

The Effects of E-Learning Integration on Students' attitude of Business Studies Subject in Secondary Schools in Kenya

Susan J. Kurgat

Department of Curriculum Instruction and Educational Media,
Moi University, P.O. Box 3900, Eldoret, Kenya
kurgatsusan@gmail.com

Abstract

The existing trends of academic performance among students in Kenyan schools show that there is need for continued search and adoption of functional innovations in the teaching and learning processes. This paper examined the integrated e-learning approach as one of these new innovations. The study examined the effects of integrated Electronic learning (E-learning) approach on students' attitudes towards Business Studies subject in secondary schools in Kenya. A descriptive survey research design was adopted. 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 in the study. Descriptive statistics included use of frequency tables, percentages and mean scores. Inferential statistics involved Analysis of Variance (ANOVA). From the findings, the Integrated E-learning approach has exerted a more positive influence on students' attitudes towards Business Studies course than the conventional methods. Students demonstrated a more favourable attitude towards learning Business Studies and were highly motivated through integrated E-learning approach than when taught using the conventional approach. The school administration should take a whole-school approach in prioritising development of ICT use in the teaching and learning process. There is the need for a whole school vision and a strategy for ICT. The implementation of ICT is best undertaken in the context of a vision for how it will be used to enhance and extend teaching and learning with an associated commitment and flexible strategy to achieve this. The way the Head teacher demonstrates his/her belief in ICT through action and example is influential.

Key Words: Integrated E-Learning Approach, Conventional Approach, E-Schools, Business Studies

INTRODUCTION

To move Kenya into the next level of information age, our educational system should depart substantially from the norms and practices that the existing educational institutions have inherited. E-Learning, which is regarded as the 21st century learning approach, has been viewed as one option for improving the quality of education and thus creating a literate society for Kenya. ICT can play a core and multifaceted role in helping our country deliver quality education to its citizens. In the classroom, ICTs can be used to address the inefficiencies of rote and traditional learning. For instance,

where teaching resource is scarce, a single teacher can provide direct instruction to many students using the projectors. It is a tool for independent learning where students can research, summarize and present their findings using the Internet and productivity tools such as Microsoft Office.

ICTs can be used for teaching and learning as well as for management purposes in the schools. The current education policy in Kenya seeks to achieve among other objectives: enhancement of access and equity; provision of quality education and training as indicated in Ministry of Education Sessional paper No. 1 of 2005 (Republic of Kenya [RoK], 2005). The Kenya government in its efforts to achieve these objectives has provided a conducive environment such as abolishing taxes on computers and their accessories, liberalizing the airwaves and improving the communication infrastructure.

In a move to modernize the African educational systems, New Partnership for Africa's Development (NEPAD) introduced E-learning in the secondary school system. Their core priority focus area is on bridging the digital divide. Nakabugo *et al.* (2007) define the E-learning concept as follows:

Most often e-learning has been defined as a wide set of applications and process such as web-based learning, computer- based learning, virtual classrooms, and digital collaboration that includes the delivery of content via internet, intra/extranet, audio-and video tape, satellite broadcast, interactive TV, CD-ROM among others (p. 4).

On the other hand, Littlejohn (2007) defines the concept differently:

E-learning would mean using Information Communication Technologies (ICT) as mediating devices that allow students to access learning resources that inform them of new ideas, which they can then reflect upon and integrate into the existing knowledge (p. 3).

Studies on the teaching and learning of Business Studies subjects indicate problems encountered by the teachers in their classrooms. For instance, a study by Kimutai (1991) on the utilization of learning resources in Economics teaching reveals that learning resources were inadequate. There is inadequate supply of textbooks as well as the audio-visual materials. The few available resources are underutilized. Chalkboard, posters and diagrams are adequately utilized. This means that the teachers are unable, therefore, to use learner-centred methods.

