



UTILIZATION OF VISUAL AND REALIA INSTRUCTIONAL MATERIALS IN ENHANCING ACQUISITION OF PRE-READING SKILLS AMONG PRESCHOOL LEARNERS IN NAROK COUNTY, KENYA

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Abstract:

Early childhood education, also referred to as preschool education is essential to children's social, physical, emotional, and cognitive growth. Learning can be made more effective when the teachers have the right instructional materials. The study was guided by the following research questions: how were visual instructional materials utilized in teaching pre-reading skills among preschool children? and how were realia instructional materials utilized in the teaching of pre-reading skills among preschool learners? The study adopted a descriptive survey design and data was collected using questionnaires, interviews, and observation schedules. The findings of the study revealed that visual instructional materials for teaching pre-reading skills were available but not adequate in most of the schools, hence affecting the effective teaching of pre-reading skills among the learners. The study further established that most preschools lacked adequate realia materials for teaching pre-reading skills. It was concluded that Preschool teachers should attend relevant workshops, seminars, vocational and teacher professional development courses, to acquire pedagogical skills, besides effective utilization of Visual and Realia instructional materials in teaching pre-reading skills to preschool learners. Emphasis should be on pedagogical content knowledge.

Keywords: visual and realia instructional materials, preschool learners, pre-reading skills

1. Introduction

Sustainable Development Goal 4 on Quality Education, focus on inclusivity, equity and promoting lifelong learning opportunities for all (UNESCO, 2007). Preschool education

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is fundamental to children's social, physical, emotional, and cognitive development. The gains that are seen in early learning enhance the academic performance of preschool learners. The importance of quality home and formal school environments for preschool children has been strongly supported by research in both industrialized and developing nations as noted by Ikerionwu (2010). Pre-primary education refers to education provided to children aged 5-6 years so as to prepare them for formal primary Education. Pre-school institutions include bush schools, madras (Quranic schools), nursery schools, kindergartens and daycare centers. In pre-primary education, learners are expected to learn pre-reading skills, pre-writing skills, and counting skills. The importance of pre-primary education is to give children the opportunity to learn to play together, to share toys, to use their hands, feet, and eyes, to gain self-confidence, to learn how to keep clean, how to dress, and how to use their bodies. Children also sing and recite poems, which improve their speech and memory.

Instructional materials, according to Ikerionwu (2010), refer to objects, tools, and devices that help the teacher make learning meaningful to the learners. The use of instructional materials is critical in helping the learners to understand the facts and keep them in their memory. A teacher who makes use of appropriate instructional materials to supplement his teaching enhances the learner's innovative and creative thinking as well as supports them in becoming enthusiastic to learn. Instructional materials are classified into two; visual materials made up of reading and non-reading materials and audio-visual materials comprising electrically operated and none electrically operated materials. These materials and resources include audio tape recorders, video tape recorders, slide projectors, still pictures, programmed instructional film strips, maps, charts, graphs, and many more. They offer a variety of learning experiences, individually or in combination, to meet different teaching and learning experiences. In Kenya for instance, a study by UWEZO (2011) revealed that some standard seven pupils could not read class two readers' works, simply because they had a poor background at the preschool level in learning and mastering the art of reading. Literacy scholars have noted that using instructional materials by teachers while teaching is a fundamental language-learning strategy for successful teaching and learning processes in pre-reading lessons. It is further noted that instructional materials or teaching aids, make learning interesting as they shorten the explanation and make abstract concepts to be understood more easily by the learners. Omwoyo (2013) indicated that instructional materials enable the teacher to explain concepts easily to learners as few words are used to present a given concept to the learners.

