

## **CHAPTER FIVE: DISCUSSION OF THE FINDINGS**

### **5.0 AN OVER VIEW OF THE DISCUSSION**

This chapter provides some interpretations of the major findings that came out of this research. The discussion of the findings is centred on the salient features of the objectives of the study. The chapter further draws a summary based on the emerging themes from the discussion.

This chapter also addresses concerns about using IRI as a means of accessing education for the hard-to-reach children, in Zambia. The main areas discussed are:

- 5.1 The need and benefits of establishing IRI centres.
- 5.2 Acceptance of the IRI methodology by parents, the public and MoE.
- 5.3 Support of IRI Centres by Communities.
- 5.4 The cost effectiveness of IRI methodology.
- 5.5 The quality assurance in the IRI methodology.
- 5.6 Future prospects for the IRI approach.
- 5.7 Challenges in the use of the IRI methodology.

### **5.1 THE NEED AND BENEFITS OF ESTABLISHING IRI CENTRES**

In Zambia, the establishment of like IRI centres, according to MoE officials, was based on the long history of inadequate learning institutions. The parents felt that, the distances that children were made to walk were too great in many parts of rural Zambia, such that children between the ages of 6–9 years could not attend school. Parents gave examples of the distances from the IRI centres to the nearest schools in Chipata being 10 Kilometres away. While in Lusaka rural it was learnt that some distances were up to 28 kilometres. Such distances had remained a reality even though the government introduced free basic education in 2002.

The Jesuit Centre for Theological Reflection/ OXFAM (2001) in seeming support of the need to come up with other measures in the delivery of education to all, state that, mere withdrawal of cost-sharing and bringing in “free education” has not automatically improved access to education for all. They cite issues of nutrition, household economics, lack of space in the existing schools and poverty as huge

deterrents to accessing education. However the establishment of IRI centres seem to have overridden some of the above factors.

The establishment of IRI Centres has been viewed as a positive move by parents and the public at large, because before the introduction of 'free education', many children were yearly thrown out of schools, and into the streets. Some of the reasons were due to non-payment of fees, lack of books and uniforms, more especially among orphans and pupils who come from families that are economically disadvantaged.

Supporting the idea of alternative forms of education, like IRI centres to cater for marginalized groups in Zambia, Machlup in Morrish (1980:109) states that, he foresaw "the time when alternative methods and techniques are developed in education which will be less personal and more mechanical and automated but reasonably affective and much less expensive."

#### **5.1.1 Personal benefits of the IRI methodology to parents**

Benefits of establishing IRI centres were seen in many ways by other communities. For example, some parents at M'chini IRI centre in Chipata district said that with the establishment of IRI centres they have seized the opportunity to be in control of the centres and own them. Parents at M'chini IRI centre mentioned that, even if an NGO had helped them with cement to build the centre, they however moulded the bricks and did the actual construction of the classrooms on their own. This has given them a sense of ownership and belongingness to the centre, because they can make decisions and be responsible for them, unlike in government schools where they are often just informed of decisions made by the school management.

The findings also revealed through the information shown in Table 11 (p. 30) which is showing the responses on who the target group for IRI are, that the establishment of IRI centres had not only benefited the children in rural and peri-urban communities, but have also greatly benefited many parents who listen- in to the radio. Majority of the parents (80%) talked to indicated their interest in listening to the radio since IRI centres were established as a way of learning, as well as

getting other information. They expressed happiness on the benefits of the IRI methodology. As noted in the results chapter, one parent had this to say:

*We too, listen to the radio lessons and would like MoE to bring literacy classes for us. Like me I only went up to grade three before my parents married me off because they needed money to send my elder brother to a secondary school.*

Another parent already mentioned above at Tigwilizane IRI centre of Chipata District said:

*When I listen to our radio in my house, I also ask my daughter what she learnt at school to check whether she pays attention to Mrs. Musonda. (Making reference to the radio teacher)*

There were indications that literacy could lead parents to a better life as communities. This is supported by JCTR & OXFAM report (2001) which says that children of illiterate parents are less likely to send their children to school. The article further reiterates that the cost of illiteracy is then transferred across generations. The implication of this seems to suggest that, today's illiterate children are tomorrow's illiterate adults and the chain can only be broken through education.

Agreeing to the above, ZANEC in Times of Zambia (2005, June) shows that allowing children to grow up without entering the corridors of a school or any learning institution is a time-bomb for any nation. Ezewu (1983) also adds that, more especially that the tasks or functions of any school or education system are: national building; preparing children for the world market; problem solving, socialisation, creation of social equality and building pupils into responsible citizens.

## **5.2 ACCEPTANCE OF THE IRI METHODOLOGY BY PARENTS**

It was noted that the presence of IRI centres was seen as being important, just like conventional schools were important for the other children. For this reason, rural and peri-urban communities in this study have shown that they intend to support the

centres. They had accepted the establishment of IRI centres as a way of imparting vital elements of a society such as knowledge, skills, attitudes, values and norms to their young. It became evidently clear in this study that even the MoE/EDC officials value the establishment of IRI centres. For the EDC officials as the major partner, their acceptance of IRI in Zambia, could be seen in their commitment to have sustained it for eight (8) years from its inception in 2000. For the communities and parents, “Learning at Taonga Market” centres symbolised development, identity and value, more importantly that these centres provided a future for their children and were a focus for community life development.

Mentors as members of the same communities were in agreement that IRI centres were a good thing because many pupils were able to read and write even as early as in grade two (2), a thing they did not see in some regular schools. Mentors were happy to be associated with the IRI methodology. For most of them, IRI centres have given them something to do for their communities, especially for those who were not employed after doing their ZATEC training. For others, the motivation to be mentoring in IRI centres was that they were gaining experiences and preparing themselves to get into colleges. The above was mentioned by one young man of Tigwirizane centre in Chipata District; ‘It is going to help me when I finally go into a teaching college after next year’. Yet for others, centres were a calling or vocation, like the retired teacher who said “as a former teacher I want to help get rid of illiteracy in our area”, while for the rest of the mentors, IRI centres were a “pastime activity”.

Parents had shown that they were in support of the IRI methodology and centres. They do not want IRI centres to be scrapped off, because they were happy with their children’s performance. The parents also said that before the establishment of IRI centres, many children between 7-16 years never used to attend school. They mentioned that for the boys between 13 and 17 years old, they could only engage in illicit activities. Since the coming of IRI Centres, life has changed; these over-aged boys and girls have all been accepted in centres and kept out off the streets, despite their advanced ages. IRI centres have kept many children from vices like drinking, vending, girl-molesting, pre-marital sex, smoking, street-kidding, brawls and so on.

Other benefits for children which parents indicated they had seen since the establishment of IRI centres were that, in the past, even bigger children who attended government schools that were far away from homes in rural areas, stopped schooling in the rainy season due to washed away bridges and floods. A case was told of two children of the same family who never came back home one day, because they had drowned in Luntembwe River of Chipata District due floods. They said that with the establishment of IRI centres since 2000, their children no longer stopped learning, because most of the centres were within walking distances. Other benefits of having these IRI centres as indicated by parents were that, there were no strikes as was the case in regular schools. The documentary review also revealed that since inception, about 56 000 pupils had accessed education through IRI centres.

Nonetheless, even if parents were happy with IRI Centres, and had accepted the establishment of IRI centres, they would appreciate a lot if the MoE considered paying mentors an allowance. Another thing is, even if learning takes place, the shelters where the mentors conduct teaching/learning sessions for the pupils were in very poor condition and needed improving. One can not even doubt that pupils some times get soaked while learning especially in the rainy season.

During the class observations, it was noticed that there were no compartmentalised teaching of subject- lessons, as such. In 30 minutes three subjects were taught one after the other with only short interval in between. After the radio broadcasts, pupils stayed on with the mentors for at least an hour to carry on with writing activities based on the lessons for the day. The mentor's role during that period would be to mark the work by pupils and to give home-work or ask them to finish their class work at home. The researcher also noticed that in reality mentors did a lot of work to ensure that there was quality learning (See appendix IX).

Mentors seemed to have a number of duties at the centres. Some of the duties were marking registers, maintaining discipline among pupils, record keeping and receiving visitors and organising tests, and so on.

