

Government of Zambia

Ministry of Education

Lusaka

LEARNING AT TAONGA MARKET

EXPANDING ACCESS TO EDUCATION BY ORPHANS AND
VULNERABLE CHILDREN THROUGH SUSTAINABLE LIFELINE
ENERGY TECHNOLOGIES IN ZAMBIA



BY

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1.0. INTRODUCTION

The government of the Republic of Zambia, through the Ministry of Education is committed to improving access to education for eligible children. One way of ensuring access to education is through the establishment of schools through community initiative known as ‘community schools’. These are schools provided and managed by communities.

Faced with the challenges of providing education to all school going age children, coupled with limited resources, government introduced Educational Radio programmes using the Interactive Radio Instruction (IRI) methodology. The radio was identified as a better mode of education delivery as it has the potential of reaching a wider audience, including those in hard-to-reach areas. The lessons are transmitted through the Zambia National Broadcasting Services and a number of community radio stations countrywide. The IRI lessons are designed based on the National Curriculum Framework to include elaborate learning activities that the mentor does during the pre-broadcast and post-broadcast. The activities which range from games to songs and body movements make learning an exciting and enjoyable experience for learners.

Interactive Radio Instruction (IRI) methodology popularly known as ‘Learning at Taonga Market’ uses a *blended learning approach* which involves the use of interactive radio lessons combined with face to face approaches. The interactive radio instruction programme started as a pilot project in 2000 capturing an initial 22 community IRI schools and grew to 883 by the year 2008.

1.1 LETS LEARN AND PLAY EARLY CHILDHOOD CARE DEVELOPMENT (ECCDE) BY RADIO PROGRAMME

The Ministry of Education in Conjunction with UNICEF, Plan International and Tikondane Community Programme had several meetings to come up with ideas on how best Early Childhood Care Development and Education (ECCDE) via community radio can be implemented in Zambia. During the discussions they looked at Countries where ECCDE was functioning using Community Radio stations. It was discovered that Malawi and Zanzibar were already using community radio stations to deliver ECCDE programmes. Zanzibar was indentified because it has been broadcasting ECCDE programmes for a longer time than Malawi.

Therefore, this clearly shows that Zanzibar had more experience as compared to Malawi. Further review showed that Malawi Radio Broadcast content was for lower primary; something equivalent to Taonga Market Radio programs in Zambia and not for ECCDE

1.2 ECCDE BY RADIO PROJECT PROGRESS

1.2.1 Conduct study tour of the ECCDE rise project in East Africa - Zanzibar

The tour is intended to achieve the following outcomes and tasks that each officer in the delegation has to undertake.

S/NO	OUTCOME	TASKS
1.	To learn about how the ECCDE for Radio Project is Managed and Evaluated for efficiency	The Controller – EBS I gathered information on the general and specific management issues of the project including challenges and success factors.
2.	To learn about how the ECCDE Radio Programme is managed in terms of Designed, Development and Delivery	The Executive Producer, as head of production, I gathered information on technical and pedagogical issues regarding the design development and delivery of the ECCDE and focused on monitoring and Evaluating strategies in the project. This information will be shared with the production team at EBS in order to adapt the best practices in the Development of ECCDE Programmes.
3.	To learn about production techniques and other pedagogical issues relating to the Development of ECCDE Radio Programmes	The producer gathered information on studio production techniques, pedagogical processes in lesson development and related techniques.
4.	To analyse the ECCDE Curriculum for relevance practicability for adaptation to the Zambian Environment	The ECCDE Curriculum Specialist analyzed the Curriculum for relevance and to gather information that will help the production team in their design of ECCDE learning materials.
5.	To learn how the ECCDE project is managed at learning centres, challenges and success factors.	The Tikondane Coordinator gathered information on how learning centres, Radio Stations work together to deliver ECCDE. The Coordinator will also learn from the best practices in the Management Centres

1.2.2 Base line Study.

A team of 4 members went to Eastern province to conduct the base line study in the centres and Villages around. Before the team goes to Eastern province were briefed on the findings from Zanzibar In order for them to have adequate information.

