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Integration of Media and Technology in Teaching and Learning Kiswahili Language in Secondary Schools in Siaya County, Kenya

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ABSTRACT

Teaching and learning of Kiswahili in Secondary schools could benefit from effective integration of Media and Technological resources. However, in Gem District in the Republic of Kenya concerns have been raised with regard to availability and integration of these resources in the teaching and learning process. The purpose of this study was to determine integration of Media and Technological resources in Form Three Kiswahili language teaching and learning. It adopted descriptive survey design. The study involved 38 teachers drawn from 41 Secondary schools in Gem District, Kenya selected by saturated sampling representing 84% of the population. Data was collected by the use of a questionnaire and an observation checklist. The study found that 80% of the school had an acute shortage of Media and Technological resources, over 85% of the teachers do not select and use resources, over 80% indicated that integration of Media and Technological resources is negligible and over 50% indicated that integration of Media and Technology assists in the realization of lesson objectives. The study recommends the Government through its agencies and other stakeholders to oversee acquisition and distribution of Media and Technological resources sensitize and involve teachers in the process of integration through integration of these resources through training courses, seminars and workshops.

Keywords: *Integration, Media and Technology, Teaching & Learning, Kiswahili Language.*

1. INTRODUCTION

Experience around the world in developing, industrialized, and information-based countries has shown that for the past three decades the world has witnessed a notable shift in the way media and technology are used in schools (Carlson & Gadio, 2003). Besides with the advent of World-Wide Web had given students easy and rapid access to ample multimedia information, flexible communication through electronic mail, and a variety of components that help students communicate visually and verbally with their friends locally and internationally (Sia, 2000). IT with its new technologies serves a number of functions. Brown (2000) identifies these functions as that empower people and open up new possibilities for actions, and he relates this situation as the "digital shift" because it converts people's thinking, knowledge, and communication to digital and information form. In the field of education, IT is commonly related as how computers and the Internet can best be harnessed to improve the efficiency and effectiveness of the process of teaching and learning (Guha, 2003). IT can have a transformative effect on education systems because it is a potentially powerful tool for extending educational opportunities and greatly facilitate the acquisition and absorption of knowledge (Conlon & Simpson, 2003) with the usage of computer. It tends to redefine teacher and student roles and beliefs about teaching and learning (Guha, 2003).

Republic of Kenya (2007) states that part of the Kenya Vision 2030 is to reform secondary curricula modernize teacher training and establish a computer supply program that will equip students with modern IT skills;. The education and training curricula in the country will, therefore, be modified to ensure that the creation, adoption, adaptation and usage of IT knowledge becomes part of formal instruction. This means that integration of Media and Technology is part of this mission. MOE (2004) states that one of the Government strategies in improving learning is through provision of targeted teaching and learning materials, which will also include electrification of all secondary schools to facilitate the utilization of media and technological resources.

Gerlach and Elly (1971) classified the resources into five general categories; Real materials and people i.e. teachers, librarian; Visual materials for projection i.e. projectors, overhead projectors; Audio materials i.e. radio, tape recorders; Printed materials i.e. work books and Display materials i.e. chalkboard, bulletin board. They further suggest that factors to consider for media selection include appropriateness, extent of sophistication, cost, availability, and technical quality. Dale (1969) classified them into three categories, that is; Audio i.e. radio, tape recorder; Visual media, Audio-visual and computer meditated materials. Ellington and Race (1993) classified the teaching and learning resources into seven groups; Printed and duplicated materials; Non-projected display materials; Still-projected display materials: Audio materials: Linked- audio and still-visual Material: Video materials and Computer- mediated materials.

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Gathumbi & Ssebbunga (2005) state that good language materials have the following characteristics; learner centered, task based, allow creativity of learners, interesting and authentic-dealing with real-life or common tasks. They classify them as; Audio-visual aids which can be used in teaching grammar; Flashcards in form of card or Manila paper which may be used to write bold letters on and may contain words or pictures drawn in sequence so as to bring out a story line: Pictures in form of magazines, newspapers, photographs which can be used to show letters and particular grammatical structures and Audio-tapes and films: Realia or three-dimensional objects which can be used to teach vocabulary and grammar such as prepositions of under, over: and Visual aids- which can be used to explain difficult words and also to increase the learners' concentration and retention. Wringe (1995) broadly puts them or classifies the materials into three; Traditional teaching aids such as books, posters, flashcards, diagrams and of course, the blackboard and chalk or its modern equivalent: Established language technology such as the over-head projector, audio and video-recorders, projectors, copiers and language lab: and Information technology notably the micro-computers.

