

The Influence of Teachers' Age, Gender and Level of Training on Attitudes towards the Use of Integrated E-Learning Approach to the Teaching and Learning of Business Studies in Kenyan Secondary Schools

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Abstract

This study sought to find out the influence of age, gender and level of training on attitudes towards the use of integrated e-learning approach to the teaching and learning of business studies in Kenyan secondary schools. A descriptive survey research design was adopted. The study was undertaken in 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 this study. Descriptive statistics included use of frequency tables, percentages and mean scores. Inferential statistics involved Analysis of Variance (ANOVA). The findings of the study revealed that Head teachers, teachers and students of Business Studies perceive the integrated E-learning approach to be superior to the conventional approaches regarding the learner outcomes. They were positive about its integration in the teaching and learning of Business studies in the secondary school system. Based on these findings, the researcher recommends that the new integrated E-learning approach be implemented in the teaching of Business Studies in Kenyan secondary schools to enhance learner outcomes and enrolment in the subject. This study is significant as it helps equip schools with the necessary knowledge and skills to successfully introduce the integrated e-learning approach in their schools.

Keywords: age, gender, level of training, integrated e-learning approach, business studies

INTRODUCTION

The implementation of ICT to enhance and extend teaching and learning across a wide range of subject areas has proved challenging to many schools, and understanding the issues regarding encouragement, support and infrastructures required to achieve this has proved to be complex (Selwyn, 1997). However, Tearle (2004) reports that there are some schools in which almost all staff have adopted ICT use into their working practices, adapting existing approaches to teaching and learning and developing new ones. In other schools with apparently similar desire for ICT to be used, and similar resources, only pockets of limited ICT use has been achieved. The question then is: what is their perception of the innovation?

More specifically, the paper sought to highlight the influence of teachers' age, gender and level of training on attitudes towards the use of integrated e-learning approach to the teaching and learning of business studies in Kenyan secondary schools. This paper therefore sought to answer the question by highlighting the features that prove to be influential, and hence factors which may contribute to facilitating or encouraging teachers to use ICT for teaching and learning. A number of factors may contribute to the attitudes towards and the use of ICTs in schools. Some of these are discussed below.

ORGANISATIONAL FACTORS

Ruthven *et al.* (2004), in their study on factors influencing development, dissemination and sustainability of ICT-supported practice identify the following:

- Administration support, which include adequate amount of time for preparing lessons that incorporate technology into the curriculum and for staff sharing opportunities, adequate computer network connections for intranet and/or Internet access, an adequate level of support in computer-related maintenance, and adequate opportunities for computer technology training. Their findings show that a general increasing trend in reported computer use parallel increasingly positive levels of perceived overall administration support benefits.
- The whole school characteristics have the biggest motivating influence on development, dissemination and sustainability of ICT-supported practice. The following constraints were noted: Access to technology resources was the most frequently mentioned critical factor. Teachers' comments highlighted the need for accessibility (ideally within their

department) and flexibility of use over and above quantity of machines. The next most prevalent constraint was lack of time. A teacher lamented that: "It's not that I don't know what to do, it's that I've not had time to do it". Teacher's role in orchestrating and mediating ICT-based activities requires a lot of time. For example: locating appropriate materials and guiding students towards them; structuring tasks to harness ICT tools effectively in meeting curriculum objectives; supporting pupils' use of technology; encouraging more autonomous approaches; furthering development of subject understanding through supportive pedagogical strategies, and monitoring progress (Hennessy *et al.*, 2005).

- Subject curriculum requirements, ICT initiatives and training were further reported to be factors of influence. System reliability was a major issue where development of practice was impeded through lack of technical back-up, not through lack of willingness.
- Lessons using ICT had become very high risk, especially issues on computer security and the internet misuse by students.

MOTIVATIONAL FACTORS

Teachers' technical confidence and confidence in approach plays a key role too. Teachers who have used ICT regularly have developed their confidence to higher levels than colleagues coming to it more recently. The theme of affinity with a particular approach reflects the process necessary to become confident about what is worth doing.

