

Teachers' understanding of emergent literacy in mediating foundational literacies in Grade 0 in Namibia

¹Kenneth Nzwala and ²Giulietta Harrison

¹Department of Early Childhood Development & Lower Primary Education, University of Namibia (Katima Mulilo Campus) and ²Africa A+ Schools (Republic of South Africa)

¹knzwala@unam.na and ²harrisongiulietta@gmail.com

Abstract

Shaped by Lev Vygotsky's sociocultural theory (SCT) of how children learn, this study investigated Grade 0 teachers' understanding of the concept of 'emergent literacy', and how they used this understanding to mediate foundational literacies in Grade 0. A mixed methods approach and multiple case studies were adopted. Six Grade 0 teachers, selected from three different socio-economic contexts; urban, peri-urban and rural, participated in the study. Teachers were selected using purposive sampling technique while learners were drawn using stratified random sampling. Data were collected through interviews, lesson observation and the paper version of the eEGRA test. Data were analysed statistically using ANOVA with thematic qualitative analysis of interview data against document analysis of curricula, teacher planning and learner exercise books.

The research established that teachers did not understand the concept of 'emergent literacy' and thus mediated foundational literacies in a formal manner. Teachers were oblivious to the fact that Grade 0 was a unique grade. The curriculum does not make any specific mention of the concept of 'emergent literacy' thereby exacerbating the problem. The study further revealed that the teachers teaching Grade 0 were not specifically Grade 0 trained. The study recommends that Grade 0 teachers should, irrespective of context, be provided with on-the-job training to capacitate them to handle and implement the Grade 0 literacy curriculum; Regional Advisory Teachers (RATs) should render advisory services to Grade 0 teachers; and the curriculum should be revised to accommodate Grade 0 specific content.

Keywords: *Grade 0, mediation, emergent literacy, foundational literacy*

Introduction and evolution of Grade 0 curriculum

Emergent literacy (EL) should be perceived as a key concept in the Grade 0 curriculum, and Grade 0 teachers' understanding of this concept enables them to effectively prepare children for literacy learning in Grade 0¹ prior to getting to Grade 1. Literature claims that the concept of EL is a "process children go through to develop their experiences with reading, writing and oral language, as well as

interaction with others in their homes and communities in their years before schooling" (Luongo-Orlando, 2010, p. 1). It is these experiences teachers are expected to develop further through conscious mediation (Harrison & Hodgskiss, 2017; Harrison & Muthivhi, 2013) in order for children to realize their literacy potential. Children realizing their full literacy potential is also supported by a curriculum clear on key concepts, like EL, and how they are applied, as "conceptual understanding is much more than only factual knowledge" (Van Rensburg, 2015, p. 1). In March 2014, the Namibian

¹ Note that in Namibia Grade 0 is the equivalent of Grade R namely the year prior to entering Grade 1

government approved curriculum reform for Basic Education for implementation in 2015 without qualified Grade 0 teachers, and because teachers were not specifically trained for Grade 0 but rather drawn from Grades 1 to 3 (Nakale, 2016; Tjihenua, 2016), they relied on the curriculum for guidance (Ministry of Education, 2014), further exacerbating the aspect of mediating EL in Grade 0 in the country. This article thus investigates Grade 0 teachers' level of understanding of EL, a key concept that facilitates mediation of EL in Grade 0 and proposes a way forward derived from this research project.

Literature review

This section reviews relevant literature on EL, and how the reviewed literature assists teachers in their quest to support Grade 0 learners to read in Grade 1.

Emergent literacy

In Grade 0, the literacy skills of children are still emerging (Harrison & Hodgskiss, 2017). Therefore, to promote the emergence of these skills, teachers should engage learners in suitable emergent literacy-related activities like "print motivation, print awareness, vocabulary, narrative skills, phonological awareness and letter knowledge" (Djonov, Torr, & Stenglin, 2018, p. 16). The child should also be able to name letters in order to identify them and bring them together when spelling out a word (Blevins, 1998). This is supported by the fact that the ability to identify and name letters is the most basic reading skill and if not in place would result in a child being unable to read (Foulin, 2005). Research also claims that learners should be allowed to handle books in preparation for reading in Grade 1. According to Armbruster, Lehr, and Osborn (2003, p. 6), "to be confident readers, children need lots of opportunities to build spoken language by talking and

listening, as well as learning about print and books".

While the concept of EL is complex to define, it is vital to understand it as the basis for conventional literacy in a formal mainstream classroom. Its complexity is largely informed by how it is perceived by various scholars in the academic arena. According to Justice, Bowles, and Skibbe (2006, p. 224), "the emergent literacy period sets the stage and foundation upon which other abstract layers of alphabetic knowledge will build". Therefore, EL knowledge is the basis for all future literacy learning. Inan (2010) suggests that adopting an EL perspective implies that there are a set of accepted concepts that the child must master before they can progress to the formality of Grade 1, and such concepts should be clearly stated in the Grade 0 literacy curriculum. In other words, the child must acquire foundational literacies through the growth of EL.

According to Tomlinson and Allan (2000, p. 91), "curriculum that is based upon discrete and loosely connected facts is difficult to teach effectively". Therefore, a focused curriculum is critical as it "promotes teacher clarity about learning goals and gives a powerful focus of instruction and that is key to effective teaching and learning and the pursuit of excellence". Research conducted in South Africa on EL claims that "there is a lack of policy, research and examples of effective practice that specifically address language and literacy development from birth to six years" (O'Carroll & Hickman, 2012, p. 6), which may influence Grade 0 teachers' effective mediation of EL. In Namibia, research in the area of foundational literacies and mediation thereof has been a growing concern as no research has been undertaken in this field making it an important gap that needs to be filled.

