

*EDC Support to Zambia's Ministry of Education*

# QUESTT

(Quality Education Services Through Technology)

## **FINAL PROJECT REPORT**

**OCTOBER 2004 - SEPTEMBER 2009**

*Submitted by: Education Development Center, Inc.*

*Funded by: USAID/Zambia*

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



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## Abbreviations and Acronyms

CBO	Community-Based Organization
CDC	Curriculum Development Center
COP	Chief of Party
CRC	Community Radio Coordinator
CRS	Community Radio Station
CS	Community School
CST	Community School Teacher
DCOP	Deputy Chief of Party
DEBS	District Education Board Secretary
DODE	Directorate of Open and Distance Education
DRCC	District Resource Centre Coordinator
ECZ	Examinations Council of Zambia
EBS	Educational Broadcasting Services
FBO	Faith Based Organization
FTI	Fast Track Initiative
GRZ	Government of the Republic of Zambia
IRI	Interactive Radio Instruction
IGA	Income Generating Activity
LTM	Learning at Taonga Market
M&E	Monitoring and Evaluation
MOE	Ministry of Education
NGO	Non-Governmental Organization
NISTCOL	National In-service Teachers College
NOC	National Outreach Coordinator
ODL	Open and Distance Learning
OVC	Orphans and Vulnerable Children
PEO	Provincial Education Officer
PMP	Performance Monitoring Plan
POC	Provincial Outreach Coordinator
PTDDL	Primary Teachers Diploma by Distance Learning
QUESTT	Quality Education Services Through Technology
SEO	Senior Education Officer
SESO	Senior Education Standards Officer
TED	Teacher Education Department
TESS	Teacher Education and Specialized Services
TRC	Teacher Resource Centre
USG	US Government
ZAMISE	Zambia Institute for Special Education
ZATEC	Zambia Teacher Education Course
ZCRP	Zambia Community Radio Project
ZIC	Zonal In-service Coordinator
ZNBC	Zambia National Broadcasting Corporation

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## I. Executive Summary

Introduction. From October 2004 through September 2009, USAID’s Quality Education Services through Technology (QUESTT) project, implemented by the Education Development Center (EDC) in collaboration with Zambia’s Ministry of Education (MOE) and its cooperating partners, contributed to USAID’s Education Strategic Objective (SO6) on “Improved Quality of Basic Education for More School-aged Children” with special emphasis on two Intermediate Results (IRs):

- IR 6.1 Improved Quality of Basic Education Delivery System and
- IR 6.4 Mitigate the Impact of HIV/AIDS on the Education System.

During that time, QUESTT built on an interactive radio instruction (IRI) foundation for OVC laid during previous EDC and MOE work in Zambia from 1999 to 2004, with USAID support.

QUESTT’s core strategy was to expand the provision of basic education through interactive radio instruction (IRI), especially for OVC including those in community schools and IRI centers. QUESTT assisted the Directorate of Open and Distance Education (DODE) in the design, development and revision of IRI programs and materials to cover Grades 1-7. With the MOE, QUESTT introduced IRI to government schools to supplement teaching in those schools and applied a variety of technologies including mobile phones, mp3 players, wind-up/solar powered radios, and sustainable power sources, to improve distance learning and access by teachers and children in more remote areas to learning and teaching resources. These technologies and approaches were utilized to improve the quality of pre-service and in-service teacher training delivery systems. Finally, the strength of community radio stations was built with the provision of training and equipment in order to provide programs for and connections among communities to increase their care and support for OVC and their interest in maintaining and improving education for their children. Community support for education was reinforced through a small grants program and capacity building of community school PTAs.

This report describes the many facets of QUESTT’s activities as well as accomplishments and results of those activities. This Executive Summary highlights some of the information contained in the main body of this report.<sup>1</sup>

Section II. Indicators provides an overview of the Basic Education and Social Services indicators that QUESTT reported and shows how QUESTT was able to reach and, with certain key indicators, well exceed targets set for the project. For example, QUESTT reached close to 690,000 children with IRI in 2009, exceeding a target of 640,000 by 8 %. The section also summarizes the many types of learning/teaching products that were developed and delivered by the project.

Section III. Learning at Taonga Market (LTM) describes QUESTT’s flagship activity, the LTM IRI program through which so many children and teachers received learning and teaching

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<sup>1</sup> At the end of each Section III – VI of the report is a description of some of the challenges faced and lessons learned.

support. It describes how previously developed IRI programs were revised to reflect the Ministry's revised curriculum and how new programs for Grades 6 and 7 were developed. It describes the dramatic expansion of the program with, for example, 1480 community schools using the LTM programs by the end of the project in 2009 as compared to only 188 at the outset of the project in 2004. The increase in schools was accompanied by a steady increase of learner enrolment during the same period. These increases were the result of QUESTT sensitization, training, and other support that led to increased involvement of Ministry departments and staff and non-governmental and community based organizations. Combined efforts of QUESTT and MOE staff to monitor, collect and report data on the use of IRI ensured that the Ministry knew of the contributions that LTM was making to Zambia's aim of education for all. The section provides a summary of the efforts of QUESTT in recent years to take actions to ensure that the Ministry had the capacity to sustain key components of the LTM program. It provides a breakdown of QUESTT's key LTM partners at all levels and the roles that they played as well as the support that they received. The roll out of LTM to government schools is described, an expansion that resulted in over 3000 government basic schools using *Learning at Taonga Market*, with over 600,000 learners benefiting from that effort. The section features the use of iPod technology and video and print teaching/learning resources delivered through that technology, especially to schools residing in the most difficult to reach areas of Zambia.

Section III describes the findings from studies that document the impact the LTM programs had on the achievement of pupils. Achievement tests of samples of students were conducted in each of the years 2005-2008, sampling both community and GRZ schools (both those using IRI and those not). Results of those studies show that children benefiting from IRI consistently performed at least several percentage points higher than their non-IRI counterparts, especially in the areas of Mathematics and English.

