The influence of instructional media use on pupils’ mastery of reading and writing in Kiswahili Language in Kinondoni District, Tanzania

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The study sought to establish the influence of instructional media use on pupils’ mastery of reading and writing in Kiswahili language in Kinondoni District in Tanzania using survey research approach whereby a sample of 292 pupils and teachers participated by filling the questionnaire. Validity of the questionnaire was ensured through expert judgment from a group of experienced researchers. Cronbach’s Alpha ranged between .634 and .795 meaning the questionnaire was reliable. The respondents strongly agreed that pupils are able to read and write accurately. They further agreed that teachers use hands-on activities in teaching reading and writing; they also use pictures, charts and diagrams. The results further indicates a negative yet weak correlation (-.220) between mastery of reading and writing and the use of instructional media. It was therefore concluded that pupils are able to read and write accurately, they can write simple words and complex sentences and they can write accurately vocabularies of their level. It is recommended that in order to increase learning efficiency, teachers should make use various media resources in the teaching and learning process and school administration should ensure availability of such media resources. There is need to train teachers on how to select appropriate media resources for enhancing reading and writing.

Key words: Instructional media, mastery, reading, writing, Kiswahili Language, Kinondoni, Tanzania.

INTRODUCTION

The use of instructional media in the teaching of reading and writing (literacy) plays a vital role for effective learning to take place and attainment of the objectives stated by curriculum developers. Tanzania, like many other countries in the world, seems to face challenges on the use of various instructional media in the teaching and learning process. However it is not clearly understood whether selected instructional media are available and used in learning of Kiswahili reading and writing among public primary schools in Kinondoni District. While there is a range of studies conducted in Tanzania on factors influencing acquisition and underachievement in Kiswahili reading and writing skills (Anney et al., 2016; Lyimo, 2015; Ngussa, 2015 and Ligembe, 2014), none focused on the influence of the use of instructional media on learners’ mastery of reading and writing in Kiswahili language. It is this background that informed the study to investigate the influence of instructional media use on learners’ mastery of Reading and Writing in Kiswahili language among public primary schools in Kinondoni District.

The study is based on Richard Mayer’s cognitive theory of multimedia learning which advocates that people learn
more deeply from words and pictures rather than from words alone (Levie and Lentz, 1982; Levin et al., 1987 as cited in Schnottz, 2005). Cognitive theory of multimedia learning insists on the combinations of instructional media in the teaching and learning process so as to increase improvements in terms of academic performance. This is supported by Sweller’s theory of cognitive load which suggest that effective instructional materials facilitate learning by directing cognitive resources toward activities that are relevant to learning rather than preliminaries to learning (Chandler and Sweller, 1991). The cognitive theory of multimedia learning (CTML) is firm on three assumptions provided below (Chandler and Sweller, 1991; Baddeley, 1986, 1999; and Mayer, 2001)

- **Dual-Channels:** This is the first assumption where humans possess separate channels for processing visual and auditory information.
- **Limited capacity:** This is the second assumption which affirms that humans are limited in the amount of information that can be possessed in each channel at one time.
- **Active processing:** This is the third assumption which states that humans engage in active learning by attending to relevant incoming information, organizing selected information into coherent mental representations and integrating mental representations with other knowledge.

**Literature Review**

**Studies on Instructional Media Use and Mastery of Reading and Writing**

A range of literature has explained instructional media use and mastery of reading and writing in different countries. Spaull (2011), for instance, explains that there is an alarmingly high percentage of functionally illiterate Primary school pupils in South Africa where the numbers range from approximately one in three students. Thus, in the current situation where primary school pupils are experiencing challenges in mastery of Reading and Writing Skills across the world, the use of various instructional media is very crucial in the teaching and learning process.

In Nigeria, Amosa and Ogunlade (2015) investigated the differences in the achievement of pupils taught using audio instructional package on basic school pupils’ performance in English pronunciation and those taught using the expository method. The findings indicate that the pupils taught using the audio instructional package performed significantly better than those taught using expository method.

In Kenya, Achola et al. (2016) found that teaching using various instructional materials improved the performance of learners in various learning activities including ability to write dictated words. The study concluded that mandatory use of instructional media should be established while teaching to enhance English language subject because instructional media are an integral part of English language teaching.

In Tanzania, the use of instructional media in primary schools is a problem since in most Primary Schools there is inadequate use of such for enhancing learners’ mastery of reading and writing skills. Shirima (2013) further discovered that instructional media are not used frequently because of large number of pupils in classrooms and shortage of recommended resources in school context, and as a result pupils graduate with insufficient knowledge and skills to undertake real world tasks. In the similar vein, Mtitu (2014) concluded that large classes of up to 100 pupils limit the use of instructional resources particularly text and reference books, computer assisted facilities and resources made from the school surroundings.