According to Bodrova and Leong (2007, p. 18), "if children acquire the basics of literacy they develop critical

thought which liberates them from relying on their environment by turning them into masters of their own behaviour". This implies that literacy in Grade 0 is emergent as this is the period when the child begins to mimic reading, starts to learn to write his or her name, and responds to instructions through conscious mediation by the teacher (Harrison & Hodgskiss, 2017). It is thus believed that "emergent literacy conveys the perspective that children are still in the process of becoming literate" (Rhyner, Haebig, & West, 2009, p. 7), and should thus be mediated by qualified teachers.

Namibian teachers' inability to teach Grade 0 is revealed by education statistics which confirm that "about 60% of unqualified and underqualified teachers are teaching at the Junior Primary level" (Tjihenuna, 2016, p. 5). This makes it extremely difficult for such teachers to demonstrate effective implementation of the Grade 0 literacy curriculum. Tjihenuna's (2016) view is echoed by Nakale (2016) who claims that statistics for 2013 and 2014 show that Namibia deploys a high number of unqualified and underqualified teachers to teach at the Junior Primary phase.

Theoretical framework

The theoretical framework underpinning this study is Lev Vygotsky's sociocultural theory (SCT) of how children learn. In Luongo-Orlando (2010), Clay noted that the concept of EL is grounded in Vygotsky's sociocultural perspective as the "time in a child's life when literacy starts to develop, marking the ongoing developmental process during which young children begin to understand and use language from birth until independence" (p. 6). Language in this case should be seen as a cultural tool that enables learners to communicate their ideas.

Teachers should thus be cognisant of the role played by learners' cultural, social,

and historical backgrounds in the acquisition of EL skills. Teachers also need to understand that the child brings to the classroom his or her own cultural, historical background knowledge and that the teacher must draw from the child's existing knowledge in order to provide the child with a basis upon which to hook new knowledge (Vygotsky, 1978; Campbell & Campbell, 2009). Furthermore, the teacher should respect the child's cultural roots and therefore it is important for the teacher to use materials that are culturally appropriate and relevant, for example, traditional stories, as the basis for developing their EL skills. This forms the basis of what Vygotsky termed the Zone of Proximal Development (ZPD) (Vygotsky, 1978; Verenikina, 2008). The ZPD is the developmental zone within which mediation takes place (Feuerstein, 1979). Stott (2016) therefore argues that "the possibility of learning occurs through mediation once the ZPD comes into existence" (p. 26).

Extension of learners' ZPD can only be achieved through learner active involvement in open ended classroom activities which include collaborative learning through which the teacher scaffolds learning in the ZPD, enabling learners to express their views (Vygotsky, 1986). In this article, scaffolding refers to the support given to learners to understand and master abstract or difficult activities in order for them to do such activities independently, without assistance (Van de Pol, Volman, & Beshuizen, 2010). The concept of scaffolding was not Vygotsky's idea, but rather an extension of his concept of the ZPD and mediation by Bruner (Verenikina, 2008). It is through scaffolded learning that learners attain higher mental functions (HMFs) (Vygotsky, 1978), which give rise to critical reasoning and analysis. This means that the teacher should provide plenty of opportunities for children to grapple with the concepts of reading and

writing, processing information in an experiential and staggered way as they establish their EL skills. For example, if the teacher has set up a book corner that allows children to handle books, make their own story books and surrounds the space with a print-rich environment, the child is being scaffolded into developing their EL skills.

In addition, teacher engagement of learners' prior knowledge during literacy teaching can only be possible if they understand the concepts of 'EL' and 'mediation' thereof without which learners' early literacy skills will not emerge. Furthermore, EL cannot develop unmediated but is mediated through the use of tools (such as books, word cards, labels, posters and storytelling), as it is through tools that teachers assist learners to advance to the next level of literacy growth (Vygotsky, 1978). The concept of mediation is of significance to this study because it is the key concept upon which this study is framed and thus driving the acquisition of EL skills by learners.

Mediation

The concept of mediation refers to a dialogue between a teacher and a learner in which the teacher uses tools during the lesson to assist a learner to develop understanding (Vygotsky, 1978). Thus, the social and psychological aspects of Vygotsky's theory can only be realized through this interaction and collaboration that takes place between teacher and learner with the use of tools with the aim to develop learners' EL skills (Vygotsky, 1978). In this case, the primary tool would be language. Mediation transforms the 'external' (the social) to the 'internal' (the psychological) and results in new forms of reasoning or cognition. Without use of tools or signs like vocabulary, phonemic awareness and letter knowledge to develop learners' EL skills, mediation in terms of Vygotsky's theory loses meaning, context

and integrity. However, research claims that mediation of EL does not take one form, but operates in many different forms, for example, "linguistic, visual and acoustic" (Kramsch, 2004, p. 133).

Similarly, Kozulin (1990) reasoned that mediation facilitates literacy acquisition in children in various ways, for example, mediation through material tools (e.g., using picture cards to help with remembering); mediation through symbolic systems (e.g. silent rehearsal of words to be remembered); and mediation through another person (children assisted by the teacher). According to Lantolf (1994), Vygotsky believed that higher forms of human mental activity cannot be achieved unless mediated by symbolic means.

Language and mediation of EL learning

The Namibian Grade 0 curriculum states that teachers should use mother tongue (MT), the child's home language and the language of the child's birth, to encourage the development of learners' EL skills (Ministry of Education, 2015). The curriculum further states that learners should be "actively involved in lessons and should explore and interact with each other" (Ministry of Education, 2015, p. 11). Interactions among Grade 0 learners promote oral language, one of the key drivers of EL. One of the tools of psychological mediation is language. According to Antonnacci (2000, p. 11), "language is a tool for learning and thinking and that thought development is determined by language".