1.2.3 Planning and Design Meeting for ECCDE by radio

EBS production staff held a 7 days planning meeting in Kabwe, where the team from Zanzibar and the team from Eastern Province reported their findings and experiences. This same meeting combined with the development of the design document and writing of Master plans. The out comes of this meeting were :

- Development of an ECCDE design document
- Scope and sequence for 75 radio lessons
- 25 master plans written.
- 10 trial scripts for formative evaluation and standardization
- Development of a scope and Sequence of topics and themes
- Development of character profiles for radio teacher and model children

1.2.4 Script writing

Script writing is being done at Educational Broadcasting Services. This activity will take 12 weeks to develop and produce 72 scripts. Script writing is an on- going activity.

1.2.5 Formative Evaluation

All programmes developed at EBS have to undergo rigorous formative evaluation. Formative evaluation is an ongoing process and will continue in the first 3 months of 2011. Formative evaluation is a standard quality assurance process for EBS.

1.2.6 Trialing and standardization

EBS has developed the first 10 scripts these will undergo developmental testing with teachers, caregivers, children and parents in pilot sites .The results from developmental testing of radio lessons will feed into standardization of all the 72 radio lessons.

1.2.7 Development of the Caregivers guide and colour posters

The production team has been developing a care givers guide. This guide covers what activities a care giver will do during the lesson and off the broadcast as follows:

- Objectives
- Teaching/learning resources for the caregiver and children
- Activities to be done before the broadcast
- Activities to be done during the broadcast

- Activities to be done after the broadcast

1.2.8 Production of songs, chants, games

ECCDE radio programmes are designed to be activity rich. **Songs, chants, games** and folk stories are the main features in the programmes. Through these activities children will explore pre-literacy, pre-numeracy, pre-science song and dance teachers guide, identify already existing songs and create the poster. EBS production team consisting producers and technicians went to three districts in Eastern Province to record songs, games, folk tales stories and chants from government schools, community Schools, village play grounds. These games songs and stories were captured both audio and video formats .The video is helpful in helping the writer design appropriate activities

1.2.9 Audition

A female teacher character and two children a boy and girl were Auditioned .The expected outcome of this activity is to have 3 presenters with suitable voices for the programmes identified. Adult presenters are engaged on contract with EBS terms and conditions being applied.

1.2.10 Production and Formative Evaluate programmes

72 programmes have been targeted for development during the pilot phase the structure is as follows:

- Develop and produce 10 programmes for trialing and standardization in pilot centres
- Continue production of further programmes in batches of 20 for formative evaluation in pilot areas
- Continue the development and production of the caregivers guide

1.2.11 Identify Existing and new Centres.

- Identify existing ECCDE centres and set up new ones.
- 2 caregivers for each centre

Tikondane with the help ESO's (ODL) conducted this activity. The outcome of this activity was identify 12 ECCDE centres in Katete, Chadiza, and another 12 in Petauke and Chipata.

1.12 Training

Initial Training of care givers in ECCDE methodologies was conducted by Tikondane community centre with the subgrant support from UNICEF . The training was facilitated by Tikondane's partners from Sidney Australia. Educational Broadcasting Services facilitated the second phase of the training focusing on interactive radio instruction methodologies and approaches . 24 caregivers, ESO's and Tikondane Staff. The expected outcome of this activity was to:

- 24 caregivers trained from twelve centers trained.
- 4 Education Standards officers (ESO's) trained
- 3 Tikondane staff trained.



IRI learners come from within the local communities and are organized in listening groups (centres). Learners meet in different kinds of structures such as community halls, churches, individuals' homes or class rooms. This arrangement resulted in a number of IRI community schools throughout the country which are supported by the communities and government. With an initial 22 pilot learning centres in 2000, enrolment in IRI community schools has grown from 1,254 in 2000 to more than 81,000 by 2006. Due to its effectiveness as a methodology, IRI was adopted by many community schools to complement face-to-face teaching. The programme was rolled out to Government schools.

2.0 JUSTIFICATION

Due to the high cost of air-time to transmit LTM Radio Lessons which consist of \$5,000 per grade and total of \$70,000 per annum. Educational Broadcasting Services is finding it difficult to transmit lessons via live broadcast. MP3 solar powered wind radio devices is a perfect alternative. This will provide a flexible integration of ICTs in rural based (village) classrooms. The other advantage is that even adult learners who number 370 will also benefit from the use of these devices. The table below shows projected numbers of possible users of the MP3 radio devices.