The current situation in Tanzania where many primary school pupils graduate without grasping basic literacy skills is an indicator that instructional media that might help to reduce the number of illiterates are rarely used. Findings from Annual Learning Assessment Report indicated that Reading skills that are expected to get improved in learners are still below where they should be (Uwezo, 2010). For instance, only 3 in 10 Standard Three pupils can read a standard two Kiswahili story effectively. In connection to that, even many standard seven pupils still were not able to read or pronounce words and recognize syllables.

The problem of primary schools learners’ mastery of reading and writing skills in Tanzania is further reported in the media. In a Baragumu Television Broadcast, (2013) as cited in Muneja, (2015) students join secondary school without having grasped the basics of reading, writing and arithmetic (3 Rs).

**The essence of reading and writing mastery**

In today’s information society, the ability to read and write is crucial for maximizing success in the endeavors of daily life, continuing intellectual growth and realizing personal potential. It is the ground of almost all processes of learning and acquisition of basic literacy skills to become a means of engaging with diverse forms of knowledge, understanding and communication (Geske and Ozola, 2009; Mullis, 2007; United Nations Education, Scientific and Culture Organization and Richmond, 2008). Gathumbi (2013) considers reading and writing as the two crucial skills mostly used to retrieve information from various sources and to pass the same to others. Communication through reading and writing is part of every society globally despite the fact that literacy is taken for granted by the literate but still remains a seemingly unattainable goal for many simply because millions of more young people leave school without a level of literacy adequate for productive participation in their societies hence causing the global
literacy challenge (UNESCO and Richmond, 2008).

A range of literature explains how learners’ mastery of reading and writing is experienced in different parts of the world, including Tanzania. In England, report presented by Great Britain Parliament, House of Commons Education and Skills Committee (2005) indicated that there is a very wide spread of ability and a large proportion of children around 20% leaving Primary School without the reading and writing skills expected of their age. This can highly endanger pupils’ progress in secondary school and damages their prospects for further learning and employment.

In India literacy rates are exceedingly low in many parts. The reading situation is not good because in many cases, the ability to read has decreased over time to the point where the students cannot read even at levels substantially lower than their grade level (Nakamura and de Hoop, 2014). For example, the proportion of children in Standard 5 who could read a Standard 2- level text has decreased each year since 2009 to only 47% in 2013. The proportion drops even lower, to 41.1%, in government schools. For example, in Standard 3 in Andhra Pradesh, about 31% of children cannot read a single word and 48% cannot read a Standard 1- level text. In Standard 3 in Karnataka, about 37% of children cannot read a single word and 62% cannot read a Standard 1-level text.

Research conducted in South Africa by Phajane (2012) examined teachers’ perspective on the methods used for reading instruction in Grade 1 of rural schools. The findings indicated learners’ mastery of reading skills ability was influenced by limited resources and space within the programs which affected teaching of reading as well as inadequate training and in-service workshops. It was suggested that teachers and local administrators in schools need to keep abreast with new development in the field of language and literacy development. Another study in the same country was undertaken by Makhubele (2015) who aimed to explore the challenges faced by grade 4 teachers in the implementation of effective reading practices. Findings revealed overcrowded classes, lack of parental involvement and lack of support from the responsible department as factors hindering the mastery.

In Kenya, Nyamu (2015) assessed factors influencing achievement of basic reading literacy outcome in Public Primary Schools in Nyeri County. The findings indicated that underachievement is influenced by inadequate teaching and learning resources, mother tongue, lack of school library and lack of parental support. Gathumbi (2013) indicated that in Kenya there is a lot that both teachers and learners will need to do to get the Desired Competence Level (DCL) of operational in English reading and writing skills because majority of the learners failed to attain the DCL.

With reference to Tanzania, several studies have been conducted to uncover the problem of learner’s mastery of Kiswahili reading and writing, where Kiswahili language is the medium of instruction in Primary Schools (Uwezo, 2010). The study of Anney et al. (2016) in Tanga, indicated a serious problem of literacy teaching among public primary schools. Among the factors contributed to illiteracy were pupils’ late enrolment in standard one, shortage of teaching and learning resources and inadequate literacy teachers and poor literacy skills. Another study was undertaken in Musoma Municipality and Misungwi District Council by Ligembe (2014) who discovered that main factors affecting Public Primary Schools pupils’ acquisition of reading skills include the failure of majority of teachers in the schools to use the recommended methods, strategies and steps of teaching reading skills and high shortage of text books and other reading materials.