Semiotic tools and mediation of EL

Shabiralyani, Hasan, Hamad, and Iqbal (2015) expressed the view that the use of resources, like word cards and puppets, is at the heart of EL learning in Grade 0 as resources facilitate meaningful teaching and learning. Bodrova and Leong's (2007) study revealed that when teachers use tools

of semiotic mediation (pictures for example) to mediate an activity, literacy learning by Grade 0 learners can easily be achieved. Furthermore, having learners engaged in a picture reading activity mediated by the teacher is beneficial as it assists to develop the child's EL skills through promoting language usage. The use of tools is central to consciously mediate literacy learning as they "extend our abilities, thus enabling us to do things beyond our natural capacities" (Bodrova & Leong, 2017, p. 4) and to achieve our goals.

According to Vygotsky (1978), mediating literacy learning is a conscious, goal-directed process, implying that the teacher should do it informally and in a conscious manner. Research found that if the content level is too high, learners lose interest to learn (Knestrick, 2012). Conscious mediation thus refers to the teacher's careful planning of learning activities with the ultimate aim to achieve an objective of acquiring the target skill. For example, using games so that learning is play based. According to research, the promotion of EL skills among children is best achieved through play as it is informal aiming at holistic development of children (Vygotsky, 1978; Karpov, 2003; Polanki, 2013). In view of the above perceptions, the focus of this study is of utmost significance as it forms the crux of foundational literacy learning of children through social interaction with the teacher and learning material.

Research questions

This article examines how teachers understood and mediated EL in Grade 0 level in Namibia. The research further examined the efficacy of mediation and whether or not foundational literacies were in place at the end of Grade 0 and beginning of Grade 1. This key topic was explored through the following sub-questions:

1. What is Grade 0 teachers' understanding of the concept of EL?
2. How do Grade 0 teachers mediate EL in their respective classes in the Zambezi region?

Hypothesis

Based on this study's area of investigation, two hypotheses guided the analysis of the data are:

- **H₀**: There is no significant difference in the level of teacher mediation of EL skills across the six schools in Zambezi region.
- **H₁**: There is a significant difference in the level of teacher mediation of EL skills across the six schools in Zambezi region.

Methodology

A mixed methods approach was adopted in order to answer the research questions and to provide a comprehensive conclusion to the problem of how Grade 0 teachers mediated EL skills of learners in their classrooms. Both quantitative and qualitative data were collected in order to ensure a cross-analysis between data sets and to improve reliability and validity (Creswell & Clark, 2011). A variety of data sets were collected including teacher interviews, learner assessment in the form of an eEGRA² test and document analyses which consisted of analysis of the curriculum and teachers' lesson plans. Through this approach, the researcher was able to probe participants' views and perceptions on mediating EL skills of Grade 0 learners thus establishing their understanding of the concept of EL and to compare the difference between what

² The eEGRA test was an adaptation of the EGRA test which is designed to test early reading skills. EGRA stands for Early Grade Reading Assessment.

teachers said and what they did regarding mediation of EL skills in Grade 0.

Participants

Six Namibian schools in the Zambezi region, drawn from three different socio-economic contexts of urban, peri-urban and rural contexts participated in this study. Two schools from each socioeconomic context were purposively selected. The reason for drawing schools from different contexts was to establish if socio-economic context influences the acquisition of foundational literacies in Grade 0. In this study, urban centres were defined as schools that are found in towns with adequate facilities (like computers, overhead projectors, radios, etc.) and qualified teachers; rural centres are village schools with poor services due to a lack of teaching facilities and qualified teachers, resulting in high failure rates (McCracken & Barcinas, 1991). Peri-urban centres on the other hand share the characteristics of both urban and rural centres and are situated in the geographical gap between rural and urban settings.

Two teachers per school (one Grade 0 teacher and one Grade 1 teacher) participated in this study. The reason for this type of sampling was to make it easier for the researcher to follow the same Grade 0 learners to Grade 1. A sample of learners (9 learners per school) was drawn using stratified random sampling technique. Learners were selected by dividing each class into three groups and randomly selecting three learners from each group/strata by the researcher for the sake of objectivity. The stratification was to draw three Grade 1 learners from the top, three from the middle and three from the bottom level of achievement to take part in eEGRA assessment. This level assessment was decided upon by the researcher with the help of the teachers concerned. In total twelve teachers (6 Grade 0 and 6 Grade 1), and 54 learners (from six different schools)

constituted the sample of this study. There were two sets of teachers (Grade 0 and Grade 1) in the sample because the same Grade 0 learners were taught by different Grade 1 teachers than those who taught them in Grade 0.

Methods

Data were collected through interviews, lesson observation, learner assessment (eEGRA test) and document analysis.

Teacher interviews

Both Grade 0 and Grade 1 teachers were interviewed. The interviews were conducted individually and on a face to face basis. Grade 0 teachers were interviewed on how they promoted Grade 0 learners' EL skills; and Grade 1 teachers were interviewed on what they expected Grade 0 learners to be able to do in terms of literacy when they proceeded to Grade 1. The qualifications of the teachers interviewed, as indicated in Table 1 of the 'findings section' of this article, ranged from Grade 12 to a bachelor's degree in Lower Primary.

Lesson observation

While both Grade 0 and Grade 1 teachers were interviewed for different purposes, lesson observation only applied to Grade 0 teachers. The reason for this was for the researcher to see how Grade 0 teachers prepared the EL skills of their learners before entering Grade 1. The researcher used an observation checklist (as in Appendix 1) to see how teachers scaffolded learning; how they collaborated learning and the types of interactions they had with learners, as well as how teachers supported learning so as to help learners move from their current zone of proximal development to the next zone of proximal development.

