



## FORMATIVE AND SUMMATIVE ASSESSMENT PRACTICES BY TEACHERS IN EARLY CHILDHOOD EDUCATION CENTRES IN LUSAKA, ZAMBIA

**Stella Lungu<sup>i</sup>,**

**Beatrice Matafwali,**

**Madalitso K. Banja**

University of Zambia,

Department of Educational Psychology,

Sociology and Special Education,

Zambia

### **Abstract:**

The paper discusses formative and summative assessment practices by teachers in ECE Centres in Lusaka, Zambia. The study used a mixed methods design by utilizing a concurrent triangulation design which enabled the researchers to converge quantitative and qualitative data. In addition, the design helped to confirm and cross-validate the study findings. Qualitative data was prioritised over quantitative data. Probability and non-probability sampling techniques were used to sample one hundred and two (102) teachers, ten (10) head teachers and one hundred and twenty-five (125) parents. Questionnaires were used to gather data from teachers and parents, Focus Group Discussion Guides (FGDs) were used to interview teachers whilst Interview guides were used to interview head teachers. A Documentary Analysis Guide and an Observational Checklist were used by the researcher to obtain additional data on assessment practices by teachers from a documentary and observational point of view. Descriptive statistics were computed to analyse quantitative data whilst thematic analysis was used to analyse qualitative data using a framework approach of qualitative data analysis. Results revealed that the most predominantly implemented summative assessments in ECE Centres were mid-term tests and end of term tests. Teachers also used formative assessments such as homework, oral questioning, collection of samples, portfolios and interview guides. However, teachers failed to adhere to the actual norms of formative assessment such as tracking of individual children's development, learning needs and achievements so as to adapt instruction accordingly. Consequently, the assessment results were often compromised. Finally, the study recommends that Ministry of General Education should conduct capacity building training programmes for teachers on formative and summative assessment practices in ECE to ensure effective implementation of both formative and summative assessment in ECE Centres.

<sup>i</sup> Correspondence: email [stellalungu34@yahoo.com](mailto:stellalungu34@yahoo.com)

**Keywords:** authentic assessment, early childhood education, early childhood education curriculum, formative assessment, summative assessment

## 1. Introduction

This article particularly focuses on formative assessment and summative assessment practices by teachers in ECE Centres. It exemplifies the assessment strategies used by teachers to assess children's development and academic learning in ECE Centres. Arguably, how teachers implement formative assessment and summative assessment in ECE Centres is likely to influence how children develop and learn in ECE Centres. Therefore, it is important for teachers to conduct assessments that generate reliable assessment results that reflect a child's accomplishments in a realistic manner within a particular context despite assessment of young children being complex (Wortham, 2005).

### 1.1 Background

In the 21st century, child assessment has gained momentum because of its significant role in fostering child development, teaching and academic learning (Morrison, 2017; Stiggins 2017). Notably, *"teachers of young children are moving from more traditional strategies of assessing for knowledge and facts to assessing the students' ability to reason and solve problems"* (Wortham, 2005:13). Teachers are also exploring many ways of teaching and assessing their students to ensure that teaching and learning becomes more meaningful to both the teacher and the learner. However, depending on the theoretical lens one uses to describe assessment in Early Childhood Education (ECE), assessment can mean so many things and can be described in many different ways. McAfee, Leong & Bodrova (2004:3) describe assessment as *"the process of gathering information about children from several forms of evidence, then organizing and interpreting that information."* This definition suggests that teachers are key in determining how to gather information about children's development and academic learning and how to consolidate and interpret the collected information authentically. To a large extent, teachers need to understand how to conduct assessment, why they need to conduct assessment, what should be assessed and what they need to do with the assessment results (Stiggins, 2017). Otherwise, teachers might be conducting assessment in ECE Centres just because it is a requirement in the school system. In addition, while it is important to ensure that assessment is properly conducted in ECE Centres, it should be noted that assessment of young children is not an easy undertaking because of how children grow and develop. Shepard, Kagan & Wurtz (1998:3) assert that;

*"assessing children in the earliest years of life—from birth to age 8—is difficult because it is the period when young children's rates of physical, motor, and linguistic development outpace growth rates at all other stages. Growth is rapid, episodic, and highly influenced by environmental supports: nurturing parents, quality caregiving, and the learning setting."*

Although assessment is highly influenced by environmental supports and other factors, teachers are still expected to do what they can within their means to conduct assessments that are authentic. Otherwise, failure to do what is right defeats the purpose of assessing children’s development and academic learning in ECE Centres. Key among other things is a deliberate effort to abide by the general principles that guide assessment of young children. For instance, assessments in ECE should have a specific purpose, be linguistically appropriate, age-appropriate and most importantly, parents should be a valued source of assessment information, as well as an audience for assessment results (Shepard, Kagan & Wurtz 1998; Wortham, 2005). Conversely, while it is important for teachers to understand and adhere to all these aspects that contribute to conducting authentic assessment, it also matters how teachers implement formative and summative assessment when assessing children’s learning. Clearly, even though formative and summative assessment complement each other, the differences between the two are evident in the way the assessments are used in the classroom (Dixson & Worrell, 2016). Therefore, it is important to implement formative and summative assessment according to their distinctiveness if authentic assessment results are to be attained. Below is Table 1.1 showing the distinct characteristics of summative and formative assessment.

