

Literacy and Numeracy Teaching in Tanzanian Classrooms: Insights from Teachers' Classroom Practices

Vicent Naano Anney *

Lecturer Department of Educational Psychology and Curriculum Studies – University of Dar es Salaam, P.
O. Box 35143 Dar es Salaam, Tanzania.

Mussa Mmasa

Academic Officer Mwalimu Nyerere Memorial Academy (MNMA) -Tanzania

Noela Ndunguru

Assistant Lecturer Department of Educational Psychology and Curriculum Studies – University of Dar es
Salaam, P. O. Box 35048, Dar es Salaam, Tanzania.

ABSTRACT

The study investigated the literacy teaching practices in Tanzanian classrooms in the provision of primary education. It comprehensively assessed why primary school leavers do not have reading, writing and numeracy competencies. Three objectives guided this study; first was to explore teachers' classroom practices in the teaching literacy in standard one (grade one) and two (grade two) in public primary schools. Secondly, it was to examine standard two and three mastering of literacy skills in Kiswahili language in public primary schools; and the thirdly to find out problems associated with the teaching and learning literacy skills in Tanzanian primary school classrooms. This study employed case study research design within qualitative research approach. The study conducted in one of the districts in Tanga region.

The study involved a total of 582 respondents from various categories; namely, District Education Officer, head teachers, academic teachers, class teachers and pupils who were selected through purposeful sampling approach. Data were collected through semi-structured interview, classroom observation and documentary review. Qualitative data were subjected to thematic analysis. Later on data were tabulated and responses calculated in percentages. The study findings indicated that there were serious problems of literacy teaching in public primary schools where most the teachers do not have adequate skills of teaching it. About 64% of standard two pupils cannot read, write and do simple numeracy while for standard three it is about 54% cannot do that. In addition, factors that contributed to illiteracy were pupils' late enrolment in standard one, shortages of teaching and learning resources, and parents' level of education, inadequate literacy teachers and teachers with poor literacy teaching skills. Teachers of literacy need professional learning in order improve their teaching skills.

Key words: literacy, teaching, reading, numeracy, teaching skills

1.0 Introduction

Poor literacy and numeracy teaching practices is a common problem that affects primary education system in Tanzania and elsewhere in the world in particular developing countries (Alcock et al., 2000). As result of ineffective literacy teaching practice around the globe enormous population are still illiterate despite being in schools and support from international community to address the problem. For example, recent UNESCO data indicated that "24% of all illiterate adults live in sub-Saharan Africa, 12% in East Asia and the Pacific, 6.2% in the Arab States and 4.6% in Latin America and the Caribbean. It is estimated that less than 2% of the global illiterate population live in the remaining regions combined" (UNESCO, 2013, p. 1).

International community through different forums such as EFA and Millennium Development Goals agreed to address the illiteracy problem by reducing it by 50% at the end of 2015. Despite the current shrink in illiterate population globally in past decade still "774 million adults – 64% of whom are women – still lack basic reading and writing skills (UNESCO, 2013, p. 1). According to UNESCO (2013) there is great progress in sub-Saharan Africa in the past ten years; however, there is still a big number of pupils who are neither in schools nor graduated from schools without competence in reading and numeracy. Since independence in 1961, Tanzania government has shown strong commitment in providing primary education for all of its children by investing much in education. As a result, Tanzania achieved high level of literacy among its citizen in the early 1970 to mid-1980s (Kitta, 2004). However, this literacy achievement did not last long after the introduction of cost sharing policy in education. Among the immediate impacts of cost sharing policy in education were the dropping of pupils' enrolment and an increase in illiteracy level. In addressing pupils' enrolment and poor literacy, the Tanzania government launched Primary Education Development Programme (PEDP) in 2005 which resulted

into a significant increase in pupils' enrolment in primary schools. Despite this increase in enrolment; many pupils have been graduating from primary schools without literacy skills (MoEVT, 2011). The recent research reports such as Hakielimu (2008) and UWEZO (2013) indicated that there are significant regional differences in children's learning outcomes, particularly in literacy and numeracy among children aged 9-13. Tanzania has the highest rate of illiteracy with 73% of literacy in 2013 and the lowest was 53% in 2012. Problem of literacy has gained roots in Tanzania's education as studies such as by UWEZO (2010), Hakielimu (2008) and Carroll (2011) indicated that literacy is a major problem as 50% of standard seven pupils cannot read standard two English textbook, similarly 24% cannot read standard two Kiswahili textbook, and 56% of standard three pupils are unable to work out standard two arithmetic problems. These findings suggest that there is a critical problem in Tanzanian education particularly the way literacy teaching is conducted in primary schools. In normal practice, according to Education and Training Policy (1995), after completing standard two pupils are expected to have achieved basic literacy skills particularly the ability to read, write, and solve simple arithmetic problems.

1.1 Conceptualizing literacy

The term literacy has multiple meanings. Many definitions available in the literature are context specific and some depend on who is defining literacy and for what purpose (Roberts, 2005) and the components of literacy have become increasingly complex. Thus the term literacy no longer refers to simply the ability to read or do numeracy, rather literacy has taken intricate characteristics with major consequences for the success of today's pupils (Street, 2004). Multiple modes of literacy have been found to be essential for pupils' future endeavours (Ritter, 2009) including language fluency, the comprehension and analysis of complex texts and effective social and electronic communication. Roberts (2005) argued that, traditionally, literacy was thought as the skills of reading and writing; but today it has extended its meaning to include the capacity to read, understand and critically appreciate various forms of communication including spoken language, printed text, broadcast media, and digital media. Likewise Wray and Medwell (1991) commented that numeracy is not limited to the ability to use numbers, to add, subtract, multiply and divide but encompasses the ability to use mathematical understanding and skills to solve problems and meet the demands of day-to-day living in complex social settings. Literacy is the ability to read and write while numeracy is a good basic knowledge of mathematics, the ability to understand and work with numbers (Hornby, 2000). The concepts of literacy and numeracy have been expanded beyond basic level of pupil's ability of reading and using numbers. According UK Department of Education and Skills (2011), literacy "includes the capacity to read, understand and critically appreciate various forms of communication including spoken language, printed text, broadcast media, and digital media" (p. 8)—while numeracy "encompasses the ability to use mathematical understanding and skills to solve problems and meet the demands of day-to-day living in complex social settings" (p. 8). However, in context of this study literacy is defined as pupil's ability to read, write and conduct simple arithmetic. This definition is adopted in the context of this study because many Tanzanian pupils have been graduating from primary school with inadequate ability to write and read. Therefore, this study evaluated basic literacy and numeracy ability among standard three pupils in the selected schools.

The purpose of any education in general is to help an individual to acquire core and useful basic life skills to live an independent life and therefore primary education is aimed to enable a child be able to read, write and acquire some basic arithmetic skills and these basic literacy skills are tested in Tanzania's Standard Seven National Examinations (Mkumbo, 2011). This view that school system should promote literacy was supported by famous Brazilian educator Paulo Freire and "person could not be characterized as 'truly' literate unless he or she had learned something more than simply how to inscribe and interpret symbols on a piece of paper" (Roberts, 2005, p. 35). However, recent Standard Seven National Examination results indicated that some pupils graduated without skills of reading, writing, and numeracy (TWAVEZA, 2014; UWEZO, 2013). This suggests that despite children being in school, they do not acquire basic skills in reading, writing and working out simple arithmetic problems and subsequently have not attained the achievement standards as intended in Tanzania primary curriculum. Since being literate is considered a basic condition of successful schooling, and for a productive adult life (Bryson, 2003), therefore, Tanzanian pupils with poor literacy are likely to be unsuccessful in achieving their life potentials. Mkumbo (2011) argued that if children lack ability to read, write and solve arithmetic problems, then education should be counted to have failed our children and that's exactly what seems to be the case with our Tanzania primary education since literacy and numeracy skills are fundamental core in teaching and learning. Pupil graduating with illiteracy implies that there is critical problem facing literacy teaching practices in schools. Therefore, this study investigated how teachers teach literacy and numeracy in

Tanzania primary school classrooms by examining classroom teaching practices in Tanzanian primary schools. The study was guided by the following research questions:

1. How do teachers teach reading, writing and numeracy to enhance pupils' literacy skills in Tanzanian public primary schools?
2. What is level of standard (grade) two and three literacy ability?
3. What problems do teachers face in the teaching of literacy and numeracy in Tanzanian public primary schools?

