Original Research Article

Teachers’ perception of integration of computers in classroom teaching in public secondary schools in Nyamira sub-county, Nyamira county, Kenya

Received 28 October, 2015 Revised 27 November, 2015 Accepted 30 November, 2015

1Keoro Andrew Nyamota, 2*Yungungu Alice M. and 3Ogolla Bernard O
1Kericho Teachers Training College, Department of Education
2Moi University, School of Education, Department of Curriculum Instruction and Educational Media P.O Box 3900-30100 Eldoret-Kenya
3Moi University, School of Business and Economics, Department of Marketing and Management Sciences P.O Box 3900-30100 Eldoret-Kenya
*Corresponding Author E-mail: alice@yungungu@yahoo.com

The purpose of the study was to investigate teachers' perception of integration of computers in classroom teaching in public secondary schools in Nyamira Sub-county, Nyamira County, Kenya. This study drew inspiration from the Diffusion of Innovations (Dol) Theory. Descriptive survey design was adopted for this study because of its appropriateness in seeking relevant information that describes existing phenomena and to find facts that yields accurate information. This study targeted secondary school teachers of public secondary schools in Nyamira Sub-county, Nyamira County, Kenya. To achieve representativeness, thirty percent of the public secondary schools in each division of the district were randomly selected from which forty-six participants were selected for the study. Data analysis was done with frequency distributions and percentages in the form of tables and bar charts using the Statistical Package for the Social Sciences (SPSS) software. The results of the study showed that majority (80%) of the teachers had positive perception of computer integration in teaching. In order to improve teachers’ perception of computer integration, it was recommended that computer integration in teaching should be promoted and “marketed” in teacher training colleges and during in-service workshops, conferences and seminars.

Key words: Perception, teachers, computer, teaching.

INTRODUCTION

Computer technological development must occur in our schools if teachers are to prepare students for a competitive global market place. Kenya's former Minister of Education, Prof. Sam Ongeri said that students in Forms Three and Four would be able to access learning materials in digital format before the end of the 2011/12 financial year. He said that the development at its advanced stage would complement part of education and access through modern technology. He then observed:

"We expect the Kenya Institute of Curriculum Development (KICD) to complete developing Forms Three and Four content before the end of June, 2012. Teachers and students should seize this transformation to enrich the education standards in the country. I am proud that my Ministry, through KICD is already ahead in this area of electronic mass media educational content. It here fore affirms the Ministry's commitment to support the Institute with required resources, policies and legislations to reach greater heights" (Obura, 2012).

Obura (2012) also shows that the Kenya Institute of Curriculum Development (KICD), the body charged with the digitization processes and had completed materials for Forms One and Two in the 12 subjects alongside primary school content from Class Four to Seven. KICD is tasked with the development of key programmes by laying emphasis on science and technology. The Institute has instituted Vision 2030 flagship projects to realize these strategies. In 2011, the Kenya Institute of Education (KIE)
unveiled a three-year project that would support full integration of Information and Communication Technology (ICT) in Kenya’s education system.

Education systems around the world are to use computers to teach students the knowledge and skills they need in the 21st century. Computers have the potential to transform the nature of education. Computers provide an array of powerful tools that may help in transforming the present isolated, teacher-centered and text bound classrooms into rich student focused interactive knowledge environments. Teachers in public secondary schools must make use of computers to teach their students. In this way, they will move towards the goal of transforming the traditional paradigm of teaching. Teachers do not need to learn about computers; they need to learn how to use computers to enhance their learners’ understanding and critical thinking skills. Enhancing basic information and communication skills are like reading, writing and speaking should be the focus of using computers in the classroom (Obura, 2012).

Oketch and Asiachi (1992) state that:

“The teacher is the king pin in any educational innovation. No curriculum can achieve its objectives without good teachers. The quality of curriculum implementation process is of paramount importance. Curriculum is only as good as the quality of its teachers”.