One teacher lamented that: "it's quite hard to say to people 'Here's a strategy. Off you go.' Technology skills and experience, resistance to change, and teacher age are all influential". Younger teachers are construed as natural and innovative users of ICT. In sum, teachers note how co-opting technology into the milieu of classroom activity has presented additional management issues in terms of dealing with lesson re-location, limited access to machines, confined room layouts, system unreliability and lack of technical support. Whilst some of these adversities have not been entirely unanticipated, the need to 'have something up your sleeve as a back-up' becomes highly salient, and strategies for surmounting or circumventing such difficulties more finely honed.

Teachers' and Students' Perceptions

Research conducted by Honey *et al.* (2000) on the requirements for successful integration of learning technologies into classrooms, shows that success requires understanding the complex interactions in classrooms between teachers, students and

technology. Parr (1999) has studied students' perceptions of learning contexts that incorporate learning technologies. Students' perceptions were found to influence the success of integration, specifically the amount of technology used, the ways in which the technology is used, and teachers' and students' expectations about learning.

In addition, Cope *et al.* (2002), in a study on teachers' perceptions of learning technologies and the teachers influence on students' perceptions, suggest that students' perceptions are likely to be influenced by teachers' perceptions and use of learning technologies in their teaching approaches. For successful integration leading to enhanced learning outcomes, teachers need to perceive learning technologies as part of a student-centred/conceptual change teaching approach. The learning technologies need to be perceived as tools in the learning context which encourage students to use deep learning approaches – to seek meaning in the content being studied through inter-relating the various aspects of the content, looking for a deeper understanding.

To further the understanding, a research into teachers' and students' perception of teaching and learning contexts has established a series of systematic associations linking teachers' perceptions and approaches with students' perceptions, learning approaches and outcomes (Biggs, 1999). The associations are summarised diagrammatically in Figure 1.

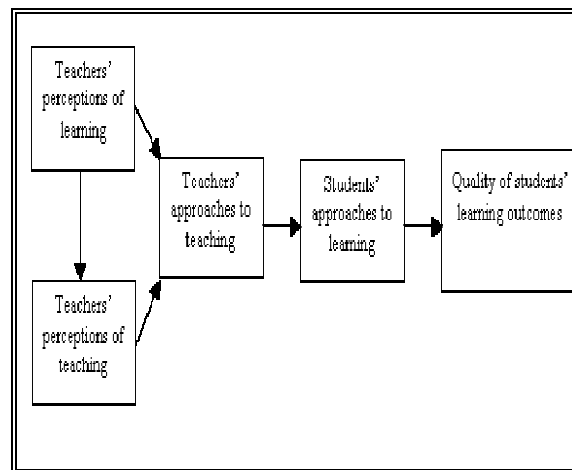


Figure 1: Teacher-student perceptions and the quality of learning outcomes
 Source: Biggs *et al.* (1999)

Cope *et al.* (2002) have concluded that teachers' perceptions and approaches and, consequently, the learning contexts they provide, influence students' perceptions. Successful integration of learning technologies leading to enhanced learning outcomes is unlikely unless teachers perceive and use technology as an integral part of a student-

centred/conceptual change teaching approach. Only through students perceiving learning technologies as part of a learning context which encourages independence in learning and deep learning approaches are enhanced learning outcomes likely.

In addition, Tearle (2004) notes that individuals' attitudes, confidence levels, cognitive and emotional styles, and social identities can influence their voluntary participation in the use of ICT and this may apply to teachers as well as students. An increasing body of research indicates that gender and racial stereotyping, in particular, may not only result in inequities concerning differential access, level and nature of use, and perceived competence. These dynamics may also impact on the formation of subject cultures and their tendency to colonise technology, and hence could affect teachers' perceptions of agency and authority in working with colleagues to bring about change.

Teamwork

Teachers in most schools do not generally work alone. They work in subject departments where they share resources, approaches, cultural values and aims, and collaboratively develop schemes of work. According to Loveless *et al.* (2001), departments which work effectively together as teams may readily share innovations involving ICT. In addition, Ruthven *et al.* (2004) indicate that practice develops over time with developing ideas and trying them out, considering the principles and purposes that underpin activities in particular contexts, and critically reflecting on them.