Section IV. Small Grants Program focuses on the grants that were delivered to communities during the years 2006, 2007, and 2009, how those grants were used, and how they became a focal point around which communities rallied to improve the learning environments of their children.

Section V. Community Radio Stations (CRSs) describes the capacity building for CRSs that QUESTT provided, the educational radio programs that CRSs helped produce and broadcast as a result of QUESTT's assistance, and the audiences they were able to reach. Radio programs that QUESTT helped produce in association with CRSs include *Education for All* programs developed to sensitize communities about OVC issues (over 1700 programs produced) and *In Our Village* programs to foster HIV/AIDS mitigation and development through village-to-village information sharing through radio (50 programs produced with 155 listener groups).

Section VI. OVC Program. With support from the President's Emergency Fund for AIDS Relief (PEPFAR), QUESTT developed a series of radio programs to impart life skills to OVC while also raising awareness among members of the community. The OVC radio series was designed to last two years, with a series of 30 sets of programs to be broadcast during the first year and another series of 30 sets of radio programs to be broadcast during the second year. Each set of weekly programs included a 15-minute soap opera – written in the local language, a 15-minute discussion program for in-school children, and a 30-minute feedback program, where

local community radio producers collected feedback regarding that week's radio programs from teachers and listener groups and reported their findings on the issues. A teacher's guide for the school broadcasts was produced for each year's programs to provide the teacher with some background information, the objectives of the lesson and activities to be conducted with the learners. By the end of the project, a total of 1,130 listener groups had been established and their leaders trained to discuss and develop plans based on the information they learned via the programs.

Section VII. Teacher Education describes the many QUESTT activities that were undertaken to improve pre-service teacher education and continuous professional development. For example, in partnership with Celtel, QUESTT piloted a cell phone activity to enable teacher educators to maintain contact with their students and teachers. The QUESTT project, working with the Ministry of Education and Educational Broadcasting Services financed the design and production of 110 *Fastele! Fastele!* radio programs. The programs aimed to enhance teacher skills and promoted continuing professional development of teachers. To improve the teaching of difficult science topics, QUESTT developed a manual containing 30 integrated science lessons to demonstrate learner-centered science teaching and the use of local materials and produced six videos to accompany the manual and to train teachers.

QUESTT supported the Ministry of Education through the Teacher Education Department to implement a Zambia Teacher Education Course by distance learning for Community School Teachers (ZATEC-CST). The aim was to train 500 community school teachers to improve the quality of teaching among community school teachers and to upgrade their credentials to Primary Teachers' Certificates. 453 students (297 male, 156 female) were enrolled in April 2007. The two-year course was implemented in eight basic Colleges of Education in Solwezi, Kitwe, Mufulira, Mansa, Kasama, Malcolm Moffat, Mongu and Chipata.

Conclusion. The original program description of QUESTT indicated that "the Recipient will assist in developing, expanding and helping to institutionalize the MOE's use and application of Communication Technologies as cost-effective means of delivering quality education to out-of-school children, supplementing and reinforcing instruction in government and community schools, supporting teacher development efforts, and providing information to mobilize communities to address special issues, such as HIV/AIDS prevention and mitigation, promotion of girls' education and free and equal access to basic education, school governance and support, and/or other issues identified by the MOE and its partners."

We believe that the QUESTT project, through USAID's support and EDC's partnership with the MOE, many other businesses and non-governmental organizations, and other cooperating partners, has not only accomplished its mission but forged innovative ways to address the issues of access to education, quality of education, and mitigating the circumstances of OVC that will not only continue to benefit Zambia but also serve as models for other countries trying to address similar challenges in the future.

## II. Indicators

### A. QUESTT Project Indicators Compared with USAID Indicator Framework

The QUESTT project's performance monitoring plan (PMP) was revised with USAID in 2007 to reflect the changes in the project description and funding levels. The table below shows the most recent QUESTT indicators as compared to those in USAID's Basic Education and Social Services Indicator Frameworks.

Table 1: QUESTT Indicators Compared with USAID Indicators

<b>QUESTT Project Indicators</b>	<b>USAID BASIC EDUCATION Indicator Framework</b>
	Number of learners enrolled in USG-supported pre-primary schools or equivalent non-school-based settings
Number of primary school students enrolled in IRI participating schools	Number of learners enrolled in USG-supported primary schools or equivalent non-school-based settings
	Number of adult learners enrolled in USG-supported schools or equivalent non-school-based settings
	Number of learners enrolled in USG-supported secondary schools or equivalent non-school-based settings
Number of teachers trained IRI methodologies	Number of teachers/educators trained with USG support
Number of teachers who are enrolled in the ZATEC distance teachers training course	Number of teachers/educators trained with USG support
Number of MOE officials and administrators trained in IRI and/or education management	Number of administrators and officials trained
Number of teacher's guides and other teaching and learning materials provided with USG assistance	Number of textbooks and other teaching and learning materials provided with USG assistance
Number of school committees supported with grant funds	Number of Parent-Teacher Association or similar 'school' governance structures supported
Number of school structures improved with grant funds	Number of classrooms constructed with USG assistance
	Number of classrooms repaired with USG assistance
	Does your program support education systems/policy reform? If yes, please describe the contributions of your program, including progress against any mission-level outcome or impact indicators.
	Number of laws, policies, regulations, or guidelines developed or modified to improve equitable access to or the quality of education services
	<b>USAID SOCIAL SERVICES Indicator Framework</b>

<b>QUESTT Project Indicators</b>	<b>USAID BASIC EDUCATION Indicator Framework</b>
	Number of people benefiting from USG-supported social services
Number of parents, caregivers and community-based trainers trained in OVC programs	Number of service providers trained who serve vulnerable persons
Number of community radio stations, NGOs, CBOs, churches, and partner organizations supporting QUESTT programs	Number of USG assisted organizations and/or service delivery systems strengthened who serve vulnerable populations

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

**B. Number of primary school students enrolled in IRI schools**

The number of students is measured in the QUESTT PMP by annual enrollment. The target for enrollment in 2009 was 640,000. Data collected from the provinces in 2009 indicated that there were 247,100 learners in 1,693 IRI centers and community schools using IRI. By the end of the project, data for government schools in 2009 was not available but data from 2008 indicate that 443,221 learners in 2,978 government schools were also using IRI. Using data collected in 2009 and assuming that the number of learners in government schools using IRI did not change from 2008, the total number of students in 2009 would be 690,321, exceeding the target by 8%.