Dawes (2001) is of the view that computers have the potential to support education across the curriculum and provide opportunities for effective communication between teachers and students in ways that have not been possible before. He further states that computers have the potential to be influential in bringing about changes in ways of teaching.

Computers can play various roles in the learning and teaching processes. According to Bransford (2000), several studies have reviewed the literature on computer and teaching and have concluded that it has great potential to enhance student achievement. Wong (2006) points out that a computer can play a part in supporting face-to-face teaching and learning in the classroom. The Kenyan government is recognizing the effectiveness of emerging technologies, including computers, in establishing new goals and implementing innovative pedagogical methods. Thus, after several years of effort, Kenya promulgated a National ICT policy in January 2006 that aims to improve the livelihoods of Kenyans by ensuring the availability of accessible, efficient, reliable and affordable ICT services. The national policy has several sections. One of the sections includes information technology that sets out the objectives and strategies pertaining to ICT and education. The relevant objective in this section states that government will encourage “...the use of ICT in schools, colleges, universities and other educational institutions in the country so as to improve the quality of teaching and learning” (ICT policy for Education, 2006).

Related strategies under the heading “E-learning” are to:

a) Promote the development of an integrated e-learning curriculum to support ICT in education.

b) Promote distance education and virtual institutions, particularly in higher education and training.

c) Promoting the establishment of a national ICT center of excellence.

d) Provide affordable infrastructure to facilitate dissemination of knowledge and skills through e-learning platforms.

e) Promote the development of content to address the educational needs of primary, secondary and tertiary institutions.

f) Create awareness of the opportunities offered by ICT as an educational tool to the education sector.

g) Facilitate sharing of e-learning resources between institutions.

h) Exploit e-learning opportunities to offer Kenyan education programs for export. Integrate e-learning resources with other existing resources (ICT policy for Education, 2006).

In the Education Sector, the Ministry of Education developed a Kenya Education Sector Support Program (KESSP) in 2005 that featured ICT as one of the priority areas with the aim of mainstreaming ICTs into the teaching and learning process. The National ICT Policy embedded this intent as a national priority and provided the impetus for the Ministry to develop its sector policy on ICT in Education. The ministry moved quickly and in June 2006, introduced the National ICT Strategy for Education and Training (ICT policy for Education, 2006). This document is referred to as the ICT policy for the education sector and consists of the following components, each with its own statement of strategic objectives and expected outcomes:

1. ICT in education policy
2. Digital equipment
3. Access and equity
4. Technical support and maintenance
5. Harnessing emerging technologies
6. Digital content
7. Integration of ICT in education
8. Training (capacity-building and professional development)
9. Research and development

The Ministry of education was given the mandate to lead the monitoring and evaluation of the strategy’s implementation, guided by government overall policies on education and ICT, specific education strategic documents for implementing its mandate and global goals such as Education for All (EFA) and the Millennium Development Goals (MDGs). This mandate is carried out through a ministerial ICT committee that meets monthly and reports quarterly on progress made. The committee is chaired by the Permanent secretary and supported by the Ministry’s ICT units. It has representation from stakeholders involved in implementing the strategy and mobilizing resources such as donors and private sector partners (ICT policy for Education, 2006). The implementing agencies include:

1. The Semi-Autonomous Government Agencies (SAGAs) of the ministry.

2. The Network Initiative for Computers in Education
(NICE), a consortium of NGOs involved in ICT in the education sector.

3. Individual NGOs that meets specified criteria.
4. Civil society organizations involved in ICT in education activities.
5. Academia and/or individuals with experience in ICT in education projects.
6. Another key part of the implementation strategy is the Kenya ICT Trust Fund, formed in 2004, with the aim of spearheading ICT initiatives in education.

