

EDC Support to Zambia's Ministry of Education

QUESTT

(Quality Education Services Through Technology)

QUARTERLY REPORT

JANUARY 1ST TO

MARCH 31ST, 2009

Submitted by: Education Development Center, Inc.

Funded by: USAID/Zambia

Associate Cooperative Agreement 690-A-00-04-00321-00



Contents

Contents.....	3
Abbreviations and acronyms	5
1. Executive summary	6
2. Project results.....	9
2.1 Number of primary school students enrolled in IRI schools.....	9
2.2 Number of teachers trained in IRI.....	9
2.3 Number of teachers enrolled in teacher training course by distance education.....	9
2.4 Number of MOE officials and administrators trained in IRI and for education management.....	9
2.5 Number of teacher’s guides and other teaching and learning materials provided.	9
2.6 Number of community radio stations, CBOs, churches and partner organizations supporting QUESTT programs.....	9
2.7 Number of school committees supported with grant funds	10
2.8 Number of school structures built or repaired with grants.....	10
2.9 Number of parents, caregivers and community-based trainers trained in OVC program	10
3. Overview of Activities	11
3.1 Development of programs and materials.....	11
3.1.1 Using iPods to enhance teaching and learning	11
3.2 Outreach.....	13
3.2.1. Provincial activities.....	13
3.2.2. Visits to the Districts and Provinces.....	14
3.3 Small Grant Scheme.....	16
3.3.1 Introduction	16
3.3.2 Monitoring	16
3.3.2 Progress achieved	16
3.4 Community Radio Stations	19
3.4.1 Broadcasts	19
3.4.2 ZNBC	19
3.4.3 Sustainability	20
3.4.4 Future plans	20
3.5 OVC Life Skills Program.....	21
3.5.1 Program production and broadcasting.....	21
3.5.2 Training	21
3.5.3 Monitoring visits	22
3.5.4 Material Distribution.....	23
3.5.5 Impact	23
3.5.6 Challenges	23
3.5.7 Plans for next quarter	24
3.6 Teacher Education	25
3.6.1 <i>Fastele! Fastele!</i> radio program for teachers	25
3.6.2 Sample Science Lessons for grades 5 to 7.....	25

3.6.3 ZATEC by distance learning for Community School Teachers	25
3.7 Monitoring and evaluation.....	29
3.7.1 Enrolment Data Management	29
3.7.2 IRI evaluation	29
3.7.3 IRI Monitoring.....	31
3.7.4 Tracer study	31
3.7.6 Next Quarter M&E Activities.....	32
4. Special Events	33
5. Staffing.....	33
APPENDIX A: Paper presented at MOE Research Symposium.....	34

Abbreviations and acronyms

AWPB	Annual Workplan and Budget
CBO	Community-Based Organization
CDC.....	Curriculum Development Center
COP	Chief of Party
CRC	Community Radio Coordinator
CRS.....	Community Radio Station
CS.....	Community School
DCOP	Deputy Chief of Party
DEBS	District Education Board Secretary
DESO.....	District Education Standards Officer
DODE.....	Directorate of Open and Distance Education
DRCC	District Resource Centre Coordinator
ECZ.....	Examinations Council of Zambia
EBS	Educational Broadcasting Services
ESO.....	Education Standards Officer
GRZ	Government of the Republic of Zambia
IRI	Interactive Radio Instruction
LTM.....	Learning at Taonga Market
M&E	Monitoring and Evaluation
MOE	Ministry of Education
NGO.....	Non-Governmental Organization
NOC	National Outreach Coordinator
NSC	National Science Centre
ODL.....	Open and Distance Learning
OVC.....	Orphans and Vulnerable Children
PCV	Peace Corps Volunteer
PEO	Provincial Education Officer
PESO	Provincial Education Standards Officer
PEPFAR	President’s Emergency Plan for AIDS Relief
PO	Planning Officer
POC.....	Provincial Outreach Coordinator
PS.....	Permanent Secretary
QUESTT.....	Quality Education Services Through Technology
SEO.....	Senior Education Officer
SESO.....	Senior Education Standards Officer
SPO.....	Senior Planning Officer
TED	Teacher Education Department
TESS	Teacher Education and Specialised Services
TRC	Teacher Resource Centre
ZATEC.....	Zambia Teacher Education Course
ZIC.....	Zonal In-service Coordinator
ZNBC	Zambia National Broadcasting Corporation

QUESTT Project

The QUESTT project contributes to USAID's Education Strategic Objective (SO6) on "Improved Quality of Basic Education for More School-aged Children" with special emphasis on two IR's; IR 6.1 Improved Quality of Basic Education Delivery System and IR 6.4 Mitigate the Impact of HIV/AIDS on the Education System.

The core strategy is to continue and expand the basic education provision through Interactive Radio Instruction (IRI) in community schools for children who are not in conventional schools. QUESTT continues to assist the Directorate of Open and Distance Education (DODE) in the design, development and revision of programs and materials to cover all grades from 1-7, so that a full cycle of quality basic education will be available through DODE. QUESTT is also working with the Ministry of Education (MOE) to introduce Interactive Radio Instruction programs to supplement teaching in government primary schools.

To ensure and maintain quality basic education in schools, QUESTT will use radio and other technologies to support an improvement in the quality of pre-service and in-service teacher training delivery systems. The strategy will be to improve the teaching capacity of teachers by introducing new technical equipment as well as improving utilization of appropriate existing technologies in both Colleges of Education and Teacher Resource Centers.

1. Executive summary

As the project entered the second quarter of its final year, several activities have focused on preparations for the end of the project and the transfer of responsibilities to the Ministry of Education and community radio stations. One major activity has been visits to all the provincial education offices and to some district education offices to inform them officially about the end of the project and to plan how MOE officials will continue the programs which have been facilitated by QUESTT. By the end of March visits had been paid to five provinces and the remainder will be visited in April. The provincial and district officials have shown a clear understanding of the work the project has been doing and have expressed their gratitude for the assistance given. They have pledged their commitment to continuing the work, especially the use of IRI in the schools.

During the next quarter, funds will be given to each district for a one-day workshop for Zonal In-service Coordinators (ZICs) and zone school heads to review their roles in the ongoing programs. The results of these meetings will be used during a final review meeting to be held in Lusaka for MOE HQ and provincial staff.

The Grants Coordinator and the Provincial Outreach Coordinators (POCs) have been busy monitoring the schools which have received grants to ensure that all projects are completed before the end of May. By the end of the quarter 26 of the 39 communities which received grants had completed the second milestone and two had completed the third milestone and received the final installment of funds. One community has benefited from a reduction in the price of cement and their grant agreement has been amended to enable them to use the funds saved to purchase desks.

During the visits to the provinces, the Community Radio Coordinator has held meetings with the community radio stations to obtain from them a commitment to continue broadcasting *Learning at Taonga Market* lessons and other educational radio programs. A MOE official has been identified in each provincial or district office to liaise with the radio stations and ensure that they fulfill their commitment. Meetings have also been held with Zambia National Broadcasting Corporation (ZNBC) Director General and senior staff to inform them of the importance of the *Learning at Taonga Market (LTM)* broadcasts and the impact they are having across the country.

The POCs have started to submit enrolment data from the community schools using IRI, in order to have a complete record this year of the impact of IRI in community schools. Enrolment forms were distributed to all community schools through the District Education offices at the end of 2008 and these forms are now being collected by the ZICs and district officials for submission to the POCs.

New drama scripts are being written for the OVC Life Skills program based on the revised outlines that were developed during the workshop in November. A one-week training workshop was held in January during which EDC's media specialist, Alvaro Cisneros trained participants in plot creation, characterization and script writing for serial dramas. Mr Cisneros also provided training in drama acting and production for the radio at the two new radio stations in Mansa and Mongu. The new series of programs will be broadcast in the second term. Two hundred Lifeline radios, donated by Freeplay Foundation, were distributed to listener groups at the new radio stations. Other radios, purchased with project funds were distributed to the schools and listener groups in the other provinces.

A total of 57 drama programs, 52 school's programs and 55 feedback programs were broadcast during the quarter by the six radio stations participating in the OVC Life Skills program. In addition each radio station produced a number of special programs. The producers continued to monitor the schools and listener groups, collecting data on them for the PEPFAR semi-annual report.

The eight colleges of education participating in the Zambia Teacher Education Course (ZATEC) by distance education program for community school teachers were visited by QUESTT and MOE officials to assess the progress they had made in completing the monitoring of teaching practice and the collection and assessment of the portfolios and areas of curriculum strength. It was found that five colleges had completed the three monitoring visits required while the other three planned to conduct the third monitoring visit in April. Seven of the eight colleges had given the assignments to the teachers and had either collected them or had given the teachers a deadline for submission which would enable them to submit the results to Examinations Council of Zambia by the end of April. One college had decided to wait for the results of the examinations before giving the teachers the assignments.

It is expected that the colleges will have completed their work on the program by the end of May and Examinations Council of Zambia will be able to moderate and compile the results.

