

CHAPTER ONE

INTRODUCTION

1.1. Overview

This chapter provides the background information to this study, the purpose of the study, the study's objectives, research questions, and statement of the problem. The chapter further highlights the significance of the study, limitations as well as the definition of terms. Finally, the chapter provides the theoretical framework which guided this study.

1.2. Background to the study

1.2.1. Radio and Education

Radio has been used in education ever since it became available (Butcher, 2003). Because of having been there for a long time, radio has become more acceptable in different parts of the world by people with different cultural backgrounds. In the early 1970s, educationalists began standardizing the radio use in education and this eventually saw the emergence of education related programmes such as programmes as the Interactive Radio Instruction (IRI) programme (World Bank, 1998).

1.2.2. Interactive Radio Instruction (IRI) programme

IRI programme is a form of distance education where lessons are delivered through the radio; it is a teaching methodology in which a radio broadcast guides a teacher and learners through the activities of a lesson (Banda, 2007; DODE & QUESTT, 2005). The original IRI model was a mathematics series created in Nicaragua in the early 1970s by a team from Stanford University with the support of the U.S. Agency for International Development (USAID). Since then, more than two dozen countries around the world in places as diverse as Australia, Canada, Ghana,

India, and Zambia have engaged in developing IRI programs for a variety of subjects, audiences, and learning environments (World Bank, 1998; Anzalone & Bosch, 2005). These countries' experiences have shown that IRI can be used effectively to enhance learning in a large audience and can help reduce equity gaps between girls and boys and between rural and urban populations by standardizing certain learning processes (World Bank, 1998). It is from this context that the government of Zambia through the Ministry of Education welcomed the use of the IRI programmes not only in government schools but also in rural community schools. According to the Ministry of Education (2003), radio learning was not only seen as one way through which equity gaps between girls and boys and between rural and urban populations would reduce but also as one way which would increase literacy gains among vulnerable children, especially in rural areas.

1.2.3. Learning at Taonga Market Programme

The IRI programme adopted and developed for use in Zambia is referred to as "*Learning at Taonga Market (LTM)*". LTM is a delivery of the Zambian primary school curriculum that infuses methodologies such as New Breakthrough to Literacy (NBTL) and Step Into English (SITE) with the IRI methodology. The NBTL is a one year course during which learners are taught how to read and write for the first time (initial literacy) using their familiar language. SITE is a course in which learners are introduced to the second language. In the Zambian case, English language.

In Zambia, the LTM lessons are written and recorded by Educational Broadcasting Services (EBS) of the Directorate of Open and Distance Education (DODE) of the Ministry of Education (MOE) in collaboration with the Quality Education Services Through Technology (QUESTT) Project of Education Development Centre, a USAID-funded project (DODE & QUESTT, 1995).

Each IRI lesson at LTM center consists of a 30-minute broadcast, along with activities that the class is supposed to complete before and after the broadcast. The activities for each lesson are described in a mentor's guide. The programme follows the national curriculum and MOE's calendar of three terms. There are 150 lessons at each grade level with 50 lessons in each term, plus five teacher training broadcasts at the beginning of each term. The Zambian National Broadcast Corporation (ZNBC) broadcast Grade 1 radio programmes in 2000 in a pilot exercise. Since then, EBS has been developing programmes for additional grades. In 2005 *Learning at Taonga Market* was broadcast to Grades 1 through 5 (DODE & QUESTT, 1995).

The programme is designed to let learners complete seven years of education through the radio lessons and write the Primary School Certificate Examinations. Those learners who pass the Grade Seven examinations can attend upper basic grades in the government schools or enroll in the DODE Alternative Upper Basic Programme at distance learning centers. Learners who can manage to get a school place in a government school are free to join the mainstream at any level (Milambo, 2006; DODE & QUESTT, 1995).

The LTM is mostly attended by the vulnerable children, majority of them being orphans. The teachers at LTM are referred to as mentors who are contracted on voluntary basis. In most cases, these mentors may have just completed their secondary education and not done the teaching training. The only training they may have is that of being a mentor provided for by the IRI programme (Milambo, 2006).

1.2.4. Contextual Background

The Zambian government has also been concerned about the quality of education particularly the low literacy levels at basic school level. A number of strategies including the Interactive Radio

Instruction have since been put in place to address the issue of quality. While the IRI is seen as innovative methodology with the promise of improving quality, the evaluation study that was conducted in 2003 revealed that learners did not show marked improvement particularly in the areas of language production and writing (MoE, 2003). For instance, in a Grade 1 Literacy test where the possible score was 43, the average score of 17.0 was recorded among learners from the Interactive Radio Learning Centers (IRLCs), while a 30.5 score was recorded from IRI GRZ Pilot Schools (DODE & QUESTT, 2005).

This performance trend under IRI became a source of concern among the stakeholders such that recommendations to bring about effective learning began to be made. One underlying factor accounting for the low performance trend under the IRI could probably be the language of instruction. When the IRI was introduced in 2000, the medium of instruction was predominately English. Thus, when the NBTL was implemented, the IRI methodology promoted the use of familiar language for initial literacy for grade one lesson (DODE & QUESTT, 2005). Despite this transformation in the education policy however, the Education Broadcasting Services (EBS) in conjunction with Education Development Center (EDC) continued producing and broadcasting lessons in English in accordance with the school syllabus covering Literacy and English language, Mathematics, Science, Social Studies, Life Skills, and HIV/AIDS (Banda, 2007).

Given the importance of a familiar language of initial literacy, it was recommended that although the lessons were broadcast in English, mentors and teachers were encouraged to tailor lessons to the local audiences by translating the content into a familiar language during pauses in the broadcasts (MOE, 2004). Although all these efforts were made, the learner performance in literacy continues to be below the expected level. A post-test mean of only 17 percent for IRI and

community schools reported by DODE and QUESTT (2005) was far below the expected performance. For this reason, this study was carried out to establish the factors contributing to the low literacy levels among the IRI learners.

1.3. Statement of the Problem

The IRI mode of learning was introduced in Zambia in 2000 as an alternative learning approach to conventional teaching. Studies elsewhere seem to indicate that this learning mode improves the quality and effectiveness of learning especially in the area of literacy and mathematics (Tilson, et al., 1991; Eakle and Garber, 2003; World Bank, 1998). For this reason, the IRI programme received a lot of support from the government and the church. The government through the Ministry of Education even recommended that NBTL methodology be used in IRI centers since there was increasing evidence indicating that children learnt better when they are exposed to initial literacy in a familiar language (Sampa, 2003; MOE, 1996; Matafwali, 2010). Despite numerous supports for the IRI mode of learning, recent studies in Zambia seem to indicate that literacy gains among children under the IRI programme are relatively low (DODE, 2005; 2006; 2009). However, the factors behind the apparent low literacy gains of learners under the IRI programme were not known. It is against this background that this study sought to establish the factors behind these low literacy gains among learners under the IRI programme.

1.4. The Purpose of the Study

The purpose of this study was to establish the underlying factors behind the low literacy gains among learners under the IRI programme. The study was guided by the research objectives outlined below.

1.5. Objectives

1.5.1. Main objective

To establish the factors behind the low literacy gains among learners under the IRI programme.

1.5.2. Specific objectives

The study was guided by the following specific objectives:

1. To establish the general performance of learners in reading and writing.
2. To establish the extent to which learners are engaged in the meaningful learning activities.
3. To determine the effect on learners of mentors translating from English into learners' familiar language.
4. To identify challenges mentors are faced with when facilitating the IRI initial literacy lesson.

1.6. Research Questions

1.6.1. Main Question

What factors are behind the low literacy gains among learners under the IRI programme?

1.6.2. Sub Questions

The study was guided by the following research questions:

1. What is the general performance of learners in reading and writing?
2. To what extent are the learners engaged in the meaningful learning activities?
3. What is the effect on learners of mentors translating from English into learners' familiar language?
4. What challenges do mentors face when facilitating the IRI initial literacy lesson?

1.7. Significance of the Study

This study highlighted the factors contributing to the low literacy gains among IRI learners and the gaps that existed in the teaching of initial literacy using the IRI mode of lesson delivery. It is hoped therefore, that this would be informative to the producers of the IRI programme such as the Department of Open and Distance Education (DODE) under the Ministry of Education in Zambia to readjust the programme to suit the needs of the learners, making it to be in line with the language policy, which emphasizes teaching initial literacy using the familiar language of the learners. It is also hoped that the study would in particular inform DODE on the production of the appropriate initial literacy learning programme whose mode of delivery would be more meaningful and more accommodative to all the learners with varying learning difficulties, slow learners alike.

It is further hoped that the study would inform the policy makers on the stance they should take with regard to language use in radio instruction methodologies and in other technologies in general which the education system in Zambia has started using in teaching learners. Generally, therefore, it is hoped that the study would inform stakeholders on some of the factors that contribute to the low literacy gains among the IRI learners.

1.8. Delimitation of the Study

This study confined itself to observing initial literacy lessons and testing learners from one Learning at Taonga Market Center.

1.9. Limitations of the Study

Because this was a case study limited to a small sector of learners and mentors, findings may not be generalized to the larger population. The other limitation experienced was the time limit of

only one school term within which lesson observations and tests on the learners were done. By this time the Grade 1 learners had not learnt much of the initial literacy items. As such, the testing materials may have been over simplified to suit their level of understanding, and learners could not be tested and retested to verify the findings.

1.10. Operational Definitions

“Second language” or “Foreign language”: this is the language which is not an indigenous language. In the African context, this is the colonial language. In Zambia, it is mostly the English language.

Familiar language or Local language: a language which is well known and commonly used by children or learners in a given area.

Initial literacy: it is the learning of how to read and write for the first time.

Interactive Radio Instruction: a teaching methodology in which a radio broadcast guides a teacher and learners through the activities of a lesson. It is said to be interactive because it involves learners throughout the lesson in activities such as question and answer sessions, singing, plays, among others.

Learning at Taonga Market: is the name of the IRI programme that was developed for Zambia whose objective was to provide basic education to orphans and vulnerable children of school-going age who were unable to access formal education for various reasons.

Literacy: ‘literacy’ has been taken to basically mean ‘the ability to read and write’.

Mode: has been used to mean the style, the manner, the approach of doing something.

Mother tongue: the first language a pupil acquires from home. In other words, it is the parental language.

Study: has been used in this study to mean *learn about*, for instance, factors that contribute to low literacy gains among IRI learners.

Establish: has been used to mean ascertain.

1.11. Theoretical Framework

This study was guided by Piaget's (1971) and Papert's (1980) and Vygotsky's (1978) theories on constructivism. Piaget's theory on constructivism offers an insight on what children are interested in, and able to achieve, at different stages of their cognitive development. Piaget suggests that children will always learn something depending on how appropriate the learning item is in accordance with their level of development. Papert's theory on constructionism, in contrast, focuses more on the art of learning, or 'learning to learn', and on the significance of *making things* in learning. Papert is interested in how learners engage in a conversation with [their own or other people's] artifacts, and how these conversations boost self-directed learning, and ultimately facilitate the construction of new knowledge. Papert stresses the importance of tools, media, and context in human development. Vygotsky looks at learning as a social activity emphasizing on the role language and culture play learning. It is against these cognitive development and social constructivism tenets that the IRI mode of initial literacy lesson delivery was assessed. Therefore, what particularly befit this study from the theoretical approaches highlighted here are the way children cognitively develop and learn as contained in Piaget's theory and the way they socially interact using language as contained in Papert's and Vygotsky's social theories.

From this theoretical framework, we can deduce that there are a number of factors at play when it comes to the effective teaching by teachers and the eventual learning of the learners. We can point at the language used, the culture, the level of development of the learners, the learning

environment, the general social interaction, and the learning activities, among others, as some of the activities that interplay during the learning session. Depending on how well they are acknowledged, they have the potential to make learning either effective or ineffective.