Membership is open to public sector organizations such as ministries and other government institutions, private sector companies, donor partners, civil society, as well as academic and other educational institutions. In general, the objective is to facilitate public-private partnerships (PPPs) that will mobilize and provide ICT resources to Kenyan public schools and community resource and learning centers. It hopes to achieve the following goals over the next five years:
1. Resource mobilization for delivery of ICT infrastructure to schools.
2. E-readiness assessment for secondary schools, tertiary institutions and primary schools.
4. Establishment of a National Computer Assembly Center.
5. Member partners can apply for project funds to implement various ICT components that are outlined in the Kenya ICT Trust Fund objectives.

Each university in Kenya has developed its own ICT policy. However, the three East African higher education regulatory agencies, including the Kenyan Commission for University Education, signed a memorandum of cooperation in July 2006 intended to streamline and harmonize accreditation and quality assurance practices and procedures in the region. This is expected to enhance access to quality higher education and accelerate response to new opportunities for e-learning, use of virtual universities and other modes of distance and open learning. This is an indicator that the government, through the Ministry of Education is making an effort to introduce ICTs into the teaching and learning process in secondary schools as per the ICT policy for Education of 2006, where one of the objectives is to integrate ICT in education, computer inclusive. Computer integration in curriculum delivery is actually meant to improve academic standards which are deteriorating in public secondary schools in Nyamira district, Nyamira County. The recent years have shown little improvements according to the KNEC reports as shown in Table 1. Even though there was a little improvement, the academic performance was still poor.

However, the researcher carried out reconnaissance study to find out the status of computer integration in public secondary schools in Nyamira Sub-county, Nyamira County. According to that reconnaissance study, computer integration had not taken off. It was for this reason the researcher had to find out teachers’ perception of computer integration in classroom teaching in public secondary schools in Nyamira Sub-county, Nyamira County.

### Statement of the problem

Computer integration in the classroom is the application of technology to assist, enhance and extend student knowledge. Computers in education mean more than simply teaching learners on how to use computers. Computer is a means of improving education and not an end in itself. Thus computers should be used to promote information literacy-the ability to access, use and evaluate information from different sources in order to enhance learning, solve problems and generate new knowledge. Computers determine more than anything else, the quality of our education.

However, reconnaissance study was carried out to find out the status of computer integration in public secondary schools in Nyamira Sub-county, Nyamira County and this showed that computer integration had not taken off. It was this reason the researcher had to find out teachers’ perception of computer integration for teaching in public secondary schools in Nyamira Sub-county, Nyamira County.

Even with the Kenya government initiative in place, computer integration for curriculum delivery in public secondary schools in Nyamira Sub-county had not taken place. In view of the scenario outlined in the background to the problem, the problem was whether teachers could integrate computers in curriculum delivery in public secondary schools. Thus the question was; what was constraining computer integration in public secondary schools in Nyamira Sub-county, Nyamira County? The main emphasis of this study was to find out teachers’ perception of computer integration in teaching in public secondary schools in Nyamira Sub-county, Nyamira County.

### Objective of the study

The main objective of this study was to find out teachers’ perception of computer integration in classroom teaching in public secondary schools in Nyamira Sub-county, Nyamira County.

### RESEARCH DESIGN AND METHODOLOGY

#### Study area

The study was conducted in Nyamira Sub-county, Nyamira...
County, Kenya. Nyamira is one of the four districts in Nyamira County. It borders Rachuonyo to the West, Borabu to the East, Nyamira North to the North, Masaba to the Southeast, Manga to the South and Marani to the Southwest. There are 46 public secondary schools in the district. (Nyamira Sub-county Development Plan, 2004-2009).

**Research design**

Survey research design was adopted in conducting this study. Survey was appropriate because it is concerned with describing, recording and reporting conditions that exist (Kothari, 2008). Survey method is widely used to obtain data useful in evaluating present practices and providing bases for decision making (Engelhart, 1972).

**Target population**

The target population consisted of 46 public secondary schools. It also consisted of 150 teachers and 46 principals from 46 public secondary schools in Nyamira Sub-county, Nyamira County. Teachers were targeted because they are directly involved in the classroom teaching. Principals were involved because they were responsible in making sure that computer integration had succeeded by providing the requirements for its success.