The table below shows the cumulative total for the length of the project:

Table 2: Total Number of Learners

	<b>Male</b>	<b>Female</b>	<b>Total</b>
IRI centers & community schools	321,557	319,287	640,844
<sup>2</sup> Government schools	302,968	297,818	600,786
<b>Total learners</b>	<b>624,525</b>	<b>617,105</b>	<b>1,241,630</b>

***Teaching skills of participating teachers improved***

**C. Number of teachers trained in IRI**

A total of 12,206 teachers in GRZ and IRI community schools were trained in the use of IRI, slightly exceeding the target of 12,115. Of these 7,130 were male and 5,076 were female.

**D. Number of teachers enrolled in a teacher training course by distance education**

The 422 community school teachers who enrolled in the ZATEC by distance education program completed their assignments and portfolios and, by the end of the project, were waiting for final recognition. The target was 450 teachers.

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<sup>2</sup> Data from 2008 only

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

**E. Number of MOE officials and administrators trained in IRI and for education management**

A total of 1,928 MOE officials were trained during the course of the project. 1,146 were male and 782 were female. During the final year of the project, 215 MOE officials, 807 ZICs and 764 school heads participated in one-day workshops to plan the continuation of the IRI program, bringing the total up to 3714 officials trained, exceeding the target of 2970.

*Improvement of learning resources*

**F. Number of teacher’s guides and other teaching and learning materials provided.**

The following teaching and learning materials were provided by the project:

Table 3: Teaching and Learning Materials

Description of items	# of Units produced	# of Copies Distributed
<i>Learning at Taonga Market</i> radio lessons (Grades 4, 6 and 7)	465 IRI lessons	Broadcast via radio
Mentor’s Guides for <i>Learning at Taonga Market</i>	3 guides (Grades 4, 6, 7)	18,300 (Grades 1 – 4)
Posters for Grades 1 and 6	2	5,500
Facilitator’s Training Manual for <i>Learning at Taonga Market</i>	1 manual	2500
<i>Sample Science Lessons for Grades 5 to 7</i>	1 Manual	500
DVD of 6 lessons from <i>Sample Science Manual</i>	1 DVD	250
15-minute radio dramas for <i>Our Family</i> in five languages	60 x 5 languages	Broadcast on 6 community radio stations
15-minute schools lessons for <i>Our Family</i>	60	Broadcast on 6 community radio stations
Teacher’s Guides for <i>Our Family</i>	2 guides	5,000
<i>Fastele! Fastele!</i> radio programs for teachers	110	Broadcast via radio
ZATEC Distance Education modules for community school teachers	22	11,000
Sets of 35 simple readers in seven local languages for Grades 1 to 4	NA	11,870
Lifeline Radios	NA	8,950
IPods	NA	265

*Enhanced participation of community-based organizations in OVC empowerment programs*

**G. Number of community radio stations, CBOs, churches and partner organizations supporting QUESTT programs**

The project worked with a total of twelve community radio stations which produced educational programs and broadcast *Learning at Taonga Market* lessons. Six of these stations also broadcast *Our Family* programs.

QUESTT programs were supported by 22 non-governmental organizations, 8 community-based organizations, and 8 faith-based organizations. 16 CBOs received training in order to help them support their schools. The total reached was 58 organizations against a target of 60.

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

**H. Number of school committees supported with grant funds**

In the 2006 grants program, 40 school committees received grants. In 2008, 158 communities benefited from grants and in 2009, 40 received grants. The total number of school committees benefiting was 239 against a target of 258.

**I. Number of school structures built or repaired with grants**

199 of the grants were used to build or repair school structures. The target was 250 but a number of school committees chose to use the funds for income generating activities rather than for construction.

*Parents and caregivers enroll in and participate in OVC empowerment programs*

**J. Number of parents, caregivers and community-based trainers trained in OVC program**

A total of 4,551 community members (2,687 male and 1,864 female) in five provinces participated in training for the OVC program. In the final year of QUESTT, 2066 listener group leaders from 1,130 listener groups attended one-day training workshops to prepare them for sustaining their groups after the end of the QUESTT project.

### III. *Learning at Taonga Market*

#### A. Program Development

By October 2004, EDC's project that preceded QUESTT had developed a series of interactive radio instruction programs called *Learning at Taonga Market* for Grades 1 to 5. These were designed to cover the main objectives of the primary school curriculum in English, Math, local language literacy, social studies, science, and life skills. Each program was 30 minutes long and contained segments on the different subject areas. A mentor's guide was developed for each grade, giving details of each lesson and the activities to be conducted before and after the lesson. 150 lessons were developed for each grade, 50 for each term, plus five teacher training broadcasts at the beginning of each term. These materials were written and recorded by producers at the Ministry of Education's Educational Broadcasting Services (EBS) in Lusaka, with training and technical assistance being provided by EDC.