2.0 Literature review

2.1 The role of qualified literacy teachers

Previous research strongly agreed that qualified teachers are critical factor in educational success and pupil learning achievement (Adedoyin, 2011; Akiba, LeTendre, & Scribner, 2007; Blömeke, Suhl, & Kaiser, 2011; Stronge, Ward, Tucker, & Hindman, 2007). The output from the education system rests upon the teachers who are the direct providers of education (Smith, 1999). Arguing this idea Smith (1999) added: "No education system can rise too far beyond the level of teachers in it" (p. 40). Thus, professionally trained literacy teachers are very important in success of teaching literacy skills in schools because they possess literacy teaching strategies and can simplify the action of teaching and learning reading, writing and numeracy skills (Barton, 1997). Thus, in any education system, the availability and excellence of a teaching force is a signal of the quality of education in that system. Barton (1997) reported that schools meet the challenge of improving literacy skills through teaching and practice reading skills at the elementary levels. Therefore, it implies lack of qualified literacy teachers lead to have poor pupils mastering of reading, writing and numeracy skills in schools. This view suggests that teachers are the most significant 'inputs' in the education development. Mapunda (2007) argued that, the quality of education is increasingly judged by focus on pupils' performance, what pupils actually learn, and how well they learn it. Qualified teachers are remarkably important in development of education in every country and critical for literacy and numeracy instructions.

2.2 Strategies for effective teaching of literacy and numeracy

Literacy teaching has been a topic of debate in many countries because pupils' achievement in aspect of literacy is not promising as reasonable number of primary schools pupils graduate without knowing how to read, write and conduct simple numeracy. Roskos, Christie, and Richgels (2003) reported the plethora of terms used to refer to pre-school literacy development. Such terms include: "emerging literacy, emergent reading, emergent writing, early reading, and symbolic tools" (p. 53). In addition there is no agreed position in the literature on the best framework of literacy teaching (Department of Education and Training, 2010). The literacy teaching debate according to Department of Education and Training (2010) is polarised between the proponent of whole language approach and skills-based approach. Whole language approach is built on the foundation of constructivist theory where they believe that literacy teaching should be contextual—while the proponent of skills-based approach advocate that during literacy teaching teachers should break down the reading and writing into small parts that are easily learnable by pupils such as phonics, phonemic awareness and spelling. Morrow, Gambrell, Duke, and Nero (2011, p. 22) identified ten evidenced based best practice for literacy instruction. These are:

- Classrooms should reflect a culture that fosters literacy motivation. The teacher should foster literacy by creating a community of literacy learners;
- Students learn best when they read for authentic meaning-making purposes: for pleasure, to be informed, and to perform a task;
- Teachers should provide appropriate scaffolded instruction in the five core skills (phonemic awareness, phonics, vocabulary, fluency, and comprehension) to promote independent reading;
- The school day should include time for self-selected reading;
- Providing students with high-quality literature across a wide range of genres will build a love for reading and address the Common Core standards;
- As themes or topics are explored, multiple texts should be used to increase background knowledge, connect concepts, and increase vocabulary;
- The classroom should reflect and encourage community and collaboration;
- A balance of teacher-and student-led discussions of texts is important to build lifelong learners;
- Students need ample opportunities to use technologies that connect and expand concepts; and
- Differentiate instruction based on student assessments to accommodate the needs of individual students (Morrow et al., 2011, p. 21)

US National Reading Panel (2015) reported that effective literacy instruction strategies integrate the following components: first, there is clear instruction in phonemic awareness; second, systematic phonics instruction; teaching approaches that support pupil's fluency and finally teaching that enhances pupils comprehension. In the similar vein study by Roskos et al. (2003) identified eight literacy teaching strategies. These are:

- *Rich teacher talk*—teachers involves pupils a rich discussion in large groups, small groups, and individualized talk that focuses on the use uncommon words, extending children discussion, providing cognitively challenging content, and responding to pupils talk;
- *Storybook reading*—teachers guide children to read aloud in the class at least once or twice a day. During storybook reading children are exposed to entertaining activities such as stories, poems, and information books;
- *Alphabet activities*—during literacy teaching, teachers should engage children with learning resources which increase the understanding of the alphabet, such as ABC books, magnetic letters, alphabet blocks and puzzles alphabet chart;
- *Support for emergent reading*—encourage and support children reading by providing various resources and familiarize them with books;
- *Support for emergent writing*—teachers are required to encourage children to use emergent forms of writing, such as scribble writing, random letter strings, and invented spelling. For emerging writing strategy to be successful school and writing centre should have good stock of pens, pencils, paper, and book-making materials; teacher writes down text dictated by children and availability of play-related writing materials;
- *Shared book experience*—the teacher should read the books to children by enlarging the text and point as she/he reads. During the reading, teachers should develop pupils awareness to distinguish between picture and print;
- *Integrated, content-focused activities*. Teachers are required to involve learners in investigating topics that are interesting and which are of their interests. (Roskos et al., 2003, pp. 53-55)

The last strategy which is very crucial is *phonemic awareness*. Previous studies (Chard & Osborn, 1999; Ehri et al., 2001; Tankersley, 2003) reported that phonemic awareness and letter knowledge or recognition is the pre-requisite skills for standard one and two to master reading ability. According to Tankersley (2003) phonemic awareness:

... plays such a vital role in forming the foundation of reading development, phonemic awareness is the first thread in the tapestry of reading. Phonemic awareness is the ability to hear and manipulate phonemes, which are the smallest part of a spoken language. Phonemes are the element of language that allows discrimination and make a difference in the meaning of a specific word (para, 1).

Understanding of phonemic and letters knowledge are crucial to children in the age of two or three because before “children learn to read, they must understand that the sounds that are paired with the letters are the same as the sounds of speech they hear” (Tankersley, 2003, p. para 6). It accounts to 50% of child reading ability at the end of standard one (Torgesen, Wagner, & Rashotte, 1994). It determines child's success in reading (Snow, Burns, & Griffin, 1998). In the context where phonemic awareness and letters knowledge is missing or underdeveloped pupils will have reading difficulties as well as poor reading development (Tankersley, 2003; Torgesen et al., 1994).

2.3 Models of reading development

There are many models on literacy development reported in the literature (Chall, 1983; Ehri, 2004; Farrall, 2012; Frith, 1985) for young children. For example, stage model (Gough & Hillinger, 1980) developmental model (Chall, 1983; Frith, 1985; Marsh & Desberg, 1983; Marsh, Desberg, & Cooper, 1977), influential stage model (Beech, 2005; Frith, 1985), Cognitive processing models (Rumelhart & McClelland, 1986; Verhoeven, Reitsma, & Siegel, 2011), social constructivism model (Au, 1998; Vygotsky, 1986) and Ehri model (Ehri, 1995, 2004; Farrall, 2012). This study adopted the Ehri's model of phases of learning to read or sight reading (Ehri, 1995, 2005). Sight reading refers to “not a method of teaching reading but to the process of reading words by accessing them in memory” (Ehri, 1995). This model was adopted in this study because is the model widely cited in the literature and used in various studies on literacy development (Beech, 2005). This model also supports our assertion that Tanzanian children at standard/grade two and three should have developed basics of literacy. Ehri model consists of four phases of reading: pre-alphabetic phase, partial alphabetic, full alphabetic phase, and consolidated alphabetic phase (Ehri, 1995).

- Pre-alphabetic phase—during this stage “beginners [children] remember how to read sight words by forming connections between selected visual attributes of words and their pronunciations or meanings

and storing these associations in memory” (Ehri, 1995, p. 118). At this stage of literacy, beginners develop ‘visual cue’ that help them to remember words (Beech, 2005; Ehri, 1995; Farrall, 2012).