**Sampling procedure**

For the purpose of collecting data, the following sampling techniques were employed. To sample out the required number of public secondary schools in the district, a systematic random sampling method was used. The choice of this method was on the basis of its simplicity and minimal chances of error (Kothari, 1985). From the 46 public secondary schools in the district, twenty public secondary schools were sampled out using the systematic sampling technique (Table 2). This was done by assigning each public secondary school a number. These numbers were then arranged in ascending order. From here, every second school was picked until a pre-determined total number of schools (20) were selected for the study. The researcher came up with a sample of 20 public secondary schools.

For principals, purposive sampling technique was used. The twenty principals of the twenty selected public secondary schools were included in the study. For the case of teachers, simple random sampling was employed; where each category of respondents was written ‘Yes/No’ on a piece of paper folded and picked out. The individuals who picked out ‘Yes’ participated in the study. As a result of this, the researcher came up with a sample of 40 teachers from the total of 150 teachers. Lastly, the researcher came up with a sample of 20 principals from the total of 46 principals. Sixty out of one hundred and ninety-six participants was the sample size for the study.

**Instrumentation**

**Questionnaires**

The questionnaires contained both open and close-ended questions. Questionnaires are widely used to obtain information concerning attitudes and opinions. Isolating specific questions for consideration tends to objectify, intensify and standardize the observation that respondents make (Nsugba, 2000). Questionnaires were administered to teachers. The questionnaire was divided into two parts. The first part (nos.1-4) consisted of statements requiring the respondents to state their background information on gender, teaching experience, teaching subject combinations, highest academic qualification.

The second part (nos.5-13) consisted of open statements and Likert scale type of questions which were to lead to the identification of discrepancies between the desired and actual practice of computer integration in teaching. This was meant to enable the researcher identify the respondents’ views of what computer integration in teaching and learning ought to be (the desired) and the participants’ description of what their view on the current status is.

The Likert type included, strongly agree, agree, neutral, disagree and strongly disagree. Another one was always, frequently, occasionally, seldom and never. The participants were asked to respond by ticking in the box against the appropriate response. Also involved were open-ended questions which gave the respondents opportunity to open-up and give information on the computer integration in teaching and learning.

The respondents were to provide the required information in writing in the spaces provided in the questionnaires. The responsibility for distributing questionnaires to various participating teachers and collecting them on completion was borne by the researcher.

**Interview schedules**

Interview schedules were directed to principals. Questions

<table>
<thead>
<tr>
<th>Division</th>
<th>No. of secondary schools</th>
<th>No. of schools drawn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nyamira</td>
<td>28</td>
<td>12</td>
</tr>
<tr>
<td>Nyamaiya</td>
<td>18</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>46</strong></td>
<td><strong>20</strong></td>
</tr>
</tbody>
</table>
were mainly open-ended to give the respondent a chance to discuss the perception of computer integration freely and exhaustively. It also helped in clarity of issues and suggestions provided by the respondents in regard to the perception of computer integration in curriculum delivery. The researcher took up the responsibility of administering interview schedules to principals. It was an oral administration of questions which involved a face-to-face interaction. The researcher was responsible in noting down the information given by the principals. Kothari (2008) observes that interviews are particularly suitable for intensive investigation. Some of the advantages of having used interviews were that the researcher obtained more information in greater depth, personal information as well as supplementary information about the respondent’s personal characteristics and environment which was often of great value in interpreting results and it was easy to get through an interview.

Validity

In this study, the opinion and assistance of two experts in the Department of Curriculum, Instruction and Educational Media, Moi University were sought to examine the criterion-related validity of the items. To check content validity, it was ensured that the items arose from the research objective. To check construct validity, the research items were piloted to two public secondary schools not earmarked for the study. Suggestions and advice offered were used as basis to modify the research items and make them more adaptable in the study. Validation of the items was important as it helped to ascertain whether the items would elicit relevant responses for the study.