1.1 Statement of the Problem

Research has indicated that we learn and remember 10% of what we hear, 40% of what we discuss with others, and as high as 80% of what we experience directly or through practice. Teachers are in charge of curriculum implementation but the policy on the provision of materials for effective implementation is not addressed. Such is left to the community, particularly to parents who do not give this a priority. This therefore remains

a challenge to the preschool teachers who are supposed to prepare children in reading skills at this level. In Kenya, most scholars have focused on investigating the link between using teaching instructional materials to enhance the academic performance of learners but such studies have not been specific to the learning activity such as reading skills. Studies have looked at instructional materials in general. The study sought to address this gap by studying the effective utilization of visual and realia instructional materials in teaching pre-reading skills among preschoolers in Narok County, Kenya.

1.2 Purpose of the Study

The purpose of the study was to assess the effectiveness of instructional materials in teaching pre-reading skills among preschoolers in Narok County, Kenya.

The study sought to answer the following research questions:

- 1) How were visual instructional materials utilized in teaching pre-reading skills among preschool children?
- 2) How were realia instructional materials utilized in teaching pre-reading skills among preschool learners?

2. Literature Review

2.1 The Concept of Instructional Materials

Ibeneme (2000) defined instructional materials as those materials used for practical and demonstration in the class situation by learners and teachers. On the other hand, Ikerionwu (2000) saw instructional materials as objects or devices that assist the teacher in presenting a lesson to the learners in a practical manner. Instructional materials make learning more interesting, practical, realistic, and appealing. They also enable both the teachers and learners to participate actively and effectively in lesson activities. According to World Bank (2007) report, instructional materials are ingredients of learning and effective curriculum implementation. Realia or real objects are effective in teaching pre-reading skills. They enable the learner to cognitively connect the realia with the arbitrary words in texts. Children are equipped with problem-solving skills that are important for daily living (Waigera, 2013). Despite many studies on the use of instructional materials in pre-primary schools, various types of Early Childhood Education (ECD) interventions like the provision of learning resources enhance school readiness and related educational outcomes (Nores and Barnett, 2010).

2.2 Pre-reading Skills

Reading has always been a vital and basic skill in which readers' perception and comprehension are essential. In learning a language, the ability to understand a text and interpret it appropriately is a challenging process. In order to understand a text, a reader should have an appropriate schema. If a reader lacks appropriate schema, it is the teacher's responsibility to provide necessary background information so that the reader gains sufficient knowledge to understand the text. Duke NK, Pearson P. (2002) noted that

while teaching reading, a teacher should design activities aimed at supporting the ability of the learners to develop reading skills and activate their background knowledge. Prior to asking learners to read a text, a teacher may use pre-reading skills that help readers establish the purpose for reading, activate existing knowledge about the topic, and establish realistic expectations about what is in the text by previewing (Grabe & Stoller, 2002).

According to Aebersold & Field (2003), pre-reading skills have four goals: “to activate, develop or provide general background knowledge, to activate or provide background knowledge of the text structure, to introduce key vocabulary, and to establish a purpose for reading. This cannot be achieved unless the teacher is in a position to activate learners’ background knowledge or provide background information before reading a text in cases where the learner lacks the necessary background knowledge. Pre-reading skills such as: vocabulary, letter knowledge, and phonological awareness, should prepare learners to read the text and contribute to their ability to recognize and read texts effectively. It should start at an early age in order to achieve its objectives.

2.3 Visual Instructional Materials

Eshiwani (1989) carried out a research in Kenya about the effectiveness of visual instructional materials at the level of pre-primary schools. The findings of the study indicated that the provision of instructional materials especially textbooks, seems to be the most cost-effective way of increasing the quality of education in Africa. The findings also noted the scarcity of instructional materials in pre-primary schools. The study concerning visual instructional materials is not done only in pre-primary schools but also in secondary schools. For instance, Momoh (1980) carried out research on the effects of visual instructional materials on learners’ performances in examinations in Kwara State in Nigeria. The study used a correlational design where the visual instructional material was correlated with the academic achievements of learners in ten subjects. Information was collected from the subject teachers in relation to the resources employed in teaching in five schools. Momoh, S. (1980) the achievements of learners in examinations for the past five years were related to the instructional materials available for teaching each of the subjects. He concluded that instructional materials had a significant effect on learners’ achievement in each of the subjects. This means that if instructional materials are well utilized, they have a positive effect on learners’ achievement.

