

The Use of Songs and Storytelling in Teaching Preschool Children Mathematics: A Thing of the Past in Nigeria Preschool Education

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Abstract

Children do have difficulty in learning mathematics because they find it difficult to remember and make use of mathematics facts and rules when in upper primary classes and beyond. Songs and storytelling are child-centered methods that can enhance children's acquisition, retention and recall of facts and rules in mathematics. One then wonders if the preschool teachers are still using songs and stories to teach basic concepts in Mathematics. The study, therefore, investigated teachers' use of songs and storytelling in teaching preschool children Mathematics. The study adopted the Mixed methods research design. The triangulations of QUAN + qual type. A descriptive survey design and phenomenological approach were adopted. A simple sampling technique was used to select participant for the study. The quantitative data were collected using a questionnaire while the qualitative data were collected through interview and observation schedule. Quantitative data analysis was done using frequency count, simple percentage, mean, and standard deviation while the qualitative data were analysed using the thematic approach. The finding revealed that the weighted average is 1.94 which showed that the extent to which there are songs and stories for mathematics concepts in preschool education is very low. Teachers hardly use old songs and stories to teach mathematics.

Keywords: Mathematics, Songs, Stories, Teaching, Preschool Education.

Introduction

The preschool years are crucial to the development of children in all areas and it also a time where solid foundation is laid for other levels of education. One of the purposes of preschool education is to ensure a smooth transmission to the primary level of education and lay a solid foundation for long-life learning (Haque, Nasrin, Yesmin & Biswas, 2013). Children ought to have a solid foundation at this stage of learning so that other level of education will have a basis to stand firmly on. Early childhood is an important period for children to develop all the essentials core competencies (physical, social, numeracy, literacy) needed for their learning and development (Clements & Sarama, 2011; National Research Council, 2009, Duncan et al., 2007, Chambers & Sugden, 2002).

Children have various forms of characteristics due to their nature and peculiarities. Children at the preschool level of education are in their critical period of brain development and formation, they are full of life, and actively participate in every learning activity that suit their learning experiences and interest because they have short attention span (Curtain & Dahlberg, 2009). It is expected of the teacher to ensure that the learning situation is child-centered. The teacher is expected to put into consideration the nature of children while employing any form of teaching methods; this will make learning suitable for learners and interest. Some of the preschool children's characteristics include: they are very curious and active, have limited attention span, learn through fun, require interaction and participation in learning activities, love to be fully involved in their learning, mostly rely on speaking, and experience rapid growth of development, acquire language acquisition at various pace, learn in different ways: by watching, listening, singing, imitating, hand-on activities, practice what they see, imitate what they hear, learn and think in their mother tongue and love emphases of words and repetition of activities by their teachers (Slattery & Willis 2001, Scott & Ytreberg, 2010, Farwaniya 2010). These various characteristics of children must be put into consideration by the teacher when planning his lesson in respect to the various activities and learning task and the method of instruction to be employed.

In dealing with children with respect to their characteristics “songs and storytelling enhanced stimulation have great tendency to take into consideration the nature, need and interest of children when employed by the teacher. There are various ways in which learning takes place in children, this includes: play, song, drama, storytelling experiment and discovery, and inquiry, among others, (Akinbote, Oduolowu & Lawal, 2001). These authors recognize songs and storytelling as suitably enhanced stimulation that is appropriate for learning at this level of education.

An interview conducted by the researcher with some elders around the Ibadan, community area in the course of study revealed that the method of teaching children mathematics in the olden days was through the use of songs, rhymes and stories. That enabled them as children at that time to display mastery of the content taught, developed interest in mathematics and remember what they were taught. The situation in the present day is different from what used to be in operation. The convention method is mostly adopted in the schools to teach the children. The evidence clearly indicates that the conventional method of teaching Mathematics does not properly take care of children's learning and acquisition of knowledge and skills (Haghighi et al, 2005). The conventional method adopted by teachers in teaching Mathematics includes: the chalk and board (the teacher write the topic on the chalkboard and gives one or two examples, then ask the children to solve the exercises in their textbooks) and rote learning (the teacher asks the children to recite what they are taught) (Abdulwahed et al, 2012; Tularam, 2015). There is a need to expose children to child-centered form of learning Mathematics which will enable them to have proper understanding and acquire adequate skills. Song and stories are child-centred methods of teaching children.