2. Project results

Primary schools adopting IRI as a way of improving access and quality in basic education

2.1 Number of primary school students enrolled in IRI schools

Data drawn from the draft statistics collected by the Directorate of Planning and Information from the Annual School Census forms indicates that there are 443,241 learners in Grades 1 and 2 in 2,978 GRZ schools using IRI, and 363,308 in 1,877 community schools using IRI.

Teaching skills of participating teachers improved

2.2 Number of teachers trained in IRI

A total of 603 teachers and 201 head teachers were trained in the use of iPods for IRI lessons and to access teacher resource materials.

2.3 Number of teachers enrolled in teacher training course by distance education

The 422 community school teachers who sat the ZATEC examination in November are completing their portfolios and their special interest assignments.

Enhanced institutional capacity of government to mainstream, manage and supervise IRI activities

2.4 Number of MOE officials and administrators trained in IRI and for education management

A total of 27 MOE officials were trained in the use of iPods to enable them to manage their use in their province or district.

Improvement of learning resources

2.5 Number of teacher's guides and other teaching and learning materials provided.

210 iPods were distributed to 92 GRZ schools, 109 community schools and nine teacher resource centers during the quarter. 352 radios were distributed to schools and listener groups for the OVC Life Skills program.

Enhanced participation of community-based organizations in OVC empowerment programs

2.6 Number of community radio stations, CBOs, churches and partner organizations supporting QUESTT programs

Nine community radio stations are producing educational programs and broadcasting *Learning at Taonga Market* lessons.

Enhanced participation of communities in the education of their children by supporting the schools

2.7 Number of school committees supported with grant funds

A total of 39 proposals for projects from school committees have been approved. The school committees have received training in managing the grants and mobilizing the communities.

2.8 Number of school structures built or repaired with grants

27 of the new grants are for building or repairing school structures.

Parents and caregivers enroll in and participate in OVC empowerment programs

2.9 Number of parents, caregivers and community-based trainers trained in OVC program

A total of 4551 teachers and caregivers have been trained to date for the OVC Life Skills program. They are supported by 910 trained community leaders.

3. Overview of Activities

3.1 Development of programs and materials

3.1.1 Using iPods to enhance teaching and learning

Prior to the distribution of iPods to schools seven MOE and QUESTT staff met on January 8th and 9th to prepare for the training of trainers workshops to be held the following week. These were: Lisa Easterbrooks (EDC, head office, USA) and Peter Phiri (EBS) who trained at Mufulira College, Francis Sampa (D/COP, TE QUESTT) and Douglas Kasungami (CDC) who trained at Malcolm Moffat College, and Lukonga Lindunda (ICT, QUESTT), Esvah Chizambe (TED) and Conrad Bwalya (POC, Lusaka) who trained at NISTCOL in Lusaka.

From January 12th to 14th, Zone In-service Coordinators and teachers from zone centre schools in the selected zones attended the workshops to undergo training as trainers in the use of iPods. Provincial and district officials, POCs and Peace Corps Volunteers from the relevant districts also attended the training so that they could provide ongoing support to the ZICs and teachers. The training of trainers workshops were conducted at three venues: NISTCOL in Lusaka with 68 participants, Mufulira College of Education with 47 participants and Malcolm Moffat College of Education with 43 participants. In total there were 158 participants (60 female; 98 male) who attended the training of trainers.

The key materials used for training were the 210 iPods and 192 batteries and solar panels. Nine teacher resource centres (TRCs) and 92 GRZ and 109 Community Schools received one iPod each, with batteries, solar panels and speakers. TRCs and nine schools that were using computers and had electricity did not receive a solar panel and battery. The iPods and skins were obtained from USA, while the containers for iPods, speakers, solar panels and batteries were locally obtained in Zambia. The iPods had previously been loaded with all the *Learning at Taonga Market* programs from Grades 1 to 7, teacher resource materials for the teaching of literacy and support materials for teaching the Grade 6 curriculum. Other materials that were given to trainers and teachers were the iPods User's Manual and the necessary forms to report on the training.

The training agenda comprised outlining the background to the programme, explaining the goal of the training, collecting participants' expectations of the training, discussing factors that have contributed to poor reading levels and suggesting solutions, introducing features of the iPods and explaining how each function worked. Other areas of the training were on how to connect the components, practice exercises on using iPods, presenting lessons using iPods and signing agreement forms. The use of reflective journals and monitoring forms was also introduced. Lastly, participants working in districts planned the training of teachers and head teachers in their zones.

The ZICs and teachers then returned to their zones and conducted training workshops before the end of January for three teachers from each school that would receive an iPod. The POCs and MOE officials monitored the training and supported the ZICs as necessary. A total of 603 teachers and 201 head teachers were trained.

Comments and concerns:

A number of batteries were returned to QUESTT office because they were found not to work. It was found that fuses had blown in two batteries and the iPod was not fully charged. The ICT Coordinator reported that the other batteries that were returned had no faults but were not fully charged. There is a problem with the regulators in the batteries, which shuts off if the solar panel is producing too much power. The solution seems to be to cover the solar panel partially with a piece of card to reduce the amount of power the panel is producing. Zones and Districts have been advised through POCs to explore ways of solving problems locally before sending iPods or batteries back to Lusaka.

3.2 Outreach

3.2.1. Provincial activities

In January, the POCs were occupied in receiving training in the use of iPods and managing the training of teachers by the ZICs in the schools in their provinces selected for the receipt of iPods.

During the remainder of the quarter they started collecting enrolment data for community schools, monitored the communities which had received small grants and conducted sensitization meetings with communities.

In Lusaka the POC assisted in the training of Grade 3 and 4 GRZ teachers which was organized in the Chimusanya and Chinyunyu zones by the ZICs and the PCVs. The objective of the training was in line with the rolling out of IRI in GRZ schools. Teachers in the two zones were only trained up to grade 2 level, hence the need to train the teachers in higher grades. Zonal resource centers provided accommodation in classrooms and feeding was done by participating schools.

Lusaka Central Prison authority has requested the POC and SEO to help retrain mentors in prisons, as many mentors who were trained earlier had either been discharged or transferred to other prisons. The trainers are only waiting for a letter of authority from Prisons Headquarters in Kabwe.

During monitoring in Kaoma District, Western province POC found that the 1 x 3 classroom block at Shingungu Community School, for which QUESTT had provided a grant for the roof, had collapsed due to the heavy rains. The roofing sheets have been salvaged and the community is organizing materials to rebuild the block. Heavy rain and winds also caused one wall of a classroom at Miziba Community School to collapse but the community is already rebuilding it.

The POC in Southern Province has found a new partner in Livingstone called Society Plan Set, an organization that is providing support in the form of clothing, food and learning materials to selected pupils at Linda Community School. The Society Plan Set manager indicated that the organization will identify 14 pupils that will have access to the available support. The POC and SESO-ODL sensitized four members of staff for Society Plan Set about the QUESTT activities and lobbied for more support for vulnerable learners in IRI schools. The organization also gives support to Income Generating Activities to Vulnerable communities that are registered in clusters.

In Southern Province, as a result of the donation of footballs and netballs from the Great Football Give Away from the UK, the ZICs in Livingstone are preparing for sports tournaments which will use the balls donated in 2008 and promote the messages on them.

In Luapula Province the SEO-ODL and SESO-ODL are performing the activities of the POC following the resignation of the POC in December 2008. This has proved very effective, with the two officials managing the IPod training, monitoring the small grants and sensitizing communities. They have conducted sensitization meetings with a total of 70 heads, deputy heads, teachers, and community members in four districts, Kawambwa, Nchelenge, Mwense and Mansa.

In Eastern Province the POCs conducted sensitization meetings for a total of 85 people, including MOE officials and community members.

In Central Province the POC conducted sensitization meetings for the Parent Community School Committees in ten schools. A total of 45 members attended the meetings.

In Northern Province the POC held meetings for 200 community members in Kasama district.

Topics which were discussed at these meetings were:

- The role of the school committees
- Need for IGAs
- Managing small grants
- Radio mentor training
- Data collection
- Need for regular monitoring of schools
- Care of teaching learning materials
- Need for more teachers.

3.2.2. Visits to the Districts and Provinces

In order to prepare for the end of the project, visits are being made to all the provincial education offices and to some district education offices to discuss the end of the project and how the MOE officials are going to continue the programs facilitated by QUESTT. The trips were to be joint trips with the Director of DODE but the pressure of other commitments has meant that he so far only attended the meeting in Lusaka. He has, however, travelled to Western Province and held a follow-up meeting with the PEO and plans to do the same for the other provinces.

The objectives of the meetings are to:

1. Inform PEOs and staff about the end of the QUESTT project, end of contract dates for POCS and activities planned for the rest of the project
2. Find out from MOE what have been the successes and challenges of the LTM program
3. Find out from MOE what funds have been budgeted for continuing LTM and what activities are in the AWPB
4. Brief the PEO and officials on the workshops for ZICS and zonal school heads

5. Strengthen the link between MOE and community radio stations by identifying provincial or district officials who will liaise with the stations
6. Review the work plans which were prepared during the SEO/POC meeting in 2008.