Chikwelu (2007) carried out a research among preschools in Tanzania on situational analysis of the state of visual instructional materials in preprimary school; the information was collected from subject teachers, pre-primary learners, and head teachers. The findings were that the effectiveness of instructional materials was affected by the pupil teacher ratio, the arrangement of the classrooms, and there were limited instructional materials. While several studies have been carried out on the use of instructional materials for preprimary institutions, there is a wide knowledge gap in visual instructional materials.

2.4 Realia Instructional Materials

Wantini, D. (2010) reports that realia is real objects (as opposed to the representation of models) as they are without alteration. They include coins, tools, artefacts, plants, and animals, among others. Specimen exhibits and cut-away objects are some of the classifications used for realia which have great value in every subject. They can be relevant in subjects in the sciences (biology, physics, and chemistry), history, economics, and so on. For instance, the use of realia by trainee biology teachers can promote learners' interest and care for insects, fish, and animals. Learners would become much more involved in the classroom activities. Realia eliminate distortion in student's knowledge of the topic being taught. Realia provides learners the opportunities for "hands-on" interaction and experience (Waithaka, 2015).

According to Wardhani (2012), the instructional materials to be used should not be expensive, the cost should be such that either the teacher or the school can afford it. It is no use to say that something is available but not affordable due to high cost. There should be a budget for instructional materials in the school. The teacher using the instructional materials should ensure the appropriateness of the materials for his intended learners. The materials should be suitable for their age, experience, and intelligence. The legal, safety, and ethical aspects of the materials to be used should equally be considered. The materials should not portray any anti-social attitude. They should also be free from any bias, distortion, or prejudice. In language teaching, realia provide language learners with multi-sensory impressions of the language through seeing, hearing, touching, and manipulating items. Moreover, the use of realia can enhance linguistic and cultural understanding and appreciation, which are both prerequisites for real language learning.

Models and mock-ups are three-dimensional representations of a real thing. A model or mock-up can be looked at from all sides as it has breadth, length, and depth. Waigera, J. (2013) notes that models are representations of real things that are infinitely large, like the earth or solar system, or real things that are small, whether animate or inanimate. They may be complete in every detail or more simplified than the original. Some models can be disassembled for learners' close observation. On the other hand, mock-ups are differentiated from models by their usually larger size and by their moving and operating parts. Models and mark-ups have wide application in such subjects as physics, geography, biology, chemistry, and so on. Trainee teachers can buy commercially produced models or they can be improvised.

According to Waithaka (2008), there are several kinds of Realia that can be used by the teacher. These include stationeries (a book, pencil, eraser, bag, pen, ruler, etc.), things in the classroom (table, chair, blackboard, picture, chalk, etc.), and parts of the body (hand, hair, eyes, nose, ears, mouth and foot). The replica of the object if the real objects are not possible to bring to the classroom, such as animals (cow, goat, frog, cat, lion, and dog), vehicles (bus, train, plane, motorcycle), occupations (Doctor, soldier, steward, policeman, fisherman, etc.). As a substitute for the real object, the teacher can use dolls or toys. The increasing integration of computers into the classroom and the

phenomenal growth of the Internet has brought about the need to combine new educational technologies with teaching practices and techniques. Anderson, & Cheung (2013) says that virtual realia are digitized objects and items that are now brought into the classroom as aids. They are often used to stimulate interest in the learning experience. While traditional realia is a real object in nature, when transferred to a more interactive and flexible medium, virtual realia merges an established technique with the new educational technologies in bringing culturally-based authentic materials into the classrooms.