According to Linder, Powers-Costello and Stegelin (2011), the use of song is viable in supporting the development of mathematical knowledge in children from infancy to 5 years old since the melody and the rhythmic patterns can be accomplished with an activity (Zentner & Eerola, 2010). The adoption of songs helps children to acquire mathematical knowledge when singing and involving in different activity alongside with the song in a playful manner. Song is children's first patterning experience and helps engage them in mathematics even when they do not recognize the activities as mathematics (Awopetu, 2016). Children acquire mathematical knowledge in a fun-filled manner this can arouse their interest towards the mathematics as a subject.

Previous studies have investigated ways of integrating songs into Mathematics instruction as a means for improving children performance in Mathematics. Results from studies indicated that songs had a positive impact on children academic performance (An, Kulm, & Ma, 2008; An, Ma, & Capraro, 2011 and Bilhartz, Bruhn, & Olson, 2000). Eady and Wilson (2004) investigated the effects of songs on the performance of children; the results showed that there is a positive impact of songs on both the academic performance and study skills of children. Rossini (2000) studied the effects of songs on the academic performance of children as measured by an achievement test in reading, language arts, and Mathematics. The results revealed were declared inconclusive because while some increase in achievement levels was established for students in the research group, their scores were not significantly higher than those of the students in the comparison group. In examining the effects of songs on students' attitudes, achievements and multiple intelligences in mathematics course. A pre-test-post-test experimental design with control group and time series design were used. Sample of the study was composed of 286 third graders at primary schools. Scale of Attitudes towards Mathematics, Mathematics Achievement Tests for 5 units, Multiple Intelligences Inventory for Students were used as data collecting instruments. The results show differences in favor of experimental groups on attitudes towards and mathematics success in pre-test post-test comparisons of the scores that were obtained (AyferKocabaşı, 2009).

In line with various submission and results from past studies on the use of songs to teach, storytelling is also one the child-centered method of teaching mathematics. Storytelling create a relaxing environment for children to learn and also increases their assimilation rates (Balakrishnan, 2008 and Diaw, 2009. Rokhayani (2010) opines that storytelling can be used to develop the following in children: (language skills, listening, thinking, mathematical knowledge and communication of mathematical skills). Storytelling can be used to achieve the following: motivate, arouse, increase imagination and interests, provide meaningful contexts, retaining of information learnt and development of various skills such as language skills for communication, listening, critical thinking, and problem-solving in children (Wright 2004). Storytelling is a powerful tool in children learning and activities because it is an effective pedagogical strategy that can be woven into instruction to support children of all ages to increase their competencies in all areas, develop new ideas and spark their thinking outside the box (Eder & Cajete, 2010). Storytelling can be

apply to teach various types of learners and also applied at various levels of education to teach any concept or subject matter.

When Mathematical storybooks are appropriately chosen to teach concepts in mathematics classroom, it has potential in enhancing the preschool children mathematics learning, and also provides support for children with special need and low self-efficacy for learning mathematics (Courtade et al., 2013). The adoption of storytelling helps preschool children to acquire mathematical thinking and knowledge. It also provides enjoyable and meaningful contexts in which mathematical content and concepts is taught to children (Casey, Kersh, & Young, 2004 and Van den Heuvel-Panhuizen, 2012).

Results from previous studies has showed that storytelling enhanced stimulation has potentials in helping preschool children in learning various mathematical concepts. These includes: geometry (Casey, Erkut, Ceder, & Young, 2008), and math vocabulary (Jennings et al., 1992). This shows that storytelling is an efficient instructional strategy that can used improve children learning of Mathematics. Others studies emphasized the positive impact of using storytelling as a strategy to teach preschool children Mathematics (O'Neill et al, 2004; Van & Elia, 2012). Studies have revealed that pupils are experiencing a challenge in learning mathematics at the primary and other levels of education, which is as a result of a gap created for children in learning at the preschool level of education since other levels of education are dependent on it (Tulia, 2013). Most of the causes of Mathematics difficulties experiences by pupils at the primary school can be properly looked into and reduced to a minimal or totally eradicated at the foundational level, if adequate attention is paid to teaching and learning processes. The difficulties in learning and reduction in performance children experience at their primary level of education is as a result of the methods adopted in teaching them at the preschool level of education (Westwood, 2004).