CHAPTER TWO

LITERATURE REVIEW

2.1. Overview

In this chapter, relevant literature is reviewed so as to explain the theoretical perspectives through which the factors behind the low literacy levels of the IRI learners were established. This helped in identifying the gaps in the way the IRI initial literacy lesson was actually delivered.

2.2. Literacy development

2.2.1. The Role Oral Language Plays in Literacy Development

There is culminating evidence pointing to the role of oral language in the development of literacy skills. A lot of studies have offered a great deal of evidence of the importance of oral language in literacy achievement. One of the most consistent finding in the literature is that oral language abilities in early childhood predict beginning literacy skills such as phonological awareness, letter knowledge, concepts about print, and then later, reading achievement (Scarborough, 1990; Matafwali, 2010). The hypothesis that poor readers suffer from a general ‘lag’ in language development is mostly attributed to Scarborough (1990).

More specifically, Catts et al. (1999) tested the oral language and phonological processing profiles of good and poor second-grade readers when they were in kindergarten. The poor readers were three to four times more likely to have had phonological processing weaknesses and four to five times more likely to have had oral language problems. The results of the test were that 73% of the poor readers had exhibited deficiencies in some aspect of phonological skills or oral language with most readers (40%) having a combined deficit profile, almost 20% having

primary oral language deficits and less than 15% having phonological processing deficits. Almost all the children who fell in the latter group exhibited somewhat depressed scores on tests of oral language competence. Based on these results, Catts et al. (1999) concluded that phonological processing in kindergarten was a good predictor of Grade Two reading, but oral language skills also contributed substantial and unique variance. From these studies, we can see that good language background and the eventual use of it in, for instance, a classroom situation strongly determine how well a learner develops literacy, especially the aspects of reading and writing.

2.2.2. The Role of Active Learning in the Development of Literacy Skills

Active learning, a concept popularized by Bonwell and Eison (1991), is an umbrella term that refers to several models of instruction that focus the responsibility of learning on learners. It has been described as a situation where students should be actively engaged throughout class in more activities than just listening; learners are involved in dialog (conversation), debate, writing, and problem solving, as well as higher-order thinking.

Bonwell and Eison (1991) singled out small group work as one of the models of instruction where guided practice and differentiation can be done. For instance, pupils can argue and challenge themselves on whether the colour of the item before them is green or white. The teacher will be there to just give a ruling as a guide to learning. For example, the teacher may say *“This item is not green but white” and then the pupils who thought it was green will now know that it is white.*”

Bonwell and Eison (1991) further stated that presentations and debates, writing, role playing, learning games, outdoor experiences, class/group/buddy discussions, simulations/

demonstrations are the other models of instruction which make learning to be active. All these activities are in line with the way Atherton (2011:19) described Active Learning: “*I hear, and I forget; I see, and I remember; I do, and I understand*”, and this conclusively explains why active learning plays a vital role in literacy development. When learners not only hear; not only see; but also do, then the prime purpose of teaching and learning is achieved, that of understanding.

Research has established that traditional teaching practice based on the textbook-chalkboard-lecture-homework-test paradigm has long been criticized as inadequate and inappropriate for student learning (Johnson, 1999). Literature reports have also reiterated that exclusive use of lecturing creates a passive learning environment and that engineering students learn better by participating, acting, reacting, and reflecting, rather than by watching and listening to lectures (Olinger and Hermanson, 2002). Therefore, the use of techniques that engage students in the classroom in higher order critical thinking skills such as analysis, synthesis, and evaluation has been shown to be highly effective in improving students’ learning (Olinger and Hermanson, 2002). Several innovative approaches have been proposed in the literature to promote active learning. Examples include use of presentations and debates, writing, role playing, learning games, outdoor experiences, class/group/buddy discussions, simulations/demonstrations, among others. We can deduce, therefore, that the absence of *Active Learning* in a lesson renders the lesson ineffective and the acquired knowledge may not be sustainable.

Class discussion, where learners are expected to discuss material constructively and intelligently, is a good follow-up activity given the unit has been sufficiently covered already (Bonwell and Eison, 1991). The *think-pair-share* activity where learners take a minute to ponder the previous lesson, later to discuss it with one or more of their peers, finally to share it with the class as part of a formal discussion concretizes learners’ knowledge. It is during this formal discussion that

the instructor should clarify misconceptions. However students need a background in the subject matter to converse in a meaningful way. Therefore a "think-pair-share" exercise is useful in situations where learners can identify and relate what they already know to others (Bonwell and Eison, 1991).

Student debate is an active way for students to learn because it allows students the chance to take a position and gather information to support their view and explain it to others. These debates not only give the student a chance to participate in a fun activity but it also lets them gain some experience with giving a verbal presentation (Bonwell and Eison, 1991). This entails that any form of learning (IRI inclusive) should accommodate such activities which enhance active learning since it brings about effective learning.

Numerous studies have shown evidence to support active learning. Hake (1998) reviewed data from over 6000 physics students in 62 introductory physics courses and found that students in classes that utilized active learning and interactive engagement techniques achieved an average gain of 48% on a standard test of physics conceptual knowledge, the Force Concept Inventory, compared to a gain of 23% for students in traditional, lecture-based courses. Similarly, Hoellwarth and Moelter (2011) showed that when instructors switched their physics classes from traditional instruction to active learning, student learning improved from around 12% to over 50%, as measured by the Force Concept Inventory, which has become the standard measure of student learning in physics courses.

Furthermore, in "Does Active Learning Work? A Review of the Research," Prince (2004) found that "there is broad but uneven support for the core elements of active, collaborative, cooperative and problem-based learning" in engineering education.

Michael (2006), in reviewing the applicability of active learning to physiology education, found a "growing body of research within specific scientific teaching communities that supports and validates the new approaches to teaching that have been adopted."

In a 2012 report titled "Engage to Excel," the United States President's Council of Advisors on Science and Technology (PCAST) described how improved teaching methods, including engaging students in active learning, will increase student retention and improve performance in educational courses (Hake, 1998). One study described in the report found that students in traditional lecture courses were twice as likely to leave engineering and three times as likely to drop out of college entirely compared with students taught using active learning techniques. In another study, Hake (1998) reports that students in a physics class that used active learning methods learned twice as much as those taught in a traditional class, as measured by test results.

2.2.3. The Role Literacy Principles Play in Literacy Development

Bonwell and Eison (1991) also categorized some literacy practices as literacy principles. Among them we have *Classroom Practices which should always be aiming at maximizing "time on task"*. This has to do with the amount of time students are actively engaged in meaningful learning. It is stated that there are four steps that work well in a variety of curriculum areas and classroom settings to promote time-on-task. These are: Explanation, where the teacher clearly explains the learning activity for pupils to participate within context; Modelling, where the teacher creatively demonstrates using a variety of things and even uses himself as an example and also uses other pupils to demonstrate something; Guided practice; where the teacher guides in-class activities; and Independent Practice; where the teacher lets pupils free to discuss, role

play, debate and ask questions amongst themselves only that he facilitates the deliberations (Bonwell and Eison, 1991).

The other Literacy Principle is that *the classroom instruction and activities must target the Zone of Proximal Development (ZPD)* (Bonwell and Eison, 1991). ZPD is Vygotsky's (1978) term for the range of tasks that a child can complete independently and those completed with the guidance and assistance of adults or more-skilled children. In a classroom situation where ZPD is observed, a teacher will first of all do (for instance, reads/writes) while pupils will listen and watch. The next step will not only involve the teacher doing but pupils will also help out. Thereafter the child will do and the teacher will help. Lastly, a stage where the child will do and the teacher watches will be reached, and this is the independent functioning of the learner. Essentially, therefore, ZPD has to do with gradual release of responsibility from the knowledgeable other to the learner (Luangala, 2011; Bonwell and Eison, 1991).

Another literacy principle is *the availability of a strong scaffolding component in a lesson* (Bonwell and Eison, 1991). Scaffolding is a concept closely related to the idea of ZPD. Scaffolding is changing the level of support (Bruner, 1996). Over the course of a teaching session, a more-skilled person adjusts the amount of guidance to fit the child's current performance. Dialogue is an important tool of this process in the zone of proximal development. In a dialog, a child's unsystematic, disorganized, and spontaneous concepts are met with the more systematic, logical and rational concepts of the skilled helper (Bruner, 1996; Cole and Wertsch, 1996; Luangala, 2011). Scaffolded teaching and learning therefore will involve (as earlier on seen under the Literacy Principle of maximising 'time on task') a sequence for planning of, first of all, *getting ready*. Thereafter, *modelling*, that is, showing how. It will also involve *guided practice* where the knowledgeable other will help the learner. Then there will be

an aspect of *independent practice* where the learners will be left to do ‘it’ themselves. As a fruit of the learning process, a learner will at the end ask himself/herself “*What did I learn?*”

In a literacy lesson, it is also recommended that *new knowledge is linked to prior knowledge of the learners* (Bonwell and Eison, 1991). This is for purposes of connecting new knowledge to existing knowledge to make personal meaning (Atherton, 2011). Readers therefore can be made aware that their prior knowledge is important to understanding the text. That way they can seek new ways to connect new knowledge to what they already know. It is necessary therefore that the teacher reads widely to them from multiple sources, and this should be done so constantly so as to increase background knowledge experience of the learners (Atherton, 2011). The teacher is supposed to take a few minutes before reading to review what is already known; share content specific vocabulary at the beginning of the unit; give students opportunities to identify similarities and differences; encourage students to reread when they don’t understand by stopping to think about how the reading relates to their own life and experiences. Further, the teacher should also provide reflective opportunities with prompts or questions to help students connect their learning with their prior knowledge (Atherton, 2011).

Atherton (2011) states that literacy learning also values that *revision must be part of the curriculum*, and that it is critical for children to have time to practice. The teacher, therefore, must provide multiple opportunities for students to practice instructional tasks; must provide corrective feedback after initial student responses; must play an important role in motivating children to learn; and generally must make the class lesson activity to be a mix of individual, pair, group and whole class discussions and activities (Bonwell and Eison, 1991).

2.3. The Interactive Radio Instruction (IRI) Mode and Literacy

The Interactive Radio Instruction (IRI) Programme is described as a form of distance education where lessons are delivered through a radio. The programme is also described as an active teaching methodology. It is said to be interactive since it is designed to make learning fun as learners sing, play games, answer questions, read and solve mathematics problems in ways that ensure active participation and learning during the lesson (Banda, 2007; MOE, 2004). This approach to learning is in line with the view of social constructivism strongly influenced by Vygotsky's (1978) work which purports that learning is an active, social process where culture, social factors and language play vital roles. This seems to be reiterating on the vital role oral language and active learning play in learning as seen above, and it is closely related to what Brunning et al. (1999) upheld, that knowledge is first constructed in a social context and is then appropriated by individuals.

The social context any effective learning environment should create, therefore, is that one which supports social interaction; which involves learners having fun through asking questions, challenging one another, singing, playing games, among others. However, this interaction can only be meaningful if it allows maximum usage of the familiar or local language among children as MOE (1996), Siaciwena, et al., (2002), Ndamba (2008), Matafwali (2010), among others, observed. The question therefore is: does the IRI lesson allow maximum usage of the familiar or local language among learners?

The attraction of the IRI approach can be attributed to evaluated projects that have reported greater learning gains for students using IRI programs than students in control groups not using IRI programs. Kariuki, et al., (2000) reported that in the first pilot year in Haiti, third grade students using IRI math improved almost 13% from pre- to post tests, while control students

gained only 7%. In a partial academic year in Guinea, second grade students using an integrated French and math series improved approximately 8% more than their counterparts who did not use IRI.

Tilson (1991) also reports on studies conducted in Bolivia around 1989 where students using interactive radio as part of instruction in Mathematics to others using only standard textbook instruction were compared. The differences in post-test performance between the two groups were substantial: effect size of 1.29 and 2.03 standard deviations for one and two years of radio-delivered instruction, respectively. He further reports that in a range of similar studies (but for the second grade) conducted in Bolivia, Nicaragua, and two areas of Thailand, effect sizes of 0.24 to 0.94 standard deviations were obtained for interactive radio. The picture painted by the evaluation studies is that the IRI mode of instruction is better than the other modes. However, the specific scores in the respective subjects such as mathematics, science and literacy show some differences in the performance of the learners, and the trend is that learners using the same IRI mode of teaching do not perform in literacy as good as they perform in mathematics and science. Why should this be like this even when learners learn better using the familiar language?