**Instructional media applicable in reading and writing skills**

Instructional media applicable for reading and writing are not different from instructional media used in other learning aspects. Dale (1969) as cited in Naumy, 2012) categorizes instructional media into three groups namely: Visual, Audio and Audio –Visual. Visual media are those whose content is received through the sense of sight. Examples of these include books, pictures, photographs, charts, diagrams, maps, posters, drawings, real objects, chalkboard, cartoons and the like. Audio media on the other hand are those that involve hearing. Examples of audio media are radio, tapes, telephone, disc recordings, telephone and sound distribution systems. Audio- visual media include films, television, video tapes, demonstrations and motion pictures.

In the context of the Curriculum for Basic Education, particularly Standard I and II, Tanzania Institute of Education (2016) suggests the instructional media for teaching and learning 3Rs as follows: chalkboard, bulletin board, small pieces of wood (slates) for learners practice, learning corner, tool kits, text books and teacher’s guide, supplementary books, supportive materials for learners with special needs such as voice recorders, hearing aids and Braille machines.

**The Concrete – Abstract Continuum**

This section discusses the concept of Concrete-Abstract Continuum regarding the importance of using various instructional media on learner’s mastery of reading and writing. Since both concrete and abstract materials have advantages and disadvantages, Fyfe et al. (2014) propose a solution that combines their advantages and mitigates their disadvantage. Particularly, they argue for an approach that begins with concrete materials and gradually and explicitly fades toward more abstract ones. Thus, this concreteness fading technique exploits the continuum from concreteness
to abstractness and allows learner to initially benefit from the grounded, concrete context while still encouraging them to generalize beyond it. The Concreteness fading technique is supported by D’Arcy et al. (2009) who argue that a rich ecology media appears to work best, not simply one approach or two.

Bruner (1966) as cited in Fyfe et al., 2014) proposed that new concepts and procedures should be presented in three progressive forms namely: An enactive form which is physical concrete model of concept, an iconic form which is a graphic or pictorial model and finally a symbolic form which is an abstract model of the concept. Moreover, Felder et al. (2000) Suggests balancing the Abstract with concrete materials that, the teacher should provide both visual illustrations and demonstrations of course related materials (written and spoken).

## RESEARCH METHODOLOGY

### Research Design

The present study used survey research approach. A sample of 292 pupils and 34 teachers from 15 sampled schools participate in the study by filling the questionnaire. Survey approach was used because it allows the collection of a large amount of data from a sizeable population in a highly economical way (Mark et al.2009).

### Validity and Reliability

According to Cohen et al. (2005) validity is a demonstration that a particular instrument measures what it intends to measure. In quantitative data validity might be improved through, appropriate instrumentation. Validity of the questionnaire was ensured through a review by five research experts from the University of Arusha and necessary adjustments were incorporated.

Reliability is the tendency to obtain the same results if the measure was to be repeated by using the same subjects under the same conditions (Siniscalco and Auriat, 2012). In the same manner Cohen et al. (2005) argue that for research to be reliable it must demonstrate that if it were to be carried out in a similar context, then similar results would be found. Cronbach’s Alpha was used to test reliability of questionnaire items. The cut off point for acceptable reliability was 0.6. The Cronbach’s Alpha ranged between .634 and .795 meaning all items were reliable (Table 1).

### Ethical Considerations

The researchers took some measures to ensure conformity to research ethics. Permission was sought from all concerned Institutions before collection of data and clearance obtained from the University of Arusha authorities. The respondents also assured of the confidentiality of the information they provided.

### Presentation, analysis and interpretation of data

Analysis of data was done for the three research questions which guided this study. The data was analyzed through descriptive statistics in terms of mean scores and inferential statistics in terms of Pearson Product-moment Correlational Coefficient as indicated below:

To what extent do Primary School Learners in Kinondoni District master reading and writing in Kiswahili language?

This question was analyzed through descriptive statistics in terms of mean scores. The perception on mastery of reading and writing was interpreted as follows: 3.50-4.00 = Strongly Agree, 2.50-3.49 = Agree, 1.50-2.49 = Disagree and 1.00-1.49 = Strongly Disagree.