Mathematics as a subject helps children to think logically, acquire essentials problem-solving skills that are in needed in daily lives and also apply in the learning of other subject's areas. Despite the important of this subject, a close observation of children performance in Mathematics revealed that children do have difficulties in learning effectively, the subject. This is shown as they find it difficult to remember, recall and make use of mathematics facts and rules when at upper primary classes and beyond. This may be as a result of the method of teaching adopted in teaching mathematics. Preschool teacher in the various classes view some of these instructional strategies (songs and storytelling) as something tasking and not worthwhile, which made them to shift their attention and concentration on the use of other methods in teaching mathematics. Unlike in time past, when children learn mathematics through the use of songs and short stories and are able to recall the lesson learnt. Additionally, although studies on preschool teachers' use of songs and storytelling to promote children's learning continues to draw much attention among the early childhood professionals and researchers, very few studies have been done on the aspect of the preschool teachers. Considering the fact that the preschool teachers are at the centres of learning instruction to children, this necessitated the need to carry out a study of this kind. This study therefore, investigated

the use of songs and storytelling in teaching preschool children mathematics by preschool teachers in Oyo state.

Research questions

The following questions were used as a guide to the study;

1. To what extent are there songs and stories for teaching mathematics concepts in preschool education?
2. How do preschool teachers consider the composition of new songs and the writing of stories for mathematics instructions?
3. To what extents do preschool teachers make use of existing songs and stories in teaching mathematics to children?

Methodology

The study adopted mixed methods design. The triangulations of QUAN + qual type which implies that the quantitative approach was extensively used more than the qualitative approach. The quantitative data took the form of a descriptive survey design while the qualitative data were collected using the phenomenological approach. The quantitative were collected using a questionnaire while the qualitative data were collected through the use of interview. Simple random sampling technique was used to select sample for the study. The population for this study comprises of all public and private preschool teachers in two Local Government Area of Oyo State, Nigeria. A multi-stage sampling procedure was adopted in the selection of participants. Two out of the eleven Local Government Areas in Ibadan were randomly selected. Random sampling technique was also used to select 7 private and 15 public schools in the Local Government Areas. Thus, a total of 22 schools were selected for the study. Thus, a total of 60 preschool teachers in both public and private schools selected participated in the study. Quantitative data analysis was done using frequency count, simple percentage, mean, standard deviation while the qualitative data were analyzed using a thematic approach.

Three research instruments were developed by the investigator for the survey of the use of songs and storytelling in teaching preschool children mathematics. One of the instruments was tagged The Use of Songs and Storytelling in Teaching Preschool Children Mathematics. (USSTPSCM). The questionnaire consisted of three sections. Section A of the questionnaire consists of demographic data about the preschool teachers such as gender, qualification, area of specialization, teaching experience and school type. Section B is eight items Likert-type questionnaire on Songs for Mathematics Concepts in Preschool Education while section C is eight items Likert-type questionnaire on Stories for Mathematics Concepts in Preschool Education using four points Likert scale format of highly available (HA), moderately available (MA), partially available (PA) and Not available (NA).

The second instrument was tagged: Observation Checklist in Assessing How Preschool Teachers Make Use of Songs and Stories in Teaching Mathematics (OCAPTUSSTM). The observation checklist has two parts. Section A of the questionnaire consists of demographic data while Section B is five items Likert-type on The Extents to Which Teacher Make Use of Existing Songs in Teaching Mathematics while section C is

five items Likert- type on The Extents to Which Teacher Make Use of Existing Stories in Teaching Mathematics.

The third instrument tagged: Unstructured Interview for Preschool Teachers View on Composition of New Songs and stories for Mathematics Instructions? The Unstructured Interview has two parts. The first part contains eleven questions for preschool teachers on song composition for mathematics lesson while the second part contains eleven questions for preschool teachers on story writing for mathematics lesson.

The face and content validity of the instruments was validated by some experts in the field of early childhood education who ensured the structuring appropriateness, and content of the items was valid and adequacy of the topic for measuring instrument relative to the use of songs and storytelling in teaching preschool children mathematics. Subsequently, field testing of the instruments was conducted in order to test the reliability of the questionnaire. The corrected version of the instrument was administered to ten public school teachers who were not part of the main study. The reliability of the instruments was determined using the Cronbach Alpha measure was used to establish the reliability of the instrument which yielded 0.75 and of 0.85 respectively.

Results

Research Question 1: To what extent are there songs and stories for mathematics concepts in preschool education?