### **5.3 SUPPORT OF IRI CENTRES BY THE COMMUNITIES**

The study, as shown in Graph 1 (p.31), showed that parents appreciated and had accepted IRI centres, however there seemed to be inadequate support from them to mentors and IRI centres. One of the plausible explanations for lack or inadequate support to IRI centres can be attributed to the parents' own high poverty levels in rural and peri-urban communities. This poverty was the same cause for not sending and for the non-attendance of children in regular schools, in most areas. That is why some of the parents who send their children to centres even fail to pay the K5 000 requested for, by the centres. But as stated before, in IRI centres children had the opportunity to learn even if they could not pay the fees, which some children in conventional schools do not have.

Because of poverty, some parents said that before the establishment of IRI centres, they used to keep their children at home or sent them in farms to help as labour hands, because they could not afford the huge fees demanded by regular schools. Most of the people in the communities where the research was conducted were not in regular employment. As such money was not easy to come by, least of all to save for education. One could easily see the poverty trickling down to children. There seems to be an issue of opportunity-costs forfeited by 'sending labour-hands' to school. The implication of this is that, the more expensive education is, the less likely families are going to invest in education (DVV, 2005). Put in another way, sending-labour hands to school may mean less or no food on the table.

Parents in this study further mentioned that education in IRI centres was very cheap and affordable. Even where they are asked to pay the fees (usually between K5 000 to K10 000, to buy chalk and other small requisites), parents are allowed to pay in bits or in kind, unlike in regular schools where they were made to pay more money in form of P.T.A funds, sports fund, uniform and other projects. The mentors said that, due to the parents' high poverty levels, some parents did not pay, even the K10 000 or K5 000 asked for, and their children were not chased away from classes. If parents were able to pay in monetary form or in kind, mentors would find meaningful livelihood out of mentoring unlike the way things were.

The above scenario is confirmed by JCTR and OXFAM (2001) who concluded in their study that poverty had undermined the ability of many households to contribute to the education of their children, thus throwing the EFA commitment by the year 2015 campaign off course. Because of high poverty levels and the demands for high school fees in conventional schools, MoE further states that there have been many transfers of pupils from conventional Basic Schools to Open Learning Schools like IRI centres (MoE 2005). The affordability, flexibility and quality of learning have attracted many average learners to IRI centres.

#### **5.4 THE COST-EFFECTIVENESS OF THE IRI METHODOLOGY**

Most of (80%) education officials indicated that the IRI methodology was cost-effective while 20% said that it was not cost-effective, as shown in Table 13 (p.31). The majority of officers seemed to accept IRI broadcasted by Education Broadcasting Services. They said providing this kind of education was cost-effective since there was only one cost for all the IRI centres in Zambia, which is three (3) dollars per child per year, compared to regular schools where it costs about K500 000 to educate one primary school pupil per year. In addition to the above, the kind of radio used in Learning at Taonga Market (IRI) is self-winding and does not require any electricity or batteries. These radios have been donations secured through EDC.

The mentors who were volunteers in their communities seemed to be another aspect that made the IRI methodology cheap to provide. There is no doubt that the volunteerism by mentors makes the IRI methodology cheap, however this is an issue the Ministry of Education should re-visit, and consider giving mentors an allowance because they are giving a service to the government. Finally one can add, the simple infrastructure used in IRI centres as cost saving.

The main position to show in this study is that the cost of air-time cannot be compared to the consequences of the high levels of illiteracy which would be there if the pupils had to wait for government to construct new schools before they could access education.

Some officers (20%), however, had responded that the IRI methodology was not cost-effective. Their main argument was that “if the quality of learners graduating

from the centres was poor, then the resources spent on IRI were just a waste. They also felt that the cost of airing lessons was expensive. They had a point on the cost of air-time, however education is never cheap. But as the majority conceded, there was need for the Zambian government to bear the cost for educating our future at any rate.

Parents on the other hand also said that the IRI methodology was cheap for them, just like for the pupils in grades 1-7 in regular schools who attend 'free-education'. Parents were particularly happy with the arrangements in IRI centres where their children can go to school or centres without wearing uniforms. Parents of pupils that attend IRI centres do not contribute to P.T.A. funds; pay user fees; are able to pay the children's fees in kind and the children walk shorter distances. Parents further said that even if mentors were not paid, they did not go on strike (wasting a lot of working hours) nor send pupils away. From this study it became clear that the IRI methodology seems to provide compensatory education for the economically, and socially deprived communities.

## **5.5 QUALITY ASSURANCE IN THE IRI METHODOLOGY**

One of the aspects discovered from the study about using IRI as a means of increasing children's access to education was that, "quality control in the IRI approach was intrinsic to the methodology" (Hartenberge and Bosch, 1996:31). As an example, the study discovered that the interactions and the characters used in the radio were developed in such a way that they provided quality and relevant learning experiences as well as providing positive role models. The researcher was told by education officials that IRI was developed to get rid of some internalized traditional biases found in our education system. One of such biases in our schools and communities was the issue of girls. As an example, girls were made to feel inferior to boys. This inferiority was counteracted by the presence of Mrs Musonda and Mrs Jere who as female radio teachers, were also models for girls.

After observing a number of lessons by radio one, conclusion was made that IRI programmes were deliberately created with a balance of pedagogical inputs and creativity. To ensure quality in the IRI approach, it was noticed that a lot of sound effects, oral descriptions are used to allow the learners enter different places and

visualise different objects, scenes, animals and people that are not seen in a personal encounter. Moreover, it was revealed that before any lesson were aired, there was a formative evaluation carried out to ensure relevance, quality and correct content, and to find out whether the activities developed and produced could actually work for learners when put on air. DODE officials argued that this process might not be possible when writing text books for regular schools. So from the start, the IRI approach seemed to have incorporated learner-centeredness methods rather than teacher or writer- centeredness. From the formative evaluation carried out, it seemed that, if the lessons did not make the intended effects, on the mock audience, it was easy to modify them without affecting the whole series more especially that the lessons were audio.

The officers also reiterated that, as the people behind IRI that quality of education was important for pupils learning in IRI centres because the pupils come from disadvantaged backgrounds. Initially IRI seemed to have been concerned with access but in essence it has equally given credence to quality of education.

The pupils told the researcher that they enjoyed talking and interacting with the radio teacher and other children on the radio. Pupils liked learning by radio because, they always pictured themselves at the centre of scenes in the radio; and this makes it possible to identify themselves with what is going on in the radio sometimes. It might seem that this conversational and interactive nature of learning, although at a distance, has great potential for improving learner's participation and learning, and ensures quality learning.

During the radio lessons it was observed that there was no dull moment for either the mentor or the learners. As observations of lessons went on, it was noticed that learners were invited to carry out small tasks, experiments, physical and verbal activities through radio instructions and guidance by the mentor. Young children could be seen doing role play, games and drama and hands- on experiments to solve problems posed by the radio teacher and other characters in the radio, with the help of the mentor. A lot of interactions go on among and between pupils, the mentor, radio teacher and radio characters, giving meaningful participation to both boys and girls as well as ensuring equal chances of achieving.

Confirming the quality provided by the IRI methodology, Hartenberger and Bosch (1996) give an example of the Australian case where an IRI version called “Schools of the Air” proved a success in providing education to children in their homes with just session- contacts from time to time. Other examples of quality in the IRI methodology come from Dock and Helwig (1999), who cite the experiences of IRI in South Africa where it was known as “Increasing the Role of the Teacher” and state that, the IRI methodology aimed at increasing access and improving educational quality. Their evidence shows that initially IRI was meant to counteract low levels of teachers’ training and poor achievements among pupils but had shifted to become the media for teaching at a distance. In a move that seem to support Dock and Helwig, the Ministry of Education officials mentioned that apart from the IRI centres, they have since then, extended the IRI methodology to 36 grade one conventional- basic schools, on trial.

A fewer number of 25.7% education officials indicated that the lessons on radio were not enough for quality learning. However the majority of them (73.3%) said it was adequate. Further, the pre-tests and post-test piloted in government schools with control groups showed that more pupils had great gains in English speaking and listening skills than those pupils who were in the control group (MoE 2006). Parents, mentors and Education officials in this study were happy with the quality of learning among pupils and reported that many pupils in IRI centers do perform better than some pupils in many regular schools (See appendix V).