Reliability

Reliability of the questionnaires in this study was determined by means of test re-test. The researcher piloted the questionnaires by distributing them to teachers in two schools in Nyamira North district not earmarked for participation in the study. Interview schedules were administered to principals of the two schools in Nyamira North not earmarked for participation in the study. The respondents were again issued with copies of the same questionnaires and interview schedules after a period of two weeks and requested to fill them in and answer the questions respectively. The responses were then compared, quantified and the correlation determined by Pearson’s product moment correlation coefficient. A value of 0.8 was obtained and the instruments deemed reliable.

Data collection procedure and ethical consideration

An introductory letter was obtained from the school of Education, Moi University, to the Ministry of Education in charge of Higher Education. This was to obtain a research permit from the Ministry of Education to Nyamira Sub-county, making the exercise legal and binding. An introductory letter was given out by the District Education Officer to individual institutions understudy. After all these arrangements, pre-visits were made to the schools and arrangements made with the principals on how to administer questionnaires and interviews.

Principals and teachers were briefed on the objectives of the study and reassured of the anonymity of their responses. The respondents were not required to write their names on the questionnaires. This ensured that responses given were sincere and reliable. Questionnaires were then administered and filled up by teachers and collected on the same day. This ensured a high return rate of questionnaires and ruled out the problem of questionnaires not being posted back to the researcher. The researcher also personally conducted interviews. Corrections and clarifications were made during interaction with participants as the need arose.

METHODOLOGY

The data collected was categorized as per the objective formulated and items in the questionnaires and interview schedules. Data from interview needs to be treated through qualitative method not quantitative method. The information collected was then coded and computer used for analysis. The information was presented in the tables and bar charts using frequencies and percentages. This formed the basis for the conclusions made. The computer program used was the Statistical Package for Social Sciences (SPSS) program.

RESULTS

The major findings of this study will be highlighted, discussed and compared to earlier studies. The similarities and differences between the finding of this study and those findings of the earlier studies will be stated and explained.

Teachers were asked to indicate their perception of computer integration in relation to the extent to which they Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D) or Strongly Disagree (SD) with the given statements in Table 3.

As seen in Table 3, 23 (57.5%) of the 40 teachers who responded to the item that learning using computers is better than learning using textbooks, strongly agreed. 12 (30.0%) teachers agreed. 3 (7.5%) teachers were neutral. None of the teachers who responded to this item disagreed. 2 (5.0%) strongly disagree.

Only 11 (27.5%) teachers of the forty teachers who responded to the item that learning using computers has the potential to render many teachers jobless, strongly agreed, while two teachers (5.0%) agreed. 4 (10.0%) of the 40 teachers were neutral. 16 (40.0%) teachers disagreed, while seven teachers (17.5%) strongly disagreed.

Nineteen teachers (47.5%) of the forty (40) teachers who responded to the item that teachers must master computer
integrate to be involved teaching using computers strongly agreed, while, only five teachers (12.5%) agreed. Seven teachers (17.5%) were neutral. Six teachers (15.0%) disagreed, while three teachers (7.5%) strongly disagreed. Only six teachers (15.0%) of the forty teachers who responded to the item that students can be frustrated with the technical problems associated with learning using computers strongly agreed, while fourteen (35.0%) agreed. Seven teachers (17.5%) were neutral. Nine teachers (22.5%) disagreed while four teachers (10.0%) strongly disagreed.

Twenty-four teachers (60.0%) of the forty teachers who responded to the item that a teacher can teach better when using a computer strongly agreed. Eight teachers (20.0%) agreed while four teachers (10.0%) were neutral. Two teachers (5.0%) disagreed while another two (5.0%) strongly disagreed.

Out of the forty teachers who responded to the item that computer integration makes teaching more effective, seven teachers (17.5%) strongly agreed. Twenty-six teachers (65.0%) agreed. Four teachers (10.0%) were neutral. Two teachers (5.0%) disagreed. Only one teacher (2.5%) strongly disagreed.