Document analysis

Document analysis was used to strengthen the context of description of learning content. This included Grade 0 syllabus, Grade 0 syllabus guide, teacher lesson plans and the benchmark tests for Grade 1 learners. Documents were analysed against Vygotsky's theory, for example:

1. *Curriculum documents:* The researcher analysed curriculum documents against their level of relevance to both Grade 0 learners and Vygotsky's theory of how children learn; how teachers implemented the curriculum in line with Vygotsky's theory; and the specificity of learning content.
2. *Lesson plans:* Lesson plans for Grade 0 teachers were analysed in light of how they addressed and spoke to Vygotsky's theory of how children learn; for example, does the teachers' style of mediating learner foundational literacy prepare learners to learn to read in Grade 1? Does the teacher scaffold learning to assist children to acquire new knowledge? Finally, does the type of collaboration in the classroom promote learning in line with Vygotsky's theory of how children learn?

Learner assessment (eEGRA test data)

The emergent Early Grade Reading Assessment (eEGRA) test tool (the paper version) collected quantitative data and was an adaptation of the EGRA tool (Harrison & Hodgskiss, 2017). The adaptation of the original EGRA included the removal of a section on non-word reading, removal of passage reading by learners which was replaced by passage reading by the assessor, thereafter asking learners' questions on the passage read. The eEGRA test was administered in Silozi, the learners' MT. At the beginning of learners' Grade 1 year, Grade 1 learners who participated in this study, followed

from Grade 0 (54 learners, 9 learners per school) were orally tested. The reason for conducting the eEGRA test at the beginning of Grade 1 and not in Grade 0 was that Grade 0 is the foundation class where teachers engage learners in preparatory activities that promote their EL skills in order for them (learners) to demonstrate their level of acquisition and internalization of such skills in Grade 1. A total of 9 questions were asked beginning with book handling (print concept), writing of name, letter names, letter sound fluency, syllables, initial sounds, end sounds, rhyming words and passage reading. These questions were aimed at establishing whether learners' EL skills were sufficiently developed in Grade 0 for formal reading in Grade 1.

However, for the purposes of this article, Grade 0 learners were only tested on letter names to ascertain whether or not they were now able to identify and read them (letters) as knowledge of letter names forms the basis of reading in junior primary (Foulin, 2005). The learner also needs to be able to name letters in order to identify them and bring them together when spelling out a word (Blevins, 1998). Learners were assessed on all the letters and they (learners) were asked to use expressive responses to demonstrate knowledge of letters. Pseudonyms of Grade 1 schools that participated in the eEGRA test were used as a measure to promote confidentiality; Urban School 1 (US¹), Urban School 2 (US²), Peri-Urban School 1 (PuS¹), Peri-Urban School 2 (PuS²), Rural School 1 (RS¹) and Rural School 2 (RS²).

Data analysis

The variety of data sets collected enabled cross triangulation and improved the potential for validity and reliability of results. The qualitative data was analysed thematically using a Vygotskian framework which ensured that theory was

embedded in the study and analysis. The quantitative data was analysed statistically using the Analysis of Variance (ANOVA) test. The ANOVA test was significant in order to check if the means of the different schools were significantly different from each other and the possible reasons for such differences. The eEGRA test results were also descriptively analysed to show individual learners' performances on test items.

Findings

The findings of this study are presented under research demographics, teacher interviews, curriculum documents, lesson

plans, observation of practice, and eEGRA test.

Research demographics

Teachers who participated in this study were all female; and did not have a pre-primary teaching qualification, except for PuST¹ with a Pre-primary Certificate. Therefore, these teachers taught in a grade they were unqualified for because of a lack of qualified Grade 0 teachers in the Zambezi region. All the teachers were black, with ages ranging from 30 to 54 years and with qualifications ranging from ordinary Grade 12 to a Bachelor's Degree in Lower Primary, obtained from various institutions (as in Table 1, below).

Table 1: Research demographics

Teacher Name	Age	Sex	School Type	Learner numbers	Grade 0 experience	Teacher qualifications	Where obtained
UST ¹	40	F ³	Urban	28	2 years	BETD ⁴	CCE ⁵
UST ²	30	F	Urban	39	6 years	BETD	CCE
PuST ¹	37	F	Peri-urban	15	2 years	Pre-primary Certificate	Tutaleni
PuST ²	38	F	Peri-urban	28	1 year	BED ⁶	UNAM ⁷
RST ¹	47	F	Rural	26	2 years	Grade 12	Isise Sec ⁸ School
RST ²	54	F	Rural	21	6 years	BETD	CCE

All the schools used Silozi as their Language of Learning and Teaching (LoLT). In some of these schools, the Pre-primary phase was still in its infancy stage as it only became part of Junior Primary in 2015 after Namibia's curriculum revision of 2014. However, teachers with six years of teaching experience (Table 1) were among the schools that had Grade 0 prior to the Junior Primary curriculum overhaul in 2014 (Education in Namibia, 2016, April).

Teachers' interviews

Six teachers were interviewed on their understanding of EL as shown in Dialogue Box 1 below. The questions that were used in the teachers' interviews were derived from a

³ Female

⁴ Basic Education Teacher Diploma

⁵ Caprivi College of Education

⁶ Bachelor of Education

⁷ University of Namibia

⁸ Secondary

Vygotskian framework together with specifically asking about conceptual understandings of EL and mediation thereof.

Dialogue Box 1: Responses to the question: “What do you understand by the term emergent literacy?”

UST¹: Literacy I think it is all about reading. Now, emergent I think it is like emergence, I don't know, but literacy is all about reading.

UST²: Emergent literacy I think it is the knowledge that these learners they are coming with it, that they have already, that they do not come and acquire it from school; it is the one that they start with them to read and write, meaning when they emerge, it is the starting, the starting of knowledge for these learners.

PuST¹: It is whereby you imagine something when learners are reading or talking.

PuST²: These are the materials found in the classroom which can help the learners to read. Any materials which is pasted on the wall which can just help the kids when they just look at that thing, they just learn something. Either a picture or a word.