Krashen (1985) makes a strong claim that comprehensible input in the target language is both necessary and sufficient for the acquisition of that language provided that the learners are ' effectively disposed to let it in' the input they comprehend (Ellis,1994,p.273). He goes further to explain that materials should provide exposure to authentic input through their proper use. Thus if they are not able to articulate this exposure then they limit the extent to which the learner will benefit. Materials should have impact such as creating curiosity, interest and attention.

Pearson (1983) points out that media teaching resources should be carefully used and from his research he found out that learners from different cultures reacted differently when faced with different styles of illustrating materials. He goes further to point out that another possibility that quite relate to the way of teaching is that materials will present activities and some bits of the language for the learners to work with, but include nothing that explains anything to the learners. Dulay, Burt and Krashen (1982) say that materials should help learners to develop confidence, 'Relaxed and self-confident learners learn faster'. Using media and technological resources which are stimulating, which are problematic but which can be manipulated such as making them learn to use and to develop their existing extra- linguistic skills i.e. imagination, creativity and analytical. They go further to say that relaxed and comfortable students apparently learn more and so media and technological resources should help learners to feel at ease. This brings up the issue of safety in that some of the resources selected and used may expose learners not only to physical danger but also psychological danger. Muijs and Reynolds (2001) say that the learners should be offered greater flexibility to choose what, how, where and when to learn depending on their unique potentials and needs. They are seen as

active persons 'predisposed to change' .They do not merely respond to stimuli but are grappling to make sense of things.

The UNESCO (1984) study found out that the mere use of the materials or resources however, does not guarantee effective communication, or effective teaching. It is their careful provision, selection and skilful handling that renders them useful in facilitating learning. Given the nature of the problem under examination, that is, integration of media and technology in teaching and learning Kiswahili Language in Secondary Schools, the study opted to use teachers as they are very important and influential in raising standards whatever the existing situation (Fullan, 2001).

2.   OBJECTIVES OF THE STUDY

Specific objectives of the study were to determine:

i.   Availability of Media and Technology resources.
ii.   Selection and use of Media and Technology resources.
iii. Extent of integration of Media and Technology in teaching Kiswahili Language.

3.   MATERIALS AND METHODS

Research Design

Descriptive survey design was chosen because it is appropriate for educational fact finding and yields a great deal of information, which is accurate. The research aimed at gathering accurate information on the availability of media and technology, selected and used and extent of integration of Media and technology in teaching Kiswahili Language.

Sample and Venue

Saturated sampling technique was used to select 38 Kiswahili Language teachers drawn from 41 Secondary schools in Gem District, Kenya, representing 84% of the study population. Saturated sampling technique was used because it enabled all the population within the District to be studied.

Data Collection Instruments

Teachers Questionnaire and an observation checklist were used to collect data from teachers regarding the range and factors influencing selection, development and use of language materials. Both of them had open-ended and closed-ended items. Open ended questions gathered in-depth information and were used so as to enable the researcher gather data from a large number of respondents at a particular time (Ngumbo, 2006) while closed ended questions gave out structured responses, which facilitated the ease of tabulation and analysis. The observation checklist was used to gather data from the centers to assist in verifying

information obtained through the teachers' questionnaire. And also gave additional information which could not be captured in the questionnaire.

Pilot Study

To establish reliability of the research instruments, a pilot study was carried out in 3 secondary schools involving 7 teachers (16 % of the study population) using test-retest method. The two tests were administered at an interval of two weeks. This was done so as to find out whether the terms used were understood by the teachers and also to guard against the response set, distortion of data and subjectivity of responses. Teachers who participated in the pilot study were not involved in the final study. This method of establishing reliability of instruments was appropriate for the instruments that gather data which is qualitative in nature (Joppe, 2000; Creswell and Miller, 2000). Teachers who participated in the pilot study were not involved in the final study. For validity of the instrument to be ensured, three experts on the topic examined the content of the instrument and advised the researcher on the content validity. Their feedback was used to revise the instruments.