Table 1: Visits to provinces and districts

Date	District/Province	QUESTT staff	MOE staff from Lusaka
March 2	Monze	COP, NOC, CRC	Controller, EBS
March 3	Namwala	COP, NOC, CRC	Controller, EBS
March 4	Southern Prov – Livingstone	COP, NOC, CRC	Controller, EBS
March 11	Western Province – Mongu	COP, NOC, CRC	Senior Producer EBS
March 24	Luapula Province – Mansa	COP, NOC, CRC	Senior Producer EBS
March 25	Copperbelt Province – Ndola	COP, NOC, CRC	Senior Producer EBS
March 27	Northwestern Province - Solwezi	NOC, CRC	Senior Producer EBS

The meetings have been chaired by the PEOs and attended by the PESOs, SESOs, SEOs, POCs, SPOs, DRCCs, DEBS, DESOs, ESO-ODL and POs. The agenda for the meetings has been standard with the SEO-ODL presenting a report on the successes and challenges of QUESTT activities, especially *LTM*, in the province. After discussion of the report, the meetings have proceeded to look at the way forward, how to build on the successes and overcome the challenges, the role of MOE and if there is anything that QUESTT must do before the end of the project.

It has been pleasing to see the commitment of all the MOE officials to the programs, their understanding of the contribution of *LTM* to the education of the children and their willingness to take responsibility for the continuation of the programs. The PEOs have been pleased that the project has visited their offices to discuss the end of the project rather than just closing down.

Eastern, Central, Lusaka, Northern provinces will be visited in April. A complete report will be compiled after all the visits have been made. This report will be used during the review meeting for the project planned for the end of June.

3.3 Small Grant Scheme

3.3.1 Introduction

Most of the communities monitored have shown a high level of commitment to their respective projects. The communities have worked hard to achieve the milestones as required by the terms of the contracts

There is no evidence of misappropriation of grant funds.

39 of the 40 communities funded have commenced implementation of their respective projects.

3.3.2 Monitoring

A total of 30 communities out of the 39 communities that received the grants were monitored to establish the progress that has been achieved in the implementation of their projects. Monitoring of the communities was conducted by the POCs, Ministry of Education officials as well as the Grants Coordinator. The table below shows the communities that were monitored by province.

Table 2: Communities monitored by province

Province	Communities awarded grants	No. of communities monitored
Northwestern	5	0
Northern	5	3
Luapula	4	4
Eastern	5	5
Western	5	3
Lusaka	4	4
Central	3	3
Southern	6	6
Copperbelt	2	2
	39	30

Monitoring of communities primarily focused on assessing the achievement of pre-agreed milestones. As indicated by the table above, all the communities in five provinces (Luapula, Eastern, Central, Southern and Copperbelt) were monitored while none of the communities in Northwestern province has been monitored.

3.3.2 Progress achieved

The progress of projects is measured by the extent to which the milestones outlined in the grant contract are completed. The communities have generally shown a high level of commitment and made good progress towards achieving the pre-agreed milestones. Communities that have received the funds have also exhibited a high level of accountability for the funds awarded to their schools.

Out of the 30 communities monitored, 28 communities have successfully completed milestone two activities and two of these communities have also completed milestone three activities. Two communities have not completed milestone two activities for different reasons as follows:

- One of the two communities (Mocso-Kuomboka Community School in Lusaka) undertaking an income generating activity of block making and selling, failed to make a profit from the first allocation of K5,000,000.00 disbursed to their school. The community's record books indicated that inputs such as sand and transport were at a much higher cost which resulted in a loss of about K2,000,000. The community was only able to sell 150 blocks out of the 1,128 blocks they made. This was because the blocks were of poor quality and they did not have an effective marketing plan.
- The other community (Kafwaka Community School) provided wrong bank details and so the transfer of funds to the school account could not be effected. However, the correct bank details were provided and funds have been disbursed to the school.

The second allocation has been disbursed to 20 communities while two of these communities have also received the third allocation having completed milestone three activities. Six communities will be paid the second allocation upon submission of the monitoring reports by monitoring officials.

The table below gives a summary of the progress achieved by the communities.

Table 3: Summary of achievements

	Status	No. of communities	Percentage
1	Completed tasks under milestone 2	26	67%
2	Completed tasks under milestone 3	2	5%
3	Grant has been cancelled	1	2.6%
4	Not completed tasks under milestone 2	10	26%
	Total	39	100%

The table above indicates that the majority of the communities, (72%) have completed milestone 2 activities and have received the second allocation.

Challenges

The major challenge faced by the majority of the communities has been inflation. The costs of materials required for the communities' projects has continued to increase and now cost far more than was budgeted. This has been compounded by increases in transportation cost and the distances of the communities from the supply centers. This has meant that communities could not purchase all the required materials to

complete their projects or has forced communities to readjust budgets so as to purchase the most critical of materials.

However, one community (Chibanga Community School on the Copperbelt) undertaking the completion of a 1 x 2 classroom block has benefited from a reduction in cement prices. The community was therefore able to undertake activities of the 2nd and 3rd milestones from the first allocation. The community has as a result sought for an amendment to their grant agreement to include acquisition of 40 desks from the second allocation.

Work Plan for April-June 2009

1. Monitoring of expenditure and progress of school projects
2. Disbursement of 2nd and 3rd allocations to all grantees

3.4 Community Radio Stations

3.4.1 Broadcasts

Nine community radio stations are currently working with QUESTT: Chikuni, Icengelo, Maria, Yangeni, Mano, Yatsani, Oblate Liseli, Maranatha and FCC Solwezi. By February all nine radio stations had signed agreements to broadcast educational programs from January to July. During this period they will broadcast 180 30-minute documentary programs promoting education. Chikaya in Lundazi and Mazabuka radio stations are not broadcasting at present due to equipment breakdown.

There has been an appeal from MOE and community schools for the radio stations to broadcast other grades as well as the two or three grades (mostly grades 1 and 2) which they are broadcasting at the moment. Chikuni is currently the only station broadcasting four grades. Listeners contact the radio stations to protest when stations do not air *LTM*. Obvious reasons are ZESCO load shedding, occasional maintenance, and breakdown of equipment

All radio stations reported that the lessons learnt since they started broadcasting *LTM* and *Education for All* programs have been positive. Producers confirmed to being more knowledgeable about education in Zambia than ever before.

MISA Zambia in its quest to strengthen capacity building for radio stations has donated transmitters to Chikaya, Maranatha, Yangeni, and Mazabuka. Other stations are yet to benefit. This gesture will help widen the coverage in areas which were unable to get the ZNBC signal.

The lack of knowledge of operations of radio station by board members has impeded on the operations of CRS because of interference and intimidation

The DEBS office in Monze approached Chikuni to dub *LTM* lessons on cassettes for them. The station was willing but only at a fee and dependent on QUESTT approval.

3.4.2 ZNBC

The Community Radio Coordinator held two meetings with the Director General and senior management staff at ZNBC to prepare for a subsequent meeting between MOE and ZNBC. At these meetings she briefed the Director General on the massive impact of *LTM* in the whole of Zambia and the challenges caused by the poor radio reception in many areas and the difficulty MOE had in finding the funds for the broadcast fees. The Director General stated that he was aware of the value of the programs and said that *LTM* meets some of the educational gaps in their programming. However he mentioned that ZNBC has received negative statements from people both within and outside ZNBC who do not understand the value of the program and criticize the large percentage of airtime taken up. As a result ZNBC decided to cancel *LTM* broadcasts on Thursdays.

A meeting will be held where QUESTT and MOE will make a presentation on *LTM* and its impact to all senior staff at ZNBC to dispel negative attitude towards the programme by both ZNBC staff and other government institutions.

3.4.3 Sustainability

The Community Radio Coordinator (CRC) accompanied the QUESTT and MOE team that visited the provinces to discuss the sustainability of QUESTT activities. During the meetings with the PEO, CRC made presentations on what the radio stations were doing for education and provincial or district MOE officials were identified to liaise with the radio stations. The role of this official will be to ensure that the radio stations continue to broadcast *LTM* and other educational programs and to be the point of contact when the radio stations wanted to ask for information.

During the visits to provinces, the radio station managers have agreed to continue broadcasting *LTM* after the project ends as part of their contribution to the education of the communities they serve. They emphasized the need for an MOU between the stations and the MOE to lay down the parameters for the broadcasts. A draft MOU has been prepared by QUESTT and EBS. Icengelo which has been running educational promotional programs, and not *LTM*, has pledged to start broadcasting *LTM* for the period 2010 until a date to be agreed upon.

3.4.4 Future plans

- Arrange meeting between ZNBC and MOE
- Finalize MOU between MOE and community radio stations
- Monitor the programs broadcast by the community radio stations and produce a final report

3.5 OVC Life Skills Program

3.5.1 Program production and broadcasting.

The final ten school programs for the Year Two series were produced by the coordinator in January and formatively evaluated at Mukamambo and Chibombo Basic schools in Chongwe and Chibombo respectively. Amendments to the programs were made following the evaluation.

The following table shows the programs broadcast during the quarter by the six radio stations participating in the OVC program. All programs were broadcast twice except for two of the special programs.