RST¹: I understand by saying emergent means a social group taking place in schools during teaching process.

RST²: (*Remains silent for a while*)...I think foundational literacy is concerning about reading and learning

The data in Dialogue Box 1 above revealed that teachers were not well versed with teaching Grade 0 and struggled to apply their understanding of the concept of EL to prepare Grade 0 learners for reading in Grade 1. Their lack of understanding of EL was demonstrated during the researcher's interviews with the teachers and when the researcher observed Grade 0 teachers' lessons (through their practice); as well as document analysis, as details thereof are given below. In this section, pseudonyms⁹ of research participants are used.

While 4 of the 6 Grade 0 teachers (UST¹; UST²; PuST² & RST²) demonstrated some understanding of EL, 2 of the 6 Grade 0 teachers (PuST¹ & RST¹) proved that they did not understand the concept of EL at all. These were some of these teachers' responses: EL is “*Whereby you imagine something when children are reading or talking*” (PuST¹); “*Emergent means a social group taking place in*

schools during the teaching process” (RST¹). Teachers' lack of understanding of EL suggests their inability to consciously mediate (Vygotsky, 1978) basic literacy learning in Grade 0. PuST² (1 of the 6 teachers), relating the concept of EL to “*materials that are found in the classroom*”, is partially true because when a child looks at print in their surroundings they use their emergent knowledge of letters and words to try and understand what they are seeing and to ‘read’ the text. Interview data also showed that UST² started to understand that EL is beginning to emerge from the child and is brought to class, as per the following UST²'s response: “*Emergent literacy I think it is the knowledge that these learners they are coming with it, that they are having already, that they do not come and acquire it at school*”. UST²'s stance is supported by what Vygotsky (1978) says about the child's existing knowledge and building on that knowledge in order to move from lower mental functions to higher mental functions. The results further shows that 3 of the 6 teachers (PuST², RST¹ and RST²) demonstrated a general lack of

⁹ UST¹= Urban School Teacher 1; UST²= Urban School Teacher 2; PuST¹= Peri-urban School Teacher 1; PuST²= Peri-Urban School Teacher 2; RST¹=Rural School Teacher 1; RST²=Rural School Teacher 2.

understanding of EL with teachers considering EL to be specific to reading, a social group activity, materials found in the classroom, imagining something, learning or not knowing at all, which could be attributed to the Namibian Grade 0 literacy curriculum documents' silence on the concept of EL with the curriculum putting more emphasis on "laying a solid foundation for formal learning" (Ministry of Education, 2015, p. 1), an idea not linked to mediating EL.

The teacher interviews showed that the lack of understanding of EL was specific to Grade 0 and not Grade 1, as seen in the statement: "*Emergent literacy is all about reading*" (UST¹). The root of the problem could be ascribed to teachers not being trained specifically for Grade 0 and being seconded from higher grades into Grade 0 and a curriculum that did not provide the appropriate guidance, with no mention at all of the concept of EL. Consequently, the teachers were poorly equipped to understand the age group they were teaching and resorted to a default position of using the knowledge they had already acquired which was for a higher grade. They were in fact drawing from their own existing knowledge.

Interview data also demonstrated that teachers had various views about how they mediated EL in Grade 0. For example, 3 of the 6 teachers (UST¹, PuST¹ & PuST²) expressed that they mediated EL by using pictures and articulated their answers as follows: "*I use pictures*" (UST¹); "*I use books with pictures*" (PuST¹); "*I use pictures*" (PuST²). Research claims that the use of tools is critical as it "enables us to do things beyond our natural capacities" (Bodrova & Leong, 2017, p. 4). However, while the use of pictures was observed during lessons, teachers used them in a more formal manner and set the bar too high. In this article, setting the bar too high implies that teachers introduced learning content at a sophisticated level making it

inappropriate for Grade 0 learners, like asking learners to read words on word cards (UST²), and asking learners to paste words on relevant parts on the picture (UST¹), thus defeating the whole purpose of informally preparing Grade 0 learners for conventional reading and writing in Grade 1. According to Polanki (2013), teaching in Grade 0 should be informal. RST¹ raised the concept of holistic development when she responded that, "*We teach learners to be holistic in all areas of development, like emotional, social and others*". Though RST¹ didn't indicate activities she did with learners to that effect, she expressed the philosophy of the Grade 0 curriculum which is holistic development of children (Vygotsky, 1978). Furthermore, 1 of the 6 teachers (UST²) also seemed to understand how EL should be mediated to facilitate literacy learning in Grade 1. The following was UST²'s response, "*We teach them how to handle a book*". This is crucial because before a child can start reading from a book, s/he should know how to move from one page to the next (Armbruster, Lehr, & Osborn, 2003).

Document analysis supported the finding that Grade 0 teachers had an inadequate perception of EL and its application in class as was seen in the types of lessons they planned which assumed the children were already able to recognize, read and write letters and words. For example, in their lesson plans children were required to 'read' sentences and were also required to 'write' activities in their exercise books. This seems to show that teachers had a challenge to mediate foundational literacy skills of learners as they planned lessons that were more formal, thus unsuitable for Grade 0 learners. It is also worth mentioning that the manner in which teachers (from different contexts, i.e. urban, peri-urban and rural) expressed their understanding of EL, in Dialogue Box 1 above,

demonstrated their different perceptions and understanding of the concept of EL and possibly how it (EL) can be mediated in class.

Curriculum documents

The Grade 0 syllabus and teachers' manual are intended to be the guiding documents assisting the teacher to do her job and should ensure quality in preparing children's EL skills in Grade 0 (Ministry of Education, 2015). The literature review showed that the Namibian Grade 0 curriculum documents were problematic because they were hastily conceived and did not have Grade 0 specialists involved in their creation (Asheeke, 2017; Tjihenua, 2016). A document analysis of the Namibian curriculum revealed what could be termed a 'generic curriculum' meaning that it was written in a way that meant it could be applied to almost any grade in the foundation phase. Grade 0 is a highly specialized year and therefore needs a curriculum that recognises this specialization if it is to guide the teacher.

