using ICTs in their lessons. ICT is used to support pedagogical practices that provide learning environments that are more learner-centred, knowledge-centred, assessment-centred, and community-centred. Lastly, the teacher exploits the characteristics of ICT to support the learning of students by, effectively integrating their use, wherever appropriate, into constructivist learning environments, and contributing to relevant learning communities.

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