Table 4: Programs produced and broadcast

Programme	Radio Maria	Radio PASME	Radio Yangeni	Radio Mosi o tunya	Radio Mano	Oblate Radio Liseli	Total aired
School (15min)	11	10	6	8	8	9	52
Drama (15min)	15	10	6	9	8	9	57
Feedback (30min)	11	10	6	10	8	10	55
Special (30min)	3	6	2	1	1	2	15
Total	37	36	20	28	25	40	186

During the quarter there were no major disruptions to broadcasts from prolonged power outages, and only one public holiday, International Women's Day, disrupted the broadcast schedules.

3.5.2 Training

a. Mentoring of new producers

During the first week of February the coordinator provided on-site mentoring to the new producers in Mongu and Mansa, where planning, production and listener group mobilization was discussed. Subsequent training in radio production by the experienced producers from Petauke, Kasama and Livingstone occurred later in February

b. Script writing

EDC's media specialist, Mr Alvaro Cisneros conducted a one week workshop in writing drama scripts for radio. The participants were trained in plot creation, characterization, script writing for serial dramas and given tips for a good drama production. The product was a well woven 30-episode storyline for the dramas and 30 skeletal scripts. The first 10 scripts have since been circulated to producers for comments. The workshop took place in Lusaka and was attended by all six producers, the coordinator, three script writers from Frameworks, who will write the final scripts, and one musician. During the week following the workshop, Mr

Cisneros worked with the scriptwriters from Frameworks to develop the actual scripts. Ten scripts were written and finalized.

c. Drama production training

Mr Cisneros traveled to Mansa and Mongu to train the new producers and the drama groups at these radio stations in acting and drama production for the radio. Two dramas were recorded and edited at each radio station. Ten local drama group members, the producers, and a technician participated in the workshop in Mansa from March 12th to 20th, while the Mongu workshop from March 22nd to 27th was attended by the Mongu producer, the Livingstone producer and ten local drama group members.

3.5.3 Monitoring visits

Monitoring and evaluation of *Our Family* implementation is done at site, school and community levels. The radio stations are monitored to check adherence to programming by the producer and the partner station, while at school and community levels, data is collected on listener trends and impact.

Three out of six community radio stations were visited by the OVC Coordinator and were all found to be adhering to agreed programming. Assessment of dramas and talk shows revealed a high level of professionalism.

Each producer has a mandate to visit two schools and two listener groups per week. Sometimes these benchmarks are not met in a month because of the producers' participation in other activities. In this quarter 125 schools were visited from the target of 144.

Schools were visited for data collection, implementation of programs and distribution of feedback forms. The following schools were monitored - Chipata 10, Chadiza 12, Katete 8, Mambwe 9, Kasama 18, Kazungula 18, Livingstone 6, Nyimba 8, Petauke 8, Sinda 4, Mansa 12 and Mongu 12.

In Nyimba 31 schools are implementing the program, while Petauke has 162 schools, Kalomo 5, Kazungula 35, and Livingstone 37. Each school has a minimum of one class with an average number of 45 pupils implementing the program. Information being submitted through the ZICs will be tabulated in the next quarter.

The updated active listener groups for the radio stations are: Radio Maria Chipata 227, Radio Mano Kasama 155, Oblate Radio Liseli Mongu 105; with an additional 50 trained groups in Kalabo not active as yet, Radio Yangeni Mansa 153, Radio Mosi O Tunya Livingstone 135 and Radio PASME Petauke 105. Listener groups were visited to distribute feedback forms, collect membership data as well as conduct one day training to chairpersons. Training was offered to care givers, who also double as chairpersons of listening groups: Radio PASME 13, Radio Maria 18, Radio Mosi O

Tunya 15, Radio Mano 32, Radio Yangeni 153, Radio Oblate Liseli 155. The groups mentioned were recipients of 352 windup radios.

3.5.4 Material Distribution

Freeplay Foundation provided the program with 200 radios from donations from Rotary International and a further 200 were purchased with project funds. The radios donated were used for listener groups in the areas covered by the two new participating radio stations in Mansa and Mongu. The total distribution of radios was as follows: Radio Maria Chipata 24, Radio PASME Petauke 24, Radio Mosi o Tunya Livingstone 24, Radio Mano Kasama 48, Radio Oblate Liseli Mongu 116 and Radio Yangeni Mansa 116. The remainder will be distributed as required by the stations.

3.5.5 Impact

The programs are being well executed by our six partner stations and well received by the community.

2687 males and 1864 female teachers and caregivers have been trained to date. The training since the inception of the project has positioned them to offer comprehensive psychosocial support to OVC. These teachers and caregivers are supported by 910 trained community leaders.

The radio stations and local producers work with a number of partners in addition to the Ministry of Education. These include Provincial and District AIDS Task Forces, District Development Coordinating Committees, Ministry of Community Development and Social Services. Local and International NGO's including Thandizani - Global Fund, Africare, World Vision, Care Zambia, Corridors of Hope, Right to Play, Media Institute of Southern Africa, Kwacha Kummawa, Chipata After Dark, District Women Association, Eastern Province Women Association, Peoples Action Forum, Keepers Zambia Foundation.

The six producers have assisted each radio station to submit proposals to the US Embassy for funds from the Ambassadors Small Grant program to fund the continuation of the OVC program from September 2009 to September 2010. Special thanks go to the various station managers and the producers for well written submissions. The Petauke producer went a step further by submitting proposals from two listener groups. The grants have a cap of \$20,000 and are meant for community based recipients.

3.5.6 Challenges

- The rainy season is quite challenging for members of staff who rely on motorbikes to cover large areas,

- Teachers in rural schools in Chipata, Katete and Chadiza were on go-slow during the period being reviewed to pressurize government to speed the payment of rural hardship allowances. This affected the teaching of the programme in the said schools. However, broadcasts were not discontinued because teachers in schools within town were not part of the strike. Despite the strike, ZICs assisted with data collection,
- Radio PASME Petauke and Mano Kasama faced some power outages and low supply thereby affecting the efficiency of their respective transmitters,
- Kalabo was and is still flooded rendering the distribution of windup radios impossible until the second term. The Ministry of Education has offered a speed boat to commence the work in late April,
- The coverage of Radio Yangeni in Mansa is limited to 80% of the district, because the Ministry of Information has not agreed to the radio station's plans to increase coverage to outlying Districts,
- It is not possible to meet the demand for windup radios in schools and communities as a result of the impact of the radio programs.

3.5.7 Plans for next quarter

- April – The main activities for April is the printing and distribution of 5000 teacher guides, recording, editing and formative evaluation of ten school programs and five radio dramas for each of the six sites, promotional jingles and data collection for the semi-annual report.
- May – Is reserved for field visits with Frameworks media consultants on quality assurance, updating monitoring and evaluation tools at site level, broadcasting of the three interrelated radio programs and continuation of data collection.
- June – The foremost activity is the continuation of radio programme production, broadcasting and Listener group leaders trainings for 450, will be conducted at Radios PASME Petauke, Maria Chipata, Mosi O Tunya Livingstone and Mano Kasama. Listener group strengthening will be done at Radio Yangeni and Oblate Liseli

3.6 Teacher Education

3.6.1 *Fastele! Fastele!* radio program for teachers

Since February 8th, there has been no programme that has been running. Although master plans for 22 episodes were produced in January 2009 with support from QUESTT Project, EBS and TED have not finalized identifying interviewees, preparing a budget for actors, producing the programme and securing funds for air time. In addition Teacher Education has yet to make a decision on whether to continue with the programme or not. QUESTT has done its role by producing the design document and distributing copies to the two units and by reminding the two units to make progress.

Comments and concerns:

The delay by TESS to make a decision on whether to continue with the programme or not, and the delay by EBS to produce the programme may lead to losing the time slots for the programme with ZNBC: Thursdays at 19:45 hours and Sundays at 18:15 hours.

3.6.2 Sample Science Lessons for grades 5 to 7

Unless there is additional funding available because of the depreciation of the kwacha and the strengthening of the dollar, there is no more funding to continue supporting the training of teachers in the use of the manual *Sample Science Lessons for Grades 5 to 7*. National Science Centre (NSC) expressed disappointment at this decision and appealed for a solution to be found to continue with the programme. The Permanent Secretary had just directed the NSC centre to be working closely with QUESTT in order to implement the use of the *Sample Science Lessons for Grades 5 to 7*. The Ministry did not put this activity in Annual Work Plan and Budget for 2009 but found the activity to be very beneficial to the teachers. Although the Ministry of Education, Teacher Education and National Science Centre have been informed about this development, they also expressed having insufficient funding to support further trainings.

As an interim measure to make the manual and DVD available more widely, QUESTT will make copies for distribution to all teacher resource centers so that the coordinators can use them for training sessions.

3.6.3 ZATEC by distance learning for Community School Teachers

Some MOE officials in Teacher Education expressed doubts that the community school teachers had completed the program and fulfilled all the requirements for certification. As a result, Mr. Kaulule, (the former, CEO for TED now with UNESCO), wrote a letter to Directors TESS and ECZ clarifying what was agreed upon concerning ZATEC by distance education for Community School teachers and the school-based year teaching practice. Emphasis was that students would not be subjected to an extra year of school teaching practice since they had been teaching throughout the course and had been monitored by lecturers during the two year

period of their course. Secondly, students were to complete their course in 24 months after writing the two major assignments: portfolio and Area of Curriculum Strength.