- Partial alphabetic phase—at this stage children have developed “how to read sight words by forming partial alphabetic connections between only some of the letters in written words and sounds detected in their pronunciations” (Ehri, 1995, p. 119). In partial alphabetic phase, children developed the skills of linking the context and partial-letters cues that are taught in the classroom (Farrall, 2012). For example a child observing at picture of an Apple child might guess an ‘Apple’ for the word that starts with A. Ehri (1995) suggested that at this phase children “had to be taught to perceive shared sounds in words, to segment initial sounds in the pronunciations of words, and to recognize how letters symbolized initial sounds in words” (p. 119).
- Full-Alphabetic Phase—at this stage a child is aware of “graphemes symbolizing phonemes in the conventional spelling system” (p.120), and therefore they can read sight words and make complete connections between letters they have read and phonemes they have identified during the pronunciations. Ehri reported that at this stage children have knowledge of sounds and letters, and so they can decode unfamiliar words. Farrall (2012) reported that instruction process at this stage should be systematic in phonemic awareness and phonics. Ehri (1995) argued that at this stage children have ability to retain information on sight words in the memory.
- Consolidated Alphabetic Phase: According to Ehri (1995) at this stage children have developed ability “to retain complete information about the spellings of sight words in memory that makes it possible for their print lexicons to grow rapidly as they encounter many different words in their reading” (p. 121). Children accuracy of reading is of high standard (Farrall, 2012) at the consolidation stage. In addition, at this stage, children start to generalize letters.

3.0 Methodology

This study employed embedded case study design. The embedded case study design allows integration of qualitative and quantitative (Scholz & Tietje, 2002) within the qualitative interpretive research paradigm (Ary, Jacobs, Razavieh, & Sorensen, 2010). This approach allows the researcher to explore participants’ world views as they perceive the social phenomenon and also it provides wider use of data collection techniques such interviews, observations as well as review of documents, and its ability to draw from diverse theoretical orientations.

The study employed purposive sampling technique to involve all pupils of standard (grade) one, two and three in every study school and teachers who taught these classes. The technique was also applied to teachers, teachers in charge of academics, heads of schools and District Education Officer. The purposive sampling was employed in order to obtain comprehensive views on literacy teaching practices in study schools. The study involved four heads of schools, 10 classroom teachers, one district education officer and 582 pupils. Pupils were given text to read and solving some numeracy problems according to their curriculum requirements. Teachers were observed and interviewed about their skills on literacy teaching practices. The classroom observations were video recorded and transcribed for thematic analysis using both manifest level and interpretive level (Boyatzis, 1998). The researcher employed qualitative trustworthiness criteria such as prolonged field work, peer debriefing, triangulation of sources and audit trial (Anney, 2014). Synonymies were used for names of schools and teachers and pupils for ensuring the privacy and confidentiality of the participants for ethical purpose of the research.

4.0 Results and Discussion

4.1 Teachers’ Classroom Practices in the Teaching Literacy in Standard One and Two

The study focused in understanding teacher’s classroom interaction processes, particularly the interactions between teacher-pupil, pupil-pupil, teacher’s ability to customise individualized learning and evaluation of literacy learning. Classroom observations and interviews show that the Tanzanian literacy teachers in researched schools have inadequate skills and knowledge required for effective teaching of literacy skills to standard two and three and they rarely use learner-centred teaching methods.

4.1.1 Teachers’ inadequate literacy teaching skills

The study investigated teaching approaches and strategies that are used by teachers through classrooms observation during teaching standard one and two. The findings indicated that standard one and two teachers had inadequate professional skills for teaching of literacy. All six literacy teachers observed the common teaching approach that of reading aloud. Given the larger teacher-pupil ratio literacy teachers do not make follow-up of

what they are reading aloud to the pupils. Interestingly, teachers do not evaluate individual pupil's reading. Some pupils do not have text books and they were not appropriately following the teacher. For example, one teacher was observed to be disorganized in teaching consonant and vowels. He started the lesson by copying on the blackboard the consonants without copying all consonants and started reading them loudly.

The Kiswahili consonants reading: "b, ch, d, f, g, j, k, m, n". After reading aloud then in the same lesson the teacher introduced vowels on the blackboard, "a, e, i, o, u". He read the vowels once and then he started to combine vowels and consonants and formed the following syllables: "ba, be, bi, bo, bu, cha, che, chi, cho, chu, da, de, di, do, du, fa, fe, fi, fo, fu, ga, ge, gi, go, gu" (Kiko, teacher from school B, standard one lesson).

The way the lesson was organised and taught suggests that teacher lacks inadequate knowledge of teaching literacy. The best strategy for this lesson is first to introduce the vowels and their short sounds and followed by consonants. In addition, teachers' practices in teaching indicated confusion of the concept of alphabets and consonants. Effective teaching literacy requires consonants being taught separately from vowels and alphabets in different topics. These findings are in line with those reported in the study by Anney (2013) which observed that using teachers with inadequate pedagogical content knowledge will likely have negative implications on pupils' learning. Dickinson and Caswell (2007) suggest that helping teachers to learn content knowledge and to draw on that knowledge to plan effective practices may improve the quality of the language and literacy environment.

In addition, during classroom observation, one teacher was noted when teaching a "reading alphabet lesson" in Kiswahili in standard two using "*reading aloud*" approach. The teacher was reading aloud and the whole-class was repeating after their teacher. Thereafter, the teacher asked the pupils to do individual reading voluntarily by first rising up their hands and then moving in front of the class. Few pupils responded by raising hands and the teacher asked those who can read the text to move forward. Most of the pupils were silent indicating that they did not know how to read properly. This teacher's approach did not emphasize individual learning in reading; the teacher did not probe further to understand if those who rose up their hands could correctly read the text. This suggests that pupils with reading difficulties will remain with literacy problems and this is likely to affect their academic performance in the future. Whitehead (1994) observed that "teachers have a role helping readers to make meaning from text... encouraging readers to share text related experiences prior to reading and asking questions, designed to test and extend understanding after reading" (p. 24). The way literacy is taught in researched schools does not support the views reported in the study by Whitehead (1994).

During classroom observation a teacher in standard two used song as a teaching approach to introduce the lesson:

Asiyependa shule ni mjinga kabisa.x2
Barua ikija atembeza kutwax2
Huyoo.....huyoo... ni mjinga kabisax2.

English translation;

Whoever dislikes school is foolish...x2.

When he receives a letter walks around to find who can read it for him/her...x2

He is fool... he is fool...x2

She then asked pupils to open their text books and read on page seven. She read aloud and asked pupils to read a whole-class instruction approach. Thereafter, she requested pupils to read independently. The results were that text books ratio was 1: 4. Given this scenario, only ten pupils were able to read the required task. Forty nine pupils looked bewildered not knowing what to do. The lesson thus ended. This teacher' teaching approach did not consider pupils with reading problems rather it only focused on few pupils who actively participated in the lesson. McGee and Richgels (2001) reported that sometimes teachers read a textbook aloud to pupils when they can't read it themselves. Sturtevant and Kim (2009) reported that, the types of literacy activities available to learners in school may also have influence on pupils' ability to develop literacy skills and if pupils "judge reading and literacy activities to be unrewarding, too difficult, or not worth the effort" may become "nonreaders" (p. 59).

Another teaching approach used in classroom practices was *vocabulary instructions*. A teacher in class two was teaching words formation/ recognition through writing a combination of vowels and letters. She began to write:

Letters b, ch, d, f, g, h, i, j, k, l, m...then required pupils to attach, vowels, a, e, i, o, u, into these letters to form Kiswahili words, and few pupils were able to form different words such as; Chaki (chalk), kalamu (pencil), rula (ruler), mama (mother), baba (father), meza (table), and kofia (hat).

Again, this teacher's teaching approach did not consider learning by introducing the lesson from known to unknown, from simple to difficult or from specific to general things (inductive approach). This teacher would

have made the lesson effective by using real objects well known to pupils like pen, table, desk, chalk, a picture of a mother, father, a hat and others and attach them with written word on every picture or object when introducing the lesson. The teacher could write letters and vowels associated to the lists of objects or pictures introduced earlier. The way Tanzanian teachers teaches literacy in the study schools contradict to the practice of teaching literacy reported by Scott, Teale, Carry, Johnson, and Morgan (2009) that effective instructional practice should be authentic, motivational, and focused and differentiated where teachers teach specific skills in reading as well as writing.

The problem of teaching literacy was also observed during the numeracy teaching. One teacher who was teaching arithmetic under the subtopic of adding the whole numbers less than ten, did not have teaching aids but ordered pupils to use their learning aid [bow sticks] to add numbers. Despite asking pupils to use those bow sticks, most of them did not have learning aid and tried to look from neighbour pupils on how to add numbers. The teacher was working on problems involving adding numbers on the black-board by asking the whole-class the questions. There was no individualized learning as proposed in graphic organizers approach by Wood, Lapp, and Flood, (1992) that would provide pupils with visual information that in turn would complement the class discussion on the text.