According to Wantini (2010), there are various ways in which teachers can use realia to teach language to learners with difficulties in reading skills. It can also be used among small groups of children to build their oral language skills. Such activities invite children to build their oral language by listening and speaking. As a general rule, when the children say a word or phrase incorrectly, simply repeat what they said using the correct word or phrase without comment. It can also expand on their verbalizations, transforming a word into a sentence or adding words to clarify meaning.

Wantini (2010) also noted that the teacher can assess the progression of the child by either working with the child individually or working with the children in small groups. As a teacher, it is expected that every child is made to participate in the actual learning. The teacher ensures that each child routinely repeats a word a phrase, or a sentence so that everyone gets to practice. Anderson & Cheung (2013) based on this explanation, noted that using realia in the teaching-learning process is easy and fun but the teachers need to pay attention to the proper steps in implementing realia in the learning process so that learners can know properly which material to use for the lesson that is being given by the teacher.

The constructivism theory emphasizes the use of concrete objects that enable learners to acquire pre-reading skills by manipulating real objects to generate knowledge, ideas, and meaning from their experiences and develop problem-solving skills. Bruner in his mode of learning termed symbolic learning, emphasizes that one needs to use symbols to represent reality and promote conceptual development. On the other hand, Vygotsky argues that when children interact with significant objects, they are capable of constructing knowledge, skills, and positive attitudes.

3. Materials and Methods

3.1 Research Design

The study used a descriptive survey design to assess the distribution of specific behaviors in the population. It is a technique used to collect detailed data to be used to justify the current conditions and practices. The design ensures that the study variables are described without manipulation (Kothari 2004). The design was appropriate in assisting the researcher in answering research questions. It was conducted in Narok North Sub-county, Narok County in Kenya. The researcher chose this location because it has the highest number of preschools in both urban and suburban locations.

3.2 Sampling Procedure

Kothari, C. (2014) notes that sampling is the procedure of selecting individuals for a study while a sample refers to a group from which information is obtained. The study used stratified random sampling to ensure every education zone was represented. Simple random sampling was used in every stratum to select the schools and teachers to be included in the study. The target population consisted of 294 respondents.

Mugenda (2012) recommended that an appropriate sample size that can form a representative of the entire population should be between 10% and 30% of the population. A similar view was held by Kothari (2014). The sample distribution was done proportionately as shown in Table 1.

Table 1: Study Sample Size

Categories	Study Population	Sample Size
Preschool teachers	294	166
Total	294	166

3.3 Data Collection Methods

The instruments for data collection were questionnaires and observation checklists. Questionnaires were used to cover a high number of respondents in a relatively short time.

The researcher personally administered the questionnaires to the teachers. The design of the questionnaire sought to collect data on the effectiveness of instructional materials as per the purpose of the study. They adopted five Likert scale statements that required the respondents to rate the various statements related to the specific research questions, based on the following scale: 5- strongly agree, 4- agree, 3- not sure, 2 – disagree and 1- strongly disagree. The researcher adopted an observation schedule. The researcher observed the effectiveness of instructional materials during the lesson. The information in the observation schedule served the purpose of collaborating with information recorded in the teachers' questionnaire. The researcher used the observation schedule for the following aspects: effectiveness of instructional materials, relevance of the instructional materials, how often the instructional materials are used by teachers while teaching, and which instructional materials are used more often and how. The progress records were also closely examined to find how children were performing in acquiring pre-reading skills.

3.4 Data Analysis

Once the data was collected and checked, coding was done in readiness for the analysis. In coding, Kothari (2014) observes that categories of responses are identified, classified, and copied on a prepared sheet as per research questions. Open-ended questions were arranged as per the responses in sub-headings, relating the sub-headings to the research questions. The responses collected from observation were thematically organized based on the common themes and then analyzed qualitatively. Data analysis was done both quantitatively and qualitatively. Quantitative data was analyzed using descriptive

statistics of frequencies and percentages. Qualitative data collected from the observation schedule and questionnaires was analyzed thematically as per the emerging themes. The data was presented using tables and charts.