Table 1: Mean, Standard Deviation and Weighted Average showing the Extent to which Songs and Stories are Available for Teaching Mathematics Concepts in Preschool Education

No	Items: Songs for Mathematics Concepts in Preschool Education	Mean	S.TD
1	There are songs I can use to teach the concept of counting of numbers to children	1.574	0.654
2	There are songs I can use to teach the concept of addition of numbers to children	1.897	0.794
3	There are songs I can use to teach the concept of subtraction of numbers to children	1.897	0.794
4	There are songs I can use to teach the concept of colours to children	1.809	0.777
5	There are songs I can use to teach the concept of shapes to children	2.132	0.827
6	There are songs I can use to teach the concept of sorting of shapes and colours to my children	2.044	0.905
7	There are songs I can use to teach construction of shapes	1.662	0.614
8	There are songs I can use to teach the concept of time	1.735	0.661
Stories for Mathematics Concepts in Preschool Education			
9	There are stories I can use to teach the concept of counting of numbers to children	2.279	0.666

10	There are stories I can use to teach the concept of addition of numbers to children	1.900	0.819
11	There are stories I can use to teach the concept of subtraction of numbers to children	1.941	0.596
12	There are stories I can use to teach the concept of colours to children	2.029	0.732
13	There are stories I can use to teach the concept of shapes to children	1.206	0.505
14	There are stories I can use to teach the concept of sorting of shapes and colours to my children	1.779	0.707
15	There are stories I can use to teach construction of shapes	2.211	0.750
16	There are songs I can use to teach the concept of time	1.971	0.715

Weighted Average= 2.004

Decision Value: Not Available=1.0- 1.44; Partially Available: 1.45-2.44; Moderately Available: 2.45-3.44; Highly Available: 3.45-4.00

Table 1 shows the extent to which songs and stories have available to teach mathematics concepts in preschool. The detailed analysis shows songs to teach the following concepts to children are partially available: Shapes (Mean=2.13), sorting of shapes and colour (Mean=2.04), addition of numbers (Mean=1.90), subtraction of numbers (Mean=1.90), Colour (Mean=1.81), Time (Mean=1.74), Construction of shapes (Mean=1.66) and counting of numbers (Mean= 1.57).

The detailed analysis shows stories to teach the following concepts to children are partially available: counting of numbers (Mean=2.28), construction of shapes (Mean=2.21), colours (Mean=2.03), time (Mean=1.97), subtraction of numbers (Mean=1.94), addition of numbers (Mean=1.90) and sorting of shapes and colours (Mean=1.78) while stories to the teach the following concepts are not available: shapes (Mean=1.21).

To answer the research question one, the weighted average of the table is 2.00, which means songs and stories to teach mathematics concepts in preschool are partially available

Research Question 2: How do preschool teachers consider composition of new songs and writing of stories for mathematics instructions?

The responses gathered from all the preschool teachers showed that they saw the exercises as needful when teaching children mathematical concepts in the classroom. Some of the preschool teachers at the private and public schools had a positive disposition but listed some challenges that may prevent them from composing of songs and writing of stories. The result based on this research question revealed the following two interesting themes which reveals how teachers considered composition of new songs and writing of stories for mathematics instructions and three themes for challenges they have.

Purpose for Data Collection	Themes
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	Positive Influence	Challenge
How do preschool teachers consider composition of new songs and writing of stories for mathematics instructions	Worthwhile exercises and benefits.	Time Constrained
	Additional Task on the Part of the Teachers	Lack of Motivation
		Lack of songs and storybooks

Worthwhile Exercise and Benefits.

The responses gathered from all the preschool teachers showed that they saw the exercises as needful when teaching children mathematical concepts in the classroom because of the benefit the children will derive when songs and storytelling are used to teach the children.

Teacher X said: composing of songs and writing of stories for mathematics when there are not songs or stories available to a mathematics concepts will enable the children learn in a fun fill manner and also make them develop interest in the subjects.

Also, teacher Y remarks as follows:

If I take out time to compose songs and write stories to teach my children mathematics concepts, I am very sure it will enhance their memory and make them understand what they are being taught.

Also, teacher Z remarks as follows:

“composing of songs and writing of stories for teaching children mathematics will make mathematics simple for the children to learn and understands since they love to sings and enjoyed listening to storied”

Additional Task on the Part of the Teachers

Preschool teachers consider composition of new songs and writing of stories for mathematics instructions as additional task on the part of the teachers. Many of the teachers complained that this will pose additional burden on them. For instance, teacher’s remarks as follow:

Teacher X said: Trying to compose songs and writing of short stories to teach mathematics is an additional stress on the part of the teacher. Because the work load in the class is too much for a single teacher and the government has refused to employ more teachers. They only provide us with manpower teachers which are restricted to certain jobs and number of days in which they are present in the school. So the task of marking and teaching alone is enough for me.

Also teacher Y remarks as follows:

This is going to be additional task for me to do. I have enough task to contend with in the classroom, left alone adding the task of compose songs and writing of short stories to teach mathematics. I cannot even think in that direction because I have a lot to do already, although I know that children will benefit a lot from the use of songs and stories when used to teach them any concepts in mathematics.

Some of the challenges listed by the preschool teachers that prevent them for composition of new songs and writing of stories for teaching children mathematics instructions.

Time Constraint

One of the challenge listed by the preschool teachers is shortage of time. Many of teachers complained of time constrained. For instance, teacher's remarks as follow:

Teacher X said: "The time allocated on the time table does not give room for the use of songs and stories because it will consume more time in teaching the children mathematics. Each of the classes have number of subjects that must be taught on daily bases so allocating extra time to use stories to teach mathematics may not be a welcome idea'.

Also, teacher Y remarks as follows:

'If I am to employ songs and stories to teach mathematics, it means that, I will spend more time in teaching the children mathematics for the morning period which may affect other subjects.

Lack of Motivation

Another challenge noted by the preschool teachers is lack of motivation on the part of the teachers. Many of teachers complained that they are not motivated to go the extra miles in the service they render to the

Also, teacher X remarks as follows:

"My job is to teach mathematics in any way I can and not to compose songs or write stories to teach it". Since the government too are not making me happy doing the job.

Also, teacher Y remarks as follows:

The government is not motivating me to go the extra mile since they refuse to pay our salary promptly and make condition of service suitable for us. So there is way we too can go the extra mile in our teaching. By the way, my job is to teach mathematics in any way I can and not to compose songs in teaching it or writing any stories.

Lack of Songs and Story Books

On the lack of songs and stories books for mathematics, many of the teachers said they lack songs and stories book to teach the children. For instance: teacher's remarks as follow.

Teacher X said: *"The only song books we have are the one we use in teaching the children rhymes and songs and not for teaching of mathematics. So if the Government so wishes that we teach mathematics using songs and stories, then they should provide the necessary text for that purpose"*.

Also teacher Y remarks as follows:

"If I am to teach mathematics with songs and stories, where will I get it from? I can only make use of songs I know that is in the poem book. Examples are: one two buckle my shoe, one two three four, teacher waiting at the door and one two three four, catching fishes all alive."

In summary, the preschool teachers consider composition of new songs and writing of stories for mathematics instructions at sometimes worthwhile to engage while teaching children of mathematics but however stated that there are some challenges that will prevent them for doing so.

Research Question 3: To what extents do preschool teachers make use of existing songs and stories in teaching mathematics to children?

Table 3: Mean and Standard Deviation showing the Extent Preschool Teachers use Existing Songs and Stories in Teaching Mathematics to Children

Make Use of Existing Songs in Teaching Mathematics	Mean	S.td
Use of songs during my mathematics class	2.790	1.134
Use at least one song to teach each of the mathematical concepts	2.368	.831
Make use of songs at the beginning of mathematical classes	2.158	.958
Make use of song at the middle of mathematical classes	2.421	1.017
Make use of song at the end of my mathematical classes	2.263	.991
Use of Existing Stories in Teaching Mathematics	Mean	S.td
Use of stories during mathematics class	1.316	.820
Use at least one story in teaching each of the mathematical concepts	1.263	.806
Make use of stories at the beginning of mathematical classes	1.211	.631
Use stories at the middle of mathematical classes	1.211	.631
Use stories at the end of mathematical classes	1.211	.631
Weighted Average=1.821		

Decision Value: Never 1.00-1.44; Sometimes 1.45-2.44; Sometimes Often 2.45-3.44, Often 3.45-4.44 and Always 4.45-5.00

Table 3 shows the extent preschool teachers make use of existing songs and stories in teaching mathematics to children. The detailed analysis shows teachers agreed that sometimes often use the existing songs to teach mathematics concepts to children: Use of songs during my mathematics class (Mean=2.79) while sometimes use existing songs: Make use of song at the middle of mathematical classes (Mean=2.42), Use at least one song to teach each of the mathematical concepts (Mean=2.37), Make use of song at the end of my mathematical classes (Mean=2.26) and Make use of songs at the beginning of mathematical classes (Mean=2.16).

Teachers agreed that they never use the existing stories to teach mathematics concept to children: Use of stories during mathematics class (Mean=1.32), Use at least one story in teaching each of the mathematical concepts (Mean=1.26), Make use of stories at the beginning of mathematical classes (Mean=1.21), Use stories at the middle of

mathematical classes (Mean=1.21) and Use stories at the end of mathematical classes (Mean=1.21).

To answer the research question 3, the weighted average of the table is 1.82, which implies teacher sometimes use existing songs and stories in teaching mathematics to children.

Discussion of Findings

The result of the study revealed that preschool teachers consider the writing of stories and composing songs as something worthwhile and important and beneficiary to the children. This is in the line with the result of Romero, Bernal, and Olivares (2012), in their study on Using Songs to Encourage Sixth Graders to Develop English Speaking Skills who submitted that the songs are important part of daily teaching activities. Also, in agreement with the study conducted by Tse (2015) in a Malaysian context which revealed teacher perception that songs should be a vital and an indispensable element of teaching and learning processes. Sevik (2011), conducted a study on Teachers' Views about using songs in enhancing lessons for learners. The findings of his study revealed that most primary teachers consider songs to be fun and full of pedagogical value because songs present many opportunities for young learners' to learn effectively.

However, the preschool teachers also listed some challenges that prevent them from using songs and storytelling in teaching the preschool children mathematics. Some of these challenges include: lack of songs and story books, time constraint and lack of motivation. In a similar context of Saudi Arabia, Hejjawi (2007) conducted a research study entitled Teachers and students' attitudes toward the use of songs in UAE English language classrooms. A combination of qualitative and quantitative techniques was used for data collection using 160 participants which comprise both the students and teachers. The results showed that teachers from both levels struggled in making use of songs to teach and also, think that using songs is time-consuming, do not have the equipment to utilize songs in their classes, and therefore decided to ignore it.

The result of the study showed that the extent to which preschool teachers make use of existing songs and stories during mathematics class is very low. This is in line with the submission of Murphey, (1992) which shows that choosing and composing of the suitable song for a particular class or purpose can be a real challenge for teachers. Some teachers do not have a huge repertoire of songs and therefore tend to sing the same set of songs or avoid using songs completely. Although many preschool teachers use song on day-to-day basis, research also suggests that many depend on old songs and do not compose new songs, because they feel they lack the requisite skills (Hildebrandt, 1998; Scott-Kassner, 1999).

Conclusion

The study investigated the use of songs and storytelling in teaching preschool children mathematics. The preschool teachers submitted that songs and stories are very good in

teaching children because of their nature but however listed some challenges that prevented them from making use of them during their lessons. Some of the challenges include: lack of songs and story books, the nature and structure of time table used in the class, lack of motivation among others. The researcher is of the opinion that if these challenges are critically looked into, preschool teachers will be motivated to make use of songs and stories during their mathematics lesson since they are aware of its importance. It could be concluded that the use of songs and storytelling in teaching preschool children mathematics, is now a thing of the past, Oyo State Classroom

Recommendation

Based on the findings, the following recommendations were made:

Curriculum planners should ensure that song books and story books that are geared towards the teaching of mathematics at the preschool level of education should be included in the curriculum and provided to reach out to all the schools. When teachers have access to teaching materials it will encourage them to make use of it during their lesson than when it is not available.

The classroom timetable should be flexible enough to enable the teacher to explore and carry out various activities that will enable the children to learn mathematics in a fun-filled manner, instead of trying to cover all the subjects on the timetable with the time stipulated.

Teachers should be encouraged to make use of songs and story books for their mathematics classes since they are child-centred methods of teaching that enhance learning and are suitable for children's age and interest. Other forms of methods that are not appropriate for the level of learning should be discouraged.

Teacher competences should be developed in the areas of composing songs and writing stories in teaching preschool mathematics. These can be achieved when seminars and workshops are organized for teachers by the government and school owners to instill the skills in the preschool teachers and also encourage them to go the extra miles when teaching the children in their care. When there are no songs and stories to teach a particular concept in mathematics, the teacher should compose or write short stories to accomplish the lesson.

The government should ensure that the condition of service is made favourable for the teachers so that they can give their best in the classroom. When teachers are motivated both intrinsically and extrinsically, they will be motivated to work.

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