Colleges of education were aware that there would be no further funding for the programme by QUESTT project after April and had arranged that all the students would have completed the program by then. The two major assignments were given during 2008 and most of the students had been monitored three times as was required by ECZ.

This issue prompted MoE Teacher Education to monitor the colleges of education in order to ascertain the amount of progress made by each college. During the monitoring conducted from March 9th to 15th in all 8 Colleges of Education, verification of progress made by the colleges and completion of the two major assignments was made.

The following tables show the examination results and the amount of work that has been done and what needs to be done by Colleges of Education:

Table 5: November 2008 examination results

College	CS candS	Passed		Referred		Failed		Absent		Percent pass
		Male	Female	Male	Female	Male	Female	Male	Female	
Chipata	58	15	1	17	7	13	4	1	0	28%
Kasama	24	4	0	17	3	0	0	0	0	16.7%
Kitwe	68	8	6	19	21	6	8	0	0	21%
M/Moffat	45	12	8	10	6	4	4	1	0	44.4%
Mansa	62	13	2	23	7	7	10	0	0	24.2%
Mongu ¹	53	0	0	20	19	7	6	1	0	0%
Mufulira	43	7	4	11	7	6	8	0	0	26%
Solwezi	64	9	1	27	27	0	0	0	0	17.2%
TOTAL	417	90	21.6%	241	57.8%	83	20%	3	0.7%	

¹ An error in processing the results meant that no marks were recorded by ECZ for one assignment

Table 6: Progress of each college in monitoring

College	Monitoring done	Monitoring to be done	Comment
Chipata	56 students monitored 3 times	None	Results sent to ECZ
Mansa	60 students monitored 3 times	None	Results to be sent to ECZ
Malcolm Moffat	49 students monitored 3 times	None	Results to be sent to ECZ
Kasama	30 students monitored 2 times.	3 rd monitoring from 16-20 th March.	Results to be sent to ECZ
Mufulira	48 students monitored 3 times	9 students in Mansa and Livingstone to be monitored	Results to be sent to ECZ
Mongu	53 students monitored	5 students to be monitored in Mongu from 16-20 March 2009	Results to be sent to ECZ
Solwezi	60 students monitored 2 times	3 rd monitoring for 60 students to be completed by mid March	Results to ECZ by end of April 2009
Kitwe	60 students monitored 2 times	3 rd monitoring for 60 students to be conducted from 16-27 th March 2009	Results to ECZ by early May 2009

Table 7: Progress of each college on assignments

College	What has been done	What is to be done	Comment
Chipata	2 major assignments given and marked for 56 students	None	Results sent to ECZ
Mansa	2 major assignments collected from students	Marking, compiling and sending results to ECZ	To complete by end of March
Malcolm Moffat	2 major assignments collected from 49 students	Marking, compiling and sending results to ECZ	To complete by end of March
Kasama	Assignments given to students	2 major assignments to be collected from 16 -20 March. Marking, compiling results and sending results in April	Results to be sent to ECZ
Mufulira	Deadline for handing in assignments is 20 th March	Marking, compiling results and sending results by mid April 2009	Results to be sent to ECZ
Mongu	No response on 53 students	No response	No response
Solwezi	2 major assignments to be collected from students by mid March	Marking, compiling results and sending results by end of March	Results to ECZ by mid April 2009
Kitwe	2 major assignments NOT given by first week of March to 60 students	2 major assignments to be given end of March when students collect results. Marking, compiling results and sending results by end of April	Results to ECZ by early May 2009

The reason given by Kitwe College of Education for not giving the assignments was that they could only do so when they knew who had passed and who had failed. It was only those students that had passed that were supposed to be given the assignments.

3.7 Monitoring and evaluation

3.7.1 Enrolment Data Management

The collection of enrolment forms from the provinces has begun. So far two provinces, Western and Copperbelt, have submitted their forms within the stipulated deadline. There is a worrying trend of GRZ schools being included for data collection although the plan was to collect data from community schools and not GRZ schools, as reliable data on GRZ schools can be obtained from the EdAssist data.

3.7.2 IRI evaluation

a. Testing in GRZ Grade 2 classes

1,035 learners were tested in Central, Copperbelt, Southern and Western provinces at the end of 2008. 798 learners were from IRI GRZ schools while 237 learners came from non-IRI GRZ schools, which were used as control schools.

Performance in IRI GRZ schools was 38.15% while in non-IRI GRZ control schools learners scored 34.80%, representing a 3.15% difference in performance between IRI and Control learners.

Learners who used IRI performed better than the control group in Maths and English, while IRI learners and Control learners performed almost similarly in Zambian Language Literacy and Life Skills.

Table 8: GRZ schools - results by school type and sub-test

Type of school		Maths [13 points]	Zambian Language [36 points]	Life Skills [8 points]	English Language [29 points]	Overall Test [86 points]
IRI GRZ Schools [N=798]	Mean	7.4	10.7	3.4	11.1	32.8
	Percent	57.09%	29.81%	42.08%	38.14%	38.15%
Control GRZ Schools [N=237]	Mean	6.4	11.6	3.3	9.4	29.9
	Percent	49.11%	32.22%	41.35%	32.46%	34.80%

The Grade 2 results show a difference in performance between girls and boys using IRI with boys performing better in Mathematics and Life skills. On the other hand, in the Control schools, girls performed slightly better in Life Skills and English Language, while boys performed slightly better in Maths and Zambian Language.

Table 9: GRZ schools - results by school type, sub-test and sex

Type of School	Sex of learner		Maths [13 pts]	Zambian Language [36 pts]	Life Skills [8 pts]	English Language [29 pts]	Overall [86 pts]
IRI Learners GRZ	Male	Mean	7.6	10.6	3.6	10.9	32.7
		Percent	58.7%	29.4%	44.7%	37.6%	38.0%
	Female	Mean	7.2	10.9	3.2	11.2	32.9
		Percent	55.6%	30.2%	39.6%	38.6%	38.3%
Control Learners GRZ	Male	Mean	6.6	11.9	3.2	9.3	30.4
		Percent	50.9%	33.1%	39.6%	32.1%	35.4%
	Female	Mean	6.2	11.3	3.4	9.5	29.5
		Percent	47.6%	31.5%	42.8%	32.8%	34.3%
Total Learners GRZ	Male	Mean	7.4	10.9	3.5	10.6	32.2
		Percent	57.0%	30.2%	43.6%	36.4%	37.4%
	Female	Mean	7.0	11.0	3.2	10.8	32.1
		Percent	53.7%	30.5%	40.4%	37.2%	37.3%

b. Testing in Grade 4 in community schools

A total of 756 Grade 4 learners were tested in community schools at the end of 2008. 515 learners came from IRI Community schools and 241 were from non-IRI schools which were used as control schools.

Results indicate that the performance of Grade 4 learners in both Control and IRI Schools was satisfactory, except in English. Performance was slightly better across all the provinces in IRI schools with overall mean scores of 49.5 in IRI schools and 55.1 in non-IRI schools as shown in the table below. Results indicate that learners from IRI Schools performed better than learners from non-IRI schools in all the subjects tested.

Table 10: Community schools - results by school type and sub-test

School type		English [38 Points]	Mathematics [24 Points]	Science [24 Points]	Social Studies [26 Points]	Total [112 Points]
Control [N=241]	Mean	12.4	10.5	11.9	14.7	49.5
	Percent	32.7%	43.7%	49.7%	56.5%	44.2%
IRI Schools [N=515]	Mean	15.0	11.8	12.6	15.7	55.1
	Percent	39.6%	49.2%	52.4%	60.3%	49.2%
Total [N=756]	Mean	14.2	11.4	12.4	15.4	53.3
	Percent	37.4%	47.5%	51.5%	59.1%	47.6%

The performance of learners by type of school and sex indicates that those from IRI schools performed better than the ones from Control Schools with an overall score of

51.8 and 46.2 for males and females respectively as compared to 45.7 and 42.7 for males and females. Results in the following table below show that in Control schools there was no significant difference between male learners and female learners in terms of performance. On the other hand, male learners in IRI Schools performed better than female learners in all subjects by achieving 42.2% compared to 36.6% in English, 52.7% compared to 45.2% in Mathematics, 54.1% compared to 50.4% in Science and 63% compared to 57.1% in Social Studies.

Table 11: Community schools: Results by school type, sub-test and sex

Control or IRI	Sex		English [38 Points]	Mathematics [24 Points]	Science [24 Points]	Social Studies [26 Points]	Overall Total [112 Points]
Control [N=241]	Male [N=123]	Mean	12.9	10.9	12.1	15.3	51.2
		Percent	34.0	45.2	50.5	58.8	45.7
	Female [N=118]	Mean	11.9	10.1	11.7	14.1	47.8
		Percent	31.3	42.2	48.8	54.0	42.7
IRI Schools [N=515]	Male [N=275]	Mean	16.0	12.7	13.0	16.4	58.0
		Percent	42.2	52.7	54.1	63.0	51.8
	Female [N=240]	Mean	13.9	10.8	12.1	14.9	51.7
		Percent	36.6	45.2	50.4	57.1	46.2

3.7.3 IRI Monitoring

The data collection from the 2009 monitoring of IRI Community schools has begun. So far, more than half of the provinces have successfully completed monitoring the sampled schools and submitted the forms from respective districts. It is expected that the remaining provinces will submit the forms in April in order for the data entry and analysis to be completed on time so that the report writing can be commenced within the coming quarter.