Toward the end of the preceding IRI project, the Ministry of Education introduced a new curriculum for teaching initial literacy, using the learner's mother tongue. Therefore, the original IRI lessons that had been produced had to be revised to bring them in line with the new curriculum. By October 2004 when QUESTT started, IRI programs for Grades 1 to 3 had been revised but the final editing of the Grades 2 and 3 programs had not been completed. The aims of QUESTT was to complete the final production of the revised Grades 2-3, to revise and reproduce the programs for Grades 4 and 5, and to develop and produce programs for Grades 6 and 7. Completion of these IRI programs would allow IRI learners in IRI centers and community schools to complete their primary education and take the Grade 7 examination to gain entry to secondary education. The table below shows the timeframe within which each of these tasks was accomplished.

Table 4: IRI Program Development Timeline

<b>IRI Programs Revised/Developed</b>	<b>Timeframe Year Started</b>	<b>Timeframe Year Completed</b>
Revised Grades 2-3	Pre-2004	2004
Revised Grade 4	2005	2006
Revised Grade 5	2006	2006 - Cancelled
New Grade 6	2005	2006
New Grade 7	2006	2007

Since the producers at Educational Broadcasting Services (EBS) had already been trained under the previous IRI project and were experienced IRI developers, having already developed over 700 IRI lessons, the QUESTT project provided EBS staff with short term assistance to help with key stages of the development process, such as the development of the scope and sequence, the development of master plans and the editing of the scripts and mentor's guides. For example, for Grade 4 programs, an EDC international IRI consultant made short visits to Lusaka to work with the EBS producers on the development of the design document, the scope and sequence, master plans and a timeline for the development of the programs, and subsequently provided editing services and advice from a distance via telephone and email. The revised Grade 4 programs were

first broadcast in January 2006, although the final production and editing of all 150 programs were not completed until September of that year.

Concurrently with the development of Grade 4 programs, another team of EBS producers developed the Grade 6 programs with short-term and distance IRI technical assistance provided by EDC. The development of the Grade 6 programs proved a serious challenge as the producers were not familiar with many of the concepts in the Grade 6 curriculum. To provide additional assistance for the writers/producers to understand and develop IRI programs to teach difficult concepts, a local teacher educator was recruited on a part time basis. Broadcasting of the Grade 6 programs started in January 2006, and the final production and editing of the 150 programs was completed in October of that year.

Development of the Grade 7 programs commenced in May 2006 with a workshop facilitated by EDC's international and local IRI consultants during which the design document and the scope and sequence of Grade 7 IRI programs were developed. Subsequent to the workshop, EDC's local IRI consultant continued supporting the EBS producers with the new Grade 7 programs. Subsequently the producers developed the master plans for the first term's programs and the scripts for the first ten programs so that they could be evaluated before further programs were developed. The producers completed the writing of the scripts and the teacher's guide by the end of 2006 with technical assistance provided by EDC's local consultant, and the first Grade 7 programs were broadcast in January 2007. The final production and editing of the programs was completed in October 2007.

A workshop was held in February 2006 to develop a design document and scope and sequence for the revised Grade 5 programs. The producers wrote the scripts for ten programs and these were produced and evaluated. However the development of the programs was halted because there were insufficient EBS producers available to develop the Grade 5 programs at the same time as the Grade 7 programs. Subsequently, EBS conducted an evaluation of the existing Grade 5 programs and the decision was taken that revision of the existing programs would not be done.

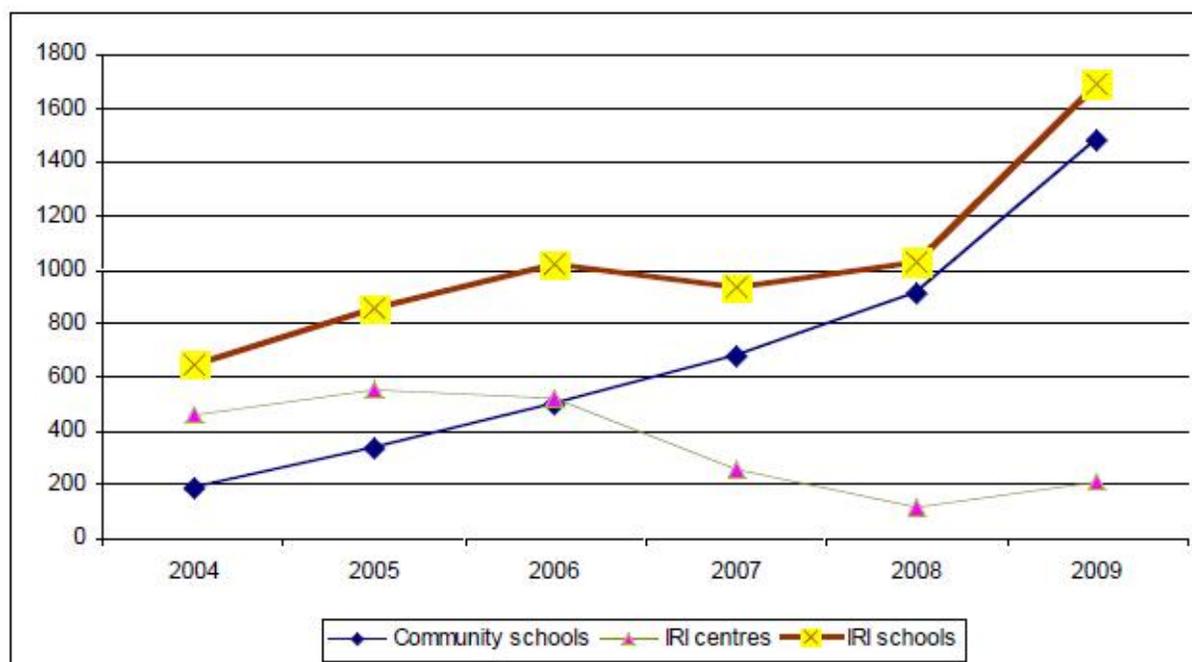
EDC provided additional support to Educational Broadcasting Services by fielding a Technology Advisor who advised the technicians at EBS on the recording of programs, worked on the design and formatting of the teacher's guides and trained the producers on computer skills.