As indicated in Table 2, the first four items ranged between the mean of 3.50 and 4.00 meaning strong agreement. This implies that respondents strongly agreed that pupils are able to read and write accurately, they can write simple words and complex sentences and they can write accurately vocabularies of their level. With the mean score ranging between 2.50 and 3.49, respondents agreed that pupils have ability to read Kiswahili sounds of letters, they can read accurately vocabulary of their level, they can read text and give correct response, they possess competence in sentence structure, they can write paragraphs with standard spellings, and they can use punctuation marks correctly. These findings are worth noting because in today’s information society, the ability to read and write is crucial for maximizing success in the endeavors of daily life, continuing intellectual growth and
realizing personal potential. It is the ground of almost all processes of learning and acquisition of basic literacy skills to become a means of engaging with diverse forms of knowledge, understanding and communication (Geske and Ozola, 2009; Mullis, 2007; United Nations Education, Scientific and Culture Organization and Richmond, 2008).

To what extent are various types of media resources used in teaching and learning transaction?

The data was analyzed through descriptive statistics in terms of mean scores. The scale of mean scores interpretation used was as follows: 3.50-4.00 = Strongly Agree, 2.50-3.49 = Agree, 1.50-2.49 = Disagree and 1.00-1.49 = Strongly Disagree.

Table 3, provides results on the use of instructional media. The first two items ranged between the mean of 2.50 and 3.49 meaning agreement. This means that respondents agreed that teachers use hand-on activities in teaching reading and writing, they also use pictures, charts and diagrams. The use of various media resources is commendable for learners' mastery of the subject matter. This is supported by Achola et al. (2016) whose findings in Kenya indicate that teaching using various instructional materials improves the performance of learners in various learning activities including ability to write dictated words. The study concluded that mandatory use of instructional media should be established while teaching to enhance language enhancement in Kenya because instructional media are an integral part of language teaching and learning.

On the contrary, six items were rated at the mean between 1.50 and 2.49 meaning disagreement. This implies that respondents disagreed that teachers use a learning corner with book shelves and reading cards, they use pieces of wood (slates) for learners to practicing 3Rs, they use hearing aids for learners with special needs, bulletin boards in teaching reading and writing, voice recorders and Braille Machines for learners with special needs. Furthermore, the last item had the mean between 1.00 and 1.49, implying strong disagreement. This suggests that respondents strongly disagreed that teachers use video clips for teaching reading and writing. It can also imply that the use of media resources in teaching reading and writing is limited to hand-on activities, pictures, charts and diagrams. Failure to use these media resources might be due to what Shirima (2013) indicated in a study in Moshi rural District that instructional media are not used because of large number of pupils in classrooms and shortage of recommended resources in school context. As a result, pupils graduate with insufficient knowledge and skills to undertake real world tasks. The findings are also in harmony with what Mwalengo (2014) established in a study in Morogoro, that there is ineffectve utilization of instructional materials by teachers and pupils during classroom instruction.

Table 2. Perceived mastery of reading and writing

<table>
<thead>
<tr>
<th>SN</th>
<th>Mastery of Reading and Writing in Kiswahili</th>
<th>Mean</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pupils are able to read accurately.</td>
<td>3.6345</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>2</td>
<td>Pupils can write simple words and complex sentences</td>
<td>3.5601</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>3</td>
<td>Pupils are able to write accurately.</td>
<td>3.5514</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>4</td>
<td>Pupils can write vocabularies of their level correctly.</td>
<td>3.5258</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>5</td>
<td>Pupils have ability to read Kiswahili sounds of letters</td>
<td>3.4759</td>
<td>Agree</td>
</tr>
<tr>
<td>6</td>
<td>Pupils can read accurately vocabularies of their level.</td>
<td>3.4486</td>
<td>Agree</td>
</tr>
<tr>
<td>7</td>
<td>Pupils can read a text and give correct responses.</td>
<td>3.3966</td>
<td>Agree</td>
</tr>
<tr>
<td>8</td>
<td>Pupils possess competence in sentence structure.</td>
<td>3.2570</td>
<td>Agree</td>
</tr>
<tr>
<td>9</td>
<td>Pupils can write a paragraph with standard spelling.</td>
<td>3.2076</td>
<td>Agree</td>
</tr>
<tr>
<td>10</td>
<td>Pupils can use punctuation marks correctly.</td>
<td>3.1678</td>
<td>Agree</td>
</tr>
</tbody>
</table>