#### **5.5.1 The role of mentors in the IRI approach**

It was observed that age, sex and marital status were not a hindering factor to teaching in IRI centres. It was noted that both men and women do mentoring in IRI centres and had been in the centres for not less than three years, a sign that these mentors had found something worthwhile. That thing was, providing education to the young. Both the young and the old seem to enjoy their work in the centres. 25% of these categories were between 21- 25 years, another 37.5% were in the range of 26-30 years, the other age range of 25% was between 36-40 years and the last age range 12.5%, was for those above 40 years.

The question on the education level of mentors showed that 12.5% went up to grade nine. Another 12.5% went up to grade twelve and the last 62.5% were grade twelve's who were also ZATEC trained. This last group consisted of two females and two males. What seemed to come out of this study was that some of mentors were not fit to be mentoring pupils especially for those who went only as far as grade nine (9). Although grade nine mentors should not be encouraged to teach, some of them have become so good over the years, that one cannot tell their education levels.

The other surprising aspect that came out through this research was that instead of finding only untrained teachers in centres, IRI centres were making use of ZATEC trained teachers to practice their profession. These ZATEC trained teachers were not employed by the MoE between 2003 and 2005. This study has revealed that, contrary to the public's perceptions, that IRI Centres are handled by untrained people, the mentors are either ZATEC trained or have received some other form of training. All the mentors (8) had undergone training in how to handle pupils and the IRI methodology in all the IRI centres under this study. Apart from this, there was continuous planned in-service training in the form of workshops, seminars and by radio (in form of distance learning) for mentors, by MoE and EDC. In these sessions pedagogical methodologies; how to use the self winding radios ready for lessons; how to manage proceedings of the radio lessons; how to assess pupils; translations and pronunciations, and any other new ideas being promoted by the Zambian education system, were taught.

These training organised by MoE and EDC, was a sign that government had provided some capacity-building for mentors. Without the training, mentors would have been at a loss in the handling of the IRI methodology and the pupils. Under going the training had made mentors to be competent and effective mentors, if not equal to, or even better than some teachers in conventional lower basic schools, looking at some of the results obtained from centres.

When probed why they had been motivated, and kept on mentoring in the IRI centres, mentors gave various responses. For one Nangombe mentor, the motivation was because the lessons were well designed and easy to follow, so he decided to

start teaching since after finishing grade twelve he had nothing to do. For others mentoring in IRI centres was an opportunity to gain a lot of insight in the teaching profession as they waited to get into teaching colleges. Teaching in IRI centres was found to be a training ground for those intending to enter teaching as a profession. Other people were in mentoring because they retired from teaching and felt that they had a calling to get rid of ignorance and illiteracy. Some people say 'once a teacher, always a teacher'.

When asked what form of payment the mentors received from either their communities or the MoE, most of the mentors indicated that they got almost nothing. All mentors were not considered to be in full-time employment but volunteers, even by some community members whose children they offer education. However, few mentors at Chainda, Kamanga and Mchini centres intimated that they got very small tokens of money from parents, while 12.5% said they get food rations as payment from time to time more especially after the harvests. All the forms of payments mentors received, for those that did so, were far from adequate. However, it seemed from this study that the 'no-payment factor' did not keep them away from the IRI centres. It became clear that they were just committed to offering education to their communities and their mentoring went beyond monetary gains. Nevertheless mentors' inward hopes were for the MoE or EDC to pay them an allowance since any one who works gets a reward, and the work they did was the responsibility of the MoE and the government.

In seeming support of mentor's presence in the centres, DODE and EDC officials and all the mentors argued that, the aspect of employing untrained teachers was not new in Zambia. Untrained teachers have been utilised for many years in conventional schools. Kelly (1999) attests to a big presence of untrained teachers at conventional primary, secondary schools and colleges, and states that we should not therefore tick-off the pupils in attendance of IRI centres.

In a further apparent attempt to support the presence of mentors in IRI centres, Kelly gives a staggering figure of 6 396 of untrained teachers all over Zambia in 1994, as against 28 940 trained ones. He goes on to state that provinces (and towns) away from the rail line were the most affected at 3 625 untrained teachers.

The responses given by the mentors regarding their roles in the centres were many and varied. Mentors bridge up the gap that exist between the pupils and the radio-teacher. Pupils in a grade two class had indicated that when they first heard lessons from the radio, they could not get every thing from the radio teacher properly. One can easily see that the presence of the mentor made things easier. Mentors are always on hand to explain the radio teacher's language (by interpreting and clarifying), which may make it difficult for pupils to decipher the information and facts, and follow instructions from the radio- teacher.

Additionally, mentors indicated that their roles which included translation of messages, information, scientific and mathematics concepts and facts, into various languages of Zambia, were not an easy task. This is why all the mentors (100%) interviewed had undergone some training on how to handle the IRI-methodology.

From the classroom observations conducted, mentors were seen to be getting instructions from the radio teacher, and translating them to pupils. However Porter et al. (1995), is apprehensive of this and warns that, some mentors may take a passive role, because they may feel that the radio teacher is doing almost all the work for them, and may end up 'de-skilling' themselves. However to avoid that, the MoE officials told the researcher that during the in-service trainings for mentors, they encourage all mentors to seriously read and study the mentor's guide as a way of preparing themselves, for "the before, during and after the broadcast radio activities".

The above apprehensions by Porter suggest that, the mentors should carry out other roles apart from translating the lessons for pupils from the radio teacher to make a case for their presence in IRI centres.

The research found out that apart from preparing lessons for pupils, the presence of the mentor during IRI lessons at the centre ensures order and discipline, motivation and guidance to pupils. Mentors also organised children for learning, marked the written exercises and set end of term examinations. They also had to conduct sports and provide an addition role, of being role models to pupils just like teachers did in conventional schools. In the final analysis this study came to a conclusion that a

mentor was a critical person at an IRI centre because pupils can not manage themselves in the above areas.

Monitoring and evaluation were said to be conducted by MoE, EDC and the communities as a quality control tool. Monitoring and evaluation ensures that meaningful learning was going on in IRI centres to justify the presence of these centres in the country. Monitoring and evaluation was a quality assurance tool to justify not only the presence of the centres, but also the expenses by government and the donors.

Quality in IRI was something that MoE took exception in. This research found out that the curriculum followed by pupils in IRI centres was the same as the one followed in conventional schools. Documentary review showed that the IRI curriculum comprised of all the six (6) core subjects in the MoE official curriculum namely; Mathematics, English Language and Literacy, Science, Social Studies, Zambian Language, moral and Spiritual Education. It was also mentioned by MoE and EDC officials that in 2006, MoE had incorporated NBTL, SITE and ROC in the grade one, two and three syllabi respectively, as was the case in conventional schools, to make learning more effective. The study therefore, found out that the intended curriculum was being implemented in IRI centres.

In addition to teaching the six (6) core subjects in IRI centers, mentors and MoE/EDC mentioned that HIV/AIDS and Life Skills were taught to prepare both pupils and the communities with skills and information for meeting challenges in life. The Life skills were meant to equip pupils with psycho-social skills which could help pupils to be more assertive and learn how to survive in an era of challenges. This was in view of the dangers posed by HIV/AIDS and other vices. They said that the disease had generally been reducing the number of learners enrolling and being retained in schools. MoE officials pointed out that HIV/AIDS had gone further into reducing the teaching staff. An example can be given where about 815 primary school teachers in Zambia died from HIV/AIDS in 2000 (International AID and Trade Review, 2005).

## 5.6 FUTURE PROSPECTS FOR THE IRI METHODOLOGY

It became evident from the discussions held with parents, and the questionnaire responses from mentors and education officials that the IRI methodology had very bright and promising prospects for, hard to-reach-children, orphans and vulnerable Children and many ordinary children in Zambia. IRI Centres were found to be on demand, not only for the children, but also for the adult population. During the Focus Group Discussions, held with parents, it became clear that they too had a lot of interest in the IRI methodology. Many parents would like 'adult literacy' introduced as IRI. About 40% of them had been listening-in, either at their homes or by the windows, while their children learnt. MoE officials however said that, for IRI to be extended to the adult population there was need to partner with local community radio stations, to help air such adult literacy programmes, as the Zambia National Broadcasting Corporation gets congested with programmes. The partnership should be extended to other line ministries, like the Ministry of Community Development and Social Services, to share the costs.