Classroom observation was followed by individual interviews to understand the views of teachers on their teaching practices. The findings suggest that literacy teachers in those researched schools lacked inadequate professional skills needed to effectively teach literacy skills to these young children. Literacy teachers' lack of professional skills was also reported during the interviews. One respondent reported that:

Yes, it's true...our teachers lack professional development support (special seminars, workshops and refresher courses) on how to teach reading, writing and numeracy due to shortage of funds for capacity building a literacy teacher needs to update one's professional knowledge. We are aware of this need and are planning of having seminars for the same ends. (DEO, interviewed March 6, 2014)

Similarly another respondent claimed that:

In fact there are teaching literacy stages which were analyzed in the previous text books and were unique for standard one and two on teaching 3Rs, published by the government. Currently they are not available and myself I am finding it difficult to teach these literacy stages. (A standard one and two teacher in school B interviewed on 6th March, 2014)

These respondents' views suggest that literacy teachers have not received trainings on literacy skills; therefore, they are not conversant with teaching reading, writing and numeracy skills. At school D during interview session one respondent said that:

Teacher's inadequate pedagogical skills cause problems in teaching literacy because they do not possess specialized skills for teaching standard one and two literacy and most of them refuse to teach once you assign them. (Academic teacher interviewed on 5th March 2014)

Some respondents reported that teachers were professionally well equipped to teach literacy but did not overly apply their skills because they were not enough; therefore, they had to teach more classes than required. When interviewed why teachers' did not apply learner-centred teaching methods, one head teacher claimed that:

In our school, one teacher is teaching both standard one and two, each class has seven subjects, this means [she/he] has fourteen subjects, although they are familiar to literacy strategies it is not easy to apply their knowledge because of a big work-load, so they use lecture method to cover the topics needed. (Head teacher in school C interviewed on 3rd March, 2014).

The findings from interviews and classrooms observations suggest that teachers have inadequate literacy teaching skills which is affecting literacy teaching in classrooms. This implies that pupils taught by these teachers hardly develop literacy skills. This study findings indicated that the dominant teaching approaches used by the literacy teachers was didactic approach, that is, basically a teacher- method that was essentially bookish, turning pupils into inactive and passive learners in the classroom. It was noted that there was very little pupil-centred teaching as observation showed that teachers taught whole class through instruction approach where learners repeating what their teachers said. This teaching practice suggests that, the 2005 Competence Based Curriculum which emphasizes teaching and learning based on learner-centred approach is not implemented as intended. This is because teachers have been employing didactic teaching approaches. These findings are in agreement with the study by Anney (2013) who reported that the teacher's choice to employ a didactic teaching approach may not be how they want to teach, but how they feel they must teach in order to cope with the circumstances.

4.2 The level of literacy skills in primary schools for standard two in district X

In assessing the literacy level and arithmetic skills, respondents were individually given semi-structured guided interview questions that were aimed to test their reading, writing and numeracy skills on letters, words, sentences/dictation, simple story for comprehension and simple arithmetic skills on subtraction, addition, and multiplication. These questions were taken from standard two books, and they were relevant to the level of literacy required for standard two to demonstrate their competencies. The total respondents were 334 pupils for standard two in four study schools in District X. The results are presented in Table 1. A read-through of the Table 1 indicates that there was an acute literacy and numeracy problem in sampled schools. The findings show the percentage of literacy and numeracy skills for pupils in those four schools as follows: reading: letters for 85(25.4%), words: 81(24.2%), sentences: 65(19.4%), comprehension 44(13.1%), and writing: letters 120(35.9%), words 94(28.1%), dictation 58 (17.3%) and numeracy is 59(17.6%) out of 334 pupils. These results indicate that; 165 pupils (49.4%) were not able to read letters, 174(52%) were not able to read words, 171(51.1%) could not read sentences, 249(75%) were not able to read and comprehend a story. Likewise, 127(38%) could not write letters, 145(43%) could not write words, 188(56%) were not able to take a dictated paragraph and 181(54%) were not able to do simple numeracy in subtraction, addition and multiplication problems. These findings imply that pupil's literacy is less than fifty percent.

Table 1: Respondents' literacy skills in sampled schools for standard two

School	Literacy level	Reading				Writing			Simple-Arithmetic	Total Respondents
		Letters	Words	Sentences	Story comprehension	Letters	Words	Dictation		
A	Good	14	14	11	8	22	22	5	11	76
	Weak	23	21	25	14	19	18	21	19	
	Poor	39	41	40	53	35	36	50	46	
B	Good	18	17	14	8	23	17	12	18	59
	Weak	7	12	17	8	11	9	9	18	59
	Poor	34	30	28	43	25	33	38	23	59
C	Good	32	29	23	16	41	29	23	22	83
	Weak	18	14	24	13	20	26	17	28	83
	Poor	33	40	36	54	22	28	43	38	83
D	Good	21	21	17	12	34	26	18	8	116
	Weak	36	32	32	5	37	42	41	34	116
	Poor	59	63	67	99	45	48	57	74	116
Total	Good	85	81	65	44	120	94	58	59	334
	Weak	84	79	98	41	87	95	88	94	334
	Poor	165	174	171	249	127	145	188	181	334

Key: pupils' scores: 5-10/10 Good, 1-4/10 Weak, 0/10 Poor.

Comprehension: 2-3/3 Good, 1/3 Weak, 0/3 Poor;

Dictation 3-5/5 Good, 1-2/5 Weak, 0/5 Poor

Good = Pupils who can read, write and do numeracy skills proficiently.

Weak = Pupils who can read, write and do numeracy by difficulty.

Poor = Pupils who completely do not know how to read, write and do numeracy skills.

These generally revealed that illiterate pupils are above 64% out of 334 pupils in surveyed schools who cannot read, write and do simple numeracy skills. These findings show that the literacy problem is very high in surveyed schools.

Given the poor learning environment occasioned by shortages of teachers in terms of academic teachers, inadequate literacy teaching skills, and lack of financial resources (school fund and budget). These findings are consistent with the open system model of assessment stated by Miskel and Hoy, (2008) who argued that, the quality of the products depends on the interplay stuck between the inputs, process and outputs. With regard to educational institutions, particularly the four primary schools surveyed, it can be argued that there are open

systems composed of inputs such as human resources (shortages of teachers in terms of employment, teachers' inadequate literacy skills), and lack of financial resources (school fund and budget). The processes involved the actual teaching and learning process which comprised of improper use of teaching methods, overcrowded classrooms, poor classroom management, lack of teaching and learning materials such as text books, desks, chairs, tables and lack of teaching aids which automatically affected the mode of assessment and weakened evaluation. This ultimately resulted into low quality outputs which are pupils' lack of competencies in mastering reading, writing and numeracy skills as revealed in this study. These results especially on the aspect of reading story for comprehension are discouraging because 249 (75%) pupils could not read and comprehend a story. Equally discouraging, is the unsatisfactory performance in other aspects such as the staggering 188 (56%) of pupils who were not able to take a dictated paragraph and 181(54%) pupils couldn't work out simple arithmetic problems involving subtraction, addition and multiplication.

These findings are in line with Alcock, et al. (2000) who reported that most young children are good in decoding, but poor in comprehension in Kiswahili. Children could clearly read words very loudly, but they were poor in understanding the message or the meaning attached to those words or sentences. The findings revealed that 13% of the sampled school in standard two could read a simple story, compared to Uwezo (2010) who found that only 42% of the sampled pupils could read a simple story at the level of standard two. However, these findings more or less tally with those of Hakielimu (2008) who reported that, one out of four students could not write a dictated paragraph in Kiswahili. Similarly, Breznitz (2006) reports that a diffluent reading performance is an outcome of difficulties in word recognition systems, such as phonology and orthography. This means that literacy teachers should put more emphasis on teaching reading, writing and arithmetic skills as one entity evenly possessed by pupils.

4.2 The level of literacy skills in primary schools for standard three in district X

In assessing the literacy level and arithmetic skills, respondents were individually given semi-structured guided interview questions that tested their reading skills on letters, words, sentences and comprehension. Interview questions were also given to assess writing skills letters, words and sentences in the form of dictation likewise to simple arithmetic skills on subtraction, addition, and multiplication problems. The total respondents were 229 standard three pupils in four sampled schools in District X (see Table 2).