Data Collection Procedures

The researchers sought for a research permit and research authorization letter from the Ministry of Higher Education, Science and Technology before the process of data collection in the field. The instruments were administered through personal visits on appointment with teachers. The questionnaires were filled by the teachers and collected by the researchers after a fortnight. The researchers observed a number of Kiswahili language lessons and held discussions with the respective teachers before and after the lessons and during the collection of the questionnaires.

Data Analysis Procedure

Quantitative data was analyzed by use of descriptive statistics, namely frequency and percentage. Qualitative data was categorized and reported in emergent themes. As defined by Watson (1994), qualitative data analysis is systematic procedure followed in order to identify essential features, themes and categories. Data was then reported in frequencies, percentages, verbatim quotations and tables.

4. RESULTS

Availability of Media and Technology for Teaching Kiswahili Grammar

Out of the 38 sampled teachers majority 20 (52.64%) indicated they do not have radios, 18 (47.36%) indicated they had radios.

On availability of television sets majority 23(60.53%) indicated none and 15(39.47%) responded in the positive. On films 3(7.9%) indicated to have films while 35(92.10%) indicated none. On photographs 20 (52.64%) responded in the affirmative while 18 (47.36%) indicated none. Video cassettes scored 20(52.64%) in the affirmative while 18(47.36) indicated none. Computers and computer software availability was at 10(26.32) and 28 (73.68) indicated they were not availability. Overhead projectors availability was at 4 (10.53%) and unavailability at 34 (89.47%).Finally audio-video recorders availability was at 6(15.79%) and 32(84.21% lacking. The teachers were further asked to indicate how they acquire media and technology resources for teaching. Majority 20 (52.64%) did not respond to the question, 10 (26.32%) said that their schools avails the resources, 4(10.53%) indicated that they borrow resources from other institutions, 2(5.3%) each indicated that the ministry and well wishers supplies the schools with media and technology resources for use in their schools. *"Our schools are 'decimal schools' which can't afford such amount of money to by these resources.'* The above findings show that over half of the schools do not have media and technology resources for use in teaching especially in languages teaching. The findings are shown in Table 5.

Media and Technology Selected and Used in Teaching Kiswahili Grammar

Out of the 38 sampled teachers majority 5 (13.6 %) indicated they have selected and used the radio as a resources for teaching Kiswahili grammar while 33(86.4) have not. On television sets majority 8(21.1%) answered on the positive and 30 (78.9%) responded in the negative. On films 1(2.6%) indicated to have selected and used films while 35(92.10%) answered in the negative. On photographs 2 (5.3%) responded in the affirmative while 36 (94.7%) gave a negative answer. Video cassettes scored 1(2.6%) in the affirmative while 37(97.4%) said they had never selected nor used Video cassettes. Computers and computer software and overhead were neither selected nor used in teaching Kiswahili Language grammar. Finally Video cassettes selected and used was at 5(13.6%) in the affirmative while majority 33 (86.4%) indicated that they had never selected and used these resources for teaching and learning Kiswahili grammar. Teachers who participated in this study had the following general responses on this subject: '*We try our best to use the available resources such as radios, films and photographs. But radios do not have the best programmes for teaching situations.'*

Extent of Integration of Media and Technology in Teaching Kiswahili Grammar

Out of the 38 respondents 1(2.6%) indicated that the integration of Media and technology is done at a very great extent when teaching Kiswahili language grammar, 2(5.3%) indicated Great Extent, 1 (2.6%) at fair extent, 2 (5.3%) each for minimum extent

and no extent at all while majority 30(78.9%) gave a Not Applicable answer. These findings are represented in Table 3.

The respondents were asked to indicate how often they integrated media and technology in teaching Kiswahili. Majority 15(39.47%) said they rarely integrate media and technology, 4(10.53%) indicated regularly, 3 (7.9%) were not sure how often they integrated these resources while 4(10.53%) each indicated very regularly and occasionally while 8 (21.1%) indicated not at all. The findings are presented in Table 4.