4. Results and Discussion

4.1 Utilization of Visual Instructional Materials in Teaching Pre-reading Skills among Preschool Learners

The respondents were asked to indicate the effectiveness of various visual instructional materials at the preschool in developing pre-reading skills among learners. The findings are presented in Table 2.

Table 2: Effectiveness of Visual Instructional Materials

Effectiveness of Visual Instructional Materials	Effective Teachers	Less Effective Teachers	Not Effective Teachers
Visual inn			
Pictures	9.9%	75.3%	14.8%
Maps available	10.6%	45.8%	43.6%
Charts and figures available	12.0%	81.7%	6.3%
Use of teaching flash cards with different concepts such as length, colour, texture, shape, etc.	21.1%	35.2%	43.7%
Other classrooms display	19.0%	62.7%	18.3%

The results revealed that teachers, 75.3% indicated that the pictures used for teaching pre-reading skills were not effective and only 9.9% indicated that the pictures were effective in their schools. The teachers also indicated that they worked hard to ensure they produced the pictures for their own use in enhancing the teaching of pre-reading skills among their learners.

Results indicated that 45.8% of teachers reported that were maps less effective. Some of the teachers, 43.6%, said that the maps were not effective and the rest, 10.6% reported that the maps were effective. This implies that maps required for teaching and learning pre-reading skills at preschools were effective when used properly. In addition, results indicated that many teachers, 81.7%, agreed that charts and figures were less effective, 6.3% of the teachers indicated that the materials were not effective, while 2.0% of the teachers indicated that charts and figures were not effective. All the responses point to one conclusion, that the learning materials under investigation were effectively used. The study also sought to find out whether teaching flash cards with different concepts such as length, color, texture, shape, etc. was effective in teaching pre-reading skills in schools. The results revealed that some teachers, 43.7% said the flashcards were not effective, 35.2% said they were less effective and 21.1% said that they were effective. It was noted that the flashcards were not effective in most of the preschools, affecting the teaching of pre-reading skills among the preschool learners.

The study established that teachers 62.7% indicated that they had other visual materials but they were also less effective for use in teaching pre-reading skills. The

respondents indicated that the charts and figures were effective since teachers have knowledge of innovation. This agrees with the findings of Lenah (2010) who indicated that teachers are the best learning instructional materials that the school can have. Teachers have been trained to be innovative and ensure that what they are teaching can be transformed into visual objects in the form of charts and figures. Results from the observation schedule confirmed that visual instructional materials were effectively used in the classroom as they were available, and displayed on the classroom walls. Though they were not many they were visible and the teachers occasionally referred to the charts and asked the learners to sound out some of the pictures or words that were on the charts. The results revealed that over 50% of the learners were in a position to use the visual instructional materials effectively to learn sounds and other features.

4.2 Utilization of Realia Instructional Materials in Teaching Pre-reading Skills

The second objective sought to assess the effectiveness of realia instructional materials in teaching pre-reading skills among preschool learners. The respondents were asked to indicate the effectiveness of the various realia instructional materials at the preschool in enhancing pre-reading skills among the learners. The results are presented in Table 3.

Table 3: Response to Effectiveness of Realia
 Instructional Materials in Teaching Pre-reading Skills

Realia Instructional Materials	Effective	Less Effective	Not Effective
Real objects	14.1%	49.2%	36.6%
Replica of the objects	35.9%	28.2%	35.9%
Computer-aided objects	22.5%	52.1%	25.3%
Other relevant objects	34.5%	41.6%	23.9%