**Table 1.1:** Characteristics of Summative and Formative Assessment

Assessment practices	Formative Assessment	Summative Assessment
<b>What is it?</b>	Assessment that gathers information about student learning to determine what students are understanding and what they still need to learn to master a goal or outcome.	Assessment that shows what students have learned.
<b>When is it used?</b>	During a lesson or unit of study. Is used continually by providing descriptive feedback.	At the end of a lesson or unit of study. Is presented in a periodic report.
<b>Why is it used?</b>	To track students’ Progress. To make changes to instruction. To improve teaching and learning.	Evaluates what students learn. For placement and promotional decisions. To provide evidence of what students learned. To assigns a grade to students’ understanding. To certify.
<b>Formality</b>	Usually informal	Usually Formal
<b>Examples</b>	Observations. Homework. Question and answer sessions. Self-evaluations. Portfolios. Reflections on performance. Curriculum-Based Measurement Games. Discussions. Informal interviews.	End of Term Tests. Mid-Term Tests. Final Papers. Projects. Portfolios. Performance assessments. In-class examinations. National examinations.

**Source:** Adapted from Dixson, D. D. & Worrell, F. C. (2016). Formative and Summative Assessment in Classroom. *Theory into Practice*, 55(2),153–159.

## **1.2 ECE Advancements and Curricula Variations in Zambia**

In Zambia, for over three decades privately owned ECE Centres, Non-Governmental Organisations (NGOs) and Faith Based Organisations (FBO) are institutions that had been providing ECE services to the general public and have continued to do so up to now (Zambia Pre-School Association, 1975). However, recent studies seem to suggest that the Zambian government has prioritised Early Childhood Education and certain interventions have been made. For instance, in 2014 the then Ministry of Education, Science, Vocational Training and Early Education (MESVTEE) now named Ministry of General Education (MoGE) enrolled the first intake of ECE pupils annexed in selected public (government) primary schools (Kalinde, 2020; Ministry of General Education, 2016; MESVTEE, 2015). In addition, a number of studies have brought to the fore the significance of early exposure to quality early childhood experiences which enhance children's development, academic learning, school readiness and provides for a smooth transition from Early Childhood Education to Primary school (Matafwali & Munsaka 2011; Zuilkowski, Fink, Moucheraud & Matafwali, 2012; Matafwali & Kabali, 2020). There is no doubt that ECE is slowly getting the recognition it deserves in Zambia. Notably, it has been six years ever since government took up the responsibility of offering ECE in selected primary schools although the private sector, NGOs and FBOs still remain the main providers of ECE in Zambia. Regarding the revised national ECE curriculum, while private ECE Centres and those run by NGOs and FBOs use the national ECE curriculum which is play based, it seems some of the ECE Centres under these institutions still opt to use their own designed ECE curriculum that either support teacher-directed activities that embrace the acquisition of academic knowledge and supports a more academic path or an entirely different curriculum with different theoretical underpinnings and pedagogical approaches.

Consequently, there seems to be different ECE curricula designs and pedagogical approaches being implemented in ECE Centres leading to variations in the way ECE is provided in Zambia. For instance, although teachers acknowledged the holistic benefits of a play based pedagogy and held positive perspective of play based learning, variations were still noted in the way play based learning was being implementation across ECE Centres (Lungu & Matafwali, 2020b). Similarly, although parents had positive perspectives of a play based pedagogy, they were uncertain of how the approach could support children's acquisition of academic knowledge that promotes learning of Arithmetic, Reading and Writing (Lungu & Matafwali, 2020a). If teachers who are the implementers of the curriculum still hold varying views on how best to implement a play based curriculum, then one wonders how assessment is being conducted in ECE Centres. Similarly, if parents who are key stakeholders and an important source of information in the assessment process of their children believe in an academic path that emphasizes on knowledge acquisition and see little value in learning through play, the situation may cause conflict of interest between the teachers and the parents. Consequently, if the teachers choose to succumb to the parents' expectations, then assessments in ECE Centres

would be compromised adding little or no benefit to the children's development and academic learning.

### **1.3 Child Assessment Practices in the Zambian National ECE Curriculum**

The current ECE curriculum document was revised in 2013 (MESVTEE, 2013). One of the most significant changes in the curriculum was the change on the content from the traditional approach of teaching, learning and assessing children that focused on the acquisition of academic knowledge (skills based approach) to incorporating pedagogical approaches that focus on play based learning and assessment approaches that assess the overall development of a child (Curriculum Development Centre, 2013; MESVTEE, 2013). The current curriculum describes the teaching methods, suggested time allocation for each period of learning and how assessment should be conducted at the ECE level. For instance, it suggests that ECE should aim at enabling children to acquire knowledge, skills, attitudes and positive values to attain developmental milestones and total development of the child while the learning outcomes should be transmitted through subjects such as Social Studies, Environmental Science, Language and Literacy, Pre-Mathematics and Expressive Arts. The document has specific sections with specific content for children aged three to four years and those aged five to six years. In addition, this curriculum emphasizes assessment of children through play by providing the children with opportunities to explore, discover and innovate. It also recommends that children should not be subjected to formal written examinations after they have finished the work for each age group. Instead, assessment through observations is emphasized asserting that it should be an integral part of the ECE programme. Further, the curriculum recommends that the focus of assessment at ECE level should be to identify as early as possible areas of a child's development that might need extra or specific attention. Assessment tools maybe used to assess children not as diagnostic tools but rather for purposes of guiding teachers in the establishment of children's developmental pattern. ECE Centres are expected to have this important document in their respective ECE Centres.

### **1.4 Study Objectives**

The following specific study objectives guided the study. These were to:

- 1) Establish formative assessment practices being practiced by teachers in ECE Centres.
- 2) Establish summative assessment practices being practiced by teachers in ECE Centres.
- 3) Ascertain assessment strategies used by teachers to assess children in ECE Centres.