Target Group	Number
Learners in LTM centres	2000 Life player sets
Learners in Early childhood Lets play and Learn programme	1450 Life player sets
Adult learners in LTM and Parenting education for ECCDE	950 Life player sets

3.0 IMPACT OF COMMUNITY SCHOOLS ON IMPROVING ACCESS TO EDUCATION FOR ELIGIBLE CHILDREN IN ZAMBIA PARTICULARLY IN RURAL AREAS

The Interactive Radio Instruction (IRI) programme has contributed to increasing access to education. From the 2001 National roll-out of the Interactive Radio Instruction (IRI), radio broadcasts tremendously increased the number of learners that could access basic education nationwide. The IRI outreach programme working with community members and Ministry of Education district officials mobilized more communities to establish new

IRI community learning centres. Since then, the Ministry has initiated more outreach partnerships with the communities, non government Organizations (NGOs) and faith based organizations (FBOs) in order to increase the number of learners accessing basic education through IRI centres .By the year 2009, 49% of learners enrolled in our educational establishments were from community schools and 23.5 % of these were enrolled in IRI community schools.

The demand for IRI has continued to increase based on the number of new IRI centres established countrywide since 2000. Another notable feature that has contributed to this increase is the number of community schools new and old adopting the IRI methodology to teach learners. There is a total number of 566 community schools (MOE Statistical Bulletin – 2009). Table 1 below indicates the enrolment trends:

Table 1: ENROLMENT TRENDS IN IRI COMMUNITY SCHOOLS

	2000	2001	2002	2003	2004	2005	2006
Community schools	N/A	N/A	N/A	88	188	338	497
IRI Centres	22	251	366	428	549	519	525
All IRI Schools	22	251	366	516	647	893	1058

According to the 2006 study on the use of IRI, community schools adopted the IRI methodology so as to supplement teaching and assist untrained teachers to manage the lessons effectively.

The ministry of education has partnered with a number of community radio stations to increase access to education especially in communities with poor ZNBC radio reception. The following radio stations have come on board to broadcast IRI lessons to community schools in their catchment areas:

1. Radio Chikuni –Monze
2. Mazabuka FM –Mazabuka
3. Radio Chikaya –Lundazi

4. Radio Maria-Chipata
5. Breeze FM –Chipata
6. Oblete Liseli-Mongu
7. Radio Maranatha –Kabwe
8. Radio Palsme-Petauke
9. Radio Yangeni –Mansa
10. Radio Mosi-o-tunya –Livingstone
11. FCC – Solwezi

4.0 AS THE GOVERNMENT FACILITATED THE ACCESS OF COMMUNITY SCHOOLS TO EDUCATIONAL RESOURCES, TRAINING, FINANCE AND DONOR RESOURCES, AS ESPOUSED IN THE NATIONAL EDUCATIONAL POLICY

The radio lessons are transmitted to learning centres countrywide through the Zambia National Broadcasting Services and some community radio stations. The Government pays for air time to ZNBC for transmission of the programmes, conducts training of community mentors (teachers) and provides teachers' guides.



At district level, the government through the office of the District Education Board Secretary supports centres with basic free education requisites such as chalk, textbooks, pencils and exercise books. IRI community schools teachers also benefit from in-service training initiatives under the continuous professional development programmes organized by the Zonal insert providers in the zone where these schools are located. Some centres which started operating in sub-standard mud and pole structures or 'under the tree' schools have received some facelift through government community partnerships. Some upgraded schools have even received trained teachers who are now on government payroll. Other IRI community schools that have satisfied the community school standard criteria have also benefitted from grants through the District Education Board Secretary's (Debs) Office. Grants to deserving community schools have been given as per operational guidelines to community schools: 2007 as follows:

- 50% for infrastructure maintenance
- 35% for teaching and learning materials
- 10% for support to orphans and vulnerable children

- 5% for school health and nutrition

Among other policy measures the ministry has adopted in the management of community schools include the following:

- Registration and upgrading of community schools;
- Development of procedures and guidelines for the establishment of community schools;
- Inclusion of community schools in the education act based on the provisions of the 1966 education policy which encourages community partnerships in education provision in Zambia;
- Provision of infrastructure support to community schools at district level
- Provision of technical support/capacity building to improve quality of teaching and learning in community schools ;
- Coordination and harmonization of all key stakeholders that provide support to community schools and
- Monitoring and evaluation of learning and teaching activities in community schools

5.0 IS THE QUALITY OF EDUCATION BEING PROVIDED IN COMMUNITY SCHOOLS CONTRIBUTING TO THE OVERALL QUALITY OF EDUCATION IN THE COUNTRY

The Interactive Radio methodology is designed to improve quality of teaching and learning in resource- poor educational environments.