Results presented established that 49.2% of the teachers indicated that real objects were less effective in teaching and learning the pre-reading skills. 14.1% of the teachers suggested that the realia were effectively used in teaching pre-reading skills among the preschoolers. It was also noted that 36.6% of the teachers reported that real objects were not effectively used in their schools. Some teachers, 35.9% indicated that replica of the objects was effective in teaching pre-reading skills. A few of the teachers, 28.2%, affirmed that they were less effective in teaching pre-reading skills. The results also showed that 35.9% of the teachers indicated that the replica objects used for teaching pre-reading skills were not effective in teaching pre-reading skills, therefore, most preschool centers did not use objects that were a replica of real objects to enhance the acquisition of pre-reading skills. It was also established that computer-aided objects were not effectively used in teaching pre-reading skills. The respondents reported that some of the items found in the classroom were, parts of the body and animals. According to Jekayinfa (2012), the importance of instructional materials is to make learning meaningful and learner-centered.

Abdu-Raheem and Oluwagbohunmi (2015) also corroborated the idea that resourceful and skillful teachers should improvise necessary instructional materials to

promote academic standards in schools. Results from the observations made in the classroom revealed that learners acquired vocabulary skills, phonological awareness skills, and matching skills among others, by relating the real world as they acquired pre-reading skills. Therefore, realia instructional materials were noted to be effective in teaching pre-reading skills among preschool learners. Some of the visual materials used are summarized in Table 4.

Table 4: Visual Instructional Materials Utilized

Visual Instructional Materials Used	Stage Used During the Lesson
Charts	Introduction of the lesson
Flashcards	Development of the lesson
Models	Conclusion of the lesson
Pictures	

Visual instructional materials were used at different stages of the lesson. Some were used to introduce the lesson, others were used during lesson development, while others were used to conclude the lesson; to make it memorable. The pre-reading skills enhanced were as summarized in Figure 1.

- Narrative skills
 - Vocabulary skills
 - Print awareness
 - Phonological skills
 - Motivational skills
 - Letter sound knowledge

Figure 1: Pre-Reading Skills Enhanced

The realia instructional materials utilized were as summarized in the next figure.

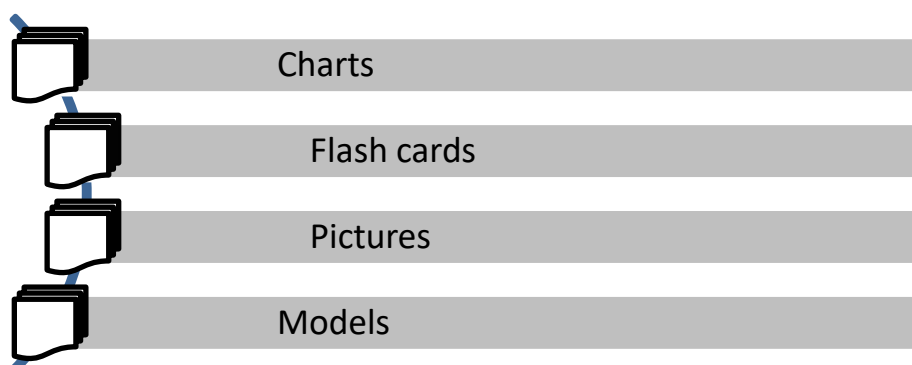


Figure 2: Realia Instructional Materials Utilized

Realia instructional materials were used at different stages of the lesson. Some were used for *set induction*, others were used during *lesson progress*, while others were used to *conclude* the lesson, to facilitate a graceful exit.

5. Conclusion and Recommendations

The study concluded that the lack of effectiveness of materials that enhance pre-reading skills in preschools such as visual and realia, affected teaching pre-reading skills among preschool learners. Preschool teachers should attend relevant workshops, seminars, and vocational and teacher professional development courses, to acquire pedagogical skills, besides knowledge on effective utilization of Visual and Realia instructional materials in teaching pre-reading skills to preschool learners. Emphasis should be on pedagogical content knowledge.

Conflict of Interest Statement

The authors declare no conflict of interest.

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