Six teachers (15.0%) of the forty teachers, who responded to the item that computer integration makes lesson plans more elaborate, strongly agreed, while twenty-two teachers (55.0%) agreed. Ten teachers (25.0%) were neutral. Two teachers (5.0%) disagreed, while none of the teachers strongly disagree.

Six teachers (15.0%) of the forty teachers who responded to the item that computer integration helps teachers to meet varying learning needs of students, strongly agreed, while a majority, twenty-six teachers (65.0%) agreed. Four teachers (10.0%) did not see any help. Three teachers (7.5%) disagreed, while one teacher (2.5%) strongly disagreed.

Seven teachers (17.5%) of the forty teachers who responded to the item that computer integration helps teachers to be more organized in teaching, strongly agreed, while twenty-six teachers (65.0%) agreed. Four teachers (10.0%) did not see any help. Three teachers (7.5%) disagreed. None of the teachers who responded to this item strongly disagreed. The result is that teachers broadly agreed that computer integration makes them more effective in their teaching (82.5%), makes their lesson plans more elaborate (70.0%), makes them better able to meet the varying learning needs of their students (80.0%) and makes them more organized in teaching (82.2%).

According to the findings of this study, teachers’ perception of computer integration was encouraging, where most of them showed a positive perception of computer integration in teaching. The findings of this study agree with the findings of Odera (2011) who noted that the

### Table 3. Teachers’ perception of computer integration in teaching in public secondary schools

<table>
<thead>
<tr>
<th>Statement</th>
<th>SA</th>
<th>A</th>
<th>N</th>
<th>D</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning using computers is better than learning using textbooks.</td>
<td>23</td>
<td>12</td>
<td>3</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Learning using computers has the potential to render many teachers jobless if it is employed.</td>
<td>11</td>
<td>2</td>
<td>4</td>
<td>16</td>
<td>7</td>
</tr>
<tr>
<td>Teachers must master computer integration to be involved in teaching using computers.</td>
<td>19</td>
<td>5</td>
<td>7</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Students can be frustrated with the technical problems associated with learning using computers.</td>
<td>6</td>
<td>14</td>
<td>7</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>A teacher can teach better when using a computer.</td>
<td>24</td>
<td>8</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Computer integration makes teaching more effective.</td>
<td>7</td>
<td>26</td>
<td>4</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Computer integration makes lesson plans more elaborate.</td>
<td>6</td>
<td>22</td>
<td>10</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Computer integration helps to meet varying learning needs of students.</td>
<td>7</td>
<td>26</td>
<td>4</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Computer integration helps teachers to be more organized in teaching.</td>
<td>7</td>
<td>26</td>
<td>4</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>


main reason that encourage teachers to integrate computer into teaching subjects was that teachers felt computer programs were well researched, well presented and formed links with traditional subjects as reported by 75% of the interviewees. She further noted that computer integration is new to teachers. However, the results showed that some computer software such as the spreadsheet linked properly with some topics in mathematics, commerce and accounts. A few teachers had also incorporated computers into teaching traditional subjects like Science, Social studies and English language. They also expressed positive perception of computer integration in motivating students to teach traditional subjects (Mathematics, Science, Languages, and Technical drawing) effectively on their own as this improves teaching and learning.

The findings of this study agree with what Earle (2002) noted that the change from a present level to a desired level of performance is facilitated by driving (encouraging) forces such as the power of new developments, rapid availability, creativity, Internet access, or ease of communication. Also in his findings, he found that teachers are unlikely to use computer integration in their teaching if they see the need to change their professional practice. He noted that teachers who resist change are not rejecting the need for change but lack the necessary education in accepting the changes and are given insufficient long-term opportunities to make sense of the new technologies for themselves. If these are provided for teachers, positive perception of computer integration in teaching and learning will be improved greatly.