3.7.4 Tracer study

The tracer study was undertaken in 13 districts in eight provinces, and 22 IRI community schools were sampled. The total number of learners in 2005 in the 22 schools in the sample was 3,318, which increased to 3,790 in 2006 and to 3,946 in 2007. Very few learners dropped out of school. In 2005 the number of drop-outs was 120 (3.6%). In 2006 the number was 202 (5.3%) and in 2007 it was 103 (2.6%). More learners moved from the IRI community schools to GRZ basic schools – 225 in 2005, 177 in 2006 and 292 in 2007.

A total of 21 GRZ schools were also visited where teachers were interviewed about the learners who had joined the schools from various IRI schools. The teachers reported that the learners had adapted well to their new schools. Three quarters recorded very good performances, which the teachers attributed to their hard work

and discipline. The 25% whose performance was unsatisfactory had problems with reading and needed remedial work in reading and math, but frequently their problems resulted from poor home conditions.

The report will be finalized and distributed during the next quarter.

3.7.6 Next Quarter M&E Activities

The M&E section will do the following in the next quarter:

1. Finalize the Tracer Study report
2. Complete the collection, entry and analysis of the 2009 enrolment data forms from provinces
3. Complete the data entry and analysis for 2009 IRI Monitoring for Community schools
4. Complete the report writing for the 2009 IRI Monitoring for Community schools
5. Complete the collection and entry of TRAiNet forms for the IPOD training of GRZ teachers

4. Special Events

January 21: The US Ambassador, Donald Booth, accompanied by the Director of USAID, Melissa Williams, visited Kamuchanga Community School. The aim of the visit was to show the Ambassador a typical community school and the impact of *Learning at Taonga Market* on the quality of teaching. The Ambassador met the school committee and spoke to the teachers, and saw an excerpt from an IRI lesson.

February 3, 18, 21 and 24: COP and DCOP held meetings with the consultants evaluating the AEI program, Felipe Tejada and Keri Culver, to assist them in planning their evaluation in Zambia.

February 12: The COP and DCOP attended the USAID Partners Meeting at Cresta Golf View Hotel. Sessions focused on Program Planning and Management, Development Outreach Communications, Sustainability, Environmental Compliance, and Gender.

February 19 to 20: COP, DCOP, M&E Coordinator and EDC's Regional Director for East and Central Africa attended the Ministry of Education's Research Symposium at Mulungushi Conference Centre. COP presented a paper on the results of the achievement testing in GRZ schools: *The use of testing to assess the contribution of Interactive Radio Instruction to the quality of education in government schools*. A copy of the paper is attached at Appendix A.

March 16 to 18: COP and DCOP attended the MOE Joint Annual Review at Mulungushi Conference Centre.

5. Staffing

There were no staff changes during the period under review.

APPENDIX A: Paper presented at MOE Research Symposium

“The use of testing to assess the contribution of Interactive Radio Instruction to the quality of education in government schools”

A paper prepared by Richard Trewby, Chief of Party QUESTT, from the evaluation reports prepared between 2005 and 2008 and presented at the MOE Research Symposium February 19 to 20.

1. Background

Education Development Center (EDC) is a non-profit organisation based in the USA that works in many countries in Asia, Africa, America and Europe to advance solutions to some of the world’s most urgent challenges in education, health and economic development.

EDC started working in Zambia in 1999 to assist the Ministry of Education in reducing the number of children who were unable to access education, which at that time stood at over 800,000. Trained and supported by EDC staff, producers from Educational Broadcasting Services produced a series of interactive radio instruction (IRI) programmes for Grade 1 learners, which were piloted in communities in Lusaka and Southern provinces. The communities found a venue for learning and a facilitator or mentor to run the class, while the project provided a radio, a mentor’s guide and training for the mentor.

The pilot was successful in demonstrating that children learning through the radio attained considerable learning gains in language and mathematics, and the Ministry decided to take the programme to scale in all nine provinces in 2001. At the same time EBS was producing programmes for higher grades and in 2007 broadcast lessons for all grades from one to seven were broadcast. The programmes are called *Learning at Taonga Market* (LTM) and are broadcast each day on ZNBC 2 from 9.00 to 15.30 and also on ten community radio stations.

There are 50 programmes for each grade per term, so one 30-minute broadcast for each grade every day for ten weeks. The lessons cover all the objectives of the Ministry of Education basic education curriculum in the major subject areas. The Mentor’s Guides give a plan for each lesson and activities to be done by the teacher before and after each broadcast. The lessons use active learning techniques and help the teachers to practise good teaching methods. The children hear a good model of spoken English from the radio teacher, but at the lower grades, the classroom teacher translates the lessons into the local language.

The demand for the program grew steadily from 2000. In 2001 there were 168 community run centres (IRI centres) reaching 7782 learners. In 2005 there were 814 centres with 54,859 learners listening to the programmes. About a third of these were

community schools, which had realised the advantages of having professionally produced programmes to support their untrained teachers.

In 2008, according to the Ministry's data, there were 1,877 community schools with 360,253 learners, which were using the interactive radio instruction programmes.

As a result of the success of the programme in IRI centres and community schools, the Ministry agreed to test the effectiveness of the programmes in government basic schools with trained teachers.

2. 2005: Pilot in Grade 1 in 36 government basic schools

In March 2005, the Ministry of Education approved a pilot to use *Learning at Taonga Market* educational broadcasts in Zambian government schools. Members of In-service Teacher Education determined that the pilot should take place at Grade 1 in schools that are understaffed, have untrained teachers or in which teachers are teaching more than one grade. Seven districts were chosen for the case study: Chongwe and Luangwa in Lusaka Province, Masaiti and Lufwanyama in Copperbelt Province, Mkushi and Serenje in Central Province and Solwezi in North Western Province. District education officers identified five schools in each district that fit the criteria of the case study, and Grade 1 teachers from each of the schools were trained to use *Learning at Taonga Market* educational broadcasts in their Grade 1 classes as a supplement to their normal teaching. Thirty-nine Grade 1 teachers from 36 government schools were trained from 13th to 15th April 2005. Since 50 LTM lessons had already been broadcast before the pilot began, the teachers used cassette tapes to help Grade 1 learners catch up during the first school break and the early part of Term 2. Lessons 51 through 150 were delivered via daily radio broadcasts during the second and third terms.

The learning gains of pupils were assessed by comparing the gains of learners enrolled in the 36 GRZ schools that used the *Learning at Taonga Market* broadcasts with learners enrolled in 14 GRZ schools not using the radio broadcasts. The evaluation efforts involved an examination of academic performance on two tests. A pre-test administered late April and a post test administered in November.

2.1 Study Goals

The overall goal of this evaluation was to determine if the IRI methodology and *Learning at Taonga Market* radio programme is an effective resource for teaching Zambian language literacy, English language, numeracy and life skills to Grade 1 pupils in Zambian government schools.

The evaluation questions were:

1. Do the pilot schools receive the radio broadcasts?
2. Can teachers conduct lessons using the broadcast effectively?

3. Do teachers integrate the educational broadcasts into their daily schedules and do the programmes help them teach efficiently?
4. Are learning gains greater for learners who use the radio broadcasts than those who do not use them?

The first three questions are about the practicality of using the radio broadcasts in GRZ schools. Answers to these questions were sought by conducting field monitoring visits to each pilot school. Monitoring questionnaires were used to collect information during classroom observations and discussions with the teachers. The fourth evaluation question about learning gains was answered by administering learning achievement pre-tests and post-tests in both experimental schools and control schools.

2.2 Results

Radio reception

During the field monitoring it was found that almost 90 percent of the selected schools had radio reception that was either very clear or acceptable, but only 65 percent reported that the radio reception was either very clear or acceptable during all five days during the week. Luangwa and Solwezi districts had the most problems with radio reception. The field monitors noted that some teachers did not make use of extension cables and other means that could be used to enhance reception.

Conducting lessons

Field monitors found that the teachers were able to teach the Learning at Taonga Market (LTM) radio programmes effectively. The classroom teachers followed the instructions of the radio teacher. The classroom teachers used all the listed materials for the lessons that were observed. Teachers were also able to engage the learners during the lesson.

Field monitors also found that learners were highly motivated during the lessons, liked songs and games, and enjoyed being taught with the radio broadcasts. The learners' enjoyment of the programme is reflected in the enrolment gains at the experimental schools. It was observed that the radio broadcasts promoted good class and time management among teachers and that learners were focused on the lessons.

Integration of the radio broadcasts into daily schedule

When asked how easy it had been to integrate the radio broadcasts into the daily teaching schedule, a little more than half of the teachers reported that it was either very easy or easy. Seventy percent of the teachers using the radio broadcasts found that they now spend less time preparing for the lessons than before. The teachers spent less time because the lesson plans in the mentor's guide describe the day's activities and needed materials. Having a prepared lesson plan for Grade 1 gave the teachers additional time to prepare lesson plans for the other grades they were teaching.