In addition to the preceding findings, Jepkoech's (2002) study on the factors affecting performance in Economics, observes that students are not well prepared due to teachers' total dependence on traditional methods of teaching of 'chalk and talk'. The importance of using visuals is underscored in the Chinese proverb —a thousand hearing are not as good as one seeing (Romiszowski, 1988, p. 4) or —a picture is worth a thousand words (Romiszowski, 1988, p. 112). This means that teachers

ought to use teaching methods that allowed learners to use more senses and thus improve learning.

There is need therefore to improve the general performance of Business Studies subject in secondary schools and hence make the subject attractive to many more students. Integrated E-learning approach may be one of the approaches that would provide a solution to all the problems in the instruction of Business Studies. Specifically, the E-Learning approach is presupposed to raise both teachers' and students' attitudes towards the subject, assist in content retention, provide for active learner participation, ensure individual learner differences, aid in fast syllabus coverage, assist in student mastery of the content among others and in the long run enhance student performance in the subject. The ICT tools play a complimentary role in this case. They enable the ordinary subject teacher to conceptualize the content and context of learning in new ways hence improve the teaching.

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.

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 (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.

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. 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 utilizes 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 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 effect of integrated E-learning approach on students' attitudes towards the Business Studies subject was examined using seven statements of reason. The main reason for seeking the information was that since learner achievements are dependent

on attitudes towards learning, then the effects of the process have to be confirmed. Responses to the statements were graphically presented using a column graph, as shown in Figure 1.

Interpretation of Statements on Students' Attitudes

I like, enjoy and appreciate Business Studies. A greater number, 90(73.1%), of the students agreed to the statement, a smaller number, 14(11.3%), disagreed while 19(15.4%) were undecided. This finding indicates that learning through the technologies has made the students to like Business Studies more.

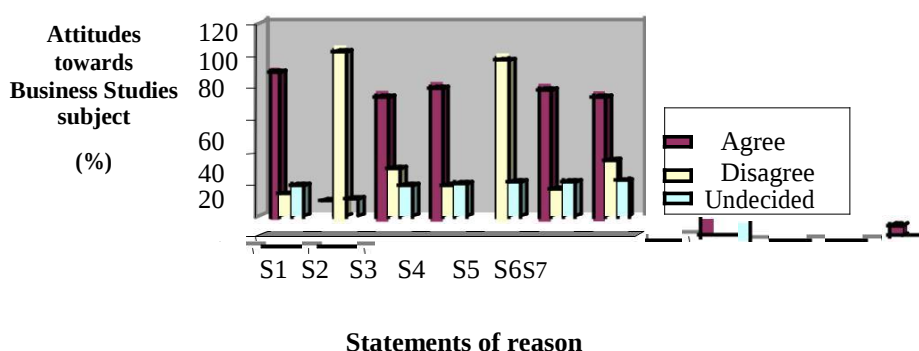


Figure 1. Effects of integrated e-learning approach on students' attitude towards business studies

KEY: S1: I like, enjoy and appreciate Business Studies; S2: I am scared and hate Business Studies; S3: It has increased my curiosity about Business Studies; S4: Has made me feel confident about Business Studies subject; S5: Has made me feel stupid and doubt my ability to do Business Studies; S6: Has sharpened my memory of Business Studies content; S7: Has improved my performance in Business Studies examinations.

Popularity in an elective subject like Business Studies means an increase in enrolment. This finding is quite encouraging considering the benefits that accrue as a result of studying Business Studies both to an individual and to the nation as a whole.

I am scared and hate Business Studies. A small proportion, 10(8.1%), of the students agreed with the statement; a larger proportion, 102(82.9%), disagreed while 11(8.9%) were undecided. This finding justifies statement one above where most seemed to like and appreciate Business Studies. This was a good indication that learning through the technology had built a lot of confidence in students towards the subject. The 8% that felt otherwise could be finding difficulties in adjusting to the new technology while the undecided students could still be adjusting to the machines.

It has increased my curiosity about Business Studies. A large number, 74(60.6%), of the students agreed with the statement, 29(23.7%) disagreed with the statement while 19(15.5%) remained undecided. This indicated that a large number of students found the new technology valuable in allowing them an opportunity to discover more in Business Studies than they normally did. The small proportion who disagreed may not have used it to learn the subject hence did not see the value. The undecided group may not have seen any difference with what they had been using before.