The future prospects for the IRI methodology were very bright as shown by the trials in 36 government basic schools, in late 2005. MoE and EDC introduced IRI in regular schools because IRI has shown that it can be used to improve teaching and learning in many schools, as evidenced by results from the piloted government schools which indicated that pupils gained from 24.6% to 45.6%, while the control group (without the IRI) gained from 21.6% to 40.1% in pre-test and post- tests given by MoE/EDC (MoE 2006). The Open and Distance Education where IRI falls may remain an important option in the next five years for out-of-school pupils and adults, to meet the education Millennium Development Goal by 2015.

It was found that the radio was also a teaching device for mentors. Many mentors received their in-service training through the radio. This innovation had greatly helped improve mentors' abilities to deliver lessons with confidence and efficiency to learners, even if some did not receive formal training in any college. There seem to be all indications that IRI could actually train a lot of teachers at a distance, to override the problem of over-crowded colleges and the shortage of teachers in Zambian schools. The researcher observed and noted that even as the radio

learning/teaching was going on, the mentors were also taking advantage to learn. Mentors themselves confessed to learning while the radio-lessons were going on.

## **5.7 CHALLENGES IN THE USE OF THE IRI METHODOLOGY**

Even if the findings revealed overwhelmingly that, parents, mentors, pupils and MoE were happy with the IRI methodology, this study found out that there were challenges in learning by the radio. Some of these challenges were: poor signals, especially in the rainy season; limited reach in few areas; lack of availability of durable and reliable radio sets, and shortage of radio sets to go round in all IRI-classes per centre in few areas.

All the above challenges hampered the effective usage of the radio. It was learnt that some of these limitations seldom affected the use of the radio in many centres. However it would seem that the last two challenges of lack of availability of durable radios and shortage of radios were most felt in remote communities and those IRI centres that were not supported by other partners, apart from MOE.

It was also generally accepted by the Directorate of Open and Distance Learning officials and the communities, that since IRI is mostly donor driven, there may be a likelihood of having sustenance problems. Threats of a donor pulling out due to donor fatigue and other unknown reasons are always imminent in donor driven programmes. Because of these fears, DODE officials said that government had been actively increasing funding for IRI and other alternative forms of education. However, as government resources dwindle due to poor economical climates, possibilities are that this alternative form of education may face the problem of inadequate funding and sustainability.

### **5.7.1 Challenges in achieving Education for All through IRI**

Accessing education is not only a Zambian concern, it is a universal one (Mumba, 2002). Mere accessibility of education is not what Zambian communities are seeking for and emphasising on. Parents told the researcher that they were not happy that the MoE did not air radio-lessons beyond grade five (5). Providing education that goes only up to grade five is a sure way of promoting pupils to

relegate into illiteracy. There was need and urgency to extend IRI methodology up to grade seven (7), because grade five (5) was not a terminal grade.

This was confirmed by some mentors who through their own initiatives had introduced grades six and seven classes in the IRI centres as a way of providing continuity with-out the radio. Mumba (2002) agrees with sentiments by both parents and mentors that, children should be given all support and opportunities to access, participate, be retained, perform and achieve in education.

Ministry of Education officials acknowledged the problem of not airing radio lessons beyond grade six. The officers said that they had already developed materials for grades six and seven and were just waiting to air them the following year (2007). They further said that other plans were on paper, to extend IRI to even secondary classes in the nearest foreseeable future. The development of IRI for secondary classes would cater for the pressure caused by pupils that were graduating in grade seven in IRI centres, or could help enhance or complement teaching and learning in conventional secondary schools.

The study discovered other challenges that posed problems in the implementation of the IRI programme. These were; a high turn-over of mentors, lack of durable structures, lack of adequate support from communities, lack of supplementary readers and other materials like maps, additional text books and so on. The biggest problems as cited by both MoE/EDC and mentors were the lack of additional learning and teaching materials and lack of adequate community support.

The view of the importance of achieving in education was held strongly even by Learning at Taonga Market pupils themselves. From pupils' responses which showed the preferred future careers of the pupils in IRI centres, the responses seemed to suggest that pupils in IRI centres had hopes, aspirations and ambitions to become future leaders and contribute to national development, too. Pupils told the researcher that they would like to complete their education and take up careers like; doctor, nurse, teacher, president, soldier, pilot, pharmacist, accountant and many more.

The Education officials also maintained in this study that, pupils' performance was a very important issue in IRI centres. They emphasised that it was in their interest to see that pupils benefited from this kind of education. Indeed MoE had a duty to ensure every child accessed the right kind of education for its national development. Parents also indicated that they would want their children to have a bright future. That is why some communities told the present researcher that they had sent some of their mentors to Teachers' Training Colleges to have them trained as teachers to improve on their mentoring abilities, and lure them into staying-on at the centres. This move has worked well for mentors, although some may still be tempted to get employed in conventional schools where they are able to get a reasonable living wage.

The results shown on preferred careers of the pupils and the sentiments by parents and the education official seem to be an indication that, IRI centres like other regular schools, should prepare the young by equipping them with knowledge, facts and various basic skills of life, to be better people for their particular societies. This gives them the impetus to work extra hard because they have a task to take over their inheritance. However, looking at the complaints raised by pupils over lack of supplementary reading books, which other pupils in other regular schools have, and the inadequate support their own parents render to centres and mentors, one may say that pupils in IRI centres will fulfil their dreams at greater cost and with a lot of difficulties. This is in view of the envisaged sustenance problems and the current volunteerism among mentors.

The study had shown that IRI centres have helped children to participate in educational programmes. The methodology has thus, shown that it can overcome factors associated with poor access, enrolment and retention. Achieving education for all is yet to be met especially that there still many areas in Zambia still challenged by factors among others like: dangers associated with children crossing bad terrains like rivers, mountains, swampy areas and forests, and so on.

Even though people may bemoan lack of permanent structures in IRI centres and may be tempted to think along the lines of increasing the school infrastructure or indeed improving it, as a way of increasing access to education for all, the other

truth is that, increasing the school infrastructure gets outstripped by the demographic growth of school-going children. Others may tow the line of developing more and more human resources to curb the presence of untrained mentors for the education sector, as the only proximate determinant for achieving EFA. Such progressive thoughts are appreciated; unfortunately, the training of more teachers is undermined by the scourge of HIV/AIDS and lack of teacher retention. This, therefore, means that alternative ways which do not require permanent structures and so many college trained teachers should be supported to give access to education to many hard-to-reach children.

Coupled with the above challenges, are those pupils who gain access in schools but can not be retained in regular schools, as they get pushed out or drop out (Lungwangwa, 1999), and relegate into illiteracy, there being no other alternative form of education for continuity.

## **5.8 SUMMARY OF THE DISCUSSION**

From the discussion of this study, came out enough evidence that all the parents, MoE officials, EDC officials, mentors and pupils in this study, viewed accessing education as a necessity and a right for all, regardless of their backgrounds and statuses. Their responses implied that education was treasured as an asset that no one could ever be stripped of, like other assets. The study also revealed that IRI was not only used for accessing education for children but it has also proved that it can also be an important tool for the adult population in fighting against illiteracy, ignorance, disease, and general deprivation.

Education through IRI has shown that it can bring social change, meaning ‘making a difference that makes a difference from what was, to that which is most desirable.’ This could only happen if all today’s children could access education in at all levels and not ending in grade five (5). Some of the changes mentioned in the research as a result of IRI, are the removal of boys and girls from vices like street-kidding street vending and early marriages and many more.

Among measures put in place to avert the closures of IRI centres, some communities have been supporting mentors and sending them to colleges as a way

of motivating them into staying- on in IRI centres, in the midst of parents' own poverty. This can be called 'sharing poverty'.