All but two of the 36 schools had a complete set of New Breakthrough to Literacy (NBTL) materials, and more than 75 percent of the teachers were trained in NBTL. Seventy percent of all the teachers used NBTL materials to teach literacy in addition to the LTM radio programme. Twenty two of those teachers continued to conduct lessons with four ability-level groups, indicating that they had been able to integrate the two teaching resources.

Some teachers reported that they were not clear about the purpose of introducing LTM into their class and that more information at the beginning of the pilot study would have helped. Some teachers also mentioned that they were confused about whether LTM programmes should replace or supplement NBTL lessons.

2.3 Overall Learning Gains

A pre-test/post-test design was used to measure learning gains. The same test was administered to a sample of learners at the beginning of the pilot in April and May and at the end of the school year in November. Learning gains were determined by subtracting the average performance on the pre-test from the average performance on the post-test. The learners who used IRI made learning gains of 21.3 percent, while learners in the control schools made gains of 18.5 percent. The overall gains of the IRI learners in GRZ schools using IRI were higher than the gains of learners in the control GRZ schools.

Learning Gains by Subjects

The first table depicts the gains from pre-test to post-test for IRI learners and learners in control schools in Zambian language literacy, numeracy and English. Learners using IRI and learners in the control schools made gains in all three subjects. The IRI learners made greater gains than the control group in the subjects of numeracy and English. In numeracy, the IRI learners gained 27.6 percentage points while the control group gained 21.6 percentage points, giving the IRI learners a greater gain of 6 percentage points. In English, the IRI learners gained 19.1 percentage points against the control groups' gain of 12.3 percentage points, giving the IRI learners a greater gain of 7.8 percentage points. In the area of Zambian language literacy, the control group made slightly greater gains than the IRI group. The control group gained 19.0 percentage points, while the IRI group gained 17.7 percentage points, giving the control group a greater gain of 1.3 percentage points.

Table 12: Learning gains by subject

	Zambian Language	Numeracy	English
IRI Learners in GRZ schools	17.7%	27.6%	19.1%
Non-IRI learners in GRZ schools	19.0%	21.6%	12.3%

Analyses of statistical significance show that IRI learners obtained statistically significantly greater gains than the learners in the control group in numeracy and English language. The difference in gains in the subject of Zambian language literacy is not statistically significant. In other words, the learners from both groups made similar gains in Zambian language literacy, while the pupils who used *Learning at Taonga Market* obtained significantly better command of English language and numeracy skills.

Assessment results indicate that *Learning at Taonga Market* did not have the same impact on learning gains in the area of Zambian language literacy. This could be because the teachers in the control schools might have put greater emphasis on Zambian language literacy activities due to recent training in NBTL teaching methods, and the fact that NBTL is an effective programme.

Learning Gains by Gender

In addition to analysing learning gains across subject areas, the evaluation also determined whether learning gains were equally attributed to boys and girls. The next table depicts the average score gain from pre-test to post-test for boys and girls in the IRI group and the control group. The table shows that the difference in learning gains between girls and boys in the IRI schools is 0.5 points, with girls achieving slightly higher gains than boys. On the other hand, the boys in the control schools obtained gains that were 8.6 points higher than the girls..

Table 13: Learning gains by gender

	IRI Learners in GRZ schools	Non-IRI learners in GRZ schools
Girls	18.9%	11.6%
Boys	18.4%	20.2%
Difference	0.5%	-8.6%

An analysis of this data indicates that the difference in learning gains between girls and boys in control schools was statistically significant, whereas there was no significant difference between the learning gains of boys and girls in IRI schools. The results seem to suggest that *Learning at Taonga Market* makes learning more accessible to girls.

Enrolment Gains

Enrolment data was collected twice during the year: once during the beginning of the pilot in April and May and once during the end of the term in November. The graph below shows the average class size in the 36 IRI schools and the 14 control schools.

Table 14: Average numbers of learners in IRI classes and control classes

	IRI Classes	Control Classes
Term 1	54.7	57.6
Term 3	57.7	47.5

While the enrolment in the IRI classes increased 5%, the average size of the classes in the control schools decreased by 17.5%. That is, control schools tended to experience attrition in their Grade 1 enrolment, while IRI schools tended to attract more Grade 1 pupils during the school year.

2.4 Overall Conclusion

The Learning at Taonga Market programme led to greater learning gains in the areas of numeracy and English language, gave girls equal access to learning gains and boosted enrolment and retention in the Grade 1 pilot schools. With proper training, teachers are able to conduct lessons effectively and integrate the programme with other elements of the curriculum. The overall conclusion of this report is that the *Learning at Taonga Market* programme is an effective tool for teaching first grade pupils in Zambian government schools.

3. Expansion to Grade 1 classes in all government schools

As a result of the positive findings in the 2005 pilot, the Ministry decided to make the IRI programme available to all GRZ schools which could receive the radio signal. Planning was done and preparations were made in 2006 and the programme was implemented in 2007 with funding from USAID. The process included the training of Ministry officials and teachers in the implementation and management of IRI. Over 4000 teachers and Ministry officials were trained, and 8000 radios and 13,500 mentor's guides distributed. At the end of the year learners were tested in Zambian language literacy and Numeracy to measure the impact of the radio programmes. The aim of the tests was to learn whether the significant results which had been found in the pilot programme would be replicated when the programme was expanded to a far greater number of schools

3.1 Sampling Design

It was decided to test 980 grade 1 learners in both IRI GRZ schools and control non-IRI GRZ schools. 660 learners were to be sampled from Grade 1 IRI GRZ classes and 320 learners from non-IRI Grade 1 classes. The testing targeted learners in Central Province and Copperbelt Province. Chibombo and Serenje were selected from Central Province and Mufulira and Masaiti from Copperbelt Province.

A total of 928 learners from the 31 IRI GRZ Schools and 14 Control GRZ schools were tested.

Table 15: Number of schools in sample

Province	Total GRZ schools using IRI	Sampled GRZ schools using IRI	Control GRZ schools not using IRI
Central	54	17	11
Copperbelt	101	14	3
Total	155	31	14

Profile of learners in sampled GRZ schools

Table 16: Number of learners in sample by gender

Province	Total IRI Learners in GRZ schools		Total Learners in Sampled GRZ schools using IRI		Total learners in Control GRZ schools not using IRI	
	Male	Female	Male	Female	Male	Female
Central	4,895	4,703	181	177	92	90
Copperbelt	10,213	10,013	137	121	80	57
Total	15,108	14,716	318	298	172	147
<i>Percentage</i>	<i>50.7%</i>	<i>49.3%</i>	<i>51.6%</i>	<i>48.4%</i>	<i>53.9%</i>	<i>46.1%</i>

The difference in the average age of learners in IRI GRZ schools and Control GRZ schools was zero.

Table 17: Age distribution of learners in sample

	GRZ schools using IRI	Control GRZ schools not using IRI	Overall
Mean Age	7.7	7.7	7.7
Modal Age	7	7	7
Minimum Age	6	6	6
Maximum Age	8	7	7.5

3.2 FINDINGS

The response of the teachers

Results show that 100% of the teachers in IRI schools in both provinces found the broadcasts useful or very useful.

Table 18: Teachers' views on usefulness of LTM

Province		Frequency	Percent
Central	Very Useful	11	64.7%
	Useful	6	35.3%
	Total	17	100%
Copperbelt	Very Useful	12	85.7%
	Useful	2	14.3%
	Total	14	100%

Reception

All the 31 schools sampled in the evaluation had working radios. 55% of the schools on the Copperbelt and 45% of the Copperbelt schools had good reception.

Availability of Teaching and Learning materials

91% of the schools using IRI had the Grade 1 Mentor’s Guide to aid in the delivery of quality teaching in schools.

Observations from lessons observed

LTM lessons were observed in 29 of the schools using the radio programmes. 73% of the schools used the language of play as language of classroom instruction. All except two of the teachers did pre- and post-broadcast activities as part of the LTM methodology. All except one of the teachers reported that LTM was useful in the delivery of lessons to the learners.

Table 19: Results of observation of lessons

Province		Central	Copperbelt	Total
Is language of play used in classroom instruction?	Yes	18 (64%)	15 (88%)	33 (73%)
	No	10 (36%)	2 (12%)	12 (27%)
Pre- and Post broadcast activities done	Yes	27 (93%)	16 (100%)	43 (96%)
	No	2 (7%)	0 (0%)	2 (4%)
Usefulness of LTM in class	Yes	27 (96%)	17 (100%)	44 (98%)
	No	1 (4%)	0 (0%)	1 (2%)

Do teachers integrate the educational broadcasts into their daily teaching schedule?

Only 3.3% of the schools reported that LTM lessons did not fit in the schedule every day. Teachers reported that they found it easy to integrate the broadcasts into their schedule because they found it easy to prepare radio lessons.