Considering teachers as members of the wider community of educational technology users means that change occurs in individuals as they develop professional expertise. They need the motivation to evolve from being 'potential users' to 'integral users' ultimately. The cultural norms and practices which operate within this wider community are shaped by competing forces, including senior management and their creation of a supportive organizational culture within the school (Loveless *et al.*, 2001).

Other forces include the external subject community; education officials, policy makers and inspectors (at local and national levels). Teachers cannot develop their pedagogy without heed to these powerful forces and educators wishing to support integration of ICT into subject teaching. Teachers need to overcome the organizational and political obstacles arising as well as their personal and professional perspectives.

Pedagogical Factors

Incorporating computer-based activities evokes subtle changes in the dynamics of classroom interaction and pedagogic practices. Hennessy *et al.* (2005) says that the most widespread shift reflects the pattern of

computer-oriented classroom organization in which student attention is redistributed away from a central teaching position. For example, teachers speak of becoming 'far less didactic' and 'spending more time with individuals and pairs' and comment that they find it easier to intervene as there is already ongoing dialogue between students. Furthermore, the discursive activity engendered by this style of working brings about increased understanding and improved learning.

On the other hand, some teachers suggest that notwithstanding the beneficial features of distributed ICT-based classroom activity, there remains a significant role for whole-class, teacher-led discussion as part of an effective teaching strategy. Teaching has been most effective when several approaches are combined. Indeed, across cases, there are signs of evolving hybrid practices involving a conjunction of resources and methods and these are reported elsewhere (Hennessy *et al.*, 2005).

Kerr (1991) has examined the place of technology in the practice of teachers who are thoughtful users of technology, but not necessarily the first to try new approaches or the most enthusiastic. Although Kerr (*ibid.*) notes that technology may provide more of a fulcrum for classroom change than some of these teachers consciously realize, he points to a process of pedagogical change in which teachers' gradual development and reconstruction of their perspectives and practices interacts with their adoption of an adaptation to new computer uses.

More recent studies show how personal and contextual factors are associated with levels and styles of computer use by teachers. Becker (1999) highlights how classroom computer use is powerfully mediated by prior practices and routines and by the interplay of institutional and individual views of student needs and good teaching (Windschitl *et al.*, 2002).

Impact of Subject Cultures on using Technology

Conceptions of teaching and learning, then, are shaped by local cultures, notably those of school and subject. Goodson *et al.* (1995) sought to highlight the challenge which microcomputers in classrooms may present to subject subcultures. The quantitative element of the study found that, while observed patterns of classroom activity do indeed vary between subject areas, computer use is associated with a common shift towards more individualised activity.

The qualitative element of the study found that the dominant trend of teachers' responses to the innovation is one in which the antecedent subject subculture in effect colonizes the computer, and uses it to teach the existing subject in the existing way. One potentially important contextual factor which

shapes how technology is perceived and used by teachers is the community of practice associated with their subject (Lave *et al.*, 1991). This is a social framework within which the planning, support and evaluation of student learning takes place. Each subject community could be said to share a set of tools and resources; approaches to teaching and learning; curriculum practices; cultural values, expectations and aims.

In England, as in the USA, the subject department acts as a basic social unit within secondary schools. Departments develop their own perspectives on objectives both internal and external to the school and they shape their actions accordingly (Trigwell *et al.*, 1999). Their sharing of practice and experience encompass the introduction and integration of ICT into subject teaching. Subject departments which work effectively together as teams may constitute more robust communities of practice than their wider subject cultures.

In sum, these studies corroborate the notion that subject cultures are an important influence in determining teachers' and students' use of ICT. There is also evidence that teachers choose ICT applications, activities and approaches to fit their own perspectives on teaching and learning (Niederhauser *et al.*, 2001). Thus pedagogic perspectives vary both within and between subject disciplines, and will influence the evolution of subject practice.