## CHAPTER SIX: CONCLUSIONS AND RECOMMENDATIONS

### 6.1 CONCLUSIONS

The biggest role that “Learning at Taonga” (IRI Methodology) had played in Zambia as shown in this study is; increasing access to quality and affordable education among rural, peri-urban and poor communities; IRI had made it possible to reach to the hard-to-reach children and promoting equalization of educational opportunities, thus endeavouring to achieve equality to left out the children. More importantly, the IRI methodology has shown that it was a strategy that has compensated for the gaps that exist in the provision of education in Zambia. IRI has shown that, it is an alternative mode of education delivery in the country, to numerous orphans, poor communities, and ordinary children, remote and hard-to-reach children.

Another thing that has come to surface through this study is that the importance of “educational technology” has been recognized as a means of bringing rich experiences in the classroom that portray realities, a means of making learning more enjoyable, less monotonous and boring. The study has also shown how to extend benefits of quality education to sections of the Zambian society that are remote and deprived, thereby providing compensatory education by use of a radio. This is more especially considering that children from poor, remote communities and subsistent farmers, mostly in the rural and peri-urban communities, start school already disadvantaged. The MoE said that it is because of this unfair disadvantage that they aim at helping and compensating pupils in IRI centres by teaching them through properly trained radio teachers, and also by using a lot of real sound effects, provided by the radio. Giddens (2002) calls such proper teaching “an elaborated code”

This study has shown that children in ‘Learning at Taonga Makert’ (IRI) know that they too needed a good future to contribute to national development. They had shown ambitions to pursue important careers such as doctors, soldier, president, teacher, nurse, accountant and many more, which are a threshold for national development.

Mentors in this study have lamented over lack of adequate support from communities whose children they give some education. They also showed sadness over the idea of being considered as volunteers who should be left to fend for themselves, without a wage for their livelihoods. The conclusion drawn was that mentors were teaching in IRI centres under a lot of hardships and challenges.

On over-aged children, this study has shown that the difficulties that they experienced in accessing education in GRZ schools can be solved by IRI centres where such children are offered a second chance to access education and realise their dreams. But another interesting thing was also discovered where the opposite was equally true. This was that there are a number of under-aged children (5 years) who sit side by side with over-aged pupils in IRI centres to access education. May be it is an early call indicating that MoE/EDC should consider developing an early-childhood (pre-school) IRI programme for under-aged pupils before they can join their colleagues in grade one.

The study has shown that both girls and boys had gained equal opportunities in accessing education in IRI centres. Since inception the over-all enrolment ratio, according to reports from MoE/EDC (2005), was at 50.5% for girls and 49.5% for boys. This ratio had been falling within one percent since the programme started. The report further states that this was in contrast to GRZ schools where attrition rates were much higher for girls as they reach grade 5. Girls in GRZ schools are at 47.6% while boys are at 52.4%. The reports on IRI performance, mentioned that since inception the number of learners increased from 22,763 in 2003 to nearly 56,233 at the time of the study.

This study has brought in a realisation that, making education available to all, is not only a matter of justice to human rights tenets, and definitely not a waste of resources, but education makes social, economic and political sense to the future work- force and leaders of any given nation. But this can only happen with a lot of political will, as Brookover (1980: 68) observes, “the education system alone is unlikely to initiate activities to force change in society in which the government control is opposed to such activities”.

A country that fails to address accessibility of education of its people will always be in a state of vulnerability and perpetual deprivation of all kinds. Hence children that grow up without being in the “corridors of schools” grow up being alienated from a country’s values, ideologies, norms, culture and developmental policies. Such children are a reservoir of discontented and anarchically prone future citizens.

It should be restated that, improvements in providing more access to education for children call for drastic or even unorthodox solutions. The education officials did not make a secret of the difficulties the Government and Ministry of Education have had in increasing access to education for all, using only the traditional mode of face to face in the classroom. Even in the Open -Learning system like the IRI methodology, there are challenges which slow the process of reaching all the children. Such challenges were inadequate funding, lack of reading and learning materials, lack of durable and permanent structures and inadequate support to mentors.

## **6.2 RECOMMENDATIONS**

Arising from the above findings and discussion, this study suggests the following recommendations as areas of concern:

- (i) There was a concern in the inadequate funding and sustainability of IRI as an open and distance learning programme in Zambia. The study therefore recommends a re-distribution of the government’s own resources towards this alternative education.
- (ii) The alternative form of education such as the IRI programme should run along side regular schools and be given as much attention because of its flexibility and extended reach to many children in need of education.
- (iii) MoE should consider developing an early-childhood (pre-school) IRI programme for under-aged pupils before they can join their colleagues in grade one.

- (iv) The MoE and its partners should consider paying the mentors in IRI centres, because volunteerism does not mean going without basics.
- (v) Priority should be given to intensive and extensive in-house training of mentors or development of a specific programme to train them in colleges by distance and certifying them as a way of improving on their public image and abilities to handle IRI classes. This would also make improvements on the quality of 'out puts' (the pupils).
- (vi) Ministry of Education should hasten the development of radio lessons for grades six and seven, and junior secondary classes to bridge up the gaps that are created by the pressure of those learners that complete grade 5 and graduate in grade 7 at IRI centres.
- (vii) All concerned partners in the provision of education by IRI, should attempt to build proper shelters for learners.
- (viii) Feeding programmes and other School Health and Nutrition (SHN) activities should be introduced and enhanced in all IRI centres just like in most rural famine- prone regular schools of Zambia. This is because learners in IRI centres are even more disadvantaged and challenged in many aspects.
- (ix) MOE through Directorate of Open and Distance Education (DODE) should network with other partners and countries providing education through IRI to the hard- to- reach learners, to learn from their "best practices".
- (x) All interventions made available to teachers in regular schools should be availed to mentors, e.g., free Voluntary Counselling and Testing (VCT), and access to Anti-Ritro Virus drugs (ARV's) to help mentors prolong their mentoring life.

### **6.3 SUGGESTED FUTURE RESEARCH AREAS**

- (i) Carrying out a longitudinal study to assess the benefits of the IRI methodology.
- (ii) Carrying out a research on successful stories of pupils who have made it into colleges after under going an education in “Learning at Taonga Market.”
- (iii) Carrying out a comparative study on attrition rates and performance among pupils in government schools and those learning in IRI centres.
- (iv) An assessment and evaluation study should be carried out on competences of “Learning at Taonga Market” pupils, at Secondary School Level.

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# APPENDICES

## APPENDIX: 1

### QUESTIONNAIRE FOR MOE (DODE) AND EDC OFFICIALS

#### TITLE: THE ROLE OF IRI IN INCREASING ACCESS TO EDUCATION FOR ALL.

Dear Respondent,

You have been selected to participate in this study with careful consideration. Kindly, answer the questions below as freely and as truthfully as you can. The information you will give will be treated with at most confidentiality.

You may or you may not give me your name.

Thank you.

W. W. Nyangu.

#### INSTRUCTIONS.

YOU MAY TICK IN APPROPRIATE BOXES OR YOU CAN WRITE YOUR ANSWERS IN THE SPACES PROVIDED

#### SECTION A:

1. What position do you hold in this institution?

.....

3 How long have you been in this position?

1. 1-2years

2. 3-4years

3. 5-6years

4. 7 years above

- 3 How long have you been in this department?
1. 1-3years
  2. 4-6years
  3. 7-10years
  4. 11above
- 4 For how long has IRI been in Zambia?
1. 2yrs above
  2. 4yrs above
  3. 6yrs above
  4. 8yrs above
- 5 Who are the target groups in these “Learning at Taonga centers?”
- a) Adults
  - b) Children
  - c) OVC
  - d) Both adults and children
- 5 What is the gross total number of learners that have accessed education through IRI so far
- a) Over 10,000
  - b) Over 20,000
  - c) Over 30,000
  - d) Over 40,000
- 7 Do mentors receive any form of training for handling IRI centers?
- (a) Yes ( ) (b) No ( )
- 8 Do you have any seconded teachers in IRI centers?
- (a) Yes ( ) (b) No ( )
- 9 Are the mentors on a salary?
- (a) Yes ( ) (b) No ( )

- 10 Are mentors considered as volunteer employees?  
 (a) Yes ( ) (b) No ( )
- 11 What subjects are taught using IRI method?  
 .....  
 .....
- 12 Apart from the above subjects what else is taught using IRI?  
 .....  
 .....
- 13 .Why is it important?  
 .....  
 .....
14. What curriculum is being followed in learning at Taonga?  
 a) MOE curriculum  
 b) Donors' curriculum  
 c) Improvised curriculum  
 d) Localized curriculum
15. Is learning by IRI methodology enough for quality learning?  
 (a) Yes ( ) (b) No ( )
16. Do you think IRI is a cost-effective investment compared to regular schools?  
 (a) Yes ( ) (b) No ( )
17. Please explain your response to 13 above  
 .....  
 .....
18. who monitors and evaluates IRI centers?  
 (a) MOE officials  
 b) MOE and communities  
 c) EDC officials  
 d) All the above

- 19 Has IRI methodology been accepted by the communities as an alternative educational approach?  
 (a) Yes ( ) (b) No ( )
- 20 What is the perception of parents/public towards Learning at Taonga Market?  
 a) Poor  
 b) Fair  
 c) good  
 d) Very good  
 e) Not sure
- 21 What are the benefits of using IRI in Zambian communities? .....
- .....
- .....
- 22 What are some of the problems pupils face in learning by IRI methodology?  
 .....
- .....
- 23 What areas would you handle differently in IRI programmes given a chance?  
 .....
- .....
- 24 What are the future prospects of IRI in Zambia? .....
- .....
- .....