Table 2 Standard Three Pupils' Literacy Skills

School	Literacy level	Reading				Writing			Simple Arithmetic	Total respondents
		Letters	Words	Sentences	Story comprehension	Letters	Words	Dictation		
A	Good	34	28	25	20	32	32	23	30	74
	Weak	9	16	14	10	9	8	10	32	74
	Poor	31	30	35	44	33	34	33	12	74
B	Good	22	19	19	12	24	24	18	9	44
	Weak	12	16	11	7	7	7	5	16	44
	Poor	10	9	14	25	13	13	21	19	44
C	Good	22	22	22	10	30	30	30	10	33
	Weak	11	11	11	9	3	3	3	-	33
	Poor	-	-	-	14	-	-	-	23	33
D	Good	26	23	23	21	40	38	24	25	78
	Weak	4	7	7	3	11	13	10	8	78
	Poor	48	48	48	54	27	27	44	45	78
Total	Good	104	92	89	63	126	86	95	96	229
	Weak	36	50	43	29	30	31	28	56	229
	poor	89	87	97	137	73	74	98	99	229

Source: Field Data (March, 2014)

Key: pupils scored: 5-10/10 means good 1-4/10 means weak, 0/10 means poor.

Comprehension: 2-3/3 means good 1/3 weak, 0/3 means poor;

Dictation: 3-5/5 means good 1-2/5 means weak, 0/ poor.

Good = Pupils who can read, write and do numeracy skills proficiently.

Weak = Pupils who can read, write and do numeracy problems.

Poor = Pupils who completely do not know how to read, write and do numeracy problems.

The findings show that pupils had literacy and numeracy problems. For example; 89(39%) pupils out of 229 were not able to read letters, 87(37.9%) could not read words, 97(42.3%) were not able to read sentence, 137(59.8%) could not read or do comprehension tasks. Likewise, 73(31.8%) could not write letters, 74(32.3%) were not able to write words, 98(42.7%) were not able to take a dictated paragraph, and 99(43.2%) failed to work out simple arithmetic problems (See Table 2). These data are the same as those for standard two which showed that; 165(49.4%) pupils were not able to read letters, 174(52%), failed to read words, 171(51.1%) were not able to read sentences, 249(75%) failed to read and comprehend a story. Likewise 127(38%), failed to write letters, 145(43%), failed to write words, 188(56%) could not take up a dictated paragraph and 181(54%) failed to work out arithmetic problems involving subtraction, addition and multiplication. These standard three findings indicate that the literacy problem is not big compared to that involving standard two because before pupils go to standard three they are 'screened' with those having literacy problems being required to repeat standard two. The head teacher from school C reported that:

Repeaters are present in my school and normally we require those pupils with literacy problems to repeat standard two instead of allowing them to continue with standard three. We do so to avoid failures in standard four national examinations. (Head teacher of school C interviewed March 12, 2014)

In the same vein, another teacher claimed that:

We get the pupils with literacy problem in standard three to repeat standard two. This is not always our own initiative but we are required by the education administrators who do so as to have impressive academic performance in standard four in line with what is called Big Results Now (BRN). (A standard two teacher for standard two from school B as interviewed March 12, 2014)

These findings reveal that one school among the four surveyed schools was screening pupils with poor literacy skills when they were still in standard two and three. A standard three teacher commented on this:

All pupils in this class.... know how to read and write, and they have the requisite numeracy skills. We got them repeat standard two instead of allowing them to continue with standard three. This is the reason why you see standard three are fewer in number in comparison to standard two. (A teacher for standard three in school C, interviewed March 12, 2014)

These findings show that there are literacy and numeracy problems among pupils in standard two and three in the four study schools. Alcock, et al. (2000) reported that, the ability to read and write has been regularly identified as key a variable that impacts education quality and relevance.

4.3 Problems do teachers face in the teaching of literacy and numeracy in Tanzanian

The study was to explore the problems facing teachers in teaching and learning literacy and numeracy skills in Tanzanian public primary schools. Data for this objective were collected through interviews. Semi-structured interviews were administered to DEO, four head teachers, four academic teachers, and ten teachers who were then teaching standard one, two and three classes. Also respondents were given questions to rate some of the factors contributing to poor literacy teaching.

4.3.1 Factors contributing to the problem of literacy skills

Teachers were interviewed several questions on the reasons which contributed to difficulties in teaching literacy and numeracy skills in their schools. In most cases, all of them admitted that some factors were the cause of these literacy problems. Table 3 shows reasons and responses from participants, percentages of respondents and total number of participants about the factors contributing to poor literacy and numeracy skills in the researched schools.

Table 3: Factors Contributing to Pupils' Illiteracy in Sampled Schools (n=19)

S/N	Items on the reasons for poor literacy and numeracy skills	Participants responded	Percentage %
1	Pupils parents 'level of education	14	74
2	Shortage of text books for pupils	7	37
3	Large number of pupils per class	19	100
4	Shortage of teachers	19	100
5	Shortage of class rooms	10	53
6	Shortage of desks	16	84
7	Many subjects taught in standard one and two	19	100
8	Lack of Pre-primary education	19	100
9	Pupils' family economic status	12	63
10	Teachers' lack of seminars, workshops and refresher courses to enhance teachers professional skills	19	100
11	Late enrolment of standard one pupils	9	47
12	Truancy and absenteeism from schools	13	68
13	Lack of food at school	15	79
14	Family separation	10	53
15	Lack of teaching and learning aids	13	68

These results imply that the most factors contributing to pupils' illiteracy in sampled schools were: large number of pupils per class, shortage of teachers, many subjects taught in standard one and two, lack of pre-primary education and inadequate professional development skills. The study findings also show that there is a need to develop awareness for families and societies in general to enrol their pupils of school age in early stage and rebuke against family separation and truancy of their children.

4.3.2 Pupils' and parents' level of education

Data for this factor were collected through semi-structured interview questions. The 14 respondents (74%) reported that, it was an obstacle to most of pupils with literacy problems. A standard one class teacher reported this:

Most of the parents are not educated and pupils don't see anything to emulate out of their parents. Also parents are unable to check their children's home-works due to their illiteracy. (A standard one teacher in school A interviewed March 16, 2014)

Another class teacher reported that:

Pupils' parents do not know how to read and write... hence it is difficult for them to supervise and inspect what their children do at school. (A standard two teacher in school B interviewed March, 16, 2014)

Reporting the situation of literacy and numeracy teaching in his school, the head teacher of school B claimed that:

Yes, it is true that most pupils come from illiterate families in which parents are not aware of education and thus do not insist their children to come to school ... (Head teacher interviewed March 16, 2014).

Study by Carr-Hill, Okech, Katahoire, Kakooza, Ndidde, and Oxenham (2001) in Uganda reported that literate parents are more likely to be able to support their children in practical ways, such as meeting with their teachers and discussing progress with their children. Therefore, reading parents become models for the children to develop reading, writing habits or interests. Similarly, Lybolt and Gottfried (2003) argued that children's home environment is naturally crucial for literacy development.

4.3.3 Shortage of text books for standard one and two

With respect to the shortage of text books 7(37%) teachers said that shortage of text books was the reason for poor literacy teaching. The findings of this study revealed the scarcity of text books for standard one and two. One of the respondents from school A reported that:

Though we received new text books from the government through a non-governmental organization known as CAMFED but they are not enough to meet our school's need. Before that the problem was

even bigger, but at the moment, the ratio of pupils with text books is 1:4. So at least we have achieved somethingbut for sure we still have a problem. (Head teacher in school A interviewed March 17, 2014)

Another respondent from School D responded that shortage of text books was a serious problem. During an interview, he reported:

I am using one text book which is like a reference source to the teacher ... pupils do not have textbooks, they just copy on the board what I am writing....it is better for the government to buy text books for standard one and two (A teacher teaching standard one and two interviewed March, 18,2014).

These findings about the shortage of text books are in line with the study by Fredriksson (2002) who reported that, most of the Tanzanian primary schools do not have libraries; text books are very few almost in all of the primary schools.

4.3.4 Shortages of class rooms and desks

In relation to the shortage of classrooms 15 (79%) teachers said that shortage of classrooms was a reason for poor literacy teaching in schools. During interview session, some respondents reported that their schools had shortages of both class rooms and desks while others had classrooms with few desks. School A and school C had sufficient class rooms, the problem was few desks. One of the respondents claimed that:

In our school classrooms are not a big problem; the problem is few desks....thus pupils are sit on the floor during lessons. (A teacher for standard in school A two interviewed March19, 2014)

In the same vein another teacher reported that:

We have scarcity of both classrooms and desks. As you see, we have four classrooms which are used for standard one up to standard seven (A teacher for standard one in school B interviewed March 20, 2014).