Educational Policy and Curriculum Context

According to policy makers worldwide, ICT initiatives should lead to significant technological and pedagogic change within subject teaching. These initiatives have included extensive training schemes for all new and existing teachers in using ICT in subject teaching and learning. In sum, there is a government drive towards provision of opportunities and expertise for using ICT in all schools, yet significant weaknesses are reported in policy and practice. The present subject curricula, assessment frameworks, and policies concerning ICT use seem to simultaneously encourage and constrain teachers in using technology in the classroom.

A study by Ofsted (2001) reveals that increasing investment in technology infrastructures has not been matched by investment of time and resources to develop new ways of learning and teaching. Despite numerous reported examples of effective use and apparent teacher motivation to develop their pedagogy and practice, clarification of what students should learn using ICT and how teachers could facilitate this is said to be needed. Change is likely to be limited without guidance of this kind, and without taking account of teachers' own theories about teaching and learning which are central to integration. Mumtaz *et al.* (2000) observe that teachers'

reluctance to abandon their existing pedagogy was more of an obstacle to teacher development in classroom use of ICT than limited resources known to be a major impediment.

Another study by Von Wodtke (1993) confirms that professional beliefs about curriculum content, subject pedagogy and managing classroom activities outweighed school factors in explaining change. The research additionally highlights the importance of personal factors associated with higher levels of computer use by teachers (Becker, 2000). These include teachers' openness to change and recognition of the transformative potential of using technology. The converse is that practitioners' concerns about disruption to established pedagogic approaches may lead to caution and additional limits on change.

Kerr (1991) further suggests that policy approaches which ignore personal and professional beliefs tend to construe educational technology as an innovation to be administered and then adopted by teachers. He observes that teachers assume that ICTs are merely new educational tools waiting to be picked up and used. Yet classroom change will not arise through simply providing more machines, software and functionality, and demonstrating that using ICT is effective.

Selwyn (1999) argues that the dominant construction of educational computing is indeed techno centric and coercive, limiting integration and educational effectiveness. It underestimates the degree of change required in teachers' understanding and beliefs. However, if ICT is viewed instead as a cultural artefact, as it is here, gradual influences of its use upon pedagogy mean that teachers' practice, thinking, attitudes, roles and approaches to using new technologies evolve over time. These influences are more complicated and significant than the degree of 'take-up' in schools, with which many statistical studies are.

Indeed the introduction of diverse forms of sophisticated technology adds even more complexity to already intricate teaching and learning processes. A meta-analysis of over 600 studies on ICT in education concluded that research struggles to tackle the complexity of the integration of the evolving technologies (Loveless *et al.*, 2001).

As a way of concluding, Cox *et al.* (2003) state that many factors point towards a whole school approach based on the premise that the adoption of ICT for teaching and learning is a special case of implementing and managing change, rather than a series of technical hurdles which need to be overcome. There is need to understand the attitudes and practice of teachers in relation to the context in which they are. Many studies have pointed to the

practical constraints operating within the working contexts in which teachers currently find them. Innovation and adaptation are costly in terms of time; developing effective pedagogy around ICT involves significant input in terms of planning, preparation and follow-up of lessons.

Other contextual factors which can act as barriers include: lack of confidence, experience, training and access to reliable technology resources (Dawes, 2001). Some writers distinguish between 'school level' and 'teacher level' barriers, with 'teacher level' factors such as pedagogical beliefs, technical skill and confidence viewed as particularly influential. Another recent literature review focusing on barriers to using ICT done by British Educational Communications and Technology Agency (BECTA) (2003a) highlighted the complex relationships between external influences such as access to reliable technology and internal influences such as school culture and teacher beliefs.

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. SchoolNet 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.

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 influence of perception on integrated E-learning approach as regards Business Studies. With this limited knowledge about integrated E-learning approach, it becomes imperative to investigate the teacher characteristics on the use of 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 is 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.

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 utilise 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, three Head teachers, eight Form Four teachers and 127 students of Business Studies constituted the sample. Purposive sampling was used in selecting the three Head teachers and eight Form Four Business Studies teachers whereas simple random sampling was used to select the 127 out of the 252 Form Four Business Studies students.

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 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 of Business Studies. Scheduled interviews with the Heads of schools were also used to back up the questionnaires.