We have come to the end of this questionnaire; I wish to thank you most sincerely for taking your time in completing this form.

W.W.B Nyangu  
 UNZAResearch and postgraduate Studies  
 Lusaka.

## APPENDIX:2

### FOCUSED GROUP DISCUSSION FOR PARENTS/COMMUNITY

Dear Parent,

You have been selected to participate in this study with a lot of consideration. The purpose of this study is to determine the impact of IRI in increasing access to Education for All.

Please answer each of the questions as truthfully as you can. All views you shall give shall be respected and the information treated with at most confidentiality.

You may or may not give me your name.

- How many villages are within the catchment area where the IRI centre is.
- How many kilometers is this centre from the nearest regular school?
- What were the major reasons for opening this centre?
- What support do you give to this center?
- What emoluments do you give to the mentor?
- What are your major occupations in this area?
- Given an alternative would you rather have a regular school for your children.
- How big are your families?
- Do your children cross any rivers/mountains in order to come to school?
- What problems do they face in traveling to school?
- How many Kilometers do some of the children cover when coming to the Center?
- What school activities are you involved in?
- Are you happy with your children's performance at this centre?
- Do you often discuss with the mentor/s over your children's work?

- Do your children pay any fees to attend the IRI centre?
- How much do they pay?
- Is MoE doing enough for the IRI centre?
- What would you like MOE and EDC to do for the centre?
- What form of payments do mentors get in your centre?
- What benefits have IRI centers brought to your community?
- To which school did the children go before the opening of this IRI centre?
- How far is that school?

THANK YOU FOR YOUR CO-OPERATION

### APPENDIX:3

#### INTERVIEW SCHEDULE FOR PUPILS IN IRI CENTRES (CHIPATA) DISTRICT

TITLE: THE ROLE OF IRI IN INCREASING ACCESS TO EDUCATION  
FOR ALL.

Dear Respondent,

You have been selected to participate in this study with careful considerations.

Kindly answer the questions below as freely and as truthfully as you can. The information you will give be treated at most confidentiality.

You may or may not give me your name.

Thank you,

W.W.B. Nyangu.

#### SECTION A

1. Sex: Male ( ) Female ( )
2. How old are you? ( ) years.
3. Name of the IRI Centre?
4. What grade are you doing?
5. Who do you stay with?
6. Are both your parents alive?
7. What are your favourite subjects on the radio?
8. Do you like learning at Taonga or you would rather be at a government school?
9. At this centre, are you given any homework by your teacher?
10. How many times in a week?
11. Who helps you with homework at home?

12. Do you write exams at the end of the term?
13. Do you have supplementary readers?
14. What materials do you receive through your teacher?
15. What would you like to be when you finish school?

**THANK YOU FOR YOUR COOPERATION**

**APPENDIX:4**

**QUESTIONNAIRES FOR MENTORS**

Dear .....

You have been selected to participate in this study with a lot of consideration. The purpose of this study is to determine the role of IRI in increasing access to Education For All.

**INSTRUCTIONS**

PLEASE TICK IN THE APPROPRIATE BOXES GIVEN OR WRITE YOUR ANSWERS IN THE SPACES PROVIDED.

**SECTION A**

**PERSONAL DATA/DETAILS**

<b>EDUCATION</b>	<b>MARITAL STATUS</b>	<b>FEMALE</b>	<b>MALE</b>	<b>AGE GROUP</b>
	Married			16 – 20 Years
	Single			21 – 25
	Widowed			26 – 30
	Divorced			31 – 35
				36 – 40
				40 years and above.

**SECTION B**

2. Have you received any training?

(a). Yes ( ) (b). No ( )

3. What type of training?

.....  
.....  
.....

3a How helpful has this training been to you

.....  
.....  
.....

4. Who are your employers at this centre?

(a) The Community..... (b) Church.....  
(c) Government ..... (d) Non-governmental Organization....

5. Name of the community.....

6. Name of the I R I centre?

.....  
.....

7. How long have you worked at this centre?

(a). 0 – 6 months ( ) (b). 6 months – 1 year ( )  
(c). 2 – 3 years ( ) (d). 4 – 5 years ( )

8. How many classes do you have at this centre?.....

9. How many pupils does this IRI center have?.....  
 .....
10. Since inception, how many pupils have attended classes from this centre?  
 (a). 200 ( ) (b). 300 ( )  
 (c). 400 ( ) (d). 500 above ( )
11. What type of pupils learn at this centre?  
 (a). Single Orphans ( ) (b). Double Orphans ( )  
 (c). Poor/Marginalized Children ( ) (d). A combination of all above ( )
12. What subjects are taught over radio?.....  
 .....
13. Do the pupils like learning through the radio?  
 (a) Yes ( ) (b) No. ( )
14. How old are some of the pupils that learn at the IRI centre?  
 (a). 5 – 7 years (b). 5 – 10 years  
 (c). 5 – 15 years (d). 5 – 20 years
15. What do you think about teaching in IRI center?  
 .....  
 .....
16. What do pupils like most about learning at Taonga Market?  
 .....  
 .....  
 .....
17. What motivates you in teaching in an I R I center  
 .....  
 .....  
 .....

18. What else do pupils learn through the I R I methodology?

.....  
.....  
.....

18a. Why is that important?

.....  
.....  
.....

19. What is the attitude of the parents/community towards Learning at Taonga?

.....

20. What medium of instructions do you use in the class room?

- (a). English      (b). Nyanja      (c). Both English and Nyanja

21. Do you use any additional language? Why?

.....  
.....  
.....

22. Since teaching is done by radio teacher, what is your role in the centre?

.....  
.....  
.....

23. How many Kilometers is your centre from the town center?

- (a). 1- 2km  
(b). 3 – 5km  
(c). 6 – 8km  
(d). 9 – 11km  
(e). 12km above

24. How many kilometers is your centre from the nearest conventional government school?
- (a). 1 – 2km                      (b). 3 – 4km  
(c). 5 – 6km                      (d). 7km and above
25. Who supports the centre materially or financially?
- (a). Community and Ministry of Education  
(b). Ministry of Education only  
(c). MOE and EDC  
(d). Any other state .....
26. What kind of materials do you receive from any organization or MoE ? (List them)

**MATERIAL**

**SOURCE**

- |    |       |       |
|----|-------|-------|
| a. | ..... | ..... |
| b. | ..... | ..... |
| c. | ..... | ..... |
| d. | ..... | ..... |
| e. | ..... | ..... |

27. Which ones do you find very helpful?
- .....  
.....
28. What form of payment do you receive from the community?
- (a) Food                      (b). Labour at my farm  
(c). None                      (d). Small token in money
29. What are some of the challenges pupils face when learning by IRI methodology?
- .....  
.....
30. If you were to make any improvements, which areas would you change?
- .....  
.....  
.....

We have come to the end of this questionnaire; I wish to thank you most sincerely for taking your time in completing this form.

Please return this questionnaire to:

W. W. B. Nyangu

University of Zambia

Research and Post graduate Studies.