## **2. Literature Review**

Formative assessment is a process that uses informal assessment strategies to gather information on student learning while summative assessment is used to measure, certify,

and report the level of students' learning so that reasonable decisions can be made about students (Dixson & Worrell, 2016; Earl, 2013; Regier, 2012). Summative assessments take the form of tests or exams often conducted at the end of a unit, a course, a grade, a key stage or a program (Earl, 2013). The results are compared against some standard or benchmark often expressed symbolically either as marks or letter grades. However, when there is so much emphasis on the grading of children without paying attention to the learning function, Black & William (1998) suggest that low performing students are likely to be demoralized and lose self-confidence. Therefore, Neaum (2016:149) assert that *"assessment in Early Years Settings needs to be predominantly formative, not summative,"* because while formative assessment is used to track students' progress, it also allows for changes to be made to instruction to improve teaching and learning which is of benefit to both the teacher and the student. Nonetheless, although formative assessment is the recommended assessment practice in ECE, the researchers are of the view that summative assessment is still acceptable in ECE as long as it remains authentic, effective evaluation tools are used for assessment, students are assessed within the context of ECE and the assessment results are not used to compare and group students according to their intellectual abilities. To further understand how teachers, conduct assessment in ECE in different contexts and settings, a review of literature on child assessment provides relevant information on the subject matter.

A study conducted in Malaysia that sought to examine the assessment practices by teachers, entitled *"Pre-school Teachers' Assessment Practices, Knowledge and Perceptions in selected districts"* by Rethza & Jamaluddin (2010) revealed that teachers mostly used informal assessment strategies such as collection of samples and direct observations. Conversely, teachers often concentrated on the 3R skills (reading, writing and arithmetic) particularly focusing on assessment of emergent writing and reading, speaking skills, number recognition, counting, fine and gross motor, and assessment of the ability in drawing and coloring. There was an imbalance in the way assessment was conducted considering that other domains were not assessed and yet the curriculum demanded that children needed to be assessed from a holistic point of view. The failure by teachers to assess children's development holistically seems to be a common problem in ECE. Perhaps there is need to investigate the factors hindering teachers from assessing children from a holistic point of view so that a solution is found in the best interest of the developing child and the teacher.

Further, in another study conducted in Ireland on early childhood educators' perspectives and practices regarding assessment in the early years (Navarrete, 2015), the study revealed that educators held diverse views and had varying approaches to assessment by using different tools and methods. Although, assessments largely helped to generate information about children and facilitated for children's learning and development, the children often had limited participation in the assessment process. This may imply that the assessments conducted were teacher-centred and if this was the case, it is most likely that the information collected about children was not adequate to make certain decisions regarding the children's development and academic learning. However,

on a positive note, collaboration between teachers and parents aided assessment practice. Otherwise, the study recommended that educators needed to expand their knowledge and expertise on the theories and practicalities of assessment for them to conduct assessment with ease and confidence. This recommendation is important because it has the potential to create a workforce that is competent to conduct assessments that are authentic and of benefit to children's development and academic learning.

A study that was conducted in Ghana entitled "Classroom Assessment Practices of Kindergarten Teachers in Ghana" by Kotor (2014) aimed at investigating kindergarten teachers' assessment, revealed that paper-and-pencil test mode of assessment was the most frequently used by the teachers. Further, teachers were reportedly not using developmentally appropriate assessment practices when assessing children's learning outcome. Instead of teachers taking into account theories on children's learning, instruction and current assessment practices in early childhood, it seems the only reason teachers used certain modes of assessment was to fulfil the expectations of parents and educational leaders so that they could secure their jobs. Furthermore, the study revealed that teachers taught and assessed children's learning within their comfort zone by relying on traditional mode of assessment which was not in line with the curriculum. Teachers reportedly lacked the requisite knowledge and skills to effectively assess the children's learning outcomes appropriately. Consequently, this had the potential to compromise assessment results in ECE Centres.

In South Korea, Nah and Kwak (2011) investigated child-assessment practices in the context of Korean early childhood education and care settings. The study revealed that although some teachers adhered to the prescribed child-assessment procedures put in place by the government, some teachers in other ECE settings did not implement the prescribed procedures systematically and as prescribed. As a result, there was a wide variation in goals, the types of assessment conducted and the assessment strategies used by teachers across environments. Subsequently, teachers' collected insufficient information regarding children which could not inform their subsequent planning in the best interest of children's development and learning. On the other hand, some of the inconsistencies teachers exhibited were attributed to lack of: guidelines for child assessment, a common assessment framework, common tools and forms for recording assessments. Ultimately, when teachers choose not to abide by the prescribed assessment procedures, the assessment results are often compromised.

### **3. Methodology**

The study employed a mixed methods design encompassing both qualitative and quantitative approaches. The chosen design had the potential to enrich the results in ways that one form of data could not allow (Creswell & Plano-Clark, 2011; Creswell, 2003; Tashakkori & Teddlie, 1998). In particular, a concurrent triangulation design was used to guide the study because it enabled the researchers to converge quantitative and qualitative data which helped in comprehensive analysis of the research problem. The

design also enabled the researchers to confirm and cross-validate the study findings. In addition, a concurrent triangulation design was appropriate because it allowed the researchers to determine what data to prioritise in the study between quantitative and qualitative data (Morgan, 1998). Therefore, qualitative data was prioritised over quantitative data although the nature of the study still had adequate quantitative data to enrich the study. Further, a concurrent triangulation design allowed concurrent integration of data which led to instantaneous integration of data. In addition, the design allowed the use of a theoretical framework (Vygotsky's Sociocultural Theory) which was relevant to this study as it provided the needed context and back up to interpret the study in general (Vygotsky, 1978).

### **3.1 Sample Size and Sampling Technique**

A total of 237 participants were selected to participate in this study broken down as follows: One hundred and two (102) teachers were selected using a total population sampling technique. This type of purposive sampling enabled the researchers to select all teachers with the required characteristics that were needed to provide deep insights on assessment practices by teachers in ECE Centres. Ten (10) head teachers were selected using a non-probability technique called Homogeneous sampling which "focuses on candidates who share similar traits or specific characteristics" (Ilker et al., 2016:3). Thus, the head teachers' job description was assumed to be homogeneous hence as overall supervisors, they were better placed to explain assessment practices by teachers from an administrative point of view. Simple random sampling was used to sample one hundred and twenty-five (125) parents from Lusaka district. Specifically, the Yamane formula (Yamane, 1967) which is a simplified formula used to calculate sample sizes for identification of optimal feasible sample size was used to select parents who participated in the study.