This is the same picture shown by the evaluation studies conducted earlier on in Zambia by Siaciwena, et al., (2002) and later on by DODE and QUESTT (2005). However, the study conducted by DODE and QUESTT (2005) gave detailed differences in the way learners actually performed in different subjects. The report reports that there was low performance by the learners on literacy compared to how they performed in Mathematics, English Language and Science. (*see Table 1 below*)

Table 1: IRI Learner Performance

Tests	Possible Score	IRLCs/ Community Schools Mean	IRI GRZ Pilot Schools Mean	Non-IRI GRZ Control Schools Mean
Zambian Language Literacy	43	17.0	30.5	29.1
Numeracy	28	43.7	66.4	58.2
English	16	57.9	49.4	38.1

(DODE and QUESTT, 2005)

However, recent studies have indicated that when learners are taught using their familiar language their understanding and performance improve (Matafwali, 2010). What led to lower literacy scores in Zambian Language was not established.

World Bank (1998) offered a critique on the IRI mode. It observed that the Interactive Radio was an idea that most educational technologists would not favour because it was not really interactive in the sense that lessons were spoken over the radio and students responded to prompts from the speaker where nothing that the student said was preserved or transmitted to the speaker.

In the same line, earlier on, Muller (1985) described the interactive radio approach not effective for all instructional needs, adding that for more difficult instructional and training needs, interactive radio is not interactive enough or individualized enough. It works exactly where information and prompting can be provided unambiguously and with minimal regard for moment-by-moment changes in students' understanding. This could be the reason learners performed better in Mathematics because there would be no much ambiguity in using figures, a '2' will just be that. Muller (1985) further stated that because radio also depends on having little or no need for pictorial or diagrammatic information, it would not be the best way to teach

physics to students on how to draw force diagrams or to teach technicians on how to operate an intravenous pump in the critical care unit of a hospital. This simply means that radio learning has its own limitations and if they are not averted in good time, the learning process can be adversely affected. Like Muller (1985) put it, the advantages of Interactive radio are very limited for all the reasons that support the use of multiple media in education. Therefore, though radio learning is easily accepted across different cultures and it is cost effective, it has its own disadvantages which may adversely affect the effective teaching and learning of some academic disciplines such as Literacy.

2.4. Factors Contributing to Effective learning

2.4.1 Teacher related factors

In 2008, the Educational Quality Improvement Program 2 (EQUIP2), in partnership with Save the Children, conducted a study on school effectiveness in Nepal (Collins and Gillies, 2008). Data were collected from 23 Save the Children-supported schools in the districts of Kailali and Kanchanpur. The study aimed to determine whether schools provided adequate opportunities to learn and whether teachers and students used those opportunities to ensure that children learnt to read fluently in the language of instruction (Nepali) by Grade 3.

The study found that few children at the start of Grade 3 had learned to read fluently enough to ensure comprehension. Forty-four percent of the students could not read a single word of Grade 3 text. Only 38 percent of students could read at a rate of 40 words per minute (wpm) or faster, a rate that may ensure comprehension (Collins and Gillies, 2008).

The data collected on opportunities to learn reveal that the low student reading performance was, in part, attributable to the amount of unused potential instructional time. School being closed,

teacher absence, and time lost during the school day combined to reduce the amount of time available for instruction by as much as 26 percent, an equivalent of 49 out of 192 days in the school year (Collins and Gillies, 2008).

The actual time available for instruction—when school was open and teachers and students were present—was further reduced by the manner in which teachers and students used their time in class. Observations of student and teacher activity in Grade 1, 2, and 3 classrooms revealed that, on average, 40 percent of students were off task and not engaged in learning during a lesson. Students were most frequently off task when the teacher was off task and not actively leading a lesson or assigning activities to the students. When these measures of time-on-task were taken into account, we found that schools lost the equivalent of an additional 58 days of potential instruction time because of off-task teachers and students (Collins and Gillies, 2008).

Closer examination of the data on classroom activity determined the amount of time students spent on reading-related activities. It was observed that there was little instruction in reading, little student use of books or other written materials, and almost no students reading. Students were observed participating in reading activities during only 8 percent of the classroom observations.

This research demonstrates that there are a number of factors that need to be put into consideration if learning is to be effective. First, the research demonstrates that the teacher and student attendance need to be more closely monitored and the factors that impact them addressed. Second, the daily school schedule needs to be better managed to ensure adequate time for reading instruction in the early grades. Third, teachers need to learn instructional strategies to engage students in reading or reading-related exercises. Furthermore, the research

made a recommendation that given the low levels of reading fluency, schools need strategies for building the reading skills of students throughout the primary grades, as few, if any, are learning to read well enough to learn across all subject areas (Collins and Gillies, 2008).

2.4.2. Language Related Factors

2.4.2.1. Teacher Language Proficiency

There is a possibility of reading and writing failure which may be caused by a teacher. Collins and Gillies, (2008) state that there has been surprisingly little research on the influence of teachers on learning to read, but the research that has been done appears to show that differences amongst teachers are far more important than differences between materials and methods. This finding is important, but it is not all clear what to do with it, since as Harris (1969) wrote, it throws us back on what we know already: that there are good and bad teachers. Nevertheless, as Cuevas (1996) recommended, the solution lies in trying to make the so called ‘bad’ teachers learn how to make learning ‘learner-centered’. To be able to do this, of course, requires training and retraining so as to have better informed and trained teachers.

Harris (1969) seem to have been talking about the same thing when he talks about a mismatch between what language the child knows and uses and the language actually used when instructing that child. He stated that, because of this mismatch, there can be failure in literacy which has to do with materials that may be socially inappropriate, being middle-class, racist, or simply boring to children. He further states that there may be a mismatch between the reading primers and the children’s interests or experiences, in terms of language or content. He declared that ignoring or disregarding a child’s native language variety or home experiences may amount to rejecting them.

He further suggested that one way of ensuring that learning to read is child-centered in both languages and context is to have pupils construct their reading material themselves. More like agreeing with this view, Mackay, et al, (1970) gave Breakthrough to Literacy methodology as evidence using one version of this language experience approach in which children use sentence-makers to construct their own sentences and stories. Mackay, et al. (1970) added that the quality and variety of the sentences children constructed were clear evidence that there was effective learning which took place in children as a result of using the familiar language.

Clark (1998) states that in both first and second language acquisition, a stimulating and rich linguistic environment will support language development. In the same line, as Cuevas (1996) put it, encouraging children to express their needs, ideas, and feelings whether in one language or two enriches children linguistically and cognitively; engaging the children and encouraging them to express themselves interactively while building on their prior knowledge in real-life situations therefore is an effective way to build language experience. A teacher, therefore, should allow pupils to fully and freely participate during the lesson. This will make them learn effectively.

Sometimes a situation where there is no mutual interaction between the teacher and the learners exists during the in-class lesson, a situation which makes the learning ineffective. Luangala (2011) states that:

The failure by the teacher to engage the learners mentally robs the teacher of the opportunities to reflect, both online and offline, on how the learners are receiving what is being presented to them. As a result, the teacher fails to scaffold the learning process and to assess the learning outcome, especially doing so online. It is common in the lessons in the basic schools in Zambia to see a teacher looking up in the air and propounding and proclaiming what the learners should presumably internalize for regurgitation later, unmindful of the learner just under his or her nose who is busy playing, completely inattentive to whatever the teacher is trying to explain.

Clearly, no effective learning can take place in such a situation as observed by Luangala (2011).

Luangala (2011) further amplifies the absence of interaction between the teacher and the learners when he states that a school teacher sometimes luxuriates in explaining and telling, which are vital elements in an instructional procedure, but it is also well known that the most beneficial explanation to any learner is usually that given at a time when that learner actively yearns for one. How can a teacher know that the learners yearn to learn more? By giving them an opportunity to express themselves, especially in the language they know best. Contrary to this, as Luangala (2011) observed, one weakness easily noticeable in the lessons is that teachers sometimes tend not to bother to create anticipation for an explanation in the learners before they (the teachers) start explaining things. This is taking learners as *tabula lasers* (empty vessels) thereby utilizing the *Banking Concept* in teaching which Paulo Freire (1978) campaigned against.

2.4.2.2. Learner Language Proficiency

Learning initial literacy in the local or the familiar language is very critical because the learning becomes meaningful and the knowledge of the learnt item is sustained for a long time. Stubbs (2004) states that there is nowadays probably a general consensus in educational thinking that education should be child-centered, in the sense that learning is most effective if it is based on the child's own experiences. In line with this, the statement by UNESCO (1953:11) is widely accepted by educationalists:

“It is axiomatic that the best medium for teaching a child is his mother tongue. Psychologically, it is the system of meaningful signs that in his mind works automatically for expression and understanding. Sociologically, it is a means of identification among the members of the

community to which he belongs. Educationally, he learns more quickly through it than through an unfamiliar linguistic medium.”

This implies that someone learning to read inevitably draws on his existing knowledge of language. Stubbs (2004) explains that in the initial stages, it is plausible to assume that any mismatches between the child’s spoken language and what he has to read, or between his experience and the content of his book, are likely to be obstacles to learning. It would now be accepted as axiomatic (obvious, clear) therefore by most educationalists that the best medium for teaching initial literacy is the child’s own native language, and there has been considerable interest recently in preparing teaching materials which reflect the child’s own interests and experience of language. Otherwise, as Stubbs (2004) put it, one is asking the child to learn a foreign language or dialect at the same time as he is learning a new skill.

Clearly, therefore, learners learn effectively when they are involved in generating knowledge themselves. According to social constructivists, the process of sharing individual perspectives-called *collaborative elaboration* results in learners constructing understanding together, which would not possibly be done meaningfully alone, and it would be hampered upon if the language being used is not familiar to the learners (Brunning, et al., 1999). A teacher therefore is supposed to create such a social environment which will enable pupils to freely learn and interact.

Cuevas (1996) identified multiple possible causes of reading and writing failure in a child. One of them is that of having inadequate involvement of the learners in the learning process as discussed earlier on. Cuevas says that when children do not have many opportunities to use language and have not been provided with a rich experiential base, they may not learn to function well independently, and at the same time, they may not continue to yearn for more new knowledge. He further says that this phenomenon occurs whether children are monolingual or

bilingual with the result that their language level is not appropriate for their age. Therefore, as Bialystok and Hakuta (1994) rightly put it, reading in the primary language is a powerful way of continuing to develop literacy in that language, and to do so, children must have access to a print-rich environment in the primary language. There is therefore a real concern here that if children do not fully acquire their first language, they may have difficulty later in becoming fully literate and academically proficient. Bialystok and Hakuta (1994) further state that cognitive development will not be interrupted when children and teachers/parents use the language they know best because experience and ideas must be familiar and meaningful to the child. Most likely, as Tabors (1997) put it, everything acquired in the first language (academic skills, literacy development, concept formation, subject knowledge, and learning strategies) will transfer to the other learning items. This means that as children are learning the new things, they are drawing on the background and experience they have available to them from their first language. In other words the skills children develop in their first language form the foundation they must have to be academically successful.

What happens if the first language is abandoned or 'confused'? Collier's (1992) statement answers this question pretty well. He states that when children learn all new information and skills in the language not familiar to them, their first language becomes stagnant and does not keep pace with their new knowledge. He says this may lead to limited bilingualism, where children never become truly proficient in either their first or second language. He further asserts that supporting and using only one language also gives children the impression that the other different languages and cultures are not valued. Consequently, on cognitive and academic measures, as Stubbs (2004) put it, children who have lost their first language (so-called

subtractive bilinguals) do not score as well as children who have maintained or expanded their first language as they acquire the second language (additive bilinguals).