Has made me feel confident about Business Studies subject. A majority 79(66.9%) of the students agreed with the statement, 19(16.1%) disagreed with the statement while 20(16.9%) were undecided. The large proportion who did find the new approach to have built in them a lot of trust in the subject shows that the approach may improve students' attitude towards learning. The 16% who felt otherwise may not have had enough exposure on the use of the machines and feel scared and hence discouraged about the subject. The undecided group were still adjusting to the use of the technologies and were in doubt about their full confidence in Business studies.

Has made me feel stupid and doubt my ability to do Business Studies. A smaller number, 6(4.8%), of the students agreed to the statement, a greater number, 97(78.2%), disagreed while 21(16.9%) were undecided. This indicates that learning through the technology did not make them slow learners but cleverer in the subject. The students who found learning through the technology to weaken their abilities to do the subject were finding difficulties in learning through the machines; 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.

Has sharpened my memory of Business Studies content. Majority, 78(67.2%), of the students agreed with the statement, 17(14.6%) disagreed with the statement while 21(18.1%) remained undecided. This seems to indicate that a large number of students can recall the content more easily without having to revisit their lesson notes. The small proportion who disagreed may not have used it to learn the subject hence did not see the value. The undecided group may have seen no difference with what they have been using before.

Has improved my performance in examinations. A greater number, 74(60.1%), of the students reported that their scores in the subject had improved while a smaller number, 35(28.3%), thought otherwise. A smaller number, 14(11.3%), remained undecided. This justifies the previous statement where some students felt their memory had been sharpened. The 11% who were undecided may not have learned through the technology for long for them to give an opinion. Improved performance can be equated to students' positive attitudes to learn. These analyses are summarized in Table 1.

Table 1. Integrated E-learning approach effects on students' attitude towards the subject

Statements	Mean Scores
I Like, enjoy and appreciate Business Studies	3.99
I am scared and hate Business Studies	1.60
It has increased my curiosity about Business Studies	3.59
Has made me feel confident about Business Studies course	3.88
Has made me feel stupid and doubt my ability to do Business studies	1.66
Has sharpened my memory of Business Studies content	3.91
Has improved my performance in Business Studies examinations.	3.37

From the findings shown on Table 1, it can be inferred from the foregoing analyses that students' attitude towards Business Studies was more positive when integrated E-learning approach was used. The analyses reveal higher mean scores (3.74) from the positive statements and lower mean scores (1.63) from the negative statements. Wanjala (2005) says that Computer-Based Instruction (CBI) exert a more positive influence on the subjects' attitudes and motivation towards the Mathematics course than the conventional instructional approach.

Furthermore, heads of schools confirmed the positive effect of the various ICT resources. These included LCD projectors, internet, Encarta software, Computer productivity tools and Interactive White Board. They had noted the excitement the students had when utilizing the resources. Most experts in the field of educational technology globally agree that when technology is properly used, teaching and learning are enhanced (Yusuf, 2005).

Constructivists posit that learning occurs when a learner constructs internal representations for his or her unique version of knowledge (Tsay *et al.*, 2000). This pedagogy argues that interactive activities in which learners play active roles can engage and motivate learning more effectively than activities where learners are passive. It has been established that individuals learn better when they discover things by themselves and when they control the pace of learning (Leidner *et al.*, 1995). It follows the principles outlined by Norman *et al.* (1996) in which they advised on the need to engage learners in interactive environment where they can learn through a collaborative learning with peers.

CONCLUSION AND RECOMMENDATIONS

Integrated E-learning approach has exerted a more positive influence on students' attitudes towards Business Studies subject than the conventional methods. Students demonstrate a more favourable attitude towards learning Business Studies and are highly motivated through integrated E-learning approach than when taught using the conventional approach.

Generally, students like to use computers and are likely to develop more positive attitudes towards their learning. The interactive and multimedia features can be used to help students grapple with more challenging concepts and ideas and encounter similar concepts within a variety of contexts.