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**3 3729 00076 6712**

## APPENDIX: 5

### QUESTIONNAIRES FOR MENTORS

#### IS THE LEARNER LEARNING? RESULTS OF THE ORAL TESTS IN ENGLISH AND MATHEMATICS

Appendices (11 – 30)

1. Please note that in these appendices, C means correct answer; PC means partially correct answer; W means wrong answer and NR means no response to the question.
2. Where the IRI centre has no shutter in the door, or where lessons were conducted under the tree, English Test questions on “close” and “open”; “go out” and “come in: were not administered.

## Appendix 11: Misi MATHEMATICS

Name of Learner	What is your name	Greeting	Counting			Name colours	Name shapes
			1 - 10	1 - 15	1 - 20		
Simon Banda	C	C	C	C	C	C	C
Wisdom Banda	C	C	C	C	C	C	C
Philimon Munenga	C	C	C	C	C	C	C
Lawrence Tembo	C	C	C	C	C	C	C
Robbison Mkandawire	C	C	C	C	C	C	C
Amon Sikalubila	C	C	C	C	C	PC	PC
Cholya Bwalya	C	C	C	C	C	C	C
Micheal Phiri	C	C	C	C	C	C	C
Steven Kwenda	C	C	C	C	C	PC	C
Edward Phiri	C	C	C	C	C	C	W
Mabvuto Lungu	C	C	C	C	C	C	C
Christopher Phiri	C	C	C	C	C	PC	C
Given Chola	C	C	C	C	C	C	C
Givenn Ngoma	C	C	C	C	C	C	C
Yesaya Sikazwe	C	C	C	C	C	C	C
Mirriam Muhango	C	C	C	C	C	C	C
Clera Nakazwe	C	C	C	C	C	C	C
Mary Phiri	C	C	C	C	C	C	C
Juliet Phiri	C	C	C	C	C	C	C
Juliet Sambambi	C	C	C	C	C	C	C
Kanemu Shadima	C	C	C	C	C	C	C
Elesiya Tembo	C	C	C	C	C	C	C
Evelyn Bwalya	C	C	C	C	C	C	C

## Appendix 11: Misisi ENGLISH

Name of Learner	Identify body parts	Use of "big" "small"	Use of "open" "close"	Use of "go out" "come in"	Use of "same" "different"	Use of "right" "left"
Simon Banda	C	C	C	C	PC	C
Wisdom Banda	PC	C	C	C	PC	C
Philimon Munenga	C	C	C	C	PC	C
Lawrence Tembo	C	C	C	C	PC	C
Robbison Mkwandawire	C	PC	C	C	W	C
Amon Sikalubila	C	C	C	C	PC	C
Cholya Bwalya	C	C	C	C	W	C
Micheal Phiri	C	C	C	C	C	C
Steven Kwenda	C	C	C	C	C	C
Edward Phiri	C	C	C	C	PC	C
Mabvuto Lungu	PC	C	C	C	PC	PC
Christopher Phiri	C	C	C	C	C	C
Given Chola	C	C	C	C	C	PC
Given Ngoma	C	C	C	C	PC	C
Mesaya Sikazwe	C	C	C	C	C	C
Mirriam Muhango	C	C	C	C	PC	C
Clera Nakazwe	C	C	C	C	PC	C
Mary Phiri	C	C	C	C	PC	C
Juliet Sambambi	C	C	C	C	PC	C
Kanemu Shadima	C	C	C	C	PC	C
Elesiya Tembo	C	C	C	C	PC	C
Evelyn Bwalya	C	C	C	C	PC	C

## Appendix 13: Bauleni MATHEMATICS

Name of Learner	What is your name	Greeting	Counting			Name colours	Name shapes
			1 - 10	1 - 15	1 - 20		
J. Phiri	C	C	C	C	C	C	C
B. Phiri	C	C	C	C	C	C	W
Sonny Phiri	C	C	C	C	C	C	C
Chrispine Phiri	C	C	C	C	C	C	W
M. Msimuko	C	C	C	C	C	C	C
Charles Shimonga	C	NR	C	C	C	C	W
M. Shatu	C	C	C	C	C	C	C
T. Sakala	C	C	C	C	C	C	W
n. Sakala	C	C	C	C	C	C	C
F. Simutanda	C	C	C	C	C	C	W
A. Banda	C	C	C	C	C	C	C
J. Nkhowani	C	C	C	C	C	C	C
John Banda	C	C	C	C	C	C	PC
Ruth Banda	C	C	C	C	C	C	C
Jack Banda	C	C	C	C	C	C	C
Fillibet Banda	C	C	C	C	C	C	C
Osmar Banda	C	C	C	PC	C	C	C
Ackim Banda	C	C	C	C	C	C	C
Geofrey Banda	C	C	C	C	C	C	C
Jimmy Banda	C	C	C	C	C	C	C
Peter Gomo	C	C	C	C	C	C	C
Violet Chanangwa	C	C	C	C	C	C	C
Kelvin Mwansa	C	C	C	PC	C	C	C

### Appendix 13: Bauleni ENGLISH

Name of Learner	Identify body parts	Use of "big" "small"	Use of "Same" "different"	Use of "right" "left"
S. Phiri	C	C	C	PC
C. Phiri	C	C	C	C
M. Msimuko	C	C	C	C
C. Shimonga	PC	C	W	W
M. Shatu	C	C	C	C
T. Sakala	PC	C	C	C
N. sakala	PC	C	C	C
F. Simutanda	PC	C	C	C
A. Banda	PC	C	C	C
J. Nkhowani	C	C	C	W
J. Banda	PC	C	C	C
R. Banda	C	C	C	C
J. Banda	PC	C	C	PC
F. Banda	C	C	C	C
C. Banda	PC	C	C	C
O. Banda	PC	C	C	C
A. Banda	C	C	C	C
P. Gomo	C	C	C	C
V. Chanangwa	PC	W	W	W
K. Mwangu	PC	C	C	C
P. Mubanga	C	C	C	C
L. Nkhata	C	C	C	C
J. Nkhata	PC	C	C	C
J. Phiri	PC	C	C	C
B. Phiri	PC	C	PC	PC

## Appendix 15: Garden MATHEMATICS

Name of Learner	What is your name	Counting			Name colours	Name shapes
		1 - 10	1 - 15	1 - 20		
Prisila Phiri	C	C	C	C	C	C
Naomi Banda	C	C	C	C	C	C
Estere daka	C	C	C	C	C	C
Leya Phiri	C	C	C	C	C	C
Felix Mvula	C	C	PC	PC	C	C
Layness Chiupula	C	C	C	C	C	W
Mwewa Njobvu	C	C	C	C	W	PC
Nolo Zimba	C	C	PC	PC	C	C
Kanga Mwanza	C	C	C	C	C	C
Micheal Daka	C	C	C	C	C	PC
Mather Kamanga	C	C	C	C	C	C
Grayton Chirwa	C	PC	C	C	C	C
Evelyn Phiri	C	C	C	C	C	C
Voster Zimba	C	C	C	C	C	C
Janet Phiri	C	PC	PC	PC	C	C
Mabvuto Milimo	C	C	C	C	C	C
Ester Banda	C	C	C	C	C	C
George Maliyale	C	C	C	C	C	C
Leya Zulu	C	C	C	C	C	C
Joshua banda	C	C	C	C	C	C
Lute Daka	C	C	C	PC	C	C
Eddie Zulu	C	C	C	C	C	C
Theresa Moyo	C	PC	C	C	C	C
Pathias Mtika	C	C	C	C	C	C
Enica Mbewe	C	C	C	C	C	C
Francis Musawa	C	PC	C	C	PC	C