School B and school D had both shortages of class rooms and desks. For example, in school B, pupils were studying by shifting, the head teacher reported this:

Due to few desks and buildings, pupils study by shifting; four classes of standard one, three, five and seven attend morning session while the other three classes of standard two, four and six attend in the afternoon session. (Head teacher in school D interviewed March 20, 2014)

It is revealed that the surveyed schools were experiencing the scarcity of desks that led to the combining of streams to form a single class. This resulted into overcrowded classes that were difficult to teach and manage. These findings are in agreement with what was reported by UNESCO (2005), Abagi and Sifuna, (2006) that, classrooms designed for 45 pupils accommodate up to 80-120 children in many developing countries. Overcrowded classrooms have negative effects on teaching and learning because they challenge the teacher's ability to assist students as individuals (Anney, 2013).

4.3.5 The family's socio-economic status

In relation to family socio-economic status and the effect it has on literacy 12 (63%) teachers supported that family socio-economic status was the reason behind poor literacy teaching. During interview session some respondents revealed that family socio-economic status was one of the factors which contributed to poor literacy skills to some extent. The respondents' reasons were that some of the students came from poor families. One of the respondents said:

Socio-economic status to some extent contributes to poor literacy teaching to many pupils although few among them are bright and in fact they are performing well in reading, writing and numeracy skills. (A standard two teacher in school A interviewed 21, March 2014)

One teacher claimed that some parents were polygamous and they had many children to take care of:

You know...polygamous marriages especially within our surrounding society cause parents to have many children in the family as a result they fail to provide for their needs including schools' uniforms. (A standard two teacher in school D interviewed March 21, 2014)

Studies show that poverty in families, lack of books in the homes and lack of parental support, are some of the major reasons for delayed literacy development among children (Lyon & Fletcher, 2001). Similarly Lybolt and Gottfried (2003) report that children from families with good economy have better achievements in literacy

compared to children from poor socioeconomic backgrounds, who lack school facilities to promote their learning literacy.

4.3.6 Shortage of qualified teachers

Study findings show that shortage of teachers is one of the reasons for poor literacy teaching in Tanzanian schools. Head teachers and academic masters reported that shortage of qualified teachers is also a factor contributing to poor literacy teaching. One of them reported that:

We have shortage of six qualified teachers; we are only nine qualified teachers. Our ratio is 1: 58 pupils, which is above the national ratio of 1:40 (Head teacher in school C interviewed March 21, 2014).

Similarly, in School B one teacher said that:

We are six teachers and there is shortage of four teachers. Teachers' pupils' ratio is 1: 60 (Academic teacher interviewed, March 21, 2014).

Again, in School D, the Head teacher reported that:

The problem of shortage of teachers in our school is big...we have sent our request to the DEO to get more teachers soon after new teachers' recruitment in this month (March) done by government.

We have shortage of eight teachers and our teachers' pupils' ratio is 1: 71. (Head teacher interviewed March 25, 2014)

Due to shortage of teachers, classes are overcrowded since pupils are often combined and therefore classroom management is very difficult because it is not easy to supervise pupils' tasks and help those facing difficulties in learning literacy. The issue of shortage of teachers is also explained by Reimers (2003) who reports that in Pakistan, in efforts to expand access to education for girls in rural areas of Baluchistan, untrained local women have been hired as teachers and then trained on the job using distance-education approaches.

4.3.7 Many subjects taught in class one and two

Many subjects taught in standard one and two was also reported to be a reason for poor literacy teaching in Tanzanian classrooms. One teacher elaborated that:

Even though the curriculum needs us to teach seven subjects, but we are mainly focusing on teaching reading, writing, and numeracy skills for six months without teaching other subjects. We are doing so because pupils are beginners with no literacy skills, majority of them did not pass through pre-primary education hence it is difficult to teach them other subjects before 3Rs (A teacher for standard one in school B, interviewed March 17, 2014)

In the same way, another teacher claimed that:

Teaching many subjects to standard one and two it is a burden to pupils simply because the majority of them do not have 3Rs (A standard one teacher in school C interviewed March 25, 2014).

Similarly, another respondent reported that:

You know the former curriculum for standard one and two was good. I was having few subjects and it directed on teaching 3Rs as major subjects. (A standard two teacher in school D interviewed March 25, 2014)

These results indicate that studying many subjects for standard one and two is a huge burden to teachers and pupils in the teaching and learning processes. It is an obstacle to access education in standard one and two. These findings contradict with those of McGaw, Long, Morgan, and Rosier (1989) who reported that the link between high levels of literacy and academic success occurs, initially, through allowing individuals' access to the subjects planned in the curriculum; and second, through enabling them to achieve success educationally. Study findings show that standard one and two pupils fail to access many subjects allocated in the curriculum hence they need to have few of them which they can learn successfully.

4.3.8 Absence of pre-primary education schools

Study findings show that lack of pre-primary education is one of the reasons affecting literacy teaching. During interview sessions, some participants claimed that the absence of pre- education for children has been contributing to poor pupils' literacy skills in Tanzanian schools particularly in district X. During interview the DEO narrated that:

Primary schools who had pre-primary classes are only 62 out of 148 schools. This is because of shortages of teachers and lack of classrooms to teach learners in pre-schools. There are also problems facing pre-schools, such as lack of salary to volunteering teachers who are unemployed by the government. Parents are responsible to pay the salary of these teachers, so once parents fail to pay those teachers they quit teaching (DEO interviewed on March 18, 2014)

Another respondent said that:

My school has a pre-primary class but the problem is that it is parents who are responsible for paying the salaries of the teachers, so once parents fail to pay them they stop working (Head teacher in school A interviewed March 24, 2014)

The findings about the importance of pre-primary education in Tanzania correspond to some previous studies such as by Lehmann (1996) who reported that attending school at pre-school age is of great importance in students' reading literacy. Learners' attainment of reading literacy is substantially influenced by collaboration with parents and children at the pre-school age.

4.3.9 Late enrolment of standard one pupils

Findings show that 9(49%) out of 19 teacher participants supported that late enrolment of standard one pupils is one of the reasons for poor literacy teaching. These results suggest that parents were not aware of their children's education and may decide whether to enrol them or not. During interview session one of the respondents reported that:

Late enrolment of the pupils in class one promotes poor literacy. Most of pupils are enrolling very late usually beginning in February and March. (A standard one teacher in school A interviewed March 24, 2014).

Another respondent claimed that:

Yes! It is very surprising... until this month some parents from interior areas are still bringing their children to enrol them and it is hard to turn them away because they are at the age or even over school age (Academic teacher in school D interviewed March 24, 2014)

These findings show there is serious problem of enrolment of primary schools in study district given its erratic nature. The findings contradict with ETP (1995) that states that the major objective of this education policy is to achieve increased enrolment for every child of school age, equitable access and quality improvement of education attained. Given this fact, it is difficult to have expected levels of literacy for pupils especially those who are enrolled late.

4.3.10 Truancy and absenteeism from schools

With regard to truancy and absenteeism of students in schools and the way it affected literacy, thirteen (68%) out of nineteen teachers supported that truancy and absenteeism from school were one of the reasons for poor literacy progress. The study findings revealed that there was fluctuation of attendance of pupils especially those in standard one and two. This was reported to have been happening the year around: One of the respondents reported that:

Parents' illiteracy contributes to pupils' truancy especially during agricultural season where many pupils stay home to help their parents in farming or doing home activities such as rearing babies. (A standard one teacher in school B interviewed March 25, 2014)

During the interviews, some participants reported that teaching of literacy was difficult because of many pupils' infrequent school attendance particularly for those in standard one and two. One teacher elaborated that:

Truancy and absenteeism are some of the problems contributing to difficulties in teaching and learning literacy and numeracy skills. Near our school there is a market once per week and some pupils are sent by their parents to sell small items like eggs, chickens, and ground nuts (A teacher for standard one in school D interviewed March 25, 2014)

It is obviously that truant pupils will have difficult to understand literacy and numeracy skills and to apply them in solving their daily problems. These findings are in line with those of study by Tunfunde (2009) showing that the most affected group for dropout from schools were boys who engaged in various activities such as animal herding, household activities, stealing and prostitution.