The hallmark of the interactive radio instruction methodology is the attention paid to quality assurance during the design and delivery of lessons. Formative evaluation is one of the key features of IRI lesson development and preparation. Lessons are pretested in potential learner classes to correct learning difficulties prior to delivery. The National Assessment conducted in 2006 by the Examinations Council show considerable learning gains among learners. The tables 2,3and 4 below illustrate these trends.

Table 2: Mean Performance by School Type

LEARNING AREA	GOVERNMENT SCHOOLS	PRIVATE SCHOOL	GRANT AIDED SCHOOL	COMMUNITY SCHOOL	TOTAL
Reading English	33.45	72.06	40.59	31.75	34.50
Numeracy	37.76	62.48	38.29	38.05	38.45
Zambian Language	37.86	5.56	41.34	37.22.	37.79

This trend shows that both government and community schools showed dismal performance in Reading English with GRZ recording 33.45% while community schools recorded 31.75%. In numeracy the scenario was equally impressive with community schools scoring 38.05% while government schools scored 37.76%. The score in Zambian Languages was almost at par with community schools recording 37.22% and government schools 37.86%.

The subsequent learning achievement survey done in 2008 by the Examination Council of Zambia recorded a marginal increase in performance across various school types. The additional feature of this survey was to disintegrate IRI community schools as a unique school type. Results of the 2008 survey are summarized in table 2 below:

Table 3: Rank Order of Overall Mean Performance by School Type

	Reading	Numeracy	Life Skills	Zambian Language	Overall Mean Performance	Rank Order
Government	34.7	38.7	39.9	41.3	38.7	3

Private	55.5	49.5	63.0	40.0	52.0	1
Grant Aided	32.4	36.8	35.4	39.4	36.0	5
Community	34.1	40.7	39.0	36.3	37.6	4
IRI Centre	45.7	58.9	54.0	40.1	49.7	2

Table 4: Mean Score by School Type

LEARNING AREA	GOVERNMENT SCHOOLS	PRIVATE SCHOOL	GRANT AIDED SCHOOL	COMMUNITY SCHOOL	IRI CENTRE
Reading	37.7	55.5	32.4	34.1	45
Maths	38.7	49.5	36.8	40.7	58.9
Life Skills	39.9	63	35.4	39	54
Zambian Language	41.3	40	39.4	36.3	41.1

In the above table private schools had the highest mean performance followed by Interactive Radio Instruction Community schools. The assessment report shows IRI community schools performance in Mathematics at 58% but IRI recorded the second highest performance by school type in English and Zambian Languages.

In Mathematics the LTM centres had the highest mean percentage of 58.9 percent then Community Schools were in the third place with a mean of 40.7 percent, then Government Schools were in the fourth place with a mean percentage of 38.7 percent lastly were the Grant Aided Schools with a mean percentage of 36.8

6.0 AVERAGE QUALIFICATION OF TEACHERS IN IRI COMMUNITY SCHOOLS

A study conducted by Daniel Bowasi (2010) on training need of community schools teachers in Lusaka, Petauke, Nyimba, Mongu and Kaoma highlighted that:

85% of teachers had no formal teacher training. 65% indicated they were willing to upgrade their teacher qualification by enrolling into formal teacher training establishment but lack of pre-requisite relevant qualification prescribed for entry into teacher training colleges.

96% of volunteer teachers in community schools came from poor families who had no capacity to receive user fees to support entry into formal teacher training establishment.

However, it must be noted that the radio lessons in an IRI environment are delivered via radio by trained teachers. The IRI community teacher is trained in IRI methodology to facilitate effective teaching and learning. These teachers are trained in IRI methodologies and life skills education at least three times a year. The table below summarises teachers trained in IRI in 2006 by gender.