The teachers were further asked to indicate how they acquire media and technology resources for teaching. Majority 20 (52.64%) did not respond to the question, 10 (26.32%) said that their schools avails the resources, 4(10.53%) indicated that they borrow resources from other institutions, 2(5.3%) each indicated that the ministry and well wishers supplies the schools with media and technology resources for use in their schools. The

above findings show that over half of the schools do not have media and technology resources for use in teaching especially in languages teaching. The findings are shown in Table 5. Some of the teachers said that*'Integration is difficult because we do not have the time even if the resources are available'*

The teachers were asked to state to what extent they perceived integration of Media and Technology would help in achieving the Kiswahili Language lesson objectives. These findings are presented in Table 6. Based on the responses of 38 Kiswahili Language Teachers, 25 (65.8%) perceived it would help to very great extent, 5(13.3%) indicated Great Extent, 4 (10.5%) gave a fair extent answer, 2 (5.2%) minimum extent and 1(2.6%) each for no extent at all and Not applicable answer, with regard to integration of Media and Technology in the realization of lesson objectives in Language teaching especially in this language.

Table 1: Teachers Response on Availability of Media and Technology Resources

Materials & Resources	Responses Availability		Not Available		Totals	
	F	%	F	%	F	%
Radio	18	47.36	20	52.64	38	100
Television	15	39.47	23	60.53	38	100
Films	3	7.9	35	92.10	38	100
Photographs	20	52.64	18	47.36	38	100
Video Cassettes	20	52.64	18	47.36	38	100
Computers & Software	10	26.32	28	73.68	38	100
Overhead Projectors	4	10.53	34	89.47	38	100
Audio Video recorders	6	15.79	32	84.21	38	100

Table 2: Teachers Response on Selection & Use of Media and Technology Resources

Language Materials & Resources	Responses Selected & Used		None		Totals	
	F	%	F	%	F	%
Radio	5	13.6	33	86.4	38	100
Television	8	21.1	30	78.9	38	100
Films	1	2.6	37	97.4	38	100
Photographs	2	5.3	36	94.7	38	100
Video Cassettes	1	2.6	37	97.4	38	100
Computers & Software	-	-	38	100	38	100
Overhead Projectors	-	-	38	100	38	100
Audio Video recorders	5	13.6	33	86.4	38	100

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Table 3: Extent of integration of Media and Technology in Teaching Kiswahili

Perceived Level	Frequency	Valid percent
Very Great Extent	1	2.6
Great Extent	2	5.3
Fair Extent	1	2.6
Minimum	2	5.3
No extent at all	2	5.3
N/A	30	78.9
Total	**38**	**100**

Table 4: Response on how often they Select and Use Resources

Response	Frequency	Valid percent
Very Regularly	4	10.53
Regularly	4	10.53
Occasionally	4	10.53
Not Sure	3	7.9
Rarely	15	39.47
Not at all	8	21.1
Total	**38**	**100**

Table 5: How Teachers Obtain Media and Technology Resources

Mode of obtaining	Frequency	Percent
The school buys them	10	26.32
The ministry supplies them	2	5.3
Teacher borrows them from other institutions	4	10.53
Well wishers supply them to school	2	5.3
N/A	20	52.64
Total	**38**	**100**

Table 6: Extent to Which Integration of Media and Technology Assists to Realize Lesson Objectives

Perceived Level	Frequency	Valid percent
Very Great Extent	25	65.8
Great Extent	5	13.3
Fair Extent	4	10.5
Minimum	2	5.2
No extent at all	1	2.6
N/A	1	2.6
Total	**38**	**100**

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5. DISCUSSION

This study found that there was insuffiency of media and technology resources in most secondary schools which is likely to have an impact in teaching language especially Kiswahili as an examinable subject and a medium of communication. It also reveals that many teachers do not consider integrating these resources in their lessons. These findings seem to concur with what Bloom (2003) found that the more ambitious teachers of the English language normally resort to resourceful fun filled language activities such as jigsaw-puzzle, crossword puzzle, quiz and Newspaper-In-Education (NIE) and they consider the usage of Media and technology as to be the last resort only if photocopies of comprehension passages and grammar exercises were not delivered on time.