Table 3. The Use of Instructional Media

<table>
<thead>
<tr>
<th>SN</th>
<th>The Use of Instructional Media</th>
<th>Mean</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The use of use hand-on activities.</td>
<td>3.0660</td>
<td>Agree</td>
</tr>
<tr>
<td>2</td>
<td>Teachers use pictures, charts and diagrams.</td>
<td>2.6263</td>
<td>Agree</td>
</tr>
<tr>
<td>3</td>
<td>Learning corner with book shelves and reading cards.</td>
<td>1.9444</td>
<td>Disagree</td>
</tr>
<tr>
<td>4</td>
<td>Teachers use slates) for learners to practicing 3Rs.</td>
<td>1.8819</td>
<td>Disagree</td>
</tr>
<tr>
<td>5</td>
<td>The use of hearing aids for special needs.</td>
<td>1.7801</td>
<td>Disagree</td>
</tr>
<tr>
<td>6</td>
<td>Bulletin a board for teaching reading and writing.</td>
<td>1.7759</td>
<td>Disagree</td>
</tr>
<tr>
<td>7</td>
<td>Voice recorders for learners with special needs.</td>
<td>1.6103</td>
<td>Disagree</td>
</tr>
<tr>
<td>8</td>
<td>The use of Braille Machines for special needs.</td>
<td>1.5483</td>
<td>Disagree</td>
</tr>
<tr>
<td>9</td>
<td>The use of video clips.</td>
<td>1.4948</td>
<td>Strongly Disagree</td>
</tr>
</tbody>
</table>
Table 4: Correlation between the use of Instructional Media and Mastery of Reading and Writing

<table>
<thead>
<tr>
<th></th>
<th>Mastery</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Correlations</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mastery</td>
<td>Pearson Correlation</td>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>Use</td>
<td>Pearson Correlation</td>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

Is there significant relationship between the use of instructional media and pupils’ mastery of reading and writing in Kiswahili language?

This research question sought to test the influence of the use of instructional media on learners' mastery of reading and writing in Kiswahili. The study tested a null hypothesis which states: *there is no significant relationship between the use of instructional media and pupils’ mastery of reading and writing in Kiswahili language.*

The Pearson product moment correlation coefficient presented in Table 4. There was a negative yet weak correlation (-.220) between mastery of reading and writing and the use of instructional media. This implies that the use of instructional media hinders mastery of reading and writing in Kiswahili. This is against established findings from previous research. Achola (2016) in Kenya indicates that teaching using various instructional materials improves the performance of learners in various learning activities including ability to write dictated words and that mandatory use of instructional media should be established to enhance mastery of language subjects. The hindrance of reading and writing mastery due to the use of instructional media could be due to ineffective use of the instructional media, or the use of instructional media which are not appropriate for boosting reading and writing ability, something which calls for frequent seminars and workshops on which media resources should be used and how to effectively use various instructional media in the teaching and learning process.

The fact that respondents agreed or strongly agreed that learners master various aspects of reading and writing (table 3), suggests that there must be other factors apart from the use of instructional media that influenced mastery of reading and writing.

Conclusions

With regard to the influence of instructional media use on learners’ mastery of reading and writing, it is concluded that:

- Pupils are able to read and write accurately, they can write simple words and complex sentences and they can write accurately vocabularies of their level. They also have ability to read Kiswahili sounds letters, they can accurately read vocabulary of their level, they can read text and give correct response, they possess competence in sentence structure, they can write paragraphs with standard spellings, and they can use punctuation marks correctly.
- The use of instructional media for teaching reading and writing skills is limited to hand-on activities, pictures, charts and diagrams. The other instructional media, including learning corners with book shelves and reading cards, slates, hearing aids for learners with special needs, bulletin boards, voice recorders and Braille Machines and video clips are not used in the teaching-learning process.
- The use of instructional media hinders mastery of reading and writing in Kiswahili. This could be due to the use of inappropriate media resources in a given subject matter or lack of skills to use the media resources in the teaching and learning process.
- There are other factors, apart from the use of instructional media that influence mastery of reading and writing skills among learners of primary schools in Kinondoni District.

Recommendations

Based on above conclusions, it is recommended that:

- In order to increase learning efficiency, teachers should make use of learning corners with book shelves and reading cards, slates, hearing aids for learners with special needs, bulletin boards, voice recorders and Braille Machines and video clips.
- School administration must ensure availability of different media resources and there is need to train teachers how to select appropriate media resources for a given topic or subject matter and how to use different media resources effectively. This can be done through regular workshops and frequent seminars.
- There is need to conduct another study about other factors apart from the use of instructional media which
influence mastery of reading and writing skills among learners of primary schools in Kinondoni District.

Conflict of interests

The authors declare that they have no conflict of interests

REFERENCE


Africa.