The curriculum analysis further showed too much emphasis on reading and writing in a way that was more appropriate to Grade 1. For example, a "*child should grip the crayon or pencil in the correct way*" (Ministry of Education, 2015, p. 18); "*When writing children should sit comfortably and well back in their seat*" (Ministry of Education, 2015, p. 18). It did not provide examples of activities that would show the Grade 0 teacher how to stimulate EL and or learning through play. A further problem was that the teachers were unqualified (Table 1) to implement the curriculum as they were drawn from higher grades and not Grade 0. The use of examples to illustrate how to implement the curriculum was few and far between. In addition they could be considered euro-centric, culturally insensitive and did not recognise the need to draw from the learners' existing knowledge which

Vygotsky (1978) regards as critical to understanding learning content. For example, the curriculum talks about the "Gingerbread boy" which is not contextual, as it is not an African example. Without this type of explicit guidance, the Grade 0 teacher finds it difficult to understand how to practically implement the curriculum. When this is coupled with teachers who have not received training in teaching Grade 0 but are simply brought from a higher grade to work in Grade 0, the latter issue becomes particularly relevant (Tjihenua, 2016). Some of the teachers in this study were unable to conceptualize what is meant by EL or how to teach in a way that was appropriate to Grade 0.

Lesson plans

An examination of the teachers' planning documents revealed a number of issues that could contribute to poor foundational literacy results as seen in the eEGRA test. These included planning lessons that were not age appropriate, for example PuST¹ planned a colouring lesson and UST¹ and UST² planned lessons where learners were asked to read from flashcards. There was no lesson where teachers engaged learners in a game or any form of play so that learning could be play based. According to Vygotsky (1978) and Karpov (2003), literacy learning in Grade 0 should be play based. All the 6 teachers (UST¹, UST², PuST¹, PuST², RST¹ and RST²) did not show evidence in their lesson plans that they adjusted their lessons to meet learners' needs. This meant that teachers were not reflecting on their practice or recognising the needs of their learners. Furthermore, the types of assessments that were being indicated did not coincide with what a Grade 0 learner should be able to do. For example, UST¹ (as already stated above) asked learners to write the letter 'b' on the chalkboard and this was at the beginning of the year when learners have not had enough exposure to practice. In

Grade 0 a learner is not expected to be able to write sentences, yet, this was the sort of assessment that was indicated.

Observation of practice

It was important to not only interview teachers about what they did but to observe what they actually did in their classrooms to understand if there was a correlation between what teachers said and what teachers did. A number of discrepancies emerged. For example, teachers stated during interviews that children should be read to and that they used a book corner to mediate EL. However, the researcher never observed either the presence of a book corner or a teacher reading to a child. This meant that children did not have the opportunity to handle books or to hear stories and discuss them to allow for the development of their vocabulary (Armbruster, Lehr, & Osborn, 2003). Such a move also demonstrated a disconnect between what was being said and what was being done, the root cause being some teachers' lack of understanding of EL. Teachers also required learners to keep quiet most of the time, labelling classroom talk as noisemaking, thereby discouraging them from using language to learn. There was no opportunity to 'discuss' concepts but rather learners answering close ended questions in a 'parrot-like' fashion. According to Vygotsky (1978), learning in any environment should be collaborative and discursive.

Another example of formal class activity included RST² asking Grade 0 learners to read a rhyme written on the chalkboard with her using a pointer, and UST² asking Grade 0 learners to read words on the board. These activities showed the teachers drawing from their

existing knowledge which was Grade 1 based and not understanding that a Grade 0 child is not able to read words or rhymes and that learning in Grade 0 is informal (Polanki, 2013). Such activities are also evidence of the formalization of Grade 0 which meant that teachers were overly formal in their practice. As stated earlier, questions asked by teachers were close ended and not explorative (Vygotsky, 1986). For example, "*how many eyes, ears does the picture have?*" (RST¹). This resulted in learners not being allowed to explore or discuss the content of the lesson but rather to provide the teacher with a predetermined answer.

eEGRA results

The quantitative data that was gathered was derived from the eEGRA test which was used to determine if the learners had consolidated EL in order to demonstrate foundational literacies at the beginning of Grade 1. For the purposes of this article, as already indicated in the methodology section, the researcher focused and tested learners on *letter names* only, referred to in this article as Question 1, with a maximum of 40 marks. The focus on letter names is critical as Namibia typically focusses on letter sounds (based on letter names) in the early grades due to the fact that letter sound knowledge supports blending sounds into words for initial reading skills. Table 2 below is a comparative analysis of Grade 1 learners' abilities to name letters across the six schools thereby providing an overview of the best performing school on Question 1 (letter names). The numbers in the table represent the number of letters which were read correctly by each learner at the six schools, expressed as a percentage.

Table 2: Schools' and learners' performance in percentages on Question 1 (letter names)

Learners	Schools					
	US ¹	US ²	PuS ¹	PuS ²	RS ¹	RS ²
1	0	25	0	0	0	75

2	0	0	0	0	0	15
3	0	35	0	5	12.5	65
4	2.5	0	0	0	52.5	20
5	0	0	0	45	97.5	0
6	0	5	0	85	55	0
7	0	15	0	90	82.5	97.5
8	0	10	0	82.5	27.5	0
9	0	15	0	57.5	92.5	0
Mean	0.3	11.7	0	40.6	46.7	30.3

Quantitative data from the eEGRA test in Table 2 (on letter names) revealed some huge discrepancies in the results on the task by some of the learners within a particular school, for example, Learners 7 and 1 in comparison to Learners 2, 5, 6, 8, and 9. The learners' scores expressed as total percentages in Table 2 formed the basis for either accepting or rejecting the null hypothesis. To compare the mean scores of the various schools, as a way to determine the level of teacher mediation (benchmarked by learner performance) of EL (on letter names) in Table 2, the researcher, as already stated, formulated statistical null hypothesis (H_0) shown below:

- **H_0** : There is no significant difference in the level of teacher mediation of EL across the six schools.
- **H_1** : There is a significant difference in the level of teacher mediation of EL across the six schools.