The other possible sources of failure in literacy learning as further given by Cuevas (1996) include the child herself or himself. He says there are several possibilities to this effect: the cause may be medical, hereditary or not; it may be psychological, for example, the pupil may be emotionally disturbed or have a personality disorder. Stubbs (2004) however notes that it is often not clear which is the cause and which is the effect. Because of the high value placed on literacy in our society, failure to learn to read can cause or worsen anxiety and emotional disturbances. This point, of course, questions the very distinction between psychological and social causes.

Cuevas (1996) further states that the cause of reading and writing failure might lie in the pupil's language. He writes that there is nothing wrong with the language of any normal child, but this language may differ sharply from the language conventionally used in books; in some cases there can be verbal deprivation, that is, one may not easily find a variety of words to explain a certain concept in a given language.

Another possible cause of writing and reading failure Cuevas (1996) identified is that one which may lie in one's family. For instance, if the home has no books and parents do not read to children, it can hamper on literacy development. In other words if there is an illiterate environment in the home, that is, an environment where there are no reading and writing materials nor the reading and writing activities and behaviours, the child will not learn to develop the interest to read and to write. Such a scenario will consequently result into reading and writing failure.

Bus, van Ijzendoorn & Pellegrini (1995) seem to have suggested a solution when they state that parents can bridge a detrimental gap that tend to exist between the school and the home by reading aloud to children on a frequent basis. They state that this is one of the most effective ways to promote early literacy development among young children. “A clear majority of educators not only talk about books they have read together, but also ask children questions during and after reading times” (Bonwell & Eison, 1991:27). As noted earlier, these strategies are consistent with researchers' recommendations for strengthening the language and literacy skills of children.

2.4.2.3. Classroom Management and Parental Involvement

In order for the learner to maximize learning, he or she needs support in various ways. This support can be in form of managing general and individual pupil-behaviour, and the learning environment. It can also do with parental involvement.

Classroom management is inevitable during class lessons. This makes it another factor which can affect the learning and eventual performance of the learners. Bonwell and Eison (1991) suggested that classrooms should be a social environment for children. This has to do with the teacher being able to manage classroom procedures, manage student behaviour, and being able to organize the physical space. Ultimately, the teacher should be able to make learners feel free to naturally socialize by way of asking questions, joking and even disagreeing with one another. In the same vein, Atherton (2011) recommended that learners should be assured that if something isn't working, they shouldn't be afraid to change it.

The prime aim of managing a class is so as to have learners learn effectively. Wong and Wong (2009) stated that each teacher in the classroom has a chance to design and teach lessons suitable

to the age and level of all children. They went further to state that since the curriculum is emergent, the teachers have an opportunity to plan lessons dependant on the children's interests. This kind of implementing the curriculum is so practical that it can be responsive to the real learner needs as is observed by the teacher on daily basis. Consequently, effective relationships between learners and teachers can be created. The teacher is planning lessons that the children will be interested in and therefore the children will enjoy what the teacher is teaching and want to learn.

It is under classroom management that teachers build relationships with not only learners but also families those learners come from. There are many factors that will affect how the teacher-pupil relationship is formed. Cangelosi (2008) pointed at language as one of the major ones and stated that the language that the teacher uses can affect the relationship that is made. He further stated that the tone of voice that is used can make the child feel comfortable and want to learn and do well. Cangelosi (2008) states that the relationships that teachers build with the students, families and colleagues may last a lifetime although the relationships that teachers build with students will have a huge impact on their academic achievement as well as the way in which they behave.

By and large, the learning environment has to be learner friendly.

Bonwell and Eison (1991:7) stated that:

parents and educators can support young children in becoming literate learners by engaging children in conversation, providing opportunities for play-based learning, encouraging interaction with environmental print, intentionally building phonological awareness, focusing on letter names and letter sound correspondences, providing lots of experiences with print, engaging in shared reading (and talking about it), and building vocabulary knowledge, among others.

Teale and Sulzby (1999) claim that the quality of the interactions between adults and children is key to enhancing children's motivation to read and their literacy knowledge. In the same vein, Kalia and Reese (2009) added that when children are read to at home in their home language and in English, learning in both languages is improved.

2.5. Chapter Summary

The literature above has indicated that oral language, active learning coupled with literacy principles can lead to literacy development. These aspects are capable of ensuring that learners are fully engaged in learning. Oral language, if properly used, can give learners the required clear instruction which in turn can make them benefit from the learning activity. It has also been established that active learning makes the lesson learner centered which in turn leads to effective learning. When the lesson is learner centered, learners have an opportunity of having hands on the real issues about what they are learning. This way, their knowledge gets concretized.

The other aspect the literature has brought out involves literacy principles during the literacy lesson. It has been recommended that the actual teaching should be tailored to making learners be 'on-the-task' most of the time. This would be achieved with the realization by the mentor/teacher that the ZPD and scaffolding play a major role in making learners be engaged in the meaningful learning activities.

The interactive nature of the IRI programme has also been discussed. It has been established that IRI is interactive since it is designed to make learning fun as learners sing, play games, answer questions, read and solve problems in ways that ensure active participation and learning during the lesson (Banda, 2007; MOE, 2004). Critics, however, have indicated how IRI may not be effective in some educational aspects.

The literature reviewed further discussed the factors that can affect effective learning. There are teacher, language and learner related factors that can affect the effective learning. Classroom management has also been discussed and there is a recommendation that a teacher should be able to manage and organize the learning environment in such a way that s/he makes learners feel free to naturally socialize by way of asking questions, joking and even disagreeing with one another. Parental involvement has also been discussed as one of the major factors behind effective learning.

It is such theoretical aspects reviewed in the literature which guided this research's design and the perspective through which the factors that led to low literacy levels among IRI learners at LTMC were investigated.

CHAPTER THREE

METHODOLOGY

3.1. Overview

This chapter explains how data was collected describing the methods which were used in collecting data and how this data was analyzed. We also describe the research designs which were employed, the target population, the sample size and the sampling procedure. The data collection procedures, data analyses as well as the instruments that were used in this study are also discussed in this chapter.

3.2. Research Design

A research design can be described as a plan that is used to generate answers to research problems; it can be regarded as an arrangement of conditions for collection and analysis of data in a manner that aims at combining relevance with the research purpose (Kombo & Tromp, 2006). This study employed both qualitative and quantitative paradigms in a case study design. A case study, according to Donald (2006), is an in-depth study of a single unit, such as one individual, one group, one organization, and/or one programme. The goal is to arrive at a detailed description and understanding of the entity.

The two methodological approaches were used to give the study an in-depth that a single approach cannot attain, and the use of multiple data collection techniques is known as triangulation. Kahn and Best (2006) explains that triangulation in research is the approach in which two or more paradigms are utilized in order to circumvent the biases associated with a

single design. They further state that triangulation of data permits the verification and validation of data.

There are two forms of validity: internal and external validity. Internal validity is concerned with the accuracy of the information and how it matches reality. The external validity means that the researcher needs to discuss the limited generalizability of the findings and the need, if possible, to replicate the study and its findings (Kahn & Best, 2006).

The study employed triangulation in data collection through the use of unstructured interview schedules and observation checklists that elicited qualitative data. The individual reading and writing tests were used to elicit quantitative data. It was hoped that this methodological triangulation would enhance the quality of data thereby testing the internal validity of this research.

3.3. Population

A population is any group of individuals that has one or more characteristics in common and that are of interest to the researcher. A population therefore should have at least one common characteristic which distinguishes that group from other individuals (Kahn & Best, 2006). Our population in this study was all the Grade One learners under the IRI programme at Learning at Taonga Market Centers (LTMCs) under Radio Chikuni. The use of radio and mentors distinguish our population from other initial literacy learners.

3.4. Target Population

Kahn and Best (2006) describe the target population as consisting of the specific group to whom we plan to generalize our findings. The target population in this study comprised the Grade 1

learners and teachers/mentors from the selected LTMC under Chikuni Community Radio Station.

3.5. Sample and Sampling Procedure

A sample is described as a small proportion of the population that is selected for observation and analysis (Kahn & Best, 2006). It is from observing the characteristics of the sample that one can make certain inferences about the characteristics of the population from which it was drawn. Our sample in this study consisted of Grade One learners and mentors at a selected LTMC. This sample also included the parents whose children went to the selected LTMC.

Sampling is the procedure a researcher uses to gather people, places or things to study; it is a process of selecting a number of individuals or objects from a population such that the selected group contains elements representative of the characteristics found in the entire group (Kombo & Tromp, 2006). In this study, all the Grade One learners at LTMCs formed the entire group this research studied.

The study used *purposive sampling*, which allows the researcher to deliberately target a group of people believed to be reliable for the study (Kombo & Tromp, 2006). This study purposively chose to use Grade One subjects at LTM because they use radio and mentors when learning initial literacy. Kombo and Tromp (2006) state that the power of purposive sampling, which can be used with both qualitative and quantitative studies, lies in selecting information rich cases for in-depth analysis related to the central issues being studied. This case study chose to study the LTM initial literacy learning activities so as to establish the factors behind the low literacy gains among the Grade One IRI learners.

Particularly, this study used Extreme Case Sampling (Kombo & Tromp, 2006), a type of purposive sampling focusing on the IRI center which would richly inform the study about radio learning and factors behind low literacy levels among IRI learners.

There were about 19 LTMCs under Chikuni Community Radio Station with about 50 Grade One learners at each center (Milambo, 2006). The subjects of this study were drawn from 1 LTMC. The participants included selected Grade 1 learners, the mentors and the parents whose children went to the selected LTMC.

3.6. Data Collection Procedure

Data from the Grade One learners was sourced in two ways: by observing the level of participation by the learners during the initial literacy lesson and the learning style these learners employed. Thereafter, the literacy tests were administered on the pupils whose test scores were analyzed statistically so as to see how the learners performed in literacy after observing how they actually learnt in a literacy lesson. The 35 pupils who participated in the literacy tests were selected with the help of the mentor on the basis of how consistent they attended lessons. Data from the mentors were also sourced in two ways: firstly, by observing how the mentor facilitated the learning process and how she managed the class during the lessons. Secondly, the mentor was asked follow up questions for clarity (refer to appendix D). About 20 parents took part in the study. The data from parents were sourced through the use of unstructured interview schedules. In total, therefore, about 70 participants took part in the study.

3.7. Research Instruments

Research instruments are the tools a researcher actually uses to collect raw data. The following instruments were used:

Narrative tests: The following measures were used during narrative tests in this study: alphabetic knowledge and comprehension abilities. It was imperative to assess the alphabet knowledge given a congruent of research evidence pointing to the importance of the alphabetic knowledge in the early stages of literacy development (Bus, van IJzendoorn, & Pellegrini, 1995). A detailed description of the measures is presented below:

Letter Knowledge: Four tasks were used to assess knowledge of the letters of the Alphabet namely, reciting the letters of the alphabet, letter name knowledge, letter sound knowledge, and sound letter knowledge. Reciting letters of the alphabet: this subtest required children to recite the letters of the alphabet from memory through the singing the alphabet song. Letter name knowledge: The subtest required children to give the name of each letter from a sequence of 26 letters printed in a random order on a card that did not conform to actual ordering of the alphabet. Letter sound knowledge: This test required children to name the sound of each letter of the alphabet. The child was presented with the letter name card and was asked to point at and name each letter of the alphabet. Sound letter association: On this subtest, the examiner produced the sound of each of the alphabet on the letter card and the child was asked to identify the corresponding letter.

Reading abilities: A picture comprehension test was used to assess reading abilities. The test consisted of items containing pictures and four groups of corresponding words. The examiner read out the word and the child was required to identify which of the four words was corresponding with the picture. The testing was translated into Chitonga.

Language Abilities: A narrative test was used to measure expressive language abilities. Children were required to name a series of pictures from a picture sequence. The test was administered in Chitonga.

Other methods of data collection included a face to face interview with mentors and an interview schedule for parents.