3.3 Performance of learners

Overall performance in Numeracy was good with learners scoring an average of 66.7% and learners from IRI GRZ schools performing better (71.7%) than those from Control schools (56.8%). Poor overall performance was recorded in Literacy with an average score of 23.2%. However, learners from IRI GRZ schools scored 28.0% in Literacy while learners from Control schools scored 13.7%. The findings are presented in the table below.

Table 20: Mean scores of learners by school type and sub-test

Type of school		Literacy (29 points)	Numeracy (26 points)	Total Overall (55 points)
Non-IRI GRZ schools [N=312]	Mean	4.0	14.8	18.8
	Percent	13.7%	56.8%	34.1%
IRI GRZ schools [N=616]	Mean	8.1	18.6	26.8
	Percent	28.0%	71.7%	48.6%

Total schools [N=928]	Mean	6.7	17.3	24.1
	Percent	23.2%	66.7%	43.7%

In both provinces learners using IRI performed significantly better than those who were not listening to the programmes.

Table 21: Performance by province, school type and sub-test

Province	Type of School		Literacy (29 points)	Numeracy (26 points)	Total Overall (55 points)
Central	Non-IRI GRZ schools [N=174]	Mean	3.2	15.8	19.1
		Percent	11.2%	60.8%	34.6%
	IRI GRZ schools [N=357]	Mean	5.1	17.2	22.3
		Percent	17.5%	66.2%	40.5%
	Total schools [N=531]	Mean	4.5	16.7	21.2
		Percent	15.4%	64.4%	38.6%
Copperbelt	Non-IRI GRZ schools [N=138]	Mean	4.9	13.5	18.4
		Percent	16.9%	51.8%	33.4%
	IRI GRZ schools [N=259]	Mean	12.3	20.6	32.9
		Percent	42.4%	79.3%	59.8%
	Total schools [N=397]	Mean	9.7	18.1	27.9
		Percent	33.5%	69.7%	50.6%
Total	Non-IRI GRZ schools [N=312]	Mean	4.0	14.8	18.8
		Percent	13.7%	56.8%	34.1%
	IRI GRZ schools [N=616]	Mean	8.1	18.6	26.8
		Percent	28.0%	71.7%	48.6%
	Total schools [N=928]	Mean	6.7	17.3	24.1
		Percent	23.2%	66.7%	43.7%

Influence of attendance on performance

During testing, the test administrators tested pupils with attendance rates ranging from Low to High. Administrators rated the attendance of pupils as High (attended 100-120 radio lessons), Medium (80-99 lessons) or Low (less than 80 lessons). Learners in IRI GRZ schools achieved higher scores in all categories than learners in non-IRI GRZ schools.

Table 22: Performance by attendance, school type and sub-test

Type of School	Attendance		Literacy (29 points)	Numeracy (26 points)	Total Overall (55 points)
Non-IRI GRZ schools	High [N=185]	Mean	5.1	15.3	20.4
		Percent	17.7%	58.8%	37.1%
	Medium [N=104]	Mean	2.4	14.2	16.6
		Percent	8.3%	54.4%	30.1%
	Low [N=3]	Mean	3.0	11.7	14.7
		Percent	10.3%	44.9%	26.7%
	Total [N=292]	Mean	4.1	14.8	19.0
		Percent	14.3%	57.1%	34.5%
IRI GRZ schools	High [N=395]	Mean	10.1	19.5	29.6
		Percent	34.9%	75.0%	53.8%
	Medium	Mean	4.4	16.8	21.2

Type of School	Attendance		Literacy (29 points)	Numeracy (26 points)	Total Overall (55 points)
	[N=208]	Percent	15.3%	64.5%	38.6%
	Low	Mean	6.5	22.6	29.1
	[N=12]	Percent	22.4%	86.9%	52.9%
	Total	Mean	8.1	18.6	26.8
Total schools	High [N=580]	Mean	8.5	18.2	26.7
		Percent	29.4%	69.8%	48.5%
	Medium [N=312]	Mean	3.8	15.9	19.7
		Percent	13.0%	61.2%	35.7%
	Low [N=15]	Mean	5.8	20.4	26.2
		Percent	20.0%	78.5%	47.6%
	Total [N=907]	Mean	6.8	17.4	24.3
		Percent	23.6%	67.0%	44.1%

Performance by gender

Results show a very minimal difference in performance between female and male learners. Overall performance show that male learners scored 44.6% and female learners scored 42.8%. Male learners performed slightly better in both IRI and control GRZ schools than female learners.

Table 23: performance by gender, school type and sub-test

Type of School	Gender		Literacy (29 points)	Numeracy (26 points)	Total Overall (55 points)
Non-IRI GRZ schools	Male [N=170]	Mean	4.3	15.0	19.3
		Percent	14.7%	57.7%	35.0%
	Female [N=142]	Mean	3.6	14.5	18.1
		Percent	12.5%	55.8%	33.0%
	Total [N=312]	Mean	4.0	14.8	18.8
		Percent	13.7%	56.8%	34.1%
IRI GRZ schools	Male [N=318]	Mean	8.4	19.0	27.4
		Percent	28.8%	73.1%	49.8%
	Female [N=298]	Mean	7.9	18.2	26.1
		Percent	27.1%	70.1%	47.4%
	Total [N=616]	Mean	8.1	18.6	26.8
		Percent	28.0%	71.7%	48.6%
Total schools	Male [N=488]	Mean	6.9	17.6	24.5
		Percent	23.9%	67.8%	44.6%
	Female [N=440]	Mean	6.5	17.0	23.5
		Percent	22.4%	65.5%	42.8%
	Total [928]	Mean	6.7	17.3	24.1
		Percent	23.2%	66.7%	43.7%

Performance by Age

Results show that learners above the recommended grade age performed better than those in the recommended age category and below. There is minimal difference in performance between learners below and learners within the recommended age.

Learners in IRI GRZ schools performed better than those in non-IRI GRZ schools in both Numeracy and Literacy across all age categories.

Table 24: Performance by age, school type and sub-test

Age category	School type		Literacy (29 points)	Numeracy (26 points)	Total Overall (55 points)
Below recommended age (below 7 years)	Control schools [N=157]	Mean	3.3	14.2	17.5
		Percent	11.3%	54.6%	31.8%
	IRI schools [N=296]	Mean	8.2	18.1	26.3
		Percent	28.3%	69.7%	47.9%
Recommended age (7-8 years)	Control schools [N=92]	Mean	4.2	13.3	17.5
		Percent	14.3%	51.2%	31.8%
	IRI schools [N=179]	Mean	8.2	18.4	26.5
		Percent	28.1%	70.7%	48.2%
Above recommended age (above 8 years)	Control schools [N=63]	Mean	5.5	18.3	23.8
		Percent	18.8%	70.5%	43.3%
	IRI schools [N=141]	Mean	7.9	20	27.9
		Percent	27.1%	77.1%	50.7%

4. Results 2008 Grade 2

In 2008 *learning at Taonga Market* was rolled out to Grade 2 classes in GRZ basic schools. Demand for the programme was so great that the Zonal In-service Coordinators trained a total of 6775 teachers. Mentor's Guides for Grade 2 were printed and distributed but no additional radios were supplied since the Grade 2 classes could use the same radios as had been supplied for the Grade 1 classes.

4.1 Testing in Grade 2 in GRZ schools

Testing was conducted in Central, Copper belt, Southern and Western provinces in October 2008 and the results are still being analysed. The following is a brief account of the results processed so far.

A target of 1,160 Grade 2 learners in both IRI GRZ schools and control non-IRI GRZ schools were set to be tested during this period. 800 learners from Grade 2 IRI GRZ classes and 360 learners from control schools were to be tested. For various reasons, notably lack of time, the test administrators were only able to test 798 learners from IRI GRZ schools and 237 learners from Control GRZ schools.

4.2 Preliminary results of learner performance

In both IRI and non-IRI schools, learners performed relatively poorly in English and Zambian Language Literacy (below 40%) and better in Mathematics and Life Skills (above 40%). The total mean percent score stood at 42.3%. Even so, the IRI school learners performed slightly better than the non-IRI school learners. Performance in IRI GRZ schools was 43.2% while in non-IRI GRZ schools learners scored 39.4%, representing a 3.8% difference between IRI and Control learners.

The biggest differences can be seen in the English and Mathematics sub-tests (5.6% and 8.0% respectively).

The following results compare performance by school type and sub test:

Table 25: Results by school type and sub-test

School type		English [29 points]	Mathematics [13points]	Zambian Language [36 points]	Life Skills [8 points]	Overall total [76 points]
Non-IRI GRZ schools [N=237]	Mean	9.4	6.4	11.6	3.3	29.9
	Percent	32.5%	49.1%	32.2%	41.4%	39.4%
IRI GRZ schools [N=798]	Mean	11.1	7.4	10.7	3.4	32.8
	Percent	38.1%	57.1%	29.8%	42.0%	43.2%
Total [N=1,035]	Mean	10.7	7.2	10.9	3.3	32.1
	Percent	36.8%	55.3%	30.4%	41.9%	42.3%

The preliminary results seem to follow the same pattern as the findings from the Grade 1 study. That is, the IRI learners performed better than their counterparts who were not using the IRI programmes, except in the area of Zambian Language Literacy.