The school administration should take a whole-school approach in prioritising development of ICT use in the teaching and learning process. There is the need for a whole school vision and a strategy for ICT. The implementation of ICT is best undertaken in the context of a vision for how it will be used to enhance and extend teaching and learning with an associated commitment and flexible strategy to achieve this. The way the Head teacher demonstrates his/her belief in ICT through action and example is influential. Seeing ICT in everyday use is particularly influential. The head teachers can achieve through establishing a well planned and visible process by which ICT is to be implemented. Such a process must exist and needs to be coherent, flexible and structured to provide strategic and operational viewpoints that take into account all aspects of ICT implementation. The articulation and dissemination of the process is key to all those involved.

REFERENCES

- Department of Education (DoE) (1998). *Learning Technologies: Teacher Capabilities Guide*. Melbourne, Australia: Community Information Service.
- Honey, M., Culp, K. M., & Carrigg, F. (2000). Perspectives on technology and education research: lessons from the past and present. *Journal of Educational Computing Research*, 23(1), 5-14.
- Jepkoech S. (2002). *A Survey of Factors that Influence The Performance of Students in Economics in Kenya Certificate of Secondary Examination. A Case of Selected Schools in Rift Valley Province of Kenya* (Unpublished M.Phil. Thesis). Moi University.
- Kimutai, C. K. (1991). *A survey of the availability, acquisition and utilization of learning resources in the teaching and learning of Economic in Kenyan secondary schools* (Unpublished, M.Ed Thesis). Kenyatta University.
- Kenya National Examination Council (KNEC) (2004-2007). *KCSE Examination Reports*. Nairobi, Kenya: Kenya National Examination Council.
- Leidner, D. E., & Jarvenpaa, S. (1995). The use of information technology to enhance Management school education: a theoretical view. *MIS Quarterly* 19(3), 265-291.
- Littlejohn, A. (2007). *Challenging or Conforming: The art of blended E- Learning*. Keynote presentation at EdMedia, Association for the Advancement of Computers in Education (AACE), Vancouver, Canada, 27th June.
- Mayer, R. E. (2001). *Multimedia Learning*. Cambridge, UK: Cambridge University Press.
- Nakabugo, M. G., Opolot-Okurut, C., Masembe, C. S., Mugimu, B. C., Ezati, B., & Hurd, S. (2007). *Learning circuits e-learning Glossary*. London: Facet Publishing.
- Norman, D. A., & Spohrer, J. C. (1996). Learner-centred education. *Communications of the ACM*, 39(4), 24-27.
- Park, O. C., & Hopkins, R. (1993). Instructional conditions for using dynamic visual displays: A review instructional science.
- Republic of Kenya, Ministry of Education, Science and Technology (2005). *Sessional Paper No. 1 of 2005 on a policy framework for education training and research: meeting the challenges of education, training and research in the 21st century*. Nairobi: Government Printers.

- Romiszowski, A. J. (1988). *The Selection and use of Instructional Media* (2nd ed.). New York: Kogan page, Nicholas Publishing.
- Strydom, W. M. (2003). *e-Education Policy: Reflections on the draft White Paper*. OLTDE (Open Learning Through Distance Education). Vol. 9(3).
- Tsay, M. H., Morgan, G., & Quick, D. (2000). Predicting student's ratings of the importance of strategies to facilitate self-directed distance learning in Taiwan, *Distance Education* 21(1), 49-65.
- Wanjala, M. (2005). *Effectiveness of Computer Based instruction versus conventional methods on students' attitudes, motivation and achievement in the teaching of Mathematics in secondary schools of Bungoma District*. Unpublished M.Ed. Thesis, Moi University.
- Yusuf, M. O. (2005). Information and communication technology and education: Analysing the Nigerian national policy for information technology. *International Education Journal*, 6(3), 316-321.

BIO-DATA

Dr Susan Kurgat is a Ph.D holder from Moi University and currently teaches at the same University in the department of Curriculum Instruction and Educational Media. Her research interests are in the field of Educational Technology.