### **3.2 Data Collection Instruments**

Questionnaires were used to gather data from teachers and parents. Focus Group Discussion Guides (FGDs) were used to collect in-depth data from teachers whilst Interview guides were used to interview head teachers. Document Analysis Guide and an Observational Checklist were used by the researcher to obtain additional data on assessment practices by teachers from a documentary and observational point of view.

### **3.3 Data Analysis**

Descriptive analysis was used to describe assessment strategies teachers were using to track, measure and document the progress of children's development and academic learning in ECE Centres. It was also used to determine the most frequently assessment strategies teachers were using to assess children at ECE Centres. Further, thematic analysis was used to analyse qualitative data by coding and grouping data according to emerging themes using a framework approach of qualitative data analysis (Ritchie & Spencer, 1994).



### **3.4 Ethical Considerations**

Before commencement of the study, ethical approval was obtained from the University of Zambia Research Ethics Committee for Humanities and Social Sciences. Upon commencement of the study, permission was obtained from the Ministry of General Education through the District Education Board Secretary (DEBS) to work with the schools offering Early Childhood Education in Lusaka district. Permission was also obtained from school administrators before involving teachers and parents in the study. All respondents were informed that participation was voluntary and that they were free to withdraw from the study if they felt uncomfortable. Thereafter, informed consent was obtained from all respondents and confidentiality was assured by upholding anonymity.

## **4. Findings**

Findings are presented in line with the study objectives. These are to: Establish formative assessment practices being practiced by teachers in ECE Centres; Establish summative assessment practices being practiced by teachers in ECE Centres and to ascertain assessment strategies used by teachers to assess children in ECE Centres.

### **4.1 Formative Assessment Practices by Teachers**

Formative assessment practices by teachers in this context were informal. The Focus Group Discussions (FGDs) conducted with the teachers revealed that teachers were using Oral questions, Collection of samples, Portfolios, Interview Guides, Music, Games and Dances to assess children. For example, Teacher E said:

*"I either give oral questions or written exercises each time I finish teaching to assess what children have understood."*

Teacher J, had this to say:

*"I personally like collecting samples of children's work although lately, it is becoming difficult to do so because the number of children in my class has increased and managing their individual files is quite difficult."*

As for teacher F, she had this to say:

*"I often use Portfolio and Learning story but I also like showing Cartoons."*

On the other hand, Teacher C explained how she used music, games and dances to teach and assess children in an ECE Centre and this is what she said:

*"Every time I teach a new concept, it is accompanied by a song, a rhyme or a dance because children do not easily forget what is taught when they can sing about it. For example, if I*

*want to teach children about numbers or wild animals, then children will sing songs that talk about those concepts. Even the games I play with them, they are always in line with a particular theme. From the same activities, assessment is conducted."*

As for Teacher D, this is what she had to say:

*"When I have a class aged between 3 to 4 years old, I often use Interview guides because I find it easy to get feedback from them. For the written work, they usually join dots which I write in their exercise books until they learn to write on their own."*

#### 4.2 Summative Assessment Practices by Teachers

In order to ascertain the actual summative assessment practices implemented by teachers in ECE Centres and to establish how frequent teachers (102) used these summative assessments, a list of formally administered assessments in ECE Centres was provided and teachers were asked to tick against what was applicable from the list provided. The results revealed that Readiness tests, Mid-term tests, End of term tests and Diagnostic tests (developmental screening) were being implemented at ECE Centres although Mid-Term tests were the most frequently administered showing that 83 out of 102 teachers used it for assessment followed by End of Term tests showing a frequency of 80. Details are shown in Figure 1 below.

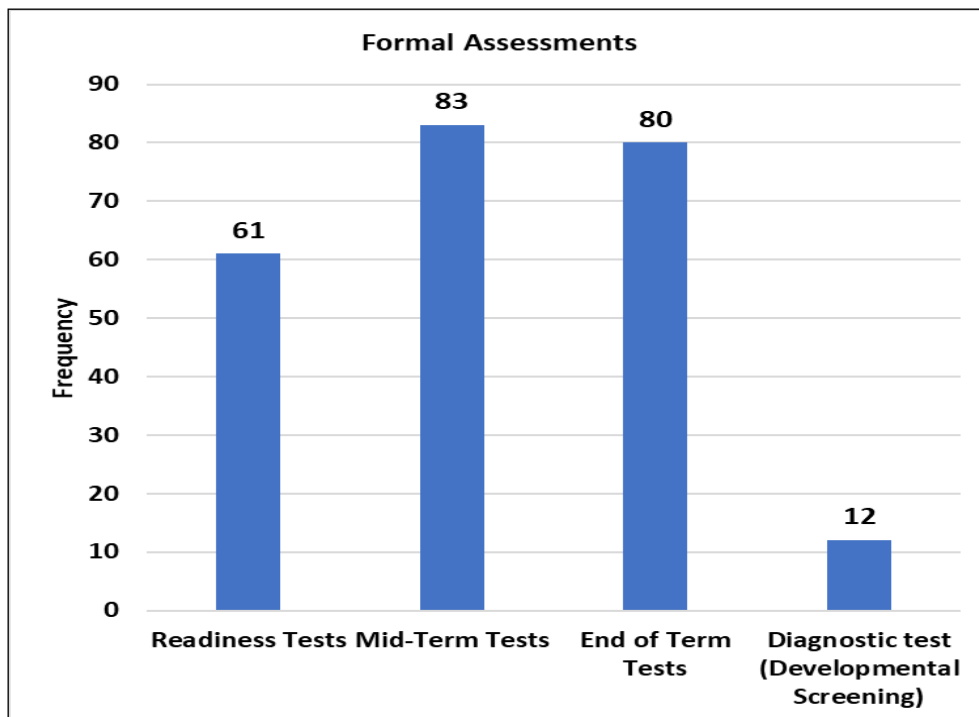


Figure 1: Formally Administered Assessments in ECE Centres

When teachers were asked during FGDs to explain how they conducted summative assessments in ECE Centres, the study revealed that teachers used class exercises and teacher-designed tests administered orally or in writing of which Mid-term

tests and End of terms tests also formed part of the assessment. For example, this is what teacher A said:

*“I use written exercises to assess the children in my class. I also conduct Mid-Term Tests before children go for their Mid-Term break and then conduct End of term tests at the end of the term.”*

Teacher H affirmed what teacher A said although there was an indication that at their school, the tests given were also aimed at determining the individual children’s readiness for grade one. This is what she said:

*“Yes, even me. The pupils at our ECE Centre are required to write both Mid-term tests and End of Term tests. At the end of the year, these tests help us to make decisions whether or not a pupil proceeds to grade one or not.”*

Meanwhile for Teacher B, after attending a workshop on the use of the revised curriculum, she had a perspective of formal assessment in ECE best explained in this statement:

*“Well, at the workshop which I attended two weeks ago, the people from the Ministry of General Education stopped the teachers from conducting Mid-Term Tests and End of term tests as methods of assessments in ECE. Instead, we were told to be using the “Child Development Assessment Tool for Zambia” (CDATZ) to assess children at the end of the term. Failure to comply will result in being charged.”*

Teacher G also attended the same workshop Teacher B attended and had this to say:

*“She is right, at the workshop we attended, we were stopped from assessing children using Mid-term tests and End of Term tests. So, beginning next term, I will not be giving End of term tests, instead I will be using the “Child Development Assessment Tool for Zambia” to assess children.”*

#### **4.2.1 Assessment Strategies used by Teachers to Assess Children’s Development and Academic Learning in ECE Centres.**

Assessment strategies in this particular study are described as a variety of methods teachers use like simple screening tools and evaluation techniques prescribed in the curriculum, or developed by teachers in an Early Childhood programme to track and measure the progress of children's development and academic learning (Wortham, 2005). Therefore, in order to better understand the nature of summative and formative assessment teachers were implementing in ECE Centres, teachers were asked during FGDs to explain the assessment strategies that they were using to assess children in ECE

Centres. The study revealed that teachers were using paper and pencil tests, Homework, Interview Guides, portfolios and collection of samples. The following verbatim is an illustration of what teachers said. Teacher A had this to say:

*“I like giving the learners paper and pencil tests. They are very easy to administer and they do not consume a lot of time.”*

Teacher B responded in affirmation to what Teacher A had explained but added a few other comments by saying:

*“Me too. In fact, I just use the chalk board to write the tasks and then I simply ask the children to copy the work on their own from the chalk board and follow the instructions given.”*

Teacher C also gave similar remarks and said:

*“You are right, paper and pencil tests are easy to administer. In fact, at our Centre, most of the tasks are in print and all learners do is to follow the instructions that are indicated. Depending on their age, they either join the dots with their pencils or write using their pencils.”*

On the other hand, Teacher D said;

*“I use Homework, Interview Guides and portfolios.”*

Meanwhile Teacher E gave examples of what she uses by making reference to her most preferred assessment strategies by saying:

*“As for me, I usually collect samples of children’s work. I also use paper and pencil test and Homework as my most preferred strategies.”*

#### **4.2.2 Assessment Strategies Teachers Frequently Use to Assess Children in ECE Centres**

Furthermore, in order to ascertain the assessment strategies teachers frequently used to assess children in ECE Centres, a list of possible assessment strategies was provided. Thus, teachers were asked to tick against an assessment strategy that they frequently used for assessment in their respective ECE Centres. Teachers were also expected to add to the list if there were other strategies that they used other than what was listed. The findings revealed that only one teacher out of 102 teachers used a strategy not listed on the schedule (Excursions). Otherwise, four strategies namely homework, interview guides, standardised tests, pencil and paper tests were the most frequently used strategies by teachers in ECE Centres. Details of the frequencies are illustrated in Figure 2 below.