Face to face interviews were conducted in Chitonga given that the respondents were not conversant with English. This stance was taken in line with Ndamba (2008) who believes that if the interviewer is skilful the interview can be regarded as a data gathering device which is often superior to others as people are more willing to talk than to write, and confidential information may be obtained from respondents who might be reluctant to put it in writing. The interview was considered suitable in this study in order to determine respondents' opinions, feelings, experiences, attitudes or trends of beliefs towards the learning of initial literacy by their children using the IRI methodology. This was necessary since a healthy partnership between the school and parents enhances good performance of the learners (Ndamba, 2008).

The interview schedule for parents had closed and open-ended questions. These allowed the researcher to follow points which needed elaboration and to clarify questions the respondents might have misunderstood. The interview guide for parents had questions which solicited information on their children's learning of initial literacy in a mother tongue through radio, how they supported their children at the Taonga Center, and how they participated in the general learning of their children.

Observation Checklist was used as the lesson observation was conducted by the researcher. The checklist was used to establish what the IRI initial literacy lesson used or lacked. This was guided by the checklists Luangala (2011) used in the baseline study for Child Fund Zambia.

3.8. Data Analysis

Data analysis refers to examining what has been collected in a survey or experiment and making deductions and inferences (Kombo & Tromp, 2006).

The data collected was analysed both qualitatively and quantitatively. Qualitative data was analysed based on emerging themes from the results. Themes refer to topics or major subjects that come up in discussions (Kombo & Tromp, 2006). It is these themes that helped in making deductions and inferences. These themes were coded using thematic categorization approach (Kahn & Best, 2006). This approach involves collecting data and identifying information that is relevant to the research questions and objectives. It also involves a coding system based on samples of collected data.

Quantitative data was analysed using Excel to generate descriptive statistics such as frequencies, means and percentages to examine the general trend in the data and the distribution of scores.

3.9. Procedure and Ethical Considerations

First of all, written authorization to carry out the study was obtained from the University of Zambia (*refer to Appendix C*). Thereafter, permission to conduct the study was sought from the District Education Board Secretary (DEBS) in Monze, then from the Director of Programmes, Chikuni Community Radio Station. Thereafter the researcher sought permission to carry out tests, interviews and observations from the mentor in charge of the selected LTM center.

A written *Informed Consent Form for Respondents* (refer to Appendix C) was given to parents and the mentor. Its aim was explained using the familiar language of the participants.

CHAPTER FOUR

PRESENTATION OF THE FINDINGS

4.1. Overview

In this chapter, we present the research findings on factors behind low literacy (reading and writing) levels among the IRI learners. The chapter is organized as follows: the first part includes findings on the established learner performance as solicited by the administered literacy tests on the learners just after observing how they actually learnt. The second part includes the findings on the extent to which learners were engaged in the meaningful learning activities. The third part includes the effect mentor translations from English into Chitonga had on the learners. Lastly, the challenges mentors were faced with when facilitating the IRI initial literacy lesson are also shown.

4.2. Learner Performance in Reading and Writing

The other objective this study used was that of establishing the current level of learners' performance in reading and writing in their familiar language. This was done after observing how learners learnt initial literacy and what they were actually taught. Initial literacy tests were administered but before they were administered, they were modified and adapted to suit the level of the learners. A total of 35 pupils from Taonga center were subjected to the tests. The pupils that were involved were selected with the help of their mentor who helped the researcher balance the pupil group according to pupils' abilities and how consistent they were in attending lessons at LTMC. It was assumed that the pupil performance would be indicative of how well the IRI mode of initial literacy lesson delivery was, thereby establishing whether the IRI mode also contributed to low literacy gains among the IRI learners at LTMC.

In assessing the reading abilities of the learners, their alphabetic knowledge and comprehension abilities were assessed. Like earlier own stated, it was imperative to assess the alphabetic knowledge given a congruent of research evidence pointing to the importance of the alphabetic knowledge in the early stages of literacy development (Bus, Van IJzendoorn & Pellegrini, 1995).

4.2.1. Knowledge of the Letters of the Alphabet

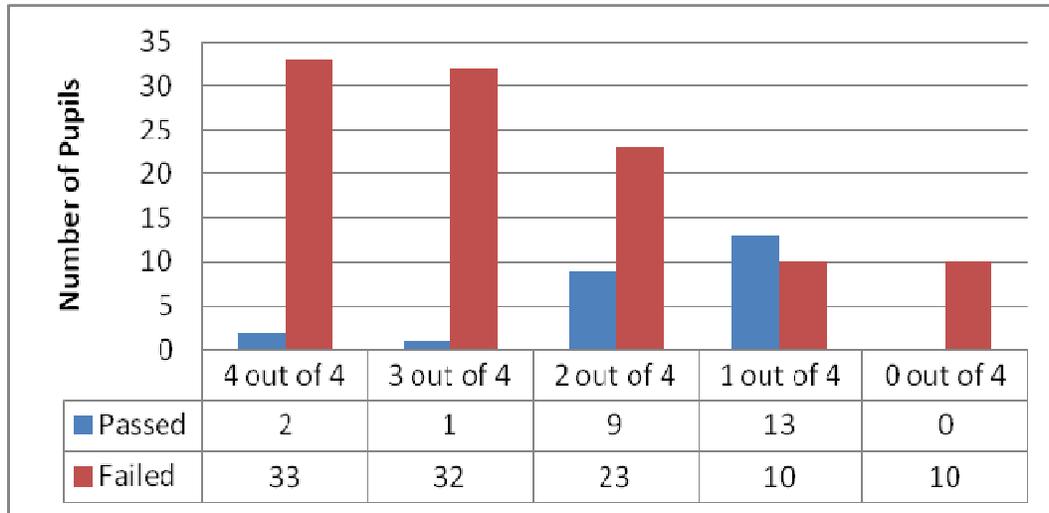
Table 2: Tabulation of Pupils' Performance on Knowledge of the Letters of the Alphabet

Task	Passed		Failed	
	Count	Percentage	Count	Percentage
Reciting Alphabet	29	83%	6	17%
Letter Naming	10	29%	25	71%
Letter Sounding	6	17%	29	83%
Sound Letter Identifying	9	26%	26	74%

From Table 2 above, it can be seen that out of the 35 pupils who were subjected to the tests, 29 pupils were able to recite the alphabet representing 83% and 6 pupils failed to recite the alphabet representing 17%. It can also be seen that when it came to letter naming, only 10 pupils passed the component, that is, they named correctly half or more letters given, while 25 (71%) failed the test. Only 6 (17%) pupils passed letter sounding test; 29 (83%) failed. Only 9 (26%) pupils passed sound letter identification test; 26 (74%) failed.

4.2.2. Reading Abilities

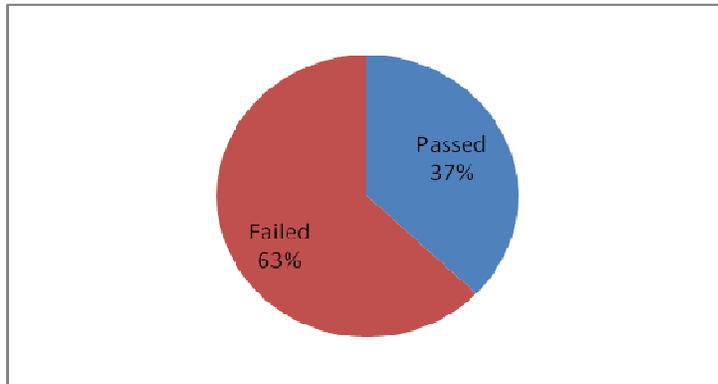
Graph 1: Reading Abilities Performance of the learners



All the pupils who got 2 and above out of 4 were regarded as having passed the test. The Graph 1 above shows that only 12 (34%) pupils passed while 23 (66%) pupils failed. These results indicate that more pupils had poor reading abilities. The results were obtained just after observing how pupils were taught.

4.2.3. Language Abilities

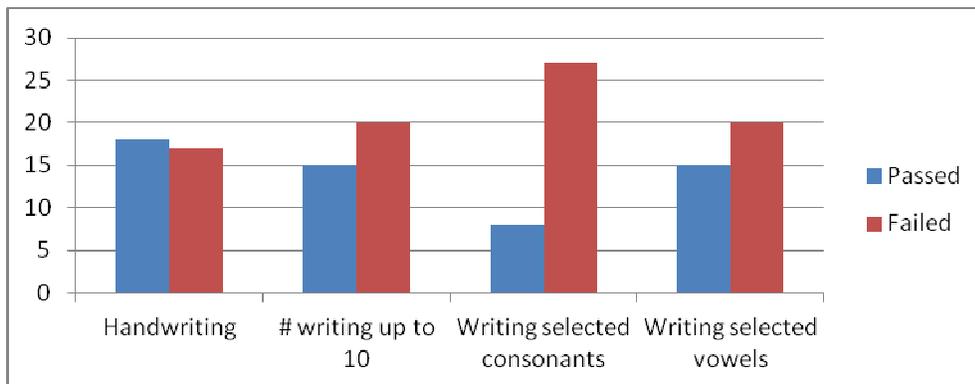
Graph 2: Pupil Performance on Language Ability Test



Language abilities were assessed using a non verbal picture vocabulary test. The study revealed low language abilities among learners with 63% learners failing to comprehend the pictures and only 37% passing the comprehension test, as shown in Graph 2 above.

4.2.4. Writing Abilities of the Learners

Graph 3: Performances in Writing



The study also assessed writing abilities of learners.' Graph 3 above shows that out of the 35 pupils who participated in the writing tests, 18(51%) passed handwriting, 17(49%) failed; 15(43%) passed number writing up to 10 while 20(57%) failed; 8(23%) pupils passed writing

selected consonants while 27(77%) failed; and when it came to writing selected vowels 15(43%) passed, 20(57%) failed.

The Graph 3 above indicates that more pupils failed than those who passed in the test assessing their writing abilities.

4.3. Engagement of Learners in Meaningful Learning Activities

One of the objectives of the study was to establish the extent to which the learners were engaged in the meaningful learning activities and how exactly that happened. To achieve this, the researcher observed the IRI initial literacy lessons from the Taonga Market Center.

4.3.1. Learner Engagement

To establish the extent to which learners were engaged in the learning activities, lesson deliberations and classroom organization were observed. Learner participation and interaction by way of asking questions, and seeking help, among others, were particularly observed. Attention was also paid to how motivated pupils were to learn. In addition, the number of learners who ‘remained on task’ at a given time was also taken note of. Such elements helped in establishing the extent to which learners were engaged in the meaningful learning activities. This inspiration was obtained from the constructivists’ belief that when learners actively participate in the lesson, initiate interaction by asking questions and seeking help, seem motivated to learn and are actually on task most of the time, effective learning takes place (Brunner, 1996; Luangala, 2011; Atherton, 2011). The Table 3 below shows how the lesson deliberations were observed and rated.

Table 3: Pupil Engagement

Desired Activity	Maximum Points	Raw Score
Pupils are participating in the lesson	4	2
Pupils initiate interaction (ask questions, seek help, etc.)	4	1
Most pupils seem motivated to learn	4	2
Most pupils are on task	4	1
Total	16 (100%)	6 (38%)

As can be seen in Table 3 above, learner participation in the lesson was half the desired participation. The other half was not seen because when learners wanted to freely participate by asking questions, the mentor quickly told them to stop ‘making noise’ lest they remained behind the radio teacher’s instructions. Learners therefore hardly initiated interaction by way of asking questions or seeking clarity. Such, however, was not entirely dependent upon the learners and the mentor. From what was observed, there was actually not enough time which could allow for such learner concerns from the way the radio teacher issued out guiding instructions. Though about 50% pupils seemed motivated to learn, very few of them (25%) could remain on task for a desired length of time. Generally, therefore, the 38% score of the desired activities was way below the expected standard for learner engagement.