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

Gender Influence on Students' Attitude towards Integrated E-learning Approach

Students' gender was analyzed to determine its influence on students' attitude towards the new approach. This research question was pegged on the hypothesis that students' gender does not significantly influence student's attitude towards E-learning approach.

The data was tabulated and then analyzed using the One-way Analysis of Variance (ANOVA) statistical technique. Computations of mean scores and

percentages for gender and attitudes of students towards the integrated E-learning approach were as recorded in Table 1. A total of 112 boys and 11 girls participated in the study. The 112 male students had a mean score of 4.12(82.4%) while their female counterparts had a mean score of 4.45(89%). This meant that the female students had a more positive attitude to the integrated E-learning approach than their male counterparts. The overall mean score of 4.28(85.7%) shows that more male students as well as their female counterparts had positive attitudes towards the new approach.

Table 1: Gender Influence on Students' Attitude towards Integrated E-learning Approach

Gender	Total Mean Score
Male n=112	4.12(82.4%)
Female n=11	4.45(89%)
Total	4.28(85.7%)

A one-way ANOVA computation for testing if gender had a significant influence on students' attitude towards the integrated E-learning approach yielded an F-ratio of 1.85 (Table 2). This is not significant at 0.05 level of significance with degrees of freedom (1, 56). This meant that the student's gender has no significant influence on his/her attitude towards the integrated E-learning approach.

This therefore means that both male and female students can learn through the approach without any problems. They both can tap the benefits of the approach and their outcomes can be compared. This finding also suggests the adoption of the new approach in the different categories of school on equal measure. That is to say the new approach can be adopted in boys' schools, girls' schools as well as in mixed schools.

Table 2: ANOVA for Students' Gender and their Attitude towards Integrated E-learning Approach

Source	Ss	Df	Ms	F-ratio	sig.
Between groups	3.96	1	3.96	1.85	4.00
Within groups	6.578	56	0.117		
Total	10.538	57			

Gender Influence on Teachers' Attitude towards integrated E-learning Approach

The literature on gender emphasizes the importance of this variable and shows a gap between men and women in the education level in general and in technology education in particular. Sociologists claim that this gap starts early at the kindergarten level, and continues through primary and secondary education. Boys tend to show more interest than girls in technical aspects relating to games.

This reflects directly on their future decisions regarding education level and educational subjects, occupation and way of life. The author's interest was to ascertain whether or not teachers' gender influenced their attitude towards the new integrated E-learning approach. A total of 5 male and 3 female teachers participated in the study.

The findings recorded in Table 3 show that all the male teachers, 5(100%), strongly agreed to the use of the approach and likewise to all the female teachers, 3(100%). This means that gender does not affect the teachers' perception towards the integrated E-learning approach negatively.

Table 3: Gender influence on Teachers' Attitude towards Integrated E-learning Approach

Gender	Positive	Negative	Total
Male	5(100%)	0(0.00%)	5(100%)
Female	3(100%)	0(0.00%)	3(100%)
Total	8(100%)	0(0.00%)	8(100%)

This is not in agreement with what Tearle (2004) observes, that gender may influence individuals' attitudes towards their voluntary participation in the use of ICT. This might apply to teachers as well as students. To help with further inquiry, the study sought to test the validity of the hypothesis that Teachers' gender does not significantly influence teacher's attitude towards integrated E-learning approach. The effect of gender on teacher's attitude towards integrated E-learning approach was determined by performing an ANOVA. The value 1.817 obtained is not significant at 0.05 level of significance (Table 4). This is an indication that gender does not influence the teacher's attitude towards the approach.

Table 4: ANOVA for Teachers' Gender and their Attitude towards Integrated E-learning Approach

Source	Ss	df	Ms	F-ratio	Sig.
Between Groups	4.762	1	4.762	1.817	3.92
Within groups	20.95	78	2.62		
Total	25.712	79			

Age influence on Teachers' Attitude towards Integrated E-learning Approach

Most research outcomes have reported more use of ICTs by young people compared to the older people. Ruthven *et al.* (2004) report that the older fear or lack experience to use the ICTs. The older feel intimidated by the new technologies than the younger generation. The researcher therefore sought to establish whether teachers of Business studies feel the same. Teachers were grouped with age differential gap of ten years. The findings showed that teachers of Business studies were in between the age bracket 20-50 years.