4.3.11 Inadequate professional development support for literacy teachers

The findings show that nineteen (100%) of participants agreed that teachers lacked seminars, workshops and refresher courses to support their literacy teaching and hence they did not have enough skills on how to teach literacy. They only taught through experience, and they did not specialize in teaching literacy for standard one and two. One of the respondents reported that:

I am an experienced teacher who has been teaching standard one and two for 14 years. Since I started teaching, I have never attended any seminar, workshop and refresher courses. (A teacher for standard one in school A interviewed March 26, 2014)

Likewise another respondent claimed:

I did not specialize in teaching literacy and numeracy skills for standard one and two. I did not attend any seminar or workshop. I am just teaching through experience (A standard two teacher in school A interviewed March 26, 2014).

Another respondent said that:

In fact there is a need for us to attend seminars, refresher courses and workshops to shape us with modern strategies of teaching literacy skills because we rely on what we have, which, of course, is not relevant (A standard 3 teacher in school C interviewed March 26, 2014).

In all four surveyed schools, the respondents agreed that inadequate knowledge on literacy teaching contributed to difficulties in teaching literacy skills.

4.3.12 Family separation

Study has found ten (53%) out of nineteen teachers supported that family separation was the reason behind poor literacy progress. Respondents explained the reasons why some students experienced difficulties in mastering reading, writing and numeracy skills. Family separation was cited as a contributing factor to some pupils' lack of literacy skills. One of the respondents reported that:

Once parents live together, children are encouraged to attend to school regularly, with close supervision and monitoring in doing their school homework, easy access to their basic needs such as school uniforms, exercise books, and other schools facilities they are likely to master literacy skills. (A teacher for standard one in school B interviewed March 27, 2014)

In school D the academic teacher said that he knew children who were coming from separated families. He reported that:

We have pupils from separated families. Before their parents got separated, they used to come to school daily, but now they live with their grandmothers, and since then, their attendance is very poor and they face the problem of literacy skills. (Academic teacher in school D interviewed March 27, 2014)

In line with these findings on the importance of the family in facilitating learners' literacy, the study by UWEZO (2010) also supports that family structure, especially in developing nations, has been held as one of the factors causing literacy skills problems. During interview sessions, respondents reported that most of the pupils who came from separated families did not attend schools regularly and hence lagged behind others in their literacy skills.

4.3.13 Lack of teaching and learning aids

With regard to lack of teaching and learning aids, the results show that thirteen (68%) of the teachers agreed that lack of teaching and learning aids was also responsible for poor literacy teaching, this is because, from the pedagogical point of view, young learners need more teaching and learning aids, classroom walls with impressive letters, words and learning cards. This was reported by one of the respondents in school B who claimed that:

You see... the walls of this class are not painted. Even if you decide to put cards for letters, words, numeracy and teaching aids they cannot last long. (A teacher for standard one and two interviewed March 27, 2014)

A researcher also observed one overloaded teacher who had to teach many subjects in class one because of shortage of teachers. Such teacher defended himself for not using teaching aids:

You know, I am able to prepare teaching aids but because of many subjects I teach, I do not have time to prepare teaching aids... (A standard one teacher in school C interviewed March 27, 2014).

The present study's findings indicate that most Tanzanian teachers teach without any teaching aids, and this situation contradicts with Altinyelken (2010) who reported that Ugandan teachers used teaching aids to facilitate

students' learning in their classrooms and that they had positive perception of the value of learner-centred teaching methods.

5.0 Conclusion and future research

Study findings indicated that almost 55% of pupils in standard two and three cannot proficiently read, write and do numeracy of the curriculum level. Teacher's inadequate literacy teaching skills mainly contributed to the problem of pupils graduating from primary schools without literacy skills. Despite other factors such as school environment, parents' level of education and resources teachers' contribution in literacy teaching cannot be overlooked in particular pedagogical aspect of literacy teaching. The findings suggest there is need to investigate the teachers' education institutions to see whether they train literacy teachers and if they develop competencies of literacy teaching for early learners.

6.0 References

- Abagi, O., & Sifuna, D. N. (2006). *Reports of the final evaluation of tusome Vitabu Project (TVP) in Tanzania*. Dar-es-Salaam: Care International Tanzania.
- Adedoyin, O. O. (2011). The impact of teachers' in-depth pedagogical mathematical content knowledge on academic performance: As perceived by Botswana junior secondary school pupils. *European Journal of Educational Studies*, 3(2), 277-292.
- Akiba, M., LeTendre, G. K., & Scribner, J. P. (2007). Teacher quality, opportunity gap, and national achievement in 46 countries. *Educational Researcher*, 36(7), 369-387. doi: 10.3102/0013189x07308739
- Alcock, K. S., Nokes, K., Ngowi, F., Musabi, C., McGregor, S., Mbise, A., Baddeley, A. (2000). The development of reading tests for use in a regularly spelt language. *Applied Psycholinguistics*, 21(4), 525-555.
- Altinyelken, H. K. (2010). Pedagogical renewal in Sub-Saharan Africa: The case of Uganda. *Comparative Education*, 46(2), 151-171. doi: 10.1080/03050061003775454
- Anney, V. N. (2013). *Supporting licensed science teachers' professional development in adopting learner-centred pedagogy in Tanzanian secondary schools*. (Doctoral dissertation), University of Waikato, Hamilton, New Zealand.
- Anney, V. N. (2014). Ensuring the quality of the findings of qualitative research: looking at Trustworthiness Criteria. *Journal of Emerging Trends in Educational Research and Policy Studies*, 5(suppl 2), 272-281.
- Ary, D., Jacobs, L. C., Razavieh, A., & Sorensen, C. K. (2010). *Introduction to research in education* (8 ed.). New York, NY: Hult Rinehart & Wiston.
- Au, K. H. (1998). Social constructivism and the school literacy learning of students of diverse backgrounds. *Journal of Literacy Research*, 30(2), 297-319.
- Barton, M. L. (1997). Addressing the literacy crisis: Teaching reading in the content areas. *NASSP Bulletin*, 81(587), 22-30. doi: 10.1177/019263659708158705
- Beech, J. R. (2005). Ehri's model of phases of learning to read: a brief critique. *Journal of Research in Reading*, 28(1), 50-58. doi: 10.1111/j.1467-9817.2005.00252.x
- Blömeke, S., Suhl, U., & Kaiser, G. (2011). Teacher education effectiveness: Quality and equity of future primary teachers' mathematics and mathematics pedagogical content knowledge. *Journal of Teacher Education*, 62(2), 154-171. doi: 10.1177/0022487110386798
- Boyatzis, R. E. (1998). *Transforming qualitative information: Thematic analysis and code development*. Thousand Oaks, CA: Sage.
- Breznitz, Z. (2006). *Fluency in reading: Synchronization of processes*. Mahwah, NJ: Erlbaum.
- Bryson, F. K. (2003). *An examination of two methods of delivering writing instruction to fourth grade students*. (Master thesis), Texas Woman's University, Texas.
- Carr-Hill, R., Okech, A., Katahoire, A., Kakooza, T., Ndidde, A., Oxenham, J. (2001). *Adult literacy programs in Uganda*. Washington D.C: Human Development Africa Region.
- Carroll, J. (2011). From encyclopaedias to search engines: Technological change and its impact on literacy learning. *Australian Journal of Language & Literacy*, 34(2), 27-34. .
- Chall, J. S. (1983). *Stages of reading development*. McGraw-Hill.
- Chard, D. J., & Osborn, J. (1999). Phonics and word recognition instruction in early reading programs: Guidelines for accessibility. <http://www.readingrockets.org/article/phonics-and-word-recognition-instruction-early-reading-programs-guidelines-accessibility>
- Department of Education and Skills. (2011). *Literacy and numeracy for learning and life: The national strategy to improve literacy and numeracy among children and young people 2011-2020*. file:///C:/Users/IBM/Downloads/Literacy&NumeracyforLearningandLife2011-2020.pdf
- Department of Education and Training. (2010). *Literacy literature review for evidence based practices framework*. http://www.education.nt.gov.au/_data/assets/pdf_file/0004/11398/LiteratureReviewLiteracy.pdf