Instructional teaching practice was also particularly used to establish the extent learner engagement was. Basically, Instructional teaching practice involves factors such as lesson objectives, lesson plan, the pace at which the lesson is delivered, lesson activities and stimulation, teacher modelling, guided practice, group activity, teacher questions and assessment as well as teacher-pupil communication were analysed (Luangala, 2011). This was important in

establishing the extent to which learner engagement is affected by Instructional teaching practice.

Table 4: Instructional Teaching Practice

Desired Activity	Maximum Points	Raw Score
Objectives of the lessons are clear/appropriate pace	4	2
Lesson is prepared (A plan exists)	4	2
Lesson has variety in activities and stimulation	4	1
Evidence of teacher modelling	4	1
Evidence of guided practice/teacher questions/assessment	4	2
Evidence of pupil independent / group activity	4	2
Evidence of clear teacher-pupil communication	4	1
Total	28 (100%)	11 (39%)

From Table 4 above, we can see that the lesson objectives were not very clear; the lesson plan was also analysed as having been planned half way because the radio teacher issued all the instructions regardless of the pace at which learners understood the learning material. It was expected that the other half should have come from the mentor and that should have adapted the pace of the lesson to the learners' understanding and involvement. The overall 39% score on Instructional Teaching Practice was way below the expected practice in an initial literacy lesson.

Table 5: Classroom Environment

Desired Activity	Maximum Points	Raw Score
Classroom has displays of pupil work	4	1
Classroom has instructional posters on the wall	4	2
Physical space is organized and conducive to learning	4	1
Total	12	4 (33%)

From Table 5 above, it can be seen that 33% judgement on the desired activities was too below the expected standard if learners were to be engaged in the learning activities. This was attributed to the local factors that the mentor pointed at when asked why the wall was “not talking”. The mentor said, *“Posters were removed from class every after lesson times because ‘people’ removed them and used them for other purposes other than educational.”* The other thing the mentor stated were the termites which infested the class wall to the damaging of the posters put against the wall.

‘Talking walls’ play a major role in having learners engaged in the learning activities most of the time. They are constant reminders of what pupils may have done or ought to do. Their absence therefore has the potential to adversely affect the engagement of the learners in the learning activity (Wong & Wong, 2009).

The *Classroom Culture* was also observed. Under classroom culture, attention was paid to how a friendly atmosphere was ensured, how classroom routines were established, how learners were encouraged, and how the learning environment was interactive. Such components were also used

to draw conclusions on whether the classroom situation enhanced learner engagement in meaningful learning activities or not.

Table 6: Classroom Culture

Desired Activity	Maximum Points	Raw Scores
There is a friendly, relaxed atmosphere	4	3
Classroom routines are well established	4	1
Pupils are encouraged, praised	4	2
There is a highly interactive environment	4	1
Total	16	7(44%)

It was observed that although a friendly and relaxing atmosphere was well created, the classroom routines were not well established. It was also observed that learners were quite alright encouraged and praised, but such encouragement was usually done half way because sometimes the mentor could not even finish explaining why a certain learner was being praised to the other learners before the radio teacher issued another instruction. Such instances made the environment not to be highly interactive as expected.

All the above used components indicate that earners were not fully engaged in the initial literacy lesson.

4.4. Effects of Mentor Translations on the learners

The other objective of this study was to establish the effect mentor translations had on the learners. Since the translations were done from English into Chitonga, it was imperative to establish whether there were some discrepancies in the translations and the pace at which the translation was done.

It was observed that the mentor found some difficulties to quickly find appropriate words when translating English Language words into Chitonga. For instance, the mentor took time to find the corresponding word for 'adze' in Chitonga (mbezyo). Such a scenario posed some challenges on the understanding and participation of the learners. Further, some of the radio stories were just so remote from the pupil experiences that the pupils could not easily make sense out of them. To make the matters worse, when the mentor attempted translating such stories into Chitonga the stories came out *artificially so* such that even the interesting nature that they should have had was completely gone, and clearly pupils were not interested to listen to such and so they did not concentrate. Instead they made noise. Such instances dragged the lesson and consequently adversely affected the learning process.

It was further observed that the pupils were not familiar with some of the contexts "ambuya stories" created. The term "ambuya stories" is used here to refer to the radio stories told to pupils through the mentor at Learning at Taonga Market during the broadcast radio lesson. The unfamiliar context made it difficult for pupils to see the connection between the story and the main point of the lesson. Moreover, the fact that the stories were told using the English Language made pupils not to understand the story. The attempts that the mentor made to translate the story into Chitonga even made the whole situation come out artificially so. It was observed that the mentor missed some words from the radio and that confused pupils so much that they lost interest in continuing to listen. For instance, the radio teacher told a story which involved the going of the two boys to the workshop where a carpenter was working from. The mentor wanted to directly translate the word 'workshop' into the local language saying 'kucintoolo kublekelwa', but it could not make sense since 'cintoolo' literally means '*shop*', and learners knew that they buy things from the shop. Therefore, this situation was a challenge not only to the

learners but also to the mentor. On one hand, learners confused how they knew and used the 'shop' with what was communicated to them by the mentor. On the other hand, the mentor could not with ease communicate the radio teacher's instructions to the learners clearly within the limited given time. Consequently, learners could not easily understand and connect the lesson deliberations due to the way the translations were done by the mentor.

4.5. Challenges Faced by the Mentor

There were some challenges observed with regard to how the mentor conducted the question and answer session, managed the class and motivated the learners.

4.5.1. Question and Answer Session

The question and answer session in the context of LTM was done as follows: first, the radio teacher issued instructions. Then the mentor translated those instructions to the learners.

It was observed that when the radio teacher instructed the mentor to ask pupils questions, the mentor spent some time on translating the given question into the local language, Chitonga, such that some of the time in which the pupils could answer the questions was wasted. Consequently, before the pupil could finish answering the given question, the radio teacher moved on to other activities in the lesson and the mentor just told the pupil to go back and sit down. It was also observed that at times pupils craved to ask the mentor questions for clarity but the mentor avoided a number of pupils from doing so lest they delayed the lesson. Even when she allowed some pupils to ask questions, she did not exhaust answering their questions clearly due to the radio teacher's instruction which moved on before the mentor could finish doing so.

It was further observed that the Taonga Radio Broadcasting time of 30 minutes was restricting. Due to limited time within which the literacy lesson was given through radio, the mentor had no

choice but to just ignore some of the activities outlined in the mentor's guide. For instance, there was a time when the radio teacher's instruction required a pupil to go to the front to write on the board the /m/ sound. The pupil spent some time thinking. By the time the pupil had thought of what to write, the radio teacher had already moved on to another activity, that of calling another pupil to perform another task, so the mentor just had to tell the pupil to go back to his seat and quickly told another pupil to go to the front. By the time the pupil reached the front, the radio had already instructed the mentor to ask the rest of the other pupils whether the second pupil had written the /m/ sound correctly or not but because the radio was way ahead, that activity could not be done. This put the mentor under pressure and adversely affected the effective learning of initial literacy.

Further, due to the limited time during which the initial literacy lessons were given, about 30 learners out of the 45 learners were unable to complete the given tasks. More so, the majority of the pupils were not just sure of what to do because they did not understand when learning as a result of having been rushed through the lesson. As a remedy to this, the radio teacher instructed the mentor to complete the tasks during the "*After the Broadcast Session*". The observations further revealed that during the "*After the Broadcast Session*" pupils were not as interested to learn as they were during the broadcast session. As such, the session was characterized by pupils making noise, sleeping, and the mentor laboured to manage the class. This, therefore, was found to be one of the major challenges the mentor faced which in turn adversely affected learners to effectively learn initial literacy through radio at LTMC.

As a result of the above observation, it was also noticed that the mentor tended to pick on the bright pupils to answer questions and do certain activities for the obvious reason that the slow ones would make her lag behind the radio instruction. This was confirmed by the mentor herself.

When asked why she picked on certain type of pupils, *she said that the slow ones would make them lag behind radio teacher's instruction.* This tendency entailed that radio learning was a no go area for slow learners.

4.5.2. Class Management

It was noticed that some pupils could sometimes make noise, be seen doing something contrary to the radio teacher's instruction such as slapping one another, exchanging things and pushing each other around. Without pausing the radio recording (which she could if she had a choice), the mentor told the pupils to keep quiet or else they would not get what was being said from the radio. All those activities required more time than what was available.

Further, the mentor was seen re-positioning some children who had put themselves in the sleeping position. She would say "Kamubuka basa. Nokayi mwaciswa? Ncinzi ncomoona beenzyoko balaiya? Kuti kamoona mulaindwa kuzyana kalila kaimbo." (*Wake up, 'friends'. Are you sick? Why are you sleeping when your friends are busy learning? If you continue sleeping you will miss out on dancing when the song plays.*) Such class management was good but was not accommodated by the radio recording and so the radio teacher's instruction was usually ahead, and the mentor had a tough time trying to catch up at the same time managing the deviant behaviour of pupils. The expectation was that after the mentor managed the class, pupils would refocus on the learning item. Instead, the pupils were seen looking 'lost' and confused. Not only were the pupils confused on following the lesson but also the mentor who lost track of the lesson progression due to managing pupils' behaviour.

When asked what she would do to the learning items which were not clear to pupils or may have been missed during the broadcast session, the mentor said she would make it clearer during the

'After the Broadcast Session'. However, during the *'After the Broadcast Session'*, the mentor spent some time reminding pupils what was covered during the broadcast session and as such there was no time left to make the lesson clearer to the learners. It was also found that most of the pupils did not benefit from *After the Broadcast Session* as the initial broadcast lesson was not clear to them. This is a clear demonstration that learners were not adequately engaged during the broadcast lesson.

4.5.3. Pupil Motivation

Learner motivation is essential in ensuring that learning is effective throughout the lesson.

It was also observed that the playing radio in itself was motivating pupils to get interested in learning, especially when a song played. The mere presence of the radio in front of pupils was seen motivating pupils to listen in anticipation for a song they could dance to. However, it was observed that some pupils prolonged dancing. Similarly, when pupils were told to clap for the friend or to sing a short song, some prolonged the singing and the clapping. Such pupil behaviours needed to be managed. By the time the mentor managed such behaviours, the radio teacher had already moved on to other learning activities. Consequently, pupils' became mixed up and could not follow the lesson with understanding. This disoriented the mentor who was visibly disturbed with the realization that pupils became confused because of the way the lesson progressed.

4.5.4. The Pace of the IRI Initial Literacy Lesson at LTMC

It was observed that the pace of the IRI initial literacy lesson at Taonga Market Center was determined by the radio teacher's instruction. When asked what would happen to the learning points which were not adequately tackled, the mentor said:

“The provision of the ‘Before the Broadcast Lesson’ and ‘After the Broadcast Lesson’ enabled them to cover such learning points not adequately tackled during the ‘Broadcast Session.’”

However, the ‘Before the Broadcast Lesson’ and ‘After the Broadcast Lesson’, like earlier stated, had their own challenges.

What is coming out clearly therefore is that the mentor found some difficulties in conducting question and answer sessions, managing the class and motivating the learners due to the limited time in which those activities could be done.

Conclusively, it can be said that the lesson and the understanding of the pupils were not connecting well with what was happening ‘During the Broadcast Session’. The mentor simply urged learners to move on together with the radio instructions instead of waiting until learners discussed and asked questions for clarity. Such should be expected to happen since the mentor implemented the lesson plan which was prepared by someone else. She did very little to adapt the lesson to the level of the learners on the ground, especially in terms of the pace at which the lesson progressed.

4.5.5. Parental Involvement

Parental involvement in education contributes greatly to the good performance of learners. Ndamba (2008) stated that a healthy partnership between the school and parents enhances good performance of the learners.

It was, therefore, assumed that if parents were not involved, in one way or another, in the education of their children at LTMC, it would be one of the challenges both the mentors and the pupils would be facing, and this would in turn negatively affect the performance of learners.