## Appendix 15: Garden ENGLISH

Name of Learner	Identify body parts	Use of "big" "small"	Use of "go out" "come in"	Use of "Same" "different"	Use of "right" "left"
Prisila Phiri	C	C	C	PC	C
Naomi Banda	C	C	C	PC	W
Estere daka	PC	PC	C	C	C
Leya Phiri	C	PC	C	PC	PC
Felix Mvula	C	C	C	C	C
Layness Chiupula	C	C	C	C	C
Mwewa Njobvu	C	PC	C	C	C
Nolo Zimba	C	C	C	PC	PC
Kanga Mwanza	C	C	C	C	C
Micheal Daka	C	PC	PC	PC	C
Mather Kamanga	C	C	C	C	C
Grayton Chirwa	PC	C	C	C	C
Evelyn Phiri	C	C	C	C	C
Voster Zimba	PC	C	NR	C	C
Janet Phiri	PC	PC	C	C	C
Mabvuto Milimo	PC	C	C	C	C
Ester Banda	C	C	C	C	C
George Maiiyale	C	C	C	C	C
Leya Zulu	C	C	C	C	C
Joshua banda	C	C	C	C	C
Lute Daka	C	C	C	C	C
Eddie Zulu	C	C	C	C	C
Theresa Moyo	C	C	C	C	C
Pathias Mtika	C	C	C	C	C

### Appendix 18: Chipata Overspill MATHEMATICS

Name of Learner	What is your name	Greeting	Counting			Name colours	Name shapes
			1 - 10	1 - 15	1 - 20		
C. Namakando	C	C	C	C	C	C	C
J. Zulu	C	C	C	C	C	C	C
N. Mwale	C	C	C	C	C	C	C
S. Kahali	C	PC	C	C	C	C	C
M. Siame	C	C	C	C	C	C	C
F. Nyaradzi	C	PC	C	C	C	C	C
Moses Banda	C	C	C	C	C	C	NR
Neva Banda	C	C	C	C	C	NR	NR
L. Chilembo	C	C	C	C	C	C	PC
M. Sinzumwa	C	C	C	C	C	C	W
C. Sichula	C	C	C	C	C	C	W
M. Meemba	C	W	C	C	C	C	C
S. Mwila	C	PC	C	C	C	C	C
E. Tembo	C	C	C	C	C	C	C
M. Namwanza	C	PC	C	PC	C	C	C
M. Mubanga	C	C	C	C	C	C	W
M. Kabanga	C	C	C	C	C	C	W
Z. Zulu	C	C	C	C	C	C	C
E. Mwale	C	C	C	C	C	C	C

### Appendix 18: Chipata Overspill ENGLISH

Name of Learner	Identify body parts	Use of "big" "small"	Use of "go out" "come in"	Use of "Same" "different"	Use of "right" "left"
N. Sinzumwa	C	C	C	C	C
M. Sinzuma	C	C	C	C	C
J. Zulu	C	C	C	C	C
C. Sichula	C	C	C	C	C
C. Namakando	PC	C	C	C	C
M. Meemba	PC	C	C	C	C
N. Mwale	PC	C	C	C	PC
S. Mwila	W	C	C	C	W
S. Kahali	PC	C	C	C	W
E. Tembo	W	C	C	C	W
M. Siame	W	C	C	C	PC
M. Kabanga	PC	C	C	C	C
F. Nyaradzi	C	C	C	C	C
M. Namwanza	W	C	C	C	W
M. Banda	C	C	C	C	C
M. Mubaya	W	C	C	C	W
N. Banda	W	C	C	C	W
Z. Zulu	C	C	C	C	C
L. Chilembo	PC	W	C	C	W
E. Mwale	C	C	C	C	C

Appendix 27: Mwachilele Centre **MATHEMATICS**

Name of Learner	What is your name	Greeting	Counting			Write 1 to 10	Add 3 + 3	Subtract 4 from 6	Name colours	Name shapes
			1 – 10	1 – 15	1 – 20					
Kizito Moomba	C	C	C	PC	PC	Nr	C	C	C	
Sinwar Funtilo	C	C	C	C	C	C	C	C	C	
Goodfellow Pinyolo	C	C	C	C	C	C	C	C	C	
Tanda Funiro	C	C	C	C	PC	C	C	C	C	
Kudzayi Funiro	C	C	C	C	PC	W	C	PC	PC	
Mary Njelani	C	C	C	C	PC	C	NR	C	W	
Eness Kalaka	C	W	C	C	PC	W	W	C	C	
Keziya Malambo	C	C	C	C	PC	W	C	C	C	
Steven Zulu	C	C	C	C	PC	C	C	C	C	
Silvester Moola	C	C	C	C	NR	NR	NR	PC	C	
Lucy Mwale	C	C	C	C	PC	W	C	C	PC	
Susan Makanta	C	C	C	C	PC	W	NR	W	C	
Salafina Moomba	C	C	C	C	PC	C	C	C	W	
Major Swana	C	C	C	C	PC	C	C	C	W	
Mercy Malambo	C	C	C	C	PC	W	C	C	W	
Vigel Moomba	C	C	C	C	PC	NR	NR	W	W	
Herold Malambo	C	C	C	C	PC	W	C	C	C	
Jennifer Chipungu	C	C	C	C	PC	C	C	C	C	
Gracia Mwale	W	W	C	C	PC	C	NR	C	W	
January Zulu	C	W	C	C	PC	NR	NR	C	W	

## Appendix 27: Mwachilele Centre ENGLISH

Name of Learner	Identify body parts	Use of "big" "small"	Use of "go out" "come in"	Use of "Same" "different"	Use of "right" "left"
Kizito Moomba	NR	C	C	C	W
Sinwar Funtilo	PC	C	C	C	C
Goodfellow Pinyolo	C	C	C	C	C
Tanda Funiro	PC	C	C	C	C
Kudzayi Funiro	PC	C	C	C	W
Mary Njelani	W	C	PC	C	C
Eness Kalaka	PC	C	C	C	W
Keziya Malambo	PC	C	C	C	C
Steven Zulu	PC	C	C	C	C
Silvester Moola	W	C	C	C	C
Lucy Mwale	PC	C	C	C	W
Susan Makanta	PC	C	PC	C	W
Salafina Moomba	PC	C	C	C	W
Major Swana	PC	C	PC	C	C
Mercy Malambo	W	C	C	C	C
Vigel Moomba	PC	C	C	C	C
Herold Malambo	C	C	C	C	C

QUBREUO PNYOO

A B C D E F G H I  
J K M M

1 2 3 4 5 6 7 8 9 10  
11 12 13 14 15 15  
17 18 19 20

STANARD - FUNILO

A B C D F E G  
R - T K M M

1 2 3 4 5 6 7 8 9 10 11

R B 14 5 6 7 7 9 8 17 9  
20

ABCDEFGHIJKLM 9

ESTER. KACHINGWE

ABCDEFGHIJKLM

EMMA MULMBA

MOMERY THI

12 3 4 5 6 7 8 9

11 12 15 14 16 7 18 1 22

LOVE M... 110

1 2 3 4 5 6 7 8 9 10

11 12 13 14 15 16 17 18 19 20

ABCDEFGHIJKLMN

GIFTMALE

(j)

CHIPATA MAIN

M	A	R	T	I	N
12	10	9	8	7	6
5	4	3	2	1	
13	14	15			

CHIPATA MAIN

A	C	K	S	O	P	N	K	A	P	M
1	2	3	4	5	6	7	8	9	10	11

CHIPATA OVERSPILL

M	E	L	I	N	G	H	S	F	L
G	U	S							
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15					

CHIPATA OVERSPILL

A	B	C	D	E	F
G	H	I	J	K	

(i)

JACK

1	2	3	4	5	6	7	8	9	10	11	12	13	14
g	e	o	r	g	y		p	w	r	i		15	

JACK

A NOLA L M N G U

A	B	C	D	E	F	G	H	I	J	K
---	---	---	---	---	---	---	---	---	---	---

NANG'OMBE

19-10-2000

L	A	S	T	O	T	E	N	R	E
					19-10-	2000			
K	J	A	T	D	E	F	D	B	A

NANG'OMBE

FELINA MUMBA

19-10-2000

A	B	C	D	E	F	G	H	I	J	K
---	---	---	---	---	---	---	---	---	---	---

(h) CHIPATA OVERSPILL

9

1 2 3 4 5 6 7 8 9 10 11 12 13

JEREMANI

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15

1 2 3 4 5 6 7 8 9 10

11 12 13 14 15 16 17 18 19 20

Estella Sikamamba

f e d c d A

m (k) (l) n g

1 2 3 4 5 6 7 8 9 10

Ivy Mwiinga

11 12 13 14 15 16 17 18 19 20

A b c d e f g h i j k l m

11 12 13 14 15 16 17 18 19 20

A b c d e f

g h i j k l m

Hajuba Makani