Table 2 shows that RS¹ was the highest performing school, with a mean value of 46.7%. PuS¹ on the other hand was the lowest performing school, with a mean value of 0%. It appears that the low mean values were due to learners performing poorly on this question (which required learners to say the letter names) and in some cases getting zero [0]. The mean marks obtained by different schools, ranging from 0% to 46.7% were generally too low. This implies that the difference in performance was significant (ANOVA One

– way, $df = 5, 48, p = 0.001249$, meaning that $p < .05$), (see Appendix 2).

Our null hypothesis (H_0) that there is no significant difference in teacher mediation of EL at the various schools is therefore rejected because there is indeed a significant difference in the level of teacher mediation of EL across the six schools. However, such discrepancies could not only be attributed to the level of teacher mediation of EL, but might also be attributed to the learners' home environments, teachers' lack of readiness to teach Grade 0 learners, as well as the sampling technique adopted by the researcher, which was made up of 3 top, 3 middle and 3 bottom learners, which might have possibly included learners who were not ready yet for Grade 1.

It is worth noting that contrary to popular belief that urban schools would out-perform a rural school because they have better qualified teachers and facilities, this study showed that the top performing school was in fact a rural school, (RS¹), with a mean of 46.7%, as opposed to urban schools with mean values of 0.3% (US¹) and 11.7% (US²) respectively. This might suggest that learning is not only linked to having the best possible facilities or teacher qualifications but perhaps about how well the teacher mediates learners' foundational literacies, the quality of learners, teacher commitment as demonstrated by RST¹, with only a Grade 12 qualification, as well as the mediation that learners get at home from parents and siblings. Another reason could be that in

rural schools there is usually a stronger focus on mother-tongue in the community, while in urban schools, English is used more frequently and could cause confusion between languages and their respective letter names and sounds.

Conclusion

The concept of EL is key to mediating foundational literacies in Grade 0. This investigation thus explored teacher understanding of EL and how teachers' understanding of the concept of EL influenced their mediation of learner foundational literacies in Grade 0. However, this study has found that at the root of the problem appeared to be a lack of Grade 0 content knowledge and conscious mediation. The Grade 0 teachers were firstly teaching a grade they might be unfamiliar with, due to lack of training (Table 1) (Tjihenuna, 2016), and secondly, they appeared to be unsure of how to mediate EL. Literacy in Grade 0 is considerably different to that of Grade 1 as the child is beginning to develop their literacy concepts whilst in Grade 1 the child should already have established their understanding of the basics of reading and writing. The conceptual understanding of EL and how to mediate this in a Grade 0 classroom was lacking and therefore being replaced by a default position of mediating at Grade 1 level, where teaching is formal. According to Polanki (2013), teaching and learning in Grade 0 can only be successful if approached in an informal way, like teaching through play.

The benefit of the research was not only to establish why Grade 0 learners were entering Grade 1 without foundational literacies but also to identify potential changes. It is evident that teachers who are teaching in Grade 0 must be given appropriate training that allows them to understand the uniqueness of the grade. Furthermore, the Grade 0 curriculum content level is inappropriate

and should thus be revised to suit the needs of the Grade 0 teacher and learner. According to Knestrick (2012), Vygotsky claims that if the content level is too high, learning becomes uninteresting to children resulting in them rejecting what is expected to be learnt. Lastly this research recommends ongoing district support for Grade 0 teachers in order to ensure quality education and the establishing of firm foundational literacies.

References

- Antonucci, P. (2000). Reading in the zone of proximal development: Mediating literacy development in beginner readers through guided reading. *Reading Horizons, 41*(1), 19-33.
- Armbruster, B. B., Lehr, F., & Osborn, J. (2003). *A child becomes a reader: Kindergarten through grade 3*. Jessup: The National Institute for Literacy.
- Asheeke, J. (2017, October 6). Training teachers is vitally important. *Windhoek Observer*, p. 1.
- Blevins, W. (1998). *Phonics from A to Z*. NY: Scholastic Inc.
- Bodrova, E., & Leong, D. J. (2007). *Tools of the mind: The Vygotskian approach to early childhood education* (2nd Ed.). New Jersey: Pearson.
- Bodrova, E., & Leong, D. J. (2017). The Vygotskian and post-Vygotskian approach: Focusing on "the Future Child". In L. E. Cohen & S. W. Stupiansky (Eds.), *Theories of early childhood education: Developmental, behaviourist, and critical* (pp. 58-70). NY: Routledge.
- Campbell, L., & Campbell, B. (2009). *Beginning with what students know: The role of prior knowledge in learning*. Retrieved November 10, 2017, from <https://www.corwin.com/sites/default/files>