The findings regarding age influence on teachers' attitude towards integrated E-learning approach show that the teachers of the different ages were all positive towards the approach. This indicates that age does not affect teachers' attitude towards the new approach. The finding seems to negate the earlier assertions that younger teachers were more innovative users of ICT. These computations are recorded in Table 5.

Table 5: Age influence on Teachers' Attitude towards E-learning Approach

Age	Positive	Negative	Total
20 – 29	2(25%)	0(0.00%)	2(25%)
30 – 39	4(50%)	0(0.00%)	4(50%)
40 – 49	2(25%)	0(0.00%)	2(25%)
Total	8(100%)	0(0.00%)	8(100%)

A further analysis was done using ANOVA to determine the influence of teachers' age and their attitude towards E-approach. The subsequent hypothesis stated that teachers' age does not significantly influence teachers' attitude towards integrated E-learning approach. The one way ANOVA computation yielded an F-ratio of 0.237 (Table 6). The value obtained indicates that the differences were not significant at 0.05 level of significance. This meant that the teacher's age has no significant influence on his/her attitude towards the integrated E-learning approach. This suggests that the adoption of the approach is not be marred by age gap differences. The implication of this is that there are no differential strategies in convincing teachers to embrace the use of the new technologies in secondary school teaching of Business Studies in Kenya.

Table 6: ANOVA for Teachers' Age and their Attitude towards Integrated E-learning Approach

SOURCE	Ss	Df	Ms	F-ratio	Sig.
Between Groups	0.133	2	0.0665	0.237	3.92
Within groups	1.967	77	0.281		
Total	2.1	79			

Level of Training Influence on Teachers' Attitude towards Integrated E-learning Approach

Many studies indicate that education level is one of the major factors that influence ICT access and usage in general. The study sought to establish teachers' professional qualification and whether that affected their attitude towards the new integrated E-learning approach. The study findings show that all the eight teachers had the Bachelors' degree in education and all were positive towards the approach. According to Too (1996), teachers with the different professional qualifications were in support of media resources in the teaching and learning process. A further scrutiny was done by formulating and testing the hypothesis that there is no significant influence of teachers' level of training and their attitude towards E-Learning

approach. On performing ANOVA, the computation yielded an F-ratio of 0.788 (Table 7).

Table 7: Analysis of Variance for Teacher's Level of Training and Teachers Attitudes towards E-learning Approach

Source	Ss	Df	Ms	F-ratio	Sig.
Between groups	0.386	1	0.193	0.788	3.92
Within Groups	1.714	77	0.245		
Total	2.1	78			

The value obtained (0.788) is not significant at 0.05 level of significance. This means that the teacher's level of training has no significant influence on his/her attitude towards the integrated E-Learning approach.

CONCLUSION AND RECOMMENDATIONS

From the study findings, it was concluded that gender has no significant influence on teachers' and students' attitude towards the integrated E-learning approach. Both male and female students had positive attitude towards the approach. Similarly, the male and female teachers were positive towards the Integrated E-learning approach. Age too has no significant influence on teachers' attitude towards the Integrated E-learning approach. Both the old and younger teachers were eager to use the new innovation. This is a good sign in the adoption of the new innovation because not much time would be wasted convincing the teachers to embrace the technologies. Likewise, to the teacher's level of training, there was no variation in the teachers' academic qualification and therefore this conclusion cannot be generalized.

From these conclusions, it is recommended that head teachers should provide a framework where the whole school community get time for and access to ICT resources. They should also ensure there is a conducive environment that is supportive of teachers and students use of ICT. This can be built on a shared, community-based vision that prepares students to learn, work and live successfully in a knowledge-based global society. Provision of ICT capacity ensures that all teachers and students have immediate access to all software that is required to support the curriculum and adequate support to implement its use. This can be achieved through offering training opportunities, especially on the ICT literacy skills.

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