The parents were responding to such questions as: *Sena mulababuzya bana banu ncibaiya?* (Do you find out what your children have learnt?) *Sena mulabala abana banu kung'anda?* (Do you read or count with your children at home?) Some parents/guardians could not say straightforward answers but instead they gave explanations which have been categorised as 'other views'. The trend of their views are tabulated below:

Table 7: Illustration of Parents' Views

Parents' Views	Number of Parents	Per centage
Finding out what pupils learnt	5	25%
Reading/counting with children at home	4	20%
Other Views	11	55%

Table 7 shows that out of the 20 parents interviewed, only 2 (25%) said that they found out what their children learnt at LTMC. Majority of the parents who held this view further elaborately explained how they did that. One of them said: *"Mebo buzuba tabwiindi pe kanditamubuzyi mwana wangu ncaaiya buzuba oobo; ulanditondezya mabbuku aakwe azyibalemba abuzuba-abuzuba."* (For me a day does not pass without finding out what my daughter did at school; she even shows me her books every day.) *Such parents further said that their children even sang interesting songs they learnt from LTMC when they were at home.* Out of the 20 parents, only 4 (20%) confirmed that they read/counted with their children. Majority of the parents 11 (55%) neither found out nor read with their children. Some of their views were noted. They said: *'Mebo inga siindaamba zyinji nkaambo kakuti okuya ku Taonga bana nkobaunka nkwakucita biyo kuti balibambile kuya kwiiya ncobeni kucikolo calyoonse.'* (I wouldn't say much because Taonga

Learning is just a nursery school). The other two parents said they liked Taonga Center because it was nearer to their homes, which was making it easier for their children to get to school.

The trend of such views indicates that there was no healthy interaction between the LTMC (school) and the parents (home), a situation which would adversely affect the effective learning.

4.6. Chapter Summary

The goal of this chapter has been to present the findings of this study as solicited from using the research questions. What is coming out clearly therefore is that learners were not fully engaged in the literacy lesson. It is also clear that there were some challenges faced during the IRI initial literacy lesson at LTMC. Particularly, the translations posed challenges not only on the learners but also on the mentor. Notably, the pace at which the initial literacy lesson progressed was not determined by the understanding of the pupils but by the radio teacher's rate of giving instructions, a situation which would adversely affect the effective learning. The way parents were involved in the learning of their children left much desired. It seems these shortfalls contributed to the poor performance of the learners in the initial literacy tests administered to them.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1. Overview

This study investigated the factors behind the low literacy levels among the IRI learners at the Learning at Taonga Market center under Chikuni Community Radio Station. In this chapter, the findings of the study are discussed showing the probable factors behind the low literacy levels among the IRI learners.

5.2. Learner Performance

The scores from the tests administered indicate that more pupils failed than those who passed. There are several factors that can be the basis for the explanation of this kind of situation. One of them can be the methodology used in teaching; the other one may be the teacher quality and the teaching process itself (Luangala, 2011).

The IRI methodology has been described by many proponents as a mode of teaching which is highly interactive. However, how it was implemented left much to be desired on its interactivity which was mainly hampered by the limited time allocated for the lesson, and the aspect of translating which resulted in the teaching points not coming out clearly and naturally so also posed a lot of challenges on not only learners but also the learners. That adversely affected the clarity of the medium of instruction used in teaching initial literacy. It can conclusively be said that the *English-to-Chitonga* medium of instruction did not work out well for the learners to effectively learn.

The absence of a good number of literacy activities during the lesson also could have contributed to low performance of the IRI learners at LTMC. In other words, the expected interaction in the IRI lesson was missing. There was no give and take kind of situation where learners could be given an opportunity to ask questions or do peer teaching in groups and the mentor be able to give feedback there and then.

5.3. Learner Engagement

One of the objectives of this study was that of establishing the extent to which learners were engaged in the meaningful learning activities. It was envisaged that learner engagement would enhance performance in literacy and other curriculum areas. Research has established that learner engagement in the meaningful learning activities requires that learners take part in the learning activity by way of asking questions for clarity, and/or seeking help (Bonwell and Eison, 1991). The study revealed that learners under the IRI were not adequately engaged in the lesson. This was mainly due to the IRI mode of instruction and the limited time allocated (30 minutes) for the lesson. Essentially, the mentor required more time when giving instructions however, this was not possible because the radio recordings progressed faster than the mentor. As a result, it was not possible for the lesson to be as interactive as expected by the IRI teaching methodology. The study however revealed that pupils enjoyed singing alongside the radio song. The children also enjoyed dancing to the radio song and this somehow motivated them to follow the lesson deliberations. This is in tandem with Banda (2007) described about the IRI programme, when he noted that the IRI is interactive and actively involves pupils throughout the lesson. This active participation, however, did not last long at LTMC because the mentor interrupted and stopped pupils from participating lest they remained behind radio teacher's instructions. Consequently, it seemed both the mentor and the learners did not have enough time to interact adequately by way

of the mentor issuing instructions to pupils and/or pupils asking questions and the mentor responding to pupil concerns. This seems to be agreeing with how the World Bank (1998) observed the IRI lesson mode as being not really interactive in the sense that lessons were spoken over the radio and learners responded to prompts from the speaker where nothing that the student said was preserved or transmitted to the speaker.

It was further revealed that the IRI lesson did not allow the mentor to create pupil groups for discussions or role playing. Again this is attributed to the way the IRI literacy lesson was designed. The mentor cut short pupils' participation because the radio recording could not accommodate the in-class activities of group work, role play, and/or demonstrations because there was not enough time given for such activities. Besides, the engagement of pupils and the mentor in, for instance, question and answer session, and/or class discussions was always cut short, sometimes without concluding on the learning activity. This scenario was contrary to the literacy principle of active learning where learners should be involved throughout the lesson; where learners should not only hear for they will forget, nor just see for they will only remember, but if they also do, then they will understand (Bonwell & Eison, 1991; Atherton, 2011).

The fact that the mentor could not pause the radio recording so as to attend to pupils' individual needs could not have motivated the learners to remain on task for a preferable period of time.

A situation where the mentor simply quickly told the learners what to do was created. Research has also established that traditional teaching practice based on the textbook-chalkboard-lecture-homework-test paradigm has long been criticized as inadequate and inappropriate for student learning (Johnson, 1999). Literature reports have also reiterated that exclusive use of lecturing creates a passive learning environment and that students learn better by participating, acting,

reacting, and reflecting, rather than by watching and listening to lectures (Olinger and Hermanson, 2002). The way the IRI lesson was designed and eventually delivered did not allow learners to debate nor role play nor do group discussions, among others, and yet it is through such activities that learners get involved in higher order critical thinking of analysis, synthesis, and evaluation which are highly effective in improving students' learning and performance (Chickering & Gamson, 1987). Passive learners may not learn how to independently think and solve problems. The IRI lesson therefore should be designed in such a way that it allows active learning throughout the lesson.

5.4. Mentor Translations

It was revealed that the medium of instruction at LTMC was English-to-Chitonga translations. Mentor translations had diverse effects on the learners. It was revealed that sometimes learners got confused because some learning items were not clearly communicated to pupils. The ultimate English-to-Chitonga oral language used at the IRI center should have clearly guided the learners on how and when to engage in the learning activities but learners were noticed not being sure of what was happening at some time; they were seen getting mixed up and giving up on paying attention due to the way the mentor tended to rush translating radio instruction into Tonga (learners' familiar language) lest she remained too behind to catch up. This could have resulted from the unclear translations which occurred intermittently during the initial literacy lesson. This contradicted Scarborough (1990) and Matafwali (2010) who saw oral language as a major tool in predicting beginning literacy skills such as phonological awareness, letter knowledge, concepts about print, and the later reading achievement. It is possible that the challenges brought about by discrepancies in translation of words from English to Chitonga affected learner engagement in the lesson because children could effectively benefit from the learning in a familiar language as

expected by the IRI methodology. One plausible explanation for challenges in translations could be that the teacher was not very conversant with the language of initial literacy. Thus, teacher proficiency in the language of initial literacy is just as important as learner proficiency because when the teacher lacks proficiency, it would interfere with the way they would translate words from English into the local language. Matafwali (2010) explains that in order to give adequate instructions in the Zambian Language, teachers need to have profound knowledge of the local language, its linguistic pronunciations and standardised spelling. Further, the English-to-Chitonga medium of instruction had a bearing on the pace at which the initial literacy lesson progressed. The pace at which the initial literacy lesson moved was dictated by radio recordings. This was seen to have been limiting the mentor's creativity such that the mentor could not even take advantage of what the pupils already knew. Stubbs (2008) cautions that ignoring or disregarding a child's own or home experiences may amount to rejecting them. This simply entails that when there are some elements in the language used which are not clear, the understanding and eventual learning of learners will be adversely affected. Consequently, learners will not even engage in independent problem solving.

Looking at the difficulties learners and the mentor experienced through the use of translations, the English-to-Chitonga language of instruction remained unfamiliar to learners and even to the mentor. This is somehow in contradiction with the Ministry of Education (1996) recommendation that the language of instruction for the development of initial literacy and numeracy should be through a language familiar to children. The fact that there were challenges in translations, one is inclined to conclude that the language in which learners were taught was inconsistent with the curriculum language as the mentor struggled to translate the words in some cases. For instance, the words 'adze, workshop' were not clearly translated. In fact, the study

revealed that the learners were not even familiar with some of the translated words. This to some extent might have contributed to low performance of learners in literacy.

5.5. Challenges the Mentor Faced

As alluded to earlier, the IRI programme at LTMC had its lessons recorded in the English language, and it required that translations were made by the mentor into the language which was familiar to the learners. Therefore, the language of instruction at the Taonga Center was English-to-Chitonga. There were a number of challenges that were noticed as a result of this medium of instruction. One of the challenges is that sometimes the mentor could not easily find matching words in Chitonga when translating from English into Chitonga to the learners. For example, the mentor could not easily find the corresponding word for “adze” in Chitonga (*mbezyo*). Apart from that, some ‘*ambuya stories*’ from the radio teacher were not familiar to children. Pupils, and even the mentor, did not have such ‘real life experiences’ which were coming from the radio teacher and so the mentor could not easily create the authenticity when translating to pupils. This dragged and made the learning process ineffective, which was contrary to what Stubbs (2004) stated that education should be child centered in that learning is most effective if it is based on the child’s own experiences. Since both the mentor and the learners were familiar with Chitonga, authenticity would have been easily created if instruction was in their familiar language straight away without venturing into translating, which did not work well for the understanding of the learners. That way the communication between the mentor and the pupils would have been natural and meaningful attesting to the UNESCO (1953) assertion that the best medium for teaching a child is his ‘mother tongue’.

It was observed that completing the given tasks within the given time by learners depended on how much time was given to do a particular task. At LTMC, the given time was limited for both learning and doing the given tasks such as individual pupil's oral activities during the lesson and the writing and reading exercises. This is as the World Bank (1995) and Muller (1985) stated that the radio instruction is not interactive and individualized enough since what the learners do and say in response are not preserved nor transmitted to the speakers there and then for the appropriate feedback to be given as the immediate required remedy. This did not guarantee effective teaching; consequently, there was no effective learning by the pupils.

By and large, the initial literacy lessons at the Taonga center were mainly characterized by verbal instructions which were devoid of the meaningful familiar words and demonstrations. This is contrary to UNESCO's (1953) affirmation that the best medium for teaching a child is his mother tongue since, psychologically, its meaningful signs and words work automatically for expression and understanding, and educationally, the child learns more quickly through it than through an unfamiliar linguistic medium. Indeed the initial stage of learning is critical to effective and sustainable learning. If there are any mismatches in the initial stages of learning, as Stubbs (2004) explained, especially between the child's familiar language and what he has to read, there can be serious obstacles to effective learning. This seem to have been the case at the Taonga Center where the IRI methodology was implemented in English and only to improvise mentor translations, which came out artificially so since some things could not easily be translated into Chitonga.

It was also revealed that the mentor was under pressure trying to translate and make learners understand because there was no time allowance for the mentor to manage the class during the radio broadcast and yet it was inevitable that pupils often times engaged in deviant behaviours.