- Creswell, J., & Clark, V. (2011). *Designing and conducting mixed methods research*. London: SAGE.
- Djonov, E; Torr, J., & Stenglin, M. (2018). *Early language and literacy: review of research with implications for early literacy programs at NSW*, Sydney, NSW: State Library of NSW and Department of Educational Studies, Macquarie University.
- Feuerstein, R. (1979). *The dynamic assessment of retarded performers: The learning propensity assessments devise theory, instruments and techniques*. Baltimore, MD: University Park Press.
- Foulin, J. (2005). Why is letter name knowledge such a good predictor of learning to read? *Reading and writing*, 18, 129-155.
- Harrison, G., & Hodgskiss, J. (2017). *Emergent literacy in Grade R*. Rhodes University, Centre for Social Development. Grahamstown: Rhodes University.
- Harrison, G., & Muthivhi, A. (2013). Mediating self-regulation in kindergarten classrooms: an explanatory case study of early childhood education in South Africa. *Journal of Education*, 57, 79-102.
- Inan, H. Z. (2010). Literacy development of a pre-schooler: An exemplary case. *The Journal of International Social Research*, 3(11), 365-371.
- Justice, L. M., Bowles, R. P., & Skibbe, L. E. (2006). Measuring preschool attainment of print- knowledge: A study of typical and at risk 3 to 5 year old children using item response theory. *Language, Speech and Hearing Services in Schools*, 37, 224-235.
- Karpov, Y. V. (2003). Internalization of children's problem solving and individual differences in learning. *Cognitive Development*, 18(3), 377-398.
- Kozulin, A. (1990). *Vygotsky's psychology: A biography of ideas*. Cambridge: MA: Harvard University Press.
- Kramersch, C. (2004). Social discursive constructions of self in L2 learning. In J. P. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 133-144). UK: Oxford University Press.
- Knestrick, J. (2012). *The zone of proximal development (ZPD) and why it matters for early childhood learning*. Retrieved April 30, 2018, from <https://www.nwea.org>.
- Lantolf, J. P. (1994). Sociocultural theory and second language learning: Introduction to the special issue. *The Modern Language Journal*, 78(4), 418-420.
- Luongo-Orlando, K. (2010). *The cornerstones to early literacy: Childhood experiences that promote learning in reading, writing and oral language*. Canada: Pembroke Publishers.
- McCracken, J., & Barcinas, J. (1991). Differences between rural and urban schools, student characteristics and student aspirations in Ohio. *Journal of Research in Rural Education*, Winter, 7(2), 29-40.
- Ministry of Education. (2015). *Pre-primary syllabus: Junior primary syllabus*. Okahandja: NIED.
- Ministry of Education (2014). *Implementation of the revised curriculum for basic education*. Retrieved March 30, 2020, from <http://www.moe.gov.na>
- Nakale, A. (2016, May 11). Government to help 3000 under-qualified teachers. *New Era*, pp. 1-2.
- O'Carroll, S., & Hickman, R. (2012). *Narrowing the literacy gap: Strengthening language and literacy development between birth and six years for children in South Africa*. Retrieved October 22, 2017, from

- http://www.wordworks.org.za/wp_content/uploads/2012
- Polanki, P. (2013). *Schoolification of children under six is harmful*. Retrieved May 1, 2018, from <https://www.firstpost.com/india/schoolification>
- Rhyner, P. M., Haebig, E. K., & West, K. M. (2009). Understanding frameworks for the emergent literacy stage. In P.M. Rhyner (Ed.), *Emergent literacy and language development: Promoting learning in early childhood* (pp. 5-26). NY: Guilford Press.
- Shabiralyani, G., Hasan, K. S., Hamad, N., & Iqbal, N. (2015). Impact of visual aids in enhancing the learning process case research: District Dera Ghazi Khan. *Journal of Education and Practice*, 6(19), 226-234.
- Stott, D. (2016). Making sense of the ZPD: An organizing framework for Mathematics education research. *African Journal of Research in Mathematics, Science and Technology Education*, 20(1), 25-34.
- Tjihenua, T. (2016, April, 8). The rise and rise of unqualified teachers. *The Namibian*, p. 5.
- Tomlinson, C. A., & Allen, S. D. (2000). *Leadership for differentiating schools and classrooms*. Virginia, USA: ASCD.
- Van de Pol, J., Volman, M., & Beishuizen, J. (2010). Scaffolding in teacher-student interaction: A decade of research. *Educational Psychology Rev*, 1-26.
- Van Rensburg, O. J. (2015). The school readiness performance of a group of Grade R learners in primary schools in the Gauteng Province of South Africa. *South African Journal of Childhood Education*, 5(1), 1-23.
- Verenikina, I. (2008). *Scaffolding and learning: Its role in nurturing new learners*. Australia: University of Wollongong.
- Vygotsky, L. S. (1978). Mind in society. In M. Cole, J.V. Steiner, S. Scribner, & E. Souberman (Eds.), *The development of higher psychological processes* (pp.1-159). Cambridge: MA: Harvard University Press.
- Vygotsky, L. S. (1986). *Thought and language*. Cambridge: MA: MIT Press.

APPENDIX 1

Observation Tool

Name of teacher**Sex**.....**Name of School**.....

Socioeconomic Context/status of school.....**Years of teaching experience**.....

Institution where teaching qualification was obtained.....

Areas of Mediation (Vygotsky's approaches to learning)	How the teacher mediates	Lesson topic according to the curriculum	Tools for mediation used [Tick in appropriate box]	Resources used	Observer's Comments on how the teacher mediates emergent literacy	Field Notes: Others

This section defines the tools for mediation that should be in evidence when the teacher is engaging in literacy lessons.			Which tools were evident in the observed lessons? A tick is assigned for the relevant areas observed.				
			YES	NO			
Collaborative learning							
Zone of Proximal Development (ZPD)							
Scaffolding							

APPENDIX 2

Anova: Single Factor
SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
US ¹	9	2.5	0.277778	0.694444
US ²	9	105	11.66667	150
PUS ¹	9	0	0	0
PUS ²	9	365	40.55556	1585.59
RS ¹	9	420	46.66667	1495.313
RS ²	9	272.5	30.27778	1466.319

ANOVA

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	18745.37	5	3749.074	4.788174	0.00124	2.40851
Within Groups	37583.33	48	782.9861		9	4
Total	56328.7	53				