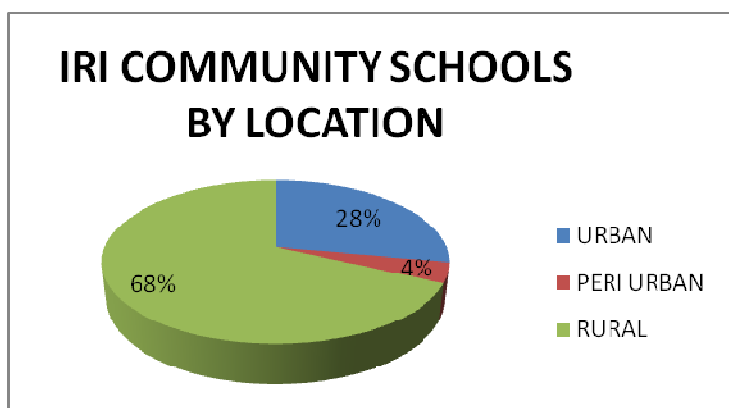
Table 5: Number of mentors trained in IRI methodologies by gender 2009

TRAINED	FEMALE MENTORS	PERCENTAGE	MALE MENTORS	PERCENTAGE
Yes	312	36%	498	51%
No	547	64%	475	49%
Missing	85		377	
Zambia	944		1350	

7.0. WHAT IS THE AVERAGE AGE AND SOCIAL STATUS OF CHILDREN ATTENDING COMMUNITY SCHOOLS

The success of the Interactive Radio programme is its ability to reach the most disadvantaged children who could not benefit from the conventional school system. There are more children using IRI in rural areas than urban areas. The table below shows the spread of IRI schools in rural, peri-urban and rural areas.

Chart 1: Location of IRI schools in Zambia



The 2006 data indicates that more learners are being enrolled in IRI schools at initial levels and also offers an opportunity for children above the official 7 year entry level start in school. These average children are more comfortable to learn and interact with peers of the same age groups. In 2006, 93% of the children enrolled in IRI community schools were from 5 to 15 years age range. The rest were either adult or underage learners. The table below shows learners by age and grade in 2006.

Table 6: Distribution of IRI Learners by Age and Grade

LEARNERS	TOTAL	PERCENTAGE	BELOW RECOMMENDED AGE	ABOVE RECOMMENDED AGE
Grade 1 (7 yrs)	35.633	44	19	46
Grade 2 (8 yrs)	18.184	22	11	64
Grade 3 (9 yrs)	12.036	14	7	76
Grade 4 (10 yrs)	7.760	14	8	73
Grade 5 (11 yrs)	4.834	11	8	78
Grade 6 (12 yrs)	2.870	10	7	78

The data shows that despite so many learners being in grade 1 only 33% were the recommended age group. 19% are below the recommended age while 46% are above the recommended age.

The interactive radio instruction programme targets orphaned and vulnerable children. This is because although the free Education Government policy is in place there are other silent costs that tend to inhibit children from enrolling in Government schools. 2006 statistics show that 35% (27,481) of children enrolled in IRI schools were orphaned. 24% were single orphans while 11% were double orphans

8.0 SUCCESSES OF THE LTM PROGRAMME

- Increased enrolment due to interest and motivation by learners.
- Extension of the programme (IRI) to government and community schools.
- Some of the basic schools in Zambia started as community schools or IRI centres.
- Helps to improve teacher's pedagogical skills

9.0 STRENGTHS/ADVANTAGES OF THE LTM PROGRAMME

- Uses a variety of methodologies e.g. body movements, games, songs. Children learn better when engaged in a variety of activities.
- The aspect of translation of new concepts in local language – in line with government policy of learning in mother tongue or language of play for early grades.

10.0. RECOMMENDATIONS/WAY FORWARD

- Under the proposed education act, community schools are part of the education system in Zambia.
- In conjunction with cooperating partners we will support community schools through capacity building.
- The Ministry will continue to support community schools in the area of funding in order to encourage sustainability. It is most likely that the strengthening of community school programmes will definitely help to attain the access to free education by 2015.
- The use of alternative technologies like the lifepayer MP3 device will cut costs associated with the high cost of air time and provide a flexible learning schedule for learners anywhere any time.