#### **B. Expansion and Support of the LTM Program**

Over the past seven years *Learning at Taonga Market (LTM)* gave many out-of-school children access to basic education in all nine provinces of Zambia. From an initial 21 IRI centers with 1,254 Grade 1 learners in 2000, the number of non-government schools using IRI increased to 1,693 in 2009.

While the number of IRI centers has decreased over time because many have become community schools using IRI, the overall number of IRI schools has increased dramatically over the last five years, as presented in the following figure.

Figure 1: IRI School Expansion 2004-2009



The table below shows a steady increase in the number of community schools using IRI from 2004 to 2009, even while there was a gradual decline in so-called IRI centers.

Table 5: Number of IRI Centers and IRI Community Schools 2004-2009

Province	IRI Community Schools						IRI Centers					
	2004	2005	2006	2007	2008	2009	2004	2005	2006	2007	2008 <sup>3</sup>	2009
Central	51	59	85	79	68	295	76	73	77	16	7	16
Copperbelt	20	37	24	106	95	97	61	69	34	13	7	16
Eastern	18	32	70	75	88	191	73	123	127	43	31	55
Luapula	0	6	27	66	18	131	64	32	28	33	12	16
Lusaka	46	105	110	112	86	202	40	46	30	9	5	18
North-Western	22	17	54	52	42	152	54	20	28	19	9	0
Northern	10	29	32	29	116	206	17	78	80	46	12	33
Southern	9	43	77	98	342	129	42	33	55	43	29	46
Western	12	10	18	58	55	77	32	45	66	36	8	13
<b>Zambia</b>	<b>188</b>	<b>338</b>	<b>497</b>	<b>675</b>	<b>910</b>	<b>1480</b>	<b>459</b>	<b>555</b>	<b>525</b>	<b>258</b>	<b>120</b>	<b>213</b>

The graph below shows that there were slightly more girls than boys enrolled in IRI schools in 2009, even though there were slightly more boys than girls enrolled during the early years of IRI.

<sup>3</sup> Data was collected from very few IRI centers in 2008, as project staff were busy monitoring GRZ schools

(In 2008 QUESTT staff concentrated on monitoring GRZ schools and collected data from only a few IRI centers; thus the 2008 data are not complete and not included in the table.)

Figure 2: Total IRI Learner Enrollment By Sex: 2000- 2007 and 2009

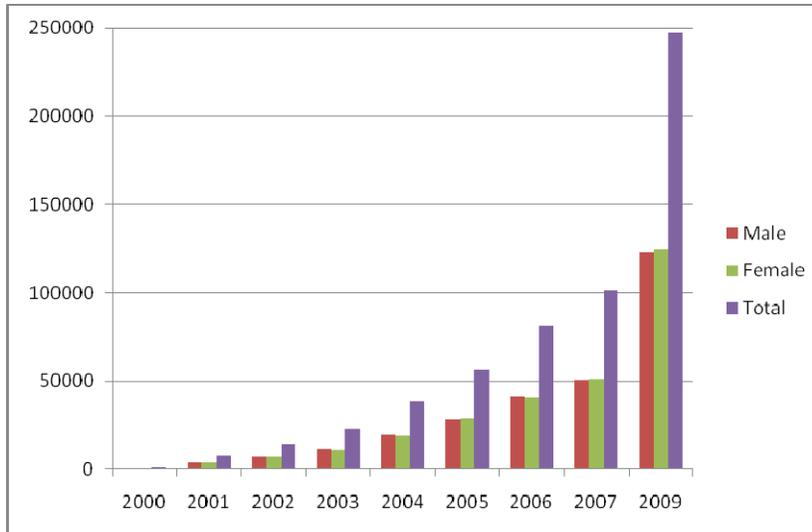
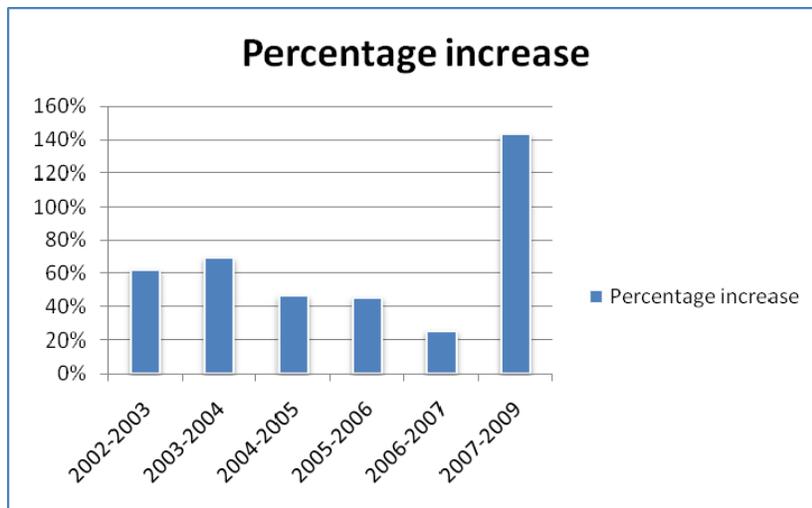


Figure 3: Percentage Increase in Learner Enrollment: 2002-2007



The expansion of the program was the result of the efforts of a small staff of QUESTT provincial outreach coordinators led by the national outreach coordinator and, until 2006, an outreach advisor. The provincial outreach coordinators (POCs) were attached to the provincial education offices (PEO) and shared office space with ministry officials. The program was attached to the Directorate of Open and Distance Education (DODE) and the POCs worked closely with Senior Education Officers for Open and Distance Learning (SEO-ODL) in the provinces. The Ministry took ownership of the program and supported the expansion into all districts. The provincial and district officials participated fully in the training of teachers and the monitoring of schools. In

2005 and 2006, the project relied on part-time Outreach Assistants to collect data and monitor schools, but as the district education officials learnt more about project activities, the Outreach Assistants were dropped and district officials were involved instead.