The findings of the study are in line with what Wanjala et al. (2011) noted that lack of support by administrators is identified as a significant barrier toward Implementation of ICTS in classrooms. Successful implementation of ICTs can only occur if administrators offer teachers support and leadership. It is noted that in addition to administrators developing a philosophy to guide the implementation of computer technology, they can support the technological professional development of teachers by: establishing flexible schedules so teachers can practice what they have learned (or to continue their learning); encouraging and facilitating team-teaching and peer coaching; allowing teachers to visit each other’s classrooms to observe technology integration; and scheduling regular meetings among teachers using technology to plan and evaluate instruction. Once this is done, teachers’ perception will be improved tremendously.

DISCUSSION

Teachers’ perception of integration of computer integration in classroom teaching in public secondary schools

According to the findings of this study, teachers’ perception of computer integration was encouraging, where most of them showed a positive perception of computer integration in teaching. The findings of this study agree with the findings of Odera (2011) who noted that the main reason that encouraged teachers to integrate computer into teaching subjects was that teachers felt computer programs were well researched, well presented and formed links with traditional subjects as reported by 75% of the interviewees. She further noted that computer integration is new to teachers.

However, the results showed that some computer software such as the spreadsheet linked properly with some topics in mathematics, commerce and accounts. A few teachers had also incorporated computers into teaching traditional subjects like Science, Social studies and English Language. They also expressed positive perception of computer integration in motivating students to teach traditional subjects (Mathematics, Science, Languages, and Technical drawing) effectively on their own as this improves teaching and learning.

The findings of this study agree with what Earle (2002) noted that the change from a present level to a desired level of performance is facilitated by driving (encouraging) forces such as the power of new developments, rapid availability, creativity, Internet access, or ease of communication. Also in his findings, he found that teachers are unlikely to use computer integration in their teaching if they see no need to change their professional practice. He noted that teachers who resist change are not rejecting the need for change but lack the necessary education in accepting the changes and are given insufficient long-term opportunities to make sense of the new technologies for themselves. If these are provided for teachers, positive perception of computer integration in teaching and learning will be improved greatly.

The findings of the study agree with Wanjala et al. (2011) who noted that lack of support by administrators is identified as a significant barrier toward implementation of ICTs in classrooms. Successful implementation of ICTs can only occur if administrators offer teachers support and leadership. It is noted that in addition to administrators developing a philosophy to guide the implementation of computer technology, they can support the technological professional development of teachers by: establishing flexible schedules so teachers can practice what they have learned (or to continue their learning); encouraging and facilitating team teaching and peer coaching; allowing teachers to visit each other’s classrooms to observe technology integration; and scheduling regular meetings among teachers using technology to plan and evaluate instruction. Once this is done, teachers’ perception will be improved.

Summary of findings

The major finding of this study was highlighted, discussed and pegged to earlier studies. The similarities between the finding of this study and those of earlier studies were stated
and explanations for the findings offered. From the data presented, analyzed and interpreted, the following major finding was established: Teachers’ perception of computer integration was encouraging, where most of them showed a positive perception of computer integration in teaching.

Conclusion and recommendation

This research was a study of teachers’ perception of computer integration in curriculum delivery in public secondary schools in Nyamira Sub-county, Nyamira County. The study was guided by the following objective: To find out teachers’ perception of integration of computers in classroom teaching in public secondary schools in Nyamira Sub-county, Nyamira County. A careful analysis of the findings obtained from the study led to the conclusion that many teachers and principals in public secondary schools had positive perception of computer integration in teaching.

Though it is evident that computer integration in curriculum delivery has got challenges, we cannot ignore the truth that computer integration in curriculum delivery can make learners’ education more productive. It is therefore recommended that computer integration in curriculum delivery be emphasized in public secondary schools. This can be done by observing the following:

In order to improve teachers’ perception of computer integration in teaching, it should be promoted and “marketed” in teacher training colleges and during in-service workshops and seminars for teachers. Teachers should be assisted to know that we are in the era of technology through workshops and seminars to sensitize them about the importance of computer integration in curriculum delivery in schools.

REFERENCES