- Dickinson, D. K., & Caswell, L. (2007). Building support for language and early literacy in preschool classrooms through in-service professional development: Effects of the Literacy Environment Enrichment Program (LEEP). *Early Childhood Research Quarterly*, 22(2), 243-260. doi: <http://dx.doi.org/10.1016/j.ecresq.2007.03.001>
- Ehri, L. C. (1995). Phases of development in learning to read words by sight. *Journal of Research in Reading*, 18(2), 116-125. doi: 10.1111/j.1467-9817.1995.tb00077.x
- Ehri, L. C. (2004). Development of Sight Word Reading: Phases and Findings.
- Ehri, L. C. (2005). Learning to Read Words: Theory, Findings, and Issues. *Scientific Studies of Reading*, 9(2), 167-188. doi: 10.1207/s1532799xssr0902_4
- Ehri, L. C., Nunes, S. R., Willows, D. M., Schuster, B. V., Yaghoub-Zadeh, Z., & Shanahan, T. (2001). Phonemic Awareness Instruction Helps Children Learn to Read: Evidence From the National Reading Panel's Meta-Analysis. *Reading Research Quarterly*, 36(3), 250-287. doi: 10.1598/RRQ.36.3.2
- Farrall, M. L. (2012). *Reading Assessment: Linking Language, Literacy, and Cognition*. Hoboken, NJ: Wiley.
- Frith, U. (1985). Beneath the surface of developmental dyslexia. In J. M. K. Patterson & M. Coltheart (Eds.), *Surface dyslexia: Neuropsychological and cognitive studies of phonological reading* (pp. 301-330). London: Erlbaum.
- Gough, P., & Hillinger, M. (1980). Learning to read: an unnatural act. *Bulletin of the Orton Society*, 30(1), 179-196. doi: 10.1007/BF02653717
- Hakielimu. (2008). *What's quality education? A research report on citizen's perspectives and children's basic skills*. Dar-es-Salaam Hakielimu.
- Hornby, A. S. (Ed.) (2000) (6 ed.). New York, NY: Oxford University Press.
- Kitta, S. (2004). *Enhancing mathematics teachers' pedagogical content knowledge and skills in Tanzania*. (Doctoral dissertation), University of Twente, Enschede, The Netherlands.
- Lehmann, R. (1996). Reading literacy among immigrant students in the United States and the former west Germany. In M. Binkley, K. Rust, & T. Williams (Eds.), *Reading literacy in the international perspectives*. National Center for Education Statistics (pp. 101-114). Washington DC, USA: Department of Statistics.
- Lybolt, J. & Gottfried. (2003). Promoting pre-school language. In H. J. Walberg (Ed.), *The International Academy of Education-IAE Educational Practices Series*, Chicago: University of Illinois.
- Lyon, G. R. & Fletcher, J. M. (2001). *Early identification, prevention, and early intervention for children at risk for reading failure*. An Article in Basic Education, the Monthly Publication of the Council for Basic Education.
- Mapunda, D. A. (2007). *A Shortage of Teachers and its Effects on Curriculum Implementation in Community Secondary Schools in Tanzania*. Dissertation. Education Psychology and Curriculum Studies. University of Dar Es salaam. Dar es salaam.
- Marsh, G., & Desberg, P. (1983). The Development of Strategies in the Acquisition of Symbolic Skills. In D. Rogers & J. Sloboda (Eds.), *The Acquisition of Symbolic Skills* (pp. 149-154): Springer US.
- Marsh, G., Desberg, P., & Cooper, J. (1977). Developmental changes in reading strategies. *Journal of Reading Behavior*, 9(4), 391-394.
- McGaw, B., Long, M. G., Morgan, G. and Rosier, M. J. (1989). Literacy and numeracy. In Australian schools, ACER Research Monograph No. 34. Hawthorn, Victoria: ACE
- McGee, L. M., & D. J. Richgels. 2001. *Literacy's beginnings: Supporting young readers and writers*, 3rd edition. Needham, MA: Allyn & Bacon.
- Miskel, C. G., and Hoy, W. K. (2008). *Educational administration. Theory research and practice*. New York: McGraw – Hil.
- Mkumbo, K. (2011, December 18). Clarify on reading and writing examination *The Guardian newspaper*.
- Morrow, L. M., Gambrell, L. B., Duke, N. K., & Nero, J. R. D. (2011). *Best Practices in Literacy Instruction* (4 ed.). New York, NY: Guilford Publications.
- Reimers, E. V. (2003). Teacher professional development; An international review of the literature. UNESCO: International Institute for Educational Planning
- Ritter, K. (2009). *Before Shaughnessy: Basic Writing at Yale and Harvard, 1920-1960*. Illinois: Southern Illinois University Press.
- Roberts, P. (2005). A framework for analysing definitions of literacy. *Educational Studies*, 31(1), 29-38. doi: 10.1080/0305569042000310949
- Roskos, K. A., Christie, J. F., & Richgels, D. J. (2003). The essentials of early literacy instruction. *Young Children*, 58(2), 52-60.
- Rumelhart, D., & McClelland, J. (1986). *Parallel distributed processing: Explorations in the microstructure of cognition*. Cambridge, MA: MIT Press.
- Scholz, R. W., & Tietje, O. (2002). *Embedded Case Study Methods: Integrating Quantitative and Qualitative Knowledge*: SAGE Publications.
- Scott, J. L., Teale, W. H., Carry, D. D., Johnson, N., & Morgan, D. R. (2009). Effective Literacy Instruction for Urban Children: Voices from the Classroom. *The Reading Teacher*, 63(4), 338-341.

- Smith, R. (1999). *The future of teacher education: Principles and prospect*. Paper presented at the American Education Research Association Symposium, Montreal, Canada.
- Snow, C. E., Burns, M. S., & Griffin, P. (1998). Preventing reading difficulties in young children. *Psychology in the Schools*, 39(3), 343-344. doi: 10.1002/pits.10011
- Street, B. V. (2004). *Understanding and defining literacy: Scoping paper for EFA global monitoring report 2006* Paris: UNESCO.
- Stronge, H., Ward, T. J., Tucker, P. D., & Hindman, J. L. (2007). What is the relationship between teacher quality and student achievement? an exploratory study. *Journal of Personnel Evaluation in Education*, 20(3-4), 165-184. doi: 10.1007/s11092-008-9053-z
- Sturtevant, E. G. & Kim, G. S. (2009). Literacy motivation and school/non-school literacies among students enrolled in a middle-school ESOL program. *Literacy Research and Instruction*, 49(1), 68-85, DOI: 10.1080/19388070802716907 London: Routledge.
- Tankersley, K. (2003). *The threads of reading: Strategies for literacy development*. New York: Association for Supervision and Curriculum Development
- Torgesen, J. K., Wagner, R. K., & Rashotte, C. A. (1994). Longitudinal studies of phonological processing and reading. *Journal of Learning Disabilities*, 27(5), 276-286. doi: 10.1177/002221949402700503
- Tunfunde, S. (2009). Primary school dropout and their post-school experiences. A case study of Mbeya district. Unpublished M. A (Education) Dissertation. University of Dar es salaam.
- Twaweza.(2014). Are our children learning? Retrieved from <http://www.twaweza.org/uploads/files/UwezoTZ-ALA2014-FINAL-EN.pdf>
- Unesco, (2005). Education for all. Global monitoring report of the quality imperative. Paris, France: UNESCO.
- Unesco. (2013). Adult and youth literacy. <http://www.uis.unesco.org/literacy/Documents/fs26-2013-literacy-en.pdf>
- US National Reading Panel. (2015). National Reading Panel. from Retrieved from <https://www.nichd.nih.gov/research/supported/Pages/nrp.aspx/>
- Uwezo. (2010). Are our children learning? Annual learning assessment report Tanzania. . Retrieved from <http://www.uwezo.net>
- Uwezo. (2013). Are our children learning? Annual learning assessment report 2012. from UWEZO Retrieved from <http://www.uwezo.net>
- Verhoeven, L., Reitsma, P., & Siegel, L. S. (2011). Cognitive and linguistic factors in reading acquisition. *Reading and Writing*, 24(4), 387-394. doi: 10.1007/s11145-010-9232-4
- Vygotsky, L. (1986). *Thought and language*. Cambridge, MA: MIT Press
- Whitehead, D. (1994). Teaching Literacy and Learning Strategies through a Modified Guided Silent Reading Procedure. *Journal of Reading*, 38(1), 24-30.
- Wood, K. D., Lapp, D., & Flood, J. (1992). *Guiding readers through texts: A review of study guides*. Newark, DE: International reading association.
- Wray, D., & Medwell, J. (1991). *Literacy and Language in the Primary Years*. London: Routledge.