## ***Provincial Activities***

### ***Sensitization***

At the beginning of the project, the POCs with the Ministry officials spent time visiting communities with no schools to convince them of the need for education for their children and to explain to them how they could establish IRI centers or IRI community schools by erecting shelters or finding other venues for classes, as well as finding volunteers to lead the IRI lessons. To each cooperating community, QUESTT provided a radio and a mentor's guide and trained the volunteer mentor's to teach IRI classes. The POCs conducted many such sensitization/mobilization meetings with communities.

As the IRI program, *Learning at Taonga Market*, became more widely known and the number of community schools increased, it no longer became necessary to provide this sort of sensitization to start up IRI centers. However sensitization meetings were needed to ensure that the communities continued to support their schools and contributed to the maintenance of the learning sites. Many communities found it difficult to find ways to support the volunteer teachers (mentors), so often meetings would focus on ways of raising money to support the volunteers. Sensitization meetings were also held with ministry officials to inform them about the IRI program and the kind of assistance that QUESTT provided to the Ministry at province or district levels.

In the final year of the project, sensitization meetings were held with provincial and district ministry officials to ensure that they understood the IRI program and would take responsibility for continuing the program after the end of the project. These meetings were chaired by the Provincial Education Officer and the issues were addressed by both ministry and project staff. Each District Education Secretary reported on the achievements of the IRI program in his or her district and the plans they had for maintaining the program.

### ***Training***

In 2005, in partnership with Youthnet, a revised mentor training manual was produced with the help of the scriptwriters from Educational Broadcasting Services and an ex-Peace Corps volunteer, who had worked with IRI centers. The manual was designed to provide training over a four-day period with the time shared between IRI content and that of HIV-AIDS. Training teams for each province were trained in Lusaka and a total of 352 mentors were trained in 18 districts in April 2005, using the draft manual. As a result of feedback from the training, the manual was revised and copies printed for distribution to provinces and districts. This manual has provided the basis for all IRI training for the Ministry, though lack of funds often caused the duration of the training to be reduced from four days to three. A revised version of the manual was produced for the training of government school teachers when IRI was introduced into government schools.

The project did not have funds in the budget for the training of mentors so training was dependent on district or provincial funding. Provincial and district education offices budgeted for training each year but frequently those funds were not forthcoming. Some provinces were more successful than others in accessing ministry funds and were able to conduct training workshops. Another source of training funds was other NGOs who formed partnerships with the project. In a few districts, the schools themselves raised sufficient funds to organize a training workshop for the teachers.

The IRI centers and community schools suffered from a high turnover of mentors and teachers as there was no regular payment. The average length of stay of a mentor or teacher in 2006 was 1.7 years. This resulted in a constant demand for training for the new volunteer teachers and mentors.

Although an emphasis was placed on conducting face-to-face training workshops, fifteen thirty-minute IRI teacher training programs were designed for each grade and five were broadcast at the beginning of each term. Teachers were encouraged to meet at resource centers to listen to the broadcasts and discuss them together. Many teachers who had been unable to attend a face-to-face training workshop were briefed by their colleagues and received their training through these radio-training broadcasts.

When USAID released funds under the Fast Track Initiative in 2007, a large portion of the funds was used for training teachers working in government and community schools. A training team including practicing teachers was selected from each district and attended a training of trainers workshop. The team then trained teachers in each district. A total of 893 community school teachers were trained together with 3,091 government school teachers.

The following year, as the funds were limited, it was decided to localize the training so that each zone in a district would be able to train the teachers in the zone, thereby reducing on the costs of transport and accommodation. Each district conducted a training of trainers workshop for the zonal in-service coordinators and at least one experienced IRI teacher from each zone. These two trainers then conducted a training workshop for the teachers in their zone. The funding provided was estimated to be sufficient for 3,500 teachers but the zonal teams managed to train 6,775 teachers with the funds they were allocated.

### ***Monitoring visits***

A major function of the National and Provincial Outreach Coordinators was to conduct monitoring visits to the centers and schools. These visits were used to supplement the training described above, as the coordinators would provide on-the-job training while they watched the teachers or mentors training, and would provide advice after observing lessons being taught. Frequently the monitoring visit would include a sensitization meeting with the Parent Teachers Association (PTA) to encourage the community to support their school.

The monitoring visits were also used to collect data about the IRI program. Each year, a sample of schools from each province would be selected for the collection of data. The collection was conducted during the second term of each year using a standard form. The data was then

analyzed and a report produced. The results were used to identify areas of weakness or inputs that were needed each year of the project.

In 2009, the final year of the project, 55 IRI community schools or IRI centers were monitored and 45 lessons observed in 21 districts. The executive summary of findings from the review reported the following findings:

- **Maintenance of high standards of learning at the IRI School**
  - 85% of the schools monitored had lessons observed by monitors
  - 76% of lessons observed teachers conducted pre-broadcast activities and 75% conducted post-broadcast activities. In nearly all the lessons observed (75%), the class was ready for the radio lesson and in 82% the teachers interacted with the learners and the radio.
- **Effective use of teaching and learning materials**
  - 71% of the schools reported the use of materials from the mentor's guide for teaching purposes.
  - 89% of the monitored schools had working radios.
  - 55% of the schools that used the FM band had clear reception, recording an increase of 2% from 53% in 2008 and 10% of the schools using short-wave (SW) band had clear reception. Fewer schools used the short-wave band than the previous year.
- **Center (School) Support Committees (CSCs) activities**
  - Out of the 87% schools with CSCs, 26% had CSCs conducting more than one school/center support activity, while 46% were involved in construction activities.
  - There was a steady increase in the number of community school teachers /mentors who felt they received adequate support from the community over the three year period from 25% (2nd half 2005), to 28% of the schools in 2006, to 37% in 2007. However, there was no increase between the results of 2007 and 2008, with the proportion of schools still at 37%. There was a significant increase in the support that mentors received from their communities in 2009 by about 15% when compared to the support they reported receiving in 2008 which was at 37%.
- **Condition of the learning environment**
  - 67% of the schools reported having good water supply and sanitary conditions.
  - 60% of the schools met in a building with a roof while 31% meet in a shelter.
  - 64% of the building venues were owned by a community or community group while 15% were owned by the Church. The Community or community group owned 64% of the building venues that had a roof as compared to 53% in 2008.
- **IRI School Monitoring**
  - A number of personnel took part in the monitoring activities. The results showed that participation by ZICs had decreased from 36% to 15% of the personnel involved in data collection. These were followed by Standards Officers at both district and provincial levels with a 2% participation rate. School monitors such as SICs, class teachers and Head teachers accounted for 13% showing a decrease from 2008 participatory rate of 20%. The participation of MOE personnel at different levels of monitoring and reporting of IRI increased to 64% from 58% in 2008.

- In 2007, as part of the roll out of IRI to government schools, 812 zonal in-service coordinators (ZICs) were each supplied with a bicycle and spare parts to enable them to monitor the schools. The provision of bicycles was shown to increase the number of visits to the schools not only for IRI activities but also for other ministry programs.

### ***Data collection and statistical reports***

At the beginning of each year, the POCs were responsible for collecting and submitting data on enrolment at each school. In 2005 to 2006, data was collected on IRI centers and IRI community schools. In 2007 and 2008, attempts were made to collect data also from government schools that were implementing IRI, but, in spite of the efforts of the POCs assisted by Ministry officials, it was impossible to collect the data from all of them, so the Ministry's own system was used to collect data on the number of learners in government schools using IRI. Data on community schools and IRI centers continued to be collected in the first half of each year and the M&E section analyzed the data and produced a bulletin. The bulletin reported on the number of schools, learners and teachers, the number of teachers who had been trained, the ages and grades of the learners and their orphan status, the materials available, and the radio station listened to.

The 2009 bulletin reported the following key findings:

- **More Schools continued to use IRI in 2009.**

Schools using *Learning at Taonga Market* (LTM) radio broadcast increased from 1,030 in 2008 to 1,693 in 2009. There was a steady increase in the number of community schools adopting the use of IRI as a teaching and learning methodology. A challenge rested in collecting data that was totally reflective of the participating schools because a sizable number of the IRI schools were located in the remote and hard to reach areas.

- **IRI broadcasting stations**

The data showed that 88% of IRI schools listened to the IRI broadcast through ZNBC radio stations. Another 3% listened to the radio broadcasts through community radio stations including Chikuni, Maria, Oblate Liseli, Yangeni and Mano radio stations that were found in Southern, Eastern, Western, Luapula and Northern provinces, respectively. Furthermore, 8% of the schools reported that they used at least one ZNBC radio band as well as transmissions from a community radio station.

- **More children continued to use IRI programs**

In 2009 the number of IRI learners in both IRI centers and community schools increased to 247,100 learners from 101,575 in 2007<sup>4</sup>. This showed a percentage increase of 143%. The gender distribution between boys and girls stood at 49.7% and 50.3% respectively in 2009.

- **More IRI learners accessed basic education**

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<sup>4</sup> Data collection in 2008 from community schools was incomplete because much time and effort was spent in collecting data from the GRZ schools. The figure for the Community and IRI learners was 92,569. The percentage increase over this figure was 167%.

91.4% of the total population of learners who accessed basic education via IRI were of school-going age while 6.9% were below the recommended age and 1.7% of the learners in the IRI centers and community schools were over 18 years of age.

▪ **More orphans and vulnerable children continued to access the IRI program**

In 2009, the number of orphans who had access to basic education through IRI in community schools and IRI centers was 75,909, representing a 31% proportion of learners. The number of orphans accessing basic education through the IRI programs continued to increase from 18,880 (36%) in 2005 to 27,481 (35%) in 2006. In 2007, 31% were found in community schools. Generally, over a third of the learners that enrolled in IRI programs in community and IRI centers were either single or double orphans.

▪ **More teachers in IRI community schools.**

The number of teachers increased from 2,294 teachers in 2006 to 2,730 teachers in 2007. In 2009, the number of community schools teachers swelled to 4,025. The teacher to school ratio stood at 2.4 to 1 in 2009. Statistically, there had been an average of two teachers per school from 2006 through 2009.

▪ **More IRI training needed**

The 2009 enrolment data showed that 2 out of every 5 teachers in IRI community schools were trained in IRI methodology.

▪ **IRI program continued to attract volunteer teachers**

In 2009, the percentage of teachers in IRI community schools and IRI centers was 50% of the total population of volunteer teachers in Zambia. More than two thirds of the teachers had attained the highest grade of secondary education.

▪ **Provision of more IRI teaching and learning materials**

Results showed that 82% of the available mentor's guides in the IRI schools were found at the lower section of the basic school grades while only 28% were in the three upper grades of the basic education.

The Grade 1 guides were more available in schools than other grades, followed by those for the Grade 2 IRI learners. There were very few Grade 7 guides available. Two thirds of the schools had one radio. 75 schools, representing only 6.1% of the schools, had a maximum of four radios. Almost all the schools (99.4%) with one radio reported that the radios were in good working condition. 21% of the schools had two radios and less than half of those were in good working condition.