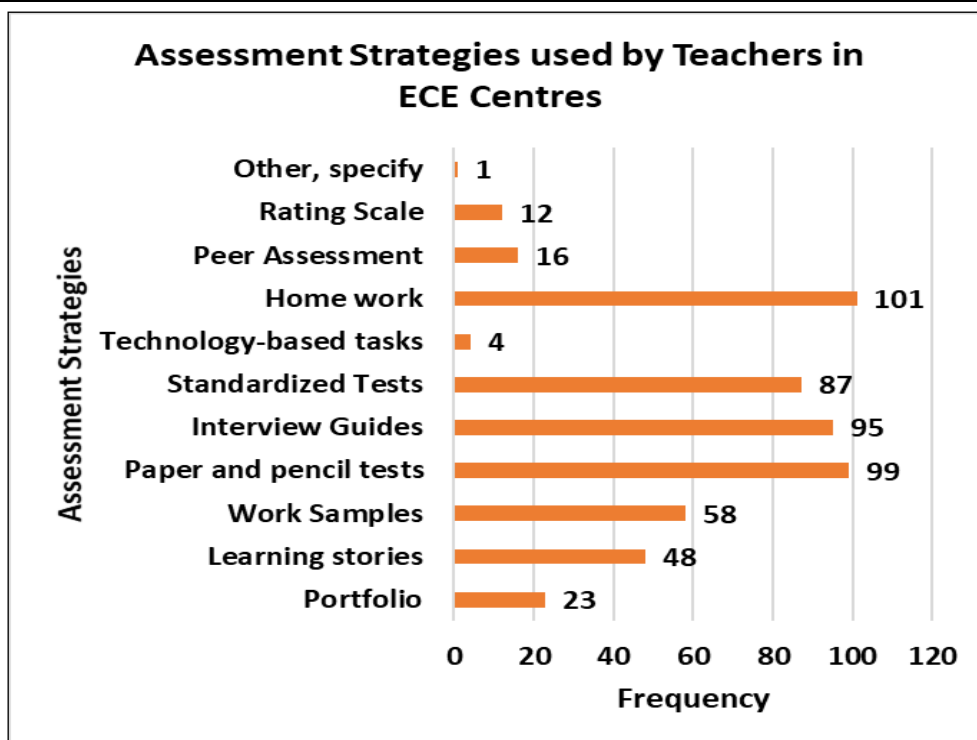


Figure 2: Assessment Strategies Used by Teachers in ECE Centres

## 5. Discussion

The study revealed that while teachers used various formative assessments such as homework, oral questioning, collection of samples, portfolios, interview guides and many others to assess children in ECE Centres, most teachers implemented very few of them and yet formative assessments require the use of multiple assessment approaches and collection of a wide range of data which teachers can use to modify instruction and improve learning. Further, teachers offered very minimal support to the children during the assessment process. These inconsistencies resulted in teachers collecting insufficient information about children because teachers could not adjust their instruction in the best interest of children's development and academic learning. It was as though children were simply given tests without adhering to the actual norms of formative assessment. These findings are consistent with what Black & Wiliam (1988) reported that formative assessment is often reduced to what appears to be a series of tests that resemble formative assessment because it is often not well understood by teachers and is often misapplied. Regarding summative assessments, the findings of the study seem to suggest that mid-term tests and end of term tests were predominantly implemented in ECE Centres (See Figure 1). It was observed that some of the mid-term tests and end of term tests given to children were too formal and challenging for children aged between three and six years. In some cases, children were required to copy and write the questions on their own before they could read and write the correct answers. It was as though there was no deliberate consideration of the children's age and linguistic skills when designing the test questions. These findings are inconsistent with Shepard et al., (1998) who assert that child

assessments should be linguistically appropriate and age-appropriate in both content and the method of data collection. Otherwise, assessment results may not be authentic. Further, the study revealed that teachers had a practice of recording the individual children's end of term test results symbolically by signaling the child's relative position in comparison with other children. This was done by indicating the position of the child in that particular class on the Report Form/Card.

However, this practice did not give a true reflection of the child's academic progression and capability. In fact, it is a departure from what has been postulated in the ECE curriculum asserting that children should not be subjected to a written examination after they have finished the work for each age group (MESVTEE, 2013). On the contrary, most parents expected their children to be subjected to tests whose results could be reported by indicating the position of their child in class in comparison with their peers. This finding was consistent with what was reported by Lungu & Matafwali (2020a) suggesting that parents preferred a more academic oriented path that was teacher-directed and focused on the acquisition of academic knowledge at ECE Centres. However, a finding that is in contrast with the idea of comparing student's performance is that by Black & Wiliam (1998) who provide evidence that the grading of students by comparing them to their peers has the potential to demoralize and affect the self-confidence of low performing students, hence should not be done.

With regards to assessment strategies used by teachers to assess children, the study has shown that teachers used various assessment strategies which include among others paper and pencil tests, homework, interview guides, portfolios and collection of samples although homework, paper and pencil tests, interview guides and standardised assessment tools were the most frequently used assessment strategies by teachers in ECE Centres (See Figure 2). The study seems to suggest that individual teachers had different perspectives and preferences of assessment strategies that could be used to assess children in ECE Centres. Perhaps this explains why certain assessment strategies were the most frequently used strategies by teachers in ECE Centres. Otherwise, it was evident that teachers had different views and approaches to assessment. This finding is similar to what Navarrete (2015) found that educators in ECE settings in Ireland held diverse views and had varying approaches to assessment including the use of different tools and methods leading to variations in the way assessment was conducted in ECE settings.

Meanwhile, although homework was rated as the highest most frequently used assessment strategy in ECE Centres on the premise that it had many benefits, it is not clear to what extent it consolidated classroom teaching and learning and if at all it assisted teachers to plan work that led to more educational success of the children. Similarly, although pencil and paper tests were the second highest most frequently used assessment strategy in ECE Centres, the biggest weakness of this assessment strategy is that there is very little room for scaffolding by the teacher or any other more knowledgeable person as anticipated in Vygotsky's sociocultural theory (1978). Nonetheless, teachers reportedly preferred this assessment strategy because it did not consume a lot of time to implement, it was convenient, easy and quick to administer in ECE Centres. This finding is consistent

with what Kotor (2014) found in Ghana signifying that paper and pencil tests were the most used mode of assessment by teachers in ECE settings.

## **6. Conclusion**

The study has shown that teachers used various formative assessments such as homework, oral questioning, collection of samples, portfolios and interview guides. However, teachers failed to utilise multiple assessment strategies to enable them to collect a wide range of children's information needed to modify instruction and improve learning. Therefore, the formative assessment practices by teachers in ECE Centres did not meet the actual norms of formative assessment hence did not adequately enhance the children's development and academic learning in ECE Centres. Further, with regards to summative assessments, the study revealed that mid-term tests and end of term tests were predominantly implemented in ECE Centres although it was observed that both were often too formal and challenging for children aged between three and six years. Regarding assessment strategies, teachers reportedly used different assessment strategies among them, paper and pencil tests, homework, interview guides, portfolios and collection of samples although homework, pencil and paper tests, interview guides and standardised assessment were the most frequently used assessment strategies by teachers in ECE Centres. Seeing that, teachers had different perspectives and preferences of assessment strategies, this perhaps explains why the named assessment strategies were most frequently used to assess children in ECE Centres. Notably, despite homework being the highest assessment strategy used by teachers in ECE Centres, it was not clear to what extent it benefited the children. As for paper and pencil tests, being the second highest most frequently used assessment strategy by teachers in ECE Centres, teachers allegedly preferred using this assessment strategy because it did not consume a lot of time to implement, it was convenient, easy and quick to administer in ECE Centres. Notably, the study seems to suggest that there are currently no standard approaches for formative and summative assessment at ECE level in Lusaka, Zambia.