Data analysis in Table 1 shows that out of the 38 Kiswahili Language teachers who participated in the study, majority 52.64% indicated that media and technology resources available their schools are photographs and video cassettes while 47.36% indicated that radios are available in their schools. However, over 70% of the respondents indicated that Media and technology resources such as televisions, films, computer and computer software, overhead projectors and audio-video recorders were not available. This study concurs with that of Mumtaz (2000) who points out that access or lack of media and technological resources can seriously limit what teachers can do in the classroom with regards to integration of media and technology.

Despite the over 50% respondents who confirmed availability of photographs and films 6 % indicated to having selected and used the resources in teaching and learning process. Over 80% of the respondents they had never selected and used some of the media and technology resources. The findings are shown in Table 2. This study also confirms the study by Bill, Jesse, and Acosta (2001) study on schools in Silicon Valley in America which showed that less than ten percent of the teachers use computers in their classrooms.

Table 3 shows that out of the 38 respondents who participated in the study, over 75% could not give an answer on the extent of integration of media and technology while only 10% gave the response that it had fair extent or better. This finding seem to concur with what Martinez (1999) found, that one of the major challenges facing developing countries is to make technology an essential part of the culture of the people. According to Hodas (1993), the diffusion of media and technologies may be inhibited by the micro culture of a certain institution or organization. Hence, acceptance of a new technology in a society depends on how well the proposed innovation fits the existing culture. Therefore, there must be a match between organizational culture and new technology into an organization.

Table 4 shows that out of the 38 respondents who participated in the study, over 65% responded that they rarely or never select nor use Media and Technological resources in teaching and learning process. This study confirms that of Oxford (2001) who posits that for learning of language to take place then many factors have to come to play and they include the setting which must provide resources and values that strongly support the teaching of the language. This means that the teachers have to be in the forefront in terms of integrating media and technology resources to spice the learning environment.

Table 5 on the other hand shows that over 52% indicated that they are not in the know how their schools acquire media and teaching resources or rather they gave a not applicable answer. This means that either the administrations of the institutions do not take integration of media and technology or they sideline the teachers in matters relating to the resources. This confirms that administrative support is vital in integration of these resources as Anderson and Dexter (2000) posit that leadership is an important element in establishing technology as a part of school culture. Therefore, school leaders should be a role model and should make media and technological resources as tools for use in their everyday life. School Culture Social system is an important parameter in the innovation diffusion process (Rogers, 1995).

On the extent to which integration of media and technology assists in realization of lesson objectives Table 6 shows that about 70% indicated that it assists to a great extent. This finding concurs with those of Drent and Meelissen (2007) who state that Media and Technology should be used as tools to support the educational objectives such as skills for searching and assessing information, cooperation, communication and problem solving which are important for the preparation of children for the knowledge society. In fact, innovative use of Media and Technology can facilitate student centered learning (Drent, 2005). Hence, every classroom teacher should integrate and use learning technologies to enhance their student learning in every subject because it can engage the thinking, decision making, problem solving and reasoning behaviors of students (Grabe & Grabe, 2001).

6. CONCLUSION

Based on the findings, the following are the conclusions of the study:

i. Over 70% of the respondents who participated in the study that most of the Media and Technology resources were not available. This is an indicator that most secondary schools in Gem district lack these resources.

ii. Majority, over 85% of teachers do not select nor use media and technological resources in teaching and learning resources.

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iii. Majority, over 80% gave a negative response on the extent of integration of media and technology in teaching Kiswahili Language.

iv. Over half, 50% of the respondents admitted that they do not know how their schools acquire Media and Technology resources. An indicator that the teachers are not consulted nor involved in the acquisition of these resources in their respective schools.

v. Over 80% of respondents stated in the affirmative that integration of Media and Technology in teaching especially in Kiswahili assists in the realization of lesson objectives.

RECOMMENDATIONS

i. The Government through its relevant agencies and should oversee the acquisition and distribution of media and technological resources for effective integration.

ii. Teachers' courses should include integration of the Media and Technological resources so as to encourage them to select and use these resources in teaching and learning process.

iii. Teachers should be sensitized on the importance of integration of Media and technological resources through seminars and workshops at school, Zonal, Divisional, District and National levels.

iv. Teachers should be fully involved in terms of their advice and also purchase before the schools acquire theses resources so as to make them own these projects and integrate the resources in their teaching.

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