Therefore, the mentor lagging behind radio teacher's instruction was unavoidable. This resulted in the mentor eventually skipping some lesson activities. This finding was in line with Muller (1985) who held the view that the interactive radio approach is not effective for all instructional needs, adding that for more difficult instructional and training needs, interactive radio is not interactive or individualized enough and that it works exactly where information and prompting can be provided unambiguously and without due regard for moment-by-moment changes in students' understanding. Truly, some pupils needed more attention to help them focus and sustain their attention on the learning points.

Noticeably, the mentor made remarkable efforts to manage deviant behaviours of pupils in a learning manner but for the inflexible nature of the radio broadcast. Instead she ended up skipping some teaching points so as to keep up with the radio broadcast pace. This, as Luangala (2011) stated, robs the teacher of opportunities to reflect, both online and offline, on how the learners are receiving what is being presented to them, and indeed even during the *After-The-Radio-Broadcast Lesson* the mentor had tough time getting the learners refocus on the learning items.

What was observed, therefore, seems to suggest that there was no adequate interaction between the pupils and the radio teacher (via the mentor) which seems to vindicate what Luangala (2011) observed that a teacher would look up in the air propounding and proclaiming what the learners should presumably internalize for regurgitation later, unmindful of how the learner is receiving the learning material. The learner may be completely inattentive to whatever the teacher is trying to explain. By implication, therefore, the mentor should have taken her time to manage pupils' misconduct and only to continue teaching when attention from all the pupils was restored, but

like earlier discussed, the way the IRI lesson was designed could not allow for all those aspects of the lesson.

The other challenge the mentor encountered had to do with parental involvement in the learning of their children. The mentor indicated that parents in the area did not look at learning from LTMC as proper learning. The comments gathered from parents themselves vindicated the mentor claims. They said LTMC was just a nursery school and very few parents read with their children. Such views seem to indicate that there was no healthy interaction between the LTMC (school) and the parents (home), a situation which could have adversely affect the effective learning and performance of the learners. This is contrary to Bonwell and Eison (1991) stated that parents and educators can support young children in becoming literate learners by engaging children in learning activities which engage which involve shared reading. Teale and Sulzby (1999) added that the quality of the interactions between adults and children plays a major role in enhancing children's motivation to read and their literacy knowledge.

In short, therefore, the mentor found some difficulties to translate with clarity the IRI lesson into the familiar language of the learners. The limited time within which the mentor could have creatively involved learners in meaningful learning activities put the mentor under pressure. The learners were not fully engaged in the meaningful learning activities due to the limited time within which they were expected to actively participate. This situation could have been one of the factors contributing to the low literacy gains observed among learners under the IRI programme. The fact that parents were not actively involved in the learning of their children created more work for the mentor.

5.6. Chapter Summary

It can be realized from the above discussion that there are several factors which could have contributed to the low literacy gains recorded among the IRI learners. First of all, it has been revealed that the IRI mode of initial literacy lesson itself restrained both learners and the mentor on doing a variety of learning activities. Secondly, the lesson observations revealed that the lesson dragged because of the aspect of translating radio teacher's English instructions into the familiar language of the learners, which was not clearly done at times. In other words, the medium of instruction has also been established that it could also have contributed to the low literacy gains recorded at LTMC; it has been established that it confused both learners and the mentor and consequently distorted the progression of the lesson. Lack of full parental support in the learning of children at LTMC has also been established as another factor which could have greatly contributed to the low literacy levels that currently obtained among the IRI learners.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1. Overview

This chapter concludes the study and also makes recommendations based on the major findings of the study.

6.2. Conclusion

It was revealed that pupils' performance in literacy was below the expected standard. This manifested in pupils' inadequate understanding and inability to express themselves well in their own familiar language.

On the engagement of the learners during the IRI initial literacy lesson delivery, it was found that pupils were not fully engaged in the learning process due to the limited time given in which the lesson was delivered. Both pupils and the mentor did not have enough time to ask questions and be able to respond to the questions exhaustively lest they lagged too behind the radio teacher's instruction. This could have been so due to the way the IRI mode of instruction was designed, which, as other scholars observed, was not fully interactive in all respects with regard to all varying learning needs.

It was also seen that the aspect of translating from English to Chitonga during the lesson had its own challenges on both the learners and the mentor. Sometimes the mentor took some time to find a word which could clearly explain the learning item. That posed a number of challenges on the understanding and participation of the learners during the literacy lesson and it even dragged the lesson.

These aforesaid findings enable us to conclude that there are several factors which could have contributed to the low literacy gains recorded among the IRI learners. The first one is the IRI mode of initial literacy lesson itself which restrained both the learners and the mentor on doing a variety of learning activities. The other factor is the aspect of translating radio teacher's English instructions into the familiar language of the learners, which was not clearly done at times. The medium of instruction (English-to-Chitonga) was also established to have contributed to the low literacy gains recorded at LTMC; it confused both learners and the mentor and consequently distorted the progression of the lesson. Lack of full parental support in the learning of children at LTMC was another factor which could have greatly contributed to the low literacy levels that currently obtained among the IRI learners.

6.3. Recommendations

Based on the findings outlined above, the following recommendations were made:

1. The radio recordings should be in the familiar language of the learners so as to do away with the translations. This would better localize the initial literacy learning where familiar terms and situations would be used. This would remove the confusion, the misunderstanding and the dragging of the lesson that occurred as a result of the translations that the mentor did. Consequently, the learning of initial literacy would be more effective and would be in line with the Ministry of Education's language policy, that is, learners learning initial literacy using the familiar language for one year (MOE, 1996).
2. The Educational Broadcasting Services in Zambia should ensure that the IRI lessons are put on soft copies which can be played and paused by the mentor. That would allow for

more flexibility and allow more time for learner participation and for the mentor to do remedial work there and then. This would enable pupils to freely think and be able to show what they know. Unlike a situation where the mentor just told a pupil to sit down because the radio instruction had moved on.

3. The pace of the IRI lesson should be dictated by the understanding of the learners and not by the radio teacher's instructions. That way pupils could even do peer teaching.
4. The parents/guardians should be actively involved in the learning of their children when at home.
5. There is need for refresher courses for mentor training and retraining.

6.4. Area of Future Research

Surveys of how many children are educated using the IRI methodology could be carried out. Such studies would capture information such as: how many IRI learners complete primary school level and where those who drop out go; how IRI learners' performance is when they mix with other learners from conventional schools at secondary school.

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APPENDICES

DATA COLLECTION INSTRUMENTS

APPENDIX A: SAMPLE TESTS FOR LEARNERS (translated into local language)

The University of Zambia

School of Education

Department of Language and Social Sciences Education

RESEARCH TOPIC: Factors Contributing to Low Literacy Levels among Learners under the Interactive Radio Instruction Programme: A case of Learning at Taonga Market Center under Chikuni Community Radio Station

LITERACY TEST INSTRUMENT

Grade 1

Reading Test

Time: Three (3) minutes per child

Section 1: Knowledge of the Alphabet

Instruction: 1. Recite the alphabet.

2. Read the following letters as one by one (The teacher randomly points at letters). Eg., Aa Bb Cc Dd Ee Ff Gg Hh Ii Jk Ll Mm Nn Oo Pp Qq Rr Ss Tu Vv Ww Xx Yy Zz

3. Sound the following letters b, k, m, p, t, etc

4. Identify letters that produce the following sounds: /k/, /b/, /d/, /s/, /o/, /u/

Letters: a, b, c, d, e, f, g, h, i, k, l, m, n, o, p, q, r, s, u, v, w, x, y, z

APPENDIX B: CLASSROOM OBSERVATION CHECKLIST

The University of Zambia

School of Education

Department of Language and Social Sciences Education

School.....

Class.....

Topic.....

Number of pupils.....

Date.....

Time.....

Sex of the teacher..... Native/non native speaker of the local language.....

Pupil Engagement	Comment/Observation
Teacher engages the pupils mentally	
Pupils are participating in the lesson	
Pupils initiate interaction (ask questions, seek help, etc.	
Most pupils seem motivated to learn	
Most pupils are on task	
Instructional Teaching Practice	
Objectives of the lessons are clear	
Lesson is prepared (A plan exists)	
Lesson has an appropriate pace	
Lesson has variety in activities and stimulation	
Evidence of teacher modelling	
Evidence of guided practice	
Evidence of pupil independent / group activity	
Evidence of teacher questions	

Evidence of clear teacher-pupil communication	
Evidence of assessment by the teacher	
Classroom Environment	
Classroom has displays of pupil work	
Classroom has instructional posters on the wall	
Physical space is organized and conducive to learning	
Classroom Culture	
There is a friendly, relaxed atmosphere	
Classroom routines are well established	
Pupils are encouraged, praised	
There is a highly interactive environment	

Adapted from Luangala's (2011) report on the baseline survey for Child Fund Zambia.

APPENDIX C: INTRODUCTORY LETTER

The University of Zambia,
Directorate of Research and Graduate Studies,
School of Education,
Department of Language and Social Sciences Education,
P.O. Box 32379,
Lusaka.

27th February, 2012.

The District Education Board Secretary,
Monze District,
Monze.

Ufs: **The Coordinator,**
Learning at Taonga Market Programme,
Chikuni Community Radio Station,
Chisekesi-Monze.

Ufs: **The Head teacher,**
.....
.....
.....

Dear Sir/Madam,

Introductory letter: Moonga Hambayi Alfred

This serves to introduce the above mentioned student. He is a bonafide student from the University of Zambia. He is identified as the student of the University of Zambia with this computer number: 530506832. He is doing his Master of Education in Literacy and Learning programme under NOMA project. He is now in his second part of the programme, which is research work. May you therefore allow him to enter your area which he proposed to be his research site.

Please be guaranteed that the information the student will collect will be used solely for academic purposes.

Your positive regard to this effect will be highly appreciated.

Yours faithfully,

J.R. Luangala (PhD)
NOMA-LITERACY PROJECT COORDINATOR

APPENDIX D: INTERVIEW GUIDE FOR PARENTS

The interview below sought to establish whether or not parents/guardians were involved in the learning of their children. If they were not involved, then it was established as one of the factors IRI learners' literacy gains were below the expected standard.

1. Do you read aloud to children on an individual (one-on-one) basis?
2. Do you set aside a special time each day to read to the children?
3. Do you read aloud a variety of different books (e.g., rhyming books, alphabet books, counting books, traditional literature, picture books)?
4. Do you reread favorite books?
5. Do you talk about books that we've read together?
6. Do you ask children questions about the books as we read (or after we read)?
7. Do you provide opportunities for children to look at books and other printed materials on their own?
8. Do you teach children about different features of a book (e.g., front and back cover, top and bottom)?
9. Do you teach children that printed letters and words run from left to right and across the page and from top to bottom?
10. Do you practice saying the alphabet with the children?
11. Do you teach children to recognize letters of the alphabet?
12. Do you teach children to distinguish between uppercase and lowercase letters?
13. Do you help children learn the sounds that each letter can represent?
14. Do you teach children to write letters of the alphabet?
15. Do you help children learn to write their names?
16. Do you help children identify different colors, shapes, and sizes?
17. Do you help children learn opposites (e.g., up, down)?
18. Do you help children recognize numbers (i.e., 1-10)?
19. Do you practice counting with the children?
20. Do you choose books to read aloud that focus on sounds, rhyming, and alliteration (i.e., recognizing the common sounds at the beginning of a series of words)?
21. Do you have children sing or say a familiar nursery rhyme or song?
22. Do you encourage children to make up new verses of familiar songs or rhymes by changing the beginning sounds or words?

APPENDIX E: INFORMED CONSENT FORM FOR RESPONDENTS

I have read contents of the interview guide and ascertain that I fully understand the purpose as well as objectives of the study. I hereby confirm that the findings of this study shall not in any way cause physical or psychological harm as it is meant for academic purposes. I, therefore, consent to participate in the study by completing this form given to me by the researcher as detailed below:

1. Name of Respondent:.....

Signature:.....

Date:.....

2. Name of Researcher:.....

Signature:.....

Date:.....