***Sustainability***

During the project the following actions were taken in order to ensure that the Ministry had the capacity to sustain the program after the end of the project:

1. Staff at Educational Broadcasting Services (EBS) trained in the design, development and production of IRI programs.
2. Up-to-date equipment provided for two studios at EBS

3. 4528 teachers were trained in the use of IRI in January 2007 and 6775 Grade 2 teachers in January 2008
4. In 2007 the district training teams consisting of the DRCCs, and ESOs-ODL were trained. In January 2008, zonal training teams consisting of ZICs and teachers were trained as trainers so that they could train and monitor the IRI classes
5. Bicycles were provided to 812 ZICs so that they could monitor the IRI classes
6. Lecturers in all the 10 colleges of education offering the ZATEC program and ZAMISE and NISTCOL were trained in the use of IRI.
7. 8000 radios were purchased and distributed in 2007. 13,500 mentor's guides were printed and distributed in 2007. 4,500 were printed and distributed in 2008.
8. Provincial Outreach Coordinators worked closely with MOE counterparts (SEOs-ODL and ESOs-ODL) in training and monitoring.
9. Sensitization sessions with provincial and district staff. In March and April, visits were made to all the provinces with officials from DODE, including the Director, to:
  - Inform PEO and staff about the end of QUESTT Project
  - Strengthen the sustainability of QUESTT activities by meeting and introducing local MOE officials to CRS and plan areas of improvement and collaboration
  - Find out from MOE what funds/activities had been budgeted for LTM as a follow up to the SEO/POC meeting held in Kafue
  - Suggest that the DEBS office print mentors guides to be provided by EBS
  - QUESTT and EBS to help identify local MOE officials to work with community radio stations on the ground to ensure the continuation of broadcasting LTM and other educational programs at no cost
  - Follow up the work plans which were prepared during the SEO/POC meeting to see which ones had been implemented
  - Learn about activities that have been planned in order to enhance LTM
  - Brief PEOs and DEBS on future workshops for ZICs and zone school heads
10. Promotional programs on community radio stations and training for community radio station producers

### **C. Partnerships**

QUESTT has fostered greater community support for basic education by establishing partnerships with local and international NGOs, FBOs and CBOs at National, Provincial, District and Community levels. A QUESTT Partnerships Coordinator was appointed in 2006. The Partnership Coordinator's role was to develop cooperation with the partners and lobby for support for the IRI community schools and IRI centers. The number of partners increased to 22 NGOs, 8 CBOs, and 8 FBOs who worked with the IRI schools to provide support or services. The support from partners was called "Learning Plus" because it went beyond the provision of basic education by addressing other material and psychological needs of children. Annex A contains a table showing the partners and the different support they provided.

#### ***CBO Training***

Some CBOs were found to be capable of providing more support for education if they were given some training and some start-up materials. Therefore, two CBOs were identified in each province to be trained and the training was conducted in the last quarter of 2007. Seven CBOs

requested training in income-generating activities (IGAs) while the rest requested training in managing the schools they were supporting. The training was conducted by the POCs, Ministry officials and accountants and specialists in the various skills required. A total of 232 members of CBOs were trained. Subsequent monitoring by the partnerships coordinator showed that the training was effective and the groups which had received training in IGAs were able to raise funds for their schools. Annex B contains a table which lists the CBOs and the type of training they requested.

#### **D. Roll Out to Government 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 were understaffed, had untrained teachers or in which teachers were teaching more than one grade. Seven districts were chosen for the pilot: 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 13<sup>th</sup> to 15<sup>th</sup> 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 IRI 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 was administered in late April 2005 and a post-test administered in November 2005. The results showed that learning gains made by children in the IRI schools were significantly greater than those not using IRI; that girls in the IRI schools achieved similar learning gains to boys while girls in non-IRI schools did not gain as much as boys; and that enrolment increased in the classes using the radio and decreased in the non-IRI classes.

As a result of the positive findings in the 2005 pilot, the Ministry decided to make the IRI program available to all GRZ schools which could receive the radio signal. Planning was done and preparations were made in 2006 to train Grade 1 teachers in all 72 districts. The program was implemented in 2007. The process included the training of Ministry officials from each district to be trainers and managers of the IRI program. The district training teams conducted training workshops at the district resource centers for the Grade 1 teachers in the use of IRI. Over 4000 teachers and Ministry officials were trained, and 8000 radios and 13,500 mentor's guides were distributed. 812 bicycles were given to the zonal in-service coordinators (ZICs) so that they could monitor the schools in their zones.

The expansion resulted in over 3000 government basic schools using *Learning at Taonga Market* with 203,489 learners<sup>5</sup>.

In 2008, the program was extended to Grade 2. Experience in 2007 had shown that it was expensive to bring teachers into the district resource centers for training, so the training workshops were conducted in each zone by the ZICs assisted by experienced teachers. In preparation for the workshops, the ZICs and other experienced teachers were given training as trainers and helped to plan the workshops for their zones. Funds were provided to the ZICs for training an estimated 3,500 Grade 2 teachers, but so great was the demand that the ZICs trained 6,775 teachers with no extra funds. No additional radios were supplied since two were issued to each school in 2007. 3,500 Grade 2 teacher's guides were printed and distributed. The Annual School Census indicated that in 2008, 2,995 schools with 230,408 learners in Grade 1 and 214,336 learners in Grade 2 were using the IRI programs.

### ***Results in IRI-GRZ schools***

Tests of achievement conducted in Grade 1 at the end of 2007 and Grade 2 at the end of 2008 indicate that the learners using the IRI programs made significant gains over those learners who did not. Monitoring reports conducted in both years indicate that the teachers and learners enjoyed using the programs, that the teachers were able to fit the radio broadcast into their timetables, and that the majority of the teachers were using the broadcasts correctly. In terms of future IRI trainings for GRZ teachers, there are sufficient trained trainers in each zone (i.e., ZICs and experienced teachers), district, and province to train teachers in