## **7. Recommendations**

The study recommends that Ministry of General Education should conduct capacity building training programmes for teachers on formative assessment and summative assessment practices in ECE to ensure effective implementation of both formative assessment and summative assessment in ECE Centres. Specifically, teachers need to conceptualize characteristics of formative and summative assessment in ECE so that they can understand assessment procedures in both formative and summative assessment. Teachers also need to acquire appropriate techniques on how to construct effective test questions, administer authentic assessment, score, and interpret the test results without being biased.

### **Acknowledgements**

We wish to acknowledge the Ministry of General Education and the school administrators for according us the opportunity to collect data in the ECE centres. We would also like to extend our gratitude to the teachers for their willingness to participate in the study. This study would not have been possible without the teachers invaluable in-put.

### **Disclaimer**

This paper is an excerpt from a PhD thesis based on one of the objectives which sought to investigate the assessment practices by teachers in ECE Centres in Lusaka, Zambia. Otherwise, the authors wish to declare that they have no conflict of interest.

### **About the Authors**

**Stella Lungu** is PhD student (Sociology of Education) in the Department of Educational Psychology, Sociology, and Special Education at the University of Zambia. She is a holder of a Master of Education in Sociology of Education and a Bachelor of Arts with Education (B.A. Ed) degree from the University of Zambia. Stella has taught secondary school students for several years. She has also taught Early Childhood Education (ECE) teachers at tertiary level for more than ten years. In addition, Stella has taught and tutored on part-time basis at the University of Zambia for over five years. She has also participated in a number of research activities in the field of Early Childhood Education and Education studies.

**Beatrice Matafwali (PhD)** obtained a PhD in Special Education from the University of Zambia /Leiden University in the Netherlands. She also holds several other professional qualifications from various disciplines. Dr. Matafwali is a Senior Lecturer at the University of Zambia in the Department of Educational Psychology, Sociology and Special Education. She has over 15 years of professional experience as a lecturer and researcher. She has conducted extensive research in Literacy, Early Childhood Development, Child Assessment, Special Education and Education studies.

**Madalitso Khulupirika Banja** obtained a PhD in Sociology of Education from the University of Zambia where he works as a teacher educator. His topic (thesis) was around the mentoring of newly qualified teachers in Zambian secondary schools. Dr. Banja has authored *Teachers as agents of Pupil Indiscipline* (2013), and has also edited *Selected Readings in Education* (2017) and *Selected Readings in Education Volume 2* (2019) and is currently working on another book tentatively titled *The Management of Newly Qualified Teachers in Africa; policies, practices, challenges and future trends*. In addition, Dr. Banja has written several book chapters and articles in peer referred journals mostly on matters surrounding the professional development and mentoring of newly qualified teachers. He has presented papers at international fora including the World Congress on Sociology (2010), the Distance Education and Training in Africa (2013, 2015 and 2017), African Teachers' Regulatory Authority (AFTRA, 2016) and the Southern African Comparative History and Education Society (SACHES, 2014 and 2017). He has won a number of



awards including the Council for the Development of Social Science Research in Africa (CODESRIA) Award for Small Thesis Writing in 1999 and in 2010. In 2010 and 2012 he also won the Organisation of Social Science Research in East Africa (OSSREA) PhD Research Methodology Training Award. His passionate desire is for collaboration in research and publication among African scholars.

## References

- Creswell, J. W. & Plano Clark, V. L. (2011). *Designing and Conducting Mixed Methods Research* (2nd Ed.). London: Sage Publications Ltd.
- Creswell, J. W., Plano Clark, V. L., Gutmann, M. L. & Hanson, W. E. (2003). *Advanced mixed methods research designs*. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioral research*. Thousand Oaks, CA: Sage
- Curriculum Development Centre. (2013). *Zambia Education Curriculum Framework, Ministry of Education, Science, Vocational Training and Early Education*. Lusaka: Curriculum Development Centre.
- Dixson, D. D. & Worrell, F. C. (2016). Formative and Summative Assessment in the Classroom. *Theory into Practice*, 55 (2),153-159. DOI:10.1080/00405841.2016.1148989
- Earl, L. (2013). *Assessment as learning: Using classroom assessment to maximize student learning*. Thousand Oaks, CA: Corwin Press.
- Ilker, E., Sulaiman, A. M., Rukayya, S. A. (2016). Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics*.5 (1),1-4. doi: 10.11648/j.ajtas.20160501.11
- Johnson, R. B., & Onwuegbuzie, A. (2006). Mixed methods research: A research paradigm whose time has come. *Educational Researcher*, 33 (7), 14-26.
- Kalinde, B. (2020). The history of early childhood education in Zambia. In Munsaka. E & Kalinde. B. (Eds.). *Laying a foundation for optimal outcomes in early childhood education* (pp.6-10). Lusaka: University of Zambia Press.
- Kotar, A. (2014). *Classroom Assessment Practices of Kindergarten Teachers in Ghana*. Ghana: Master of Philosophy Dissertation. University of Education, Winneba.
- Lungu, S. & Matafwali. B. (2020a). Parents' Views on Play Based Learning for Children Aged 3-6 Years: Evidence from Selected Early Childhood Education Centres in Zambia. *International Journal of Humanities Social Sciences and Education (IJHSSE)* 7 (5), 60-68
- Lungu, S. & Matafwali. B. (2020b). Play based learning in early childhood education (ECE) centres in Zambia: a teacher perspective. *European Journal of Education Studies*. 7 (12),356-369 DOI: 10.46827/ejes. v7i12.3427
- Matafwali B., & Chansa Kabali, T. (2017). Re-envisioning the Role of Community Based Early Childhood Programming in Promoting School Readiness. *Creative Education*,8, 1-11.

- Matafwali, B., & Serpell, R. (2014). Design and validation of assessment tests for young children in Zambia. *New directions for child and adolescent development*, 2014 (146), 77-96.
- Matafwali, B. & Munsaka, E. (2011). An evaluation of community based early childhood programmes in Zambia: A case of four selected districts. *Journal of Early Childhood Development*, vol.v,109-131. Nepal: ECD Resource.
- Matula, Kyalo, Mulwa & Gichuhi (2018). *Academic Research Proposal Writing*. Nairobi: Applied Research & Training Services.
- Ministry of Education (2016). *Educational Statistical Bulletin*. Lusaka: Ministry of Education.
- Ministry of Education, Science Vocational Training and Early Education (2015). *Education for all 2015 National Review Report*. Lusaka: MESVTEE.
- Ministry of Education, Science, Vocational Training and Early Education (2013). *Early Childhood Education Syllabus*. Lusaka: Curriculum Development Centre.
- McAfee, O., Leong, D. J. & Bodrova, E. (2004). *Basics of Assessment: A Primer for Early Childhood Educators*. Washington, DC: National Association for the Education of Young Children.
- Morgan, D. L. (1998). Practical strategies for combining qualitative and quantitative methods: Applications to health research. *Qualitative Health Research*, 8, 362–376.
- Morrison, G. S. (2017). *Fundamentals of early childhood education*. (8th Ed.). Boston: Pearson Education.
- Mugenda, O. M. & Mugenda, A. G. (2003). *Research methods: Quantitative and qualitative Approaches*. Nairobi : Laba Graphics Services Ltd.
- Nah, K.-O. & Kwak. J-I. (2011). Child Assessment in Early Childhood Education and Care Settings in South Korea. *Asian Social Science*,7,6.
- Navarrete, M. A. (2015). *Assessment in the Early Years: The Perspectives and Practices of Early Childhood Educators*. Dublin: International Master of Early Childhood Education and Care and Oslo and Akershus University College of Applied Sciences; Dublin Institute of Technology; University of Gothenburg and University of Malta.
- Neaum, S. (2016). *Child Development for Early Years Students and Practitioners*. (3<sup>rd</sup> Ed). London: Sage Publications Inc.
- Regier, N. (2012). *Focus on Student Learning - Instructional Strategies Series Book Two: 60 Formative Assessment Strategies*. Font hill, ON, L0S 1E0, Canada: Regier Educational Resources.
- Rethza, A.S.B.S. & Jamaluddin, S. (2010). Preschool Teachers' Assessment Practices, Knowledge and Perceptions in Selected. *Jurnal Pendidikan*, 30,127–157.
- Ritchie, J. & Spencer, L. (1994). Qualitative data analysis for applied policy research by Jane Ritchie and Liz Spencer in A. Bryman and R. G. Burgess (Eds.), *Analysing qualitative data*, (pp.173-194). London: Routledge.
- Shepard, L. A., Kagan, S. L., & Wurtz, E. (Eds.). (1998). *Principles and recommendations for early childhood assessments*. Washington, DC: National Goals Panel.
- Stiggins, R. (2017). *The Perfect Assessment Systems*. Alexandria, Virginia USA: ASCD.

- Taherdoost, H. (2016). Validity and Reliability of the Research Instrument; How to Test the Validation of a Questionnaire/Survey in a Research. *International Journal of Academic Research in Management*.5,28-36. 10.2139/ssrn.3205040.
- Tashakkori, A. & Teddlie, C. (1998). *Mixed methodology: Combining qualitative and quantitative approaches*. Thousand Oaks: Sage Publications.
- Vygotsky, L. S. (1978). *Mind in Society: The development of higher psychological processes*. Cambridge, Massachusetts: Harvard University Press.
- Wortham, S. C. (2008). *Assessment in early childhood education*. Upper Saddle River, New Jersey: Pearson Merrill Prentice Hall.
- Yamane, T. (1967). *Statistics, An introductory Analysis*, (2<sup>nd</sup>Ed.). New York: Harper and Row.
- Zambia Pre-School Association. (1975). *Annual Report of the Zambia Pre-School Association*, Issue No. 3. Lusaka: Zambia Pre-School Association.
- Zuilkowski, S. S., Fink, G., Moucheraud, C., & Matafwali, B. (2012). Early childhood education, child development and school readiness: Evidence from Zambia. *South African Journal of Childhood Education*, 2(2), 20.

Creative Commons licensing terms

Author(s) will retain the copyright of their published articles agreeing that a Creative Commons Attribution 4.0 International License (CC BY 4.0) terms will be applied to their work. Under the terms of this license, no permission is required from the author(s) or publisher for members of the community to copy, distribute, transmit or adapt the article content, providing a proper, prominent and unambiguous attribution to the authors in a manner that makes clear that the materials are being reused under permission of a Creative Commons License. Views, opinions and conclusions expressed in this research article are views, opinions and conclusions of the author(s). Open Access Publishing Group and European Journal of Education Studies shall not be responsible or answerable for any loss, damage or liability caused in relation to/arising out of conflicts of interest, copyright violations and inappropriate or inaccurate use of any kind content related or integrated into the research work. All the published works are meeting the Open Access Publishing requirements and can be freely accessed, shared, modified, distributed and used in educational, commercial and non-commercial purposes under a [Creative Commons Attribution 4.0 International License \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/).