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Teachers' Instructional Practices for Promoting Primary One Learners' Mathematics Competence: A Comparative Study of Busiro and Luuka, Uganda

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Abstract

Purpose: Mathematics is a globally compulsory school subject and plays a fundamental role in an individual's daily life activities. Elementary school teachers' instructional practices are key in fostering among learners the foundational competences in basic number operations. This study explored the instructional practices Primary One teachers in Busiro North and Luuka North Counties can adopt from each other in order to enhance their learners' mathematics competence.
Methodology: A qualitative approach with an observational multiple case study design was employed to obtain data from 74 purposively selected teachers. Data was collected through non-participant observation. Each teacher was observed teaching mathematics to Primary One learners and interviewed after the lesson. Data obtained was analyzed descriptively.
Findings: Findings indicate that teachers use songs, rhymes and games involving mathematical concepts, in both English language and the local languages to help learners attain competence. Teachers have also embraced use of locally available materials like woven plastic propylene bags (buveera) and banana fibres to make and decorate charts in the classrooms' mathematics learning areas. Attention grabbers like "Good children, Good teacher"; "We, Work"; are common verbal interactions between teacher and learners when the class seems to lose concentration. Teachers recognise learners' efforts when they correctly answer oral, written or practical tasks by asking the class to give a classmate "flowers" or "the pa-pa-pa clap".
Unique contribution to theory, practice and policy: For teachers to help learners' master mathematical concepts and augment their competence, they should build on learners' experience and prior knowledge, give learners opportunities to explain their mathematical ideas and use the think – pair – share strategy during problem solving.
Key words: *Teachers' Instructional Practices, learners' competence, mathematics, comparative*.

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1. INTRODUCTION

Mathematics is indispensable for transformation in both developing and industrialised societies, accelerating technical capabilities and advancements in science, technology and engineering (Ogan, 2015). Products of mathematical research are widespread and enjoyable, benefitting global social progress through multifunctional computers that enable the use of satellite and fibre-optic networks for information and communication technology via mobile telephones and internet communications (Dambatta, 2013 as cited in Ogan, 2015; Fatima, 2015). Mathematics is not only a very important and globally compulsory school subject but it also plays a fundamental role in an individual's daily life activities. It is useful at work for planning and managing job schedules; at home for planning and preparing meals; in commerce while selling or buying goods; in health to manage medicine dosages; and in each and every other human daily life activity as we navigate through this technologically fast developing world (Iyanda, 2017; Ogan, 2015; Uwadiae, 2017).

A good understanding of mathematical concepts at the onset of education facilitates children's learning of other school subjects like science, music and fine art (Frye et al., 2013). Notably, industrialised countries like Germany and the United Kingdom have been able to develop because of the technical capabilities built over time through advancements in science driven by mathematics (Fatima, 2015). Thus, early development of mathematics skills in children like addition, subtraction and multiplication of numbers is of paramount importance and a building block for lifelong learning. In the early years' mathematics lessons, teachers ought to employ intentional, very well executed and effective instructional practices that lead children to mastery of mathematical skills and augmented mathematics competence (Alber, 2014; Cairns, 2015). Teachers should help learners to reason mathematically and use the mathematics concepts learnt to solve their daily life problems, and avoid drilling learners on mathematical facts and formulae. Teachers can achieve this by employing strategies like cooperative learning, frequent assessment, intervening immediately, and involving parents and guardians to break cycles of low aspiration (Sharples, Slavin, Chambers & Sharp, 2011).

For Uganda, a citizenry competent in mathematics is important for scientific, industrial, technological and social progress. Unfortunately, Uganda has continuously experienced declining performance in mathematics right from Primary One (P.1). When compared to other countries in the region, the Southern and Eastern Africa Consortium for Monitoring Education Quality (SACMEQ) 2010 project ranked Uganda eleventh out of 15 countries on the numeracy proficiency of primary six learners (Ministry of Education and Sports [MoES], 2014). At the local level, learner performance in mathematics varies from one district to another. In Wakiso district for example, primary schools in Busiro North County rank among the best performing in Primary Leaving Examinations (PLE). In some schools, up to 99 per cent of pupils passed in grade one in the years 2010 – 2017 (Ampurire, 2017; Businge, 2010; Mayanja, 2018). On the other hand, owing to poor performance of schools in Luuka North County, Luuka District has been listed among the ten worst performing districts in the country. It has had only an average 28 per cent of learners passing at the first grade level and 32.9 % of them failing (Ampurire, 2017; Yolisigira, 2014). This creates a need to explore what the Primary one mathematics

teachers in Busiro and Luuka North Counties who set the foundation for the learners' mathematics competence do differently to warrant the difference in performance.

1.1 Purpose of the Study

The purpose of this study was to explore the instructional practices that Primary One teachers' in Busiro North and Luuka North Counties could adopt from each other in order to enhance their learners' mathematics competence.

1.2 Objectives of the Study

1. To examine the instructional practices Primary One teachers in Busiro North and Luuka North Counties use to enhance the mathematics competence of their learners
2. To determine the instructional practices Primary One teachers in Busiro North and Luuka North Counties can adopt from each other in order to enhance the mathematics competence of their learners

2. LITERATURE REVIEW

2.1 Instructional Practices Teachers use to Help Learners Attain Mathematics Competence

The way in which a teacher interacts with the learners makes a big difference in the learners' attainment of competence. Several studies report that mathematics teachers at all levels work hard to master their lesson material which they later 'broadcast' to the learners as thoroughly as possible (ThinkingKap Learning Solutions, 2015; Turner, Warzon & Christensen, 2011; Verschaffel, Torbeyns & Smedt, 2017; Yan, 2009). Teachers prefer to teach using one textbook, (Asikin, 2017) and maintain control over the learners by demanding silence (Garrett, 2008). Teachers talk most of the time (70 – 90%), ask most questions (90 – 95%) and reserve the right to evaluate learners' responses (Brodie, 2007). Furthermore, the physical arrangement of the classrooms with learners' desks facing the teacher promotes focus on the teacher while limiting the learners' activities (Garrett, 2008). Within this model of teaching, the curriculum is worked through too fast for the majority of learners who might even have failed to consolidate earlier mathematical concepts (Markusic, 2009), while learners sit passively with no opportunity to relate the content to their real lives (DoodleMaths Team, 2016; University of Manchester, 2012). Teachers may dwell on rote methods of teaching possibly because examinations focus on what is learnt by rote at the expense of problem solving skills that modern employers crave for. Many learners, however, end up without achieving their optimal competence and become more alienated from mathematics as they grow older, perform it poorly and finally drop it as soon as it is no longer compulsory (Chowdhury, 2017). This study intends to have teachers shift from these traditional practices of delivering mathematics lessons and embrace alternative practices that are of much more benefit to the learners. In addition, the teaching and learning of mathematics should not be a banking- transmission model of knowledge from the teacher who knows to the learners who are assumed blank, passive recipients (Gahagan, 2009). Rather, teachers should engage learners to find out their existing knowledge and use it to inform their teaching. Wray (2006) believes this avoids rote learning which is soon forgotten. A learner's existing knowledge may provide a mental hook that leads to success in acquiring new mathematical concepts and lay the ground work for more advanced skills (Schenke, Rutherford, Lam & Bailey, 2016).

Likewise, getting learners to be actively involved in learning mathematics through purposeful peer-to-peer talk would arouse their interest in the subject, allow them to practice communication and teamwork skills, nurture their mathematical abilities, avoid competition for recognition and expand their mathematical power (Conway & Sloane, 2005). This study seeks to encourage teachers to give learners opportunities to explain their mathematical ideas. Furthermore, learners in P.1 in Uganda have a one 30-minutes lesson period of mathematics each day from Monday to Friday (NCDC, 2013). The 30 minutes is the maximum amount of time available each day for the teacher and learners to complete the instruction, learning and assessment loop. Often times, some of this time will be spent on administrative and discipline issues in the classroom or in the school as a whole. As Bold et al. (2017) revealed, in Uganda's public primary schools, almost half of the classrooms are likely to have learners but with absent teachers; 3% of lesson time is lost to non-teaching and learning activities; and in the long run the scheduled teaching - learning time is reduced from the expected 5 hours and 27 minutes per day to an average of 2 hours and 46 minutes per day. The teachers are then most likely going to teach mathematics at a very fast pace and probably fail to give learners sufficient time on task. This study intends to appeal to teachers to give ample time for learners to attend to their classroom mathematics tasks as one way of enhancing competence.

In yet more effort to assist learners attain mathematical knowledge and skills; teachers assess the learners' progress as an integral part of the teaching and learning through observing practical activities, asking oral questions and sometimes giving written exercises. During the assessment, the learners receive feedback from the teacher, which according to Brookhart (2008, p.1) is "just-in-time, just-for-me information" given at that very moment "when and where it can do the most good". Feedback should be used to help both teacher and learner identify strengths and weaknesses in the learners' mathematical understanding, know where learners have acquired the desired competence and where they still need scaffolds (Australian Association of Mathematics Teachers [AAMT], 2008). It must transform misconceptions into significant learning and improve the mathematics competence of all learners (Hattie & Timperley, 2007; Lee & Son, 2015; Schwartz, 2017). If done well, supportive feedback addresses both cognitive and motivational factors as learners get to understand where they are in their learning, where to move to next and why; and develop a feeling that they are in control of their own learning (van Geel, Keuning, Visscher & Fox, 2016). It is hoped that the findings of this study will encourage mathematics teachers to give their learners timely and very constructive feedback.

2.2 Theoretical framework

As learners progress in acquiring mastery of new mathematical knowledge and skills, they perform certain tasks and solve problems without requiring guidance. However, there will be activities in which a learner is not yet at the stage of perfect proficiency and requires assistance from the teacher or a more capable classmate (Siyepu, 2013). This proposition stems from Vygotsky's (1978) Zone of Proximal Development (ZPD) theory which supposes that a learner's problem solving ability has a ZPD composed of all of the knowledge and skills that a learner cannot yet understand or perform on their own, but is capable of attaining with the benefit of support from a more knowledgeable other (MKO), through shared discourse during the task (Denhere, Chinyoka & Mambeu, 2013). A teacher or more knowledgeable classmate provides

the learner with supportive verbal and practical interventions to improve the learner's evolving problem solving skills. The support is later stopped as the learner eventually masters new skills. Thus, the teachers' instructional practices should be tailored to learner responses and encourage learners to conjecture, analyse, interpret, explain, and predict information. The instructional practices considered by this research are options for the teachers to adopt as supportive interventions for enhancing the learners' mathematics competence. Thus, the ZPD is in this study considered as one fundamental aspect of Vygotsky's Social Constructivist Theory which assumes that knowledge is co-constructed as classmates learn from each other. Teachers' instructional practices should then aim at supporting learning to occur with the participation, assistance and cooperation of all classmates. Teachers should also ensure that all learners are engaged in the learning process and share and strengthen their mathematical knowledge as they interact with their classmates.

3. METHODOLOGY

The study followed a qualitative approach, with an exploratory observational multiple case design. This was used to obtain text data for purposes of understanding and describing how various teachers' instructional practices promote learners' mathematics competence, and to provide insight into the prevalent situation in the study's target population (Amin, 2005; Creswell, 2012). In order to obtain the required sample of teachers for this study, a sample of 74 primary schools comprising 37 schools from Busiro North County and 37 from Luuka North County was first selected using random sampling from a list of all the schools in a county. The 74 primary one mathematics teachers in the selected schools were then purposively selected to participate in the study. Data collection in a school began with observing a P.1 mathematics lesson. A lesson observation tool with one open-ended and ten close-ended items was designed by the researcher to record information on the teachers' instructional practices. In addition, the lesson observations were recorded on video and the researcher made handwritten field notes. The observed teachers were interviewed orally after the lesson and hand written notes made during the interview. The lesson observation tool, lesson observation and interview notes were analyzed to identify main themes, assign keyword codes, and classify the responses under the main themes (Kumar, 2011). The themes were finally integrated for analysis. The narrative data collected from the lesson observation tool and interview guide to identify the teachers' instructional practices and determine the practices to be adopted by the teachers in Busiro and Luuka was summarized and coded. The codes were developed to identify common themes that cut across the data sources. The data was built from common themes to more abstract units of information then to a comprehensive set of themes that was used for presentation and analysis of the data (Creswell, 2009).

4. RESULTS

4.1 Instructional Practices Teachers Used to Enhance the Learners' Mathematics Competence

All 37 (100%) teachers in Busiro and 37 (100%) in Luuka began their mathematics lessons with a song or rhyme that involved counting from1 to 10. The song or rhyme was in English language

or in the local language as an original composition, or translated from English to the local language. Teachers also used songs, rhymes and games involving counting together with various activities like: dancing; jumping; stretching; squatting; sitting and standing alternately as teacher dictated the pace from slow to fast; or required boys and girls to sit or stand alternately as they said a number name; and making groups of 1, 2, 3 or more learners with the aim of leaving an odd man out. Teachers and learners engaged in such activities at some intervals (5 – 10 minutes) within the lesson specifically to keep the learners awake, attentive and on-task. The use of songs, rhymes and mathematical games was observed to be very popular in P.1 mathematics lessons. The learners ably, quickly and happily joined in when a teacher started a song, rhyme or game. Some of the songs, rhymes and games used during the lessons are part of the experience and prior knowledge that these learners come with from home and from pre-school to the P.1 mathematics classroom.

Similarly, all the 37 (100%) teachers in Busiro and the majority of 36 (97.3%) teachers in Luuka used objects that learners are familiar with to teach them to count numbers. Learners counted objects including: 2 ears, 3 cooking stones, four legs of a chair, and the number of legs that three learners have altogether. They counted sticks, pencils, stones, mugs and various seeds. Learners were asked to match familiar objects such as an egg and a hen or a leaf and a tree. Two (5.4%) teachers in Busiro and one (2.7 %) asked learners open ended questions such as "What things do we have at home and also have them at school?" All these familiar objects and oral problem questions assist the learners to connect the mathematical concepts to their existing knowledge which is closely related to their everyday life activities. They are then able to practise the concepts on their own both inside and outside the classroom, thereby strengthening their competence and retention of the concepts.

The majority of 36 (97.3%) teachers in Busiro and 35 (94.6%) in Luuka had printed wall charts for the numbers 1 to 100. In addition, these teachers had written and sometimes made use of their own charts for learners to refer to when forming and naming sets, counting numbers orally , writing number symbols or number words and carrying out horizontal or vertical addition. Although most teachers commonly use Manila paper, one teacher (2.7%) in Busiro and 5 (13.5%) teachers in Luuka made use of woven plastic propylene bags (*kaveera*) to write on mathematics information for P.1 learners. The bags were reused by the teachers after initially being used for industrial packaging. Mathematics work written on pieces of a woven plastic propylene bag and displayed on walls in P.1 classrooms is shown in Figure 1.
Furthermore, the majority of teachers, 36 (97.3%) in Busiro and 33 (89.2%) in Luuka used flash cards with the numbers 1 to 10, or even 1 to 20 written on manila cards or on pieces of paper boxes for the learners to say the number names or to look at as an aid to writing the number symbol. One teacher in Luuka innovatively cut the numbers 1 to 5 from old blue and red rubber slippers (*flip-flops*) as shown in Figure 2.

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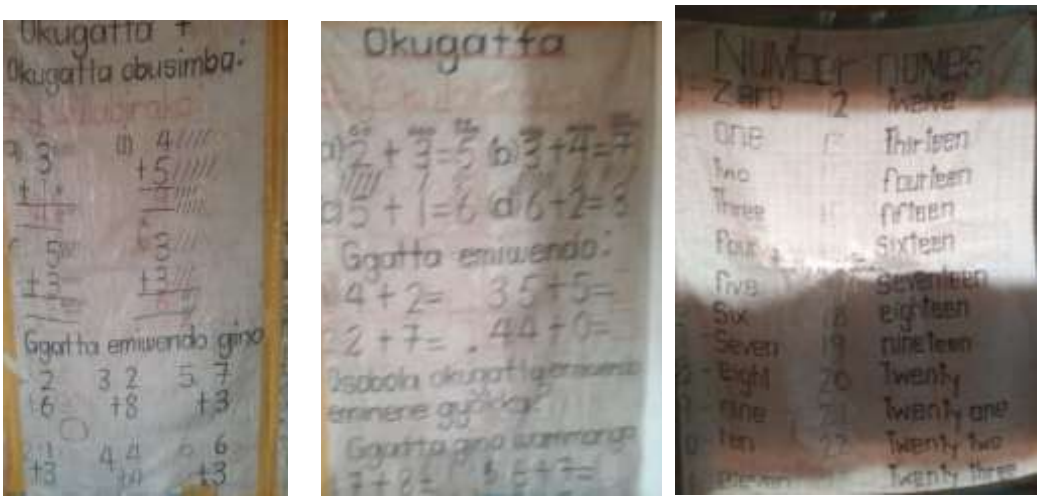

Figure 1: Mathematics work written on woven plastic propylene bags

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Figure 2: A Teacher's Innovative Cuttings for Numbers 1 to 5

This teacher's learners not only looked at the numbers but also "touched" and manipulated them, and consequently had the opportunity to learn and experience the numbers with an extra sense and skill as compared to their fellow P.1 learners in other schools.

All 37 (100%) teachers in Busiro and the majority 36 (97.3%) teachers in Luuka gave the learners on-spot feedback especially for oral activities and those that learners worked out on the chalkboard. The teachers commonly asked the class whether a classmate was right or not. Clapping (Pa-pa-pa for you, Umeme-umeme, fire), dancing by both learners and teacher, stamping the feet by both learners and teacher, giving flowers or a bottle of soda and a Hi-Five with the teacher were common physical forms of feedback given to learners when they completed a task correctly. "You are smart", Very Good, Thank you, Lovely, Thank you for trying, Super; Wonderful; Excellent; are some verbal expressions these teachers used as on-spot feedback. Often, learners were requested by the teacher to give some of these verbal on-spot feedback expressions to a classmate and sometimes both verbal and physical forms of feedback were combined. The recipient of the feedback would then dance to the rhythm of appreciation and recognition. In a few instances, 3 (8.1%) in Busiro and 2 (5.4%) in Luuka, learners laughed at classmates whose chalkboard work was not correct and the teacher ignored the laughing! This

could discourage some learners especially if this happened to them repeatedly. One teacher in Busiro taught learners to tap their desks gently when a classmate made a mistake while working on the chalkboard. This could be a good prompt for the learner working at the chalkboard to check his or her work and correct any mistakes with or without the teacher's or classmates' assistance.

Two (5.4%) teachers in Busiro with small classes of twenty or less learners used pair work/ peer support during problem solving tasks. Learners paired up to sort, count and form sets of familiar objects. No teacher in Luuka was observed using pair work. Some 4 (10.8%) teachers in Busiro used group work of 3 or more members followed by "gallery walks" for the learners to see, ask questions, clarify, revisit and explain their problem solving approaches to their classmates. Only one teacher in Luuka used group work with groups of four learners to solve addition problems.

The majority of 36 (97.3%) teachers in Busiro and similarly 36 (97.3%) teachers in Luuka rarely asked P.1 learners "why" questions during a mathematics lesson. In one instance in Busiro, the learners were able to explain why they matched an egg to a hen and a leaf to a tree but not the other way round. These teachers sometimes used "conversational language" (non-authoritarian) in order to communicate precisely to the P.1 learners. Some few teachers , 3 (8.1%) in Busiro and 2 (5.4%) in Luuka put emphasis on the use of correct mathematical vocabulary, especially pronunciations of number names like three and thirteen when teachers guided learners by telling them to "bite the tongue for *th*". This helps learners attain competence in appropriate mathematics language and communication.

The teachers had a wealth of "attention grabbers" which they used to get the learners' attention when they seemed to be going off-track, especially when the teacher was writing on the chalkboard. The following teacher-learner exchanges repeated three or more times at an instant were common at such moments:

Teacher: Hullo Children
Learners: Hullo Teacher

Teacher: Good Children
Learners: Good Teacher

Teacher: We We
Learners: Work Work

This section has presented the instructional practices which teachers in Busiro and Luuka North counties were observed to use as a means of promoting the mathematics competence of P.1 learners. The recommendations of this study will highlight the instructional practices that teachers in Busiro and Luuka ought to adopt from each other in order to enhance the learners' mathematics competence.

5. DISCUSSION

This study was motivated by one major factor: that the majority of learners in the classes P.1 to P.3 in Uganda's primary schools do not acquire the basic mathematics competence even after three years of attending school, and that it is not until P.5 that at least 50 per cent of the learners attain full competence of P.2 basic numeracy skills (Uwezo, 2016). Teachers' instructional practices were considered critical in helping P.1 learners attain mathematics competence. This is because differences in teachers' instructional practices may result in significantly different learning environments being created for the learners (Wang, Rubie-Davies & Meissel, 2019). Teachers in Busiro and Luuka are expected to employ similar instructional practices that include use of mathematical songs, rhymes and games; learning resources made from low cost locally available materials; and use of constructive, supportive feedback; all of which aim at supporting P.1 learners develop their optimal mathematics competence (NCDC, 2006).

Comparing teachers' instructional practices in the two counties, this study found that as they taught new mathematics content more teachers in Busiro than in Luuka built on the learners' existing knowledge. The teachers in Busiro also used the learners' existing knowledge and related mathematics to the learners' everyday life activities more frequently during the lesson duration than the teachers in Luuka. This could be explained by the fact that teachers in Busiro have higher expectations of their learners than teachers in Luuka. Busiro being more urban than Luuka, teachers in Busiro expect the majority of P.1 learners to have attended some form of pre-school education that gives them an opportunity to have more prior mathematical knowledge as compared to the P.1 learners in rural Luuka. This finding concurs with that of Wang, Rubie-Davies and Meissel (2019) who found that high expectation teachers made more statements that were related to their learners' prior knowledge and experiences compared with low expectation teachers.

The findings of the study also revealed that a large and similar proportion of teachers in Busiro and Luuka rarely asked learners open ended questions or gave learners opportunities to explain their mathematical ideas and choice of procedure for handling a task. Teachers did not provide for asking of questions between learner and learner and never emphasized correct mathematical vocabulary use. This could be because teachers think that the learners are still very young and are not yet able to discuss and explain their mathematical ideas and procedures or even pronounce mathematical words correctly. Such teachers' instructional practices contradict Schwartz (2017) who contends that even pre-schoolers are able to verbally articulate and justify their solutions to the mathematical problems they deal with in their everyday lives. Another possible explanation for this is that teachers themselves never had chance to discuss and explain their mathematical ideas during their early grade schooling and thereby teach in the same way as they were taught, simply emphasizing pencil and paper work. This concurs with a finding by Serio (2014) who realized that teachers' past experiences with mathematics had a big role to play in whether or not they implemented student discourse in their classroom practice. The implication of this finding is that engaging in classroom mathematics talk where there is meaningful learner-to-learner and learner-to-teacher communication should begin as early as the first year of formal schooling. In-service teachers should have continuous professional development training to help them implement effective classroom mathematics talk.

The finding further revealed that more teachers in Busiro compared to those in Luuka gave learners timely and supportive feedback especially for oral tasks and those worked out on the chalkboard. The teachers indicated to the learners how to do corrections and attended to speed, precision and accuracy. They involved classmates in judging whether a learner's work was correct and in giving on-spot verbal and practical feedback. Teachers often ask classmates to chant phrases of praise to a learner who has done a task correctly and as the chanting goes on, the learner who performed the task stands in front of the classroom and dances to the rhythm of the chant in appreciation of the feedback. On the other hand, when classmates judge that a learner is not correct, the classmates together with the teacher offer the learner step by step verbal and practical guidelines to correct mistakes. This helps the learner to overcome their misconceptions. One reason why teachers give such feedback is because they understand that it motivates learners, boosts their mathematics performance and helps them to avoid repetitive mistakes. When classmates get involved in assessing a learner's work, they also gain skills in evaluating their own work. This finding is supported by various research reports including Hattie and Timperley (2007), McFadzien (2015), Norlin (2014), and Minnoni, Tomei and Collini (2017) who concur that meaningful, timely and constructive feedback promotes dialogue between teacher and learners; targets the learners' individual needs; and is received by a learner when the assessed work is fresh enough in the mind and before learner moves to subsequent work so that it is of benefit to subsequent tasks.

Similarly, all the teachers who participated in this study were found to use songs, rhymes and games with mathematical concepts at consistent intervals throughout a lesson. This practice is in agreement with the guidelines given to the teachers by the National Curriculum Development Centre (NCDC, 2006). Whereas many of the mathematical rhymes and songs used by the teachers in Busiro and Luuka are in English language, teachers also use rhymes, songs, and games in the area local languages or even translate the ones in English language to the local language. Since the majority of learners speak and understand their area local language, rhymes, songs and games in these languages greatly enhance their mathematics competence. As learners enjoy singing or rhyming repeatedly, they are practising the mathematical concepts and vocabulary which enhances retention. Several researchers also agree that effective elementary grade teachers should use mathematical songs, rhymes and games since children enjoy chanting, singing and playing in their everyday activities. Children would learn better at school if teachers incorporate music in all their lessons (Bose & Seetso, 2016; Civil, 2007; Early Education, 2012; Early Years 2018; Fleer & Raban, 2015; Neal, 2007; Taylor, 2014).

However, whereas teachers could use the think-pair-share cooperative learning strategy to help learners explain their mathematical ideas to each other, only a small proportion of teachers in Busiro and none in Luuka used pair work. This could also be because in their schooling and teacher training, these teachers were never exposed to the think-pair-share as a mathematics problem solving strategy. Consequently, using the strategy poses a challenge to the teachers. Likewise, these teachers have not embraced the use of technology in teaching mathematics. This finding is in agreement with Owens (2013) who believes that if pre-service teachers are not taught in new ways and they do not experience novel ways of learning during their training, they too cannot teach differently from "stand – and – deliver." The implication of this finding is that

the cycle continues and the young generation misses out on creative, participatory learning environments. This cycle needs to be broken because as Kwok and Lau (2015) observed, the think-pair-share strategy significantly improved the mathematics learning outcomes for primary school learners. Tint and Nyunt (2015) add that the think-pair-share technique encourages learners to justify their mathematical ideas using clear examples, clarity of thought and expression and correct mathematics vocabulary. The technique gives learners time to think, respond and help each other (Lee, Li & Shahrill, 2018; Tanujaya & Mumu, 2019). This helps learners to improve their understanding of the learnt mathematics concepts and to build on other learners' opinions to strengthen their own (Kwok & Lau, 2015; Tint & Nyunt, 2015). It also helps learners to appreciate the value and applications of mathematics in their daily lives (Afthina, Mardiyana & Pramudya, 2017).

6. CONCLUSION

Based on the findings of this study, it can be concluded that teachers use a variety oral, written and practical instructional practices in order to promote the learners' mathematics competence. Notably, teachers who had higher expectations of their learners' mathematics competence referred to their learners' prior knowledge more often , asked learners open ended questions , gave them opportunities to explain their mathematical ideas and choice of procedure for handling a task, and used the think – pair- share strategy when learners were involved in problem solving.

7. RECOMMENDATIONS

The findings of this study established that some teachers do not use effective instructional practices that help to enhance all learners' mathematics competence. It is important that teachers ensure that within their instructional practices, all learners are attended to such that not a single learner starts a new lesson when they still have mathematical misconceptions from the previous lesson. The study therefore makes the following recommendations.

1. Teachers should build on the learners existing mathematical experiences and prior knowledge to enhance the learners' understanding of mathematics.
2. The majority of teachers were observed denying learners opportunities to engage in meaningful mathematics talk during the lessons. It is recommended that teachers give learners opportunities to explain to each other and to the teacher their mathematical ideas and their choice of procedure for handling a task.
3. It was also observed that teachers commonly give learners individual tasks or use large groups of five or more learners. This study recommends that teachers expand their use of the think - pair - share strategy and be committed to apply it to inculcate in the learners the principles and practices of problem-solving.
4. Teachers also ought to embrace modern technology as a teaching-learning resource, particularly the use of computers and the internet as a wealthy source of mathematics learning, practice and consolidation, and assessment materials and also as a means to enable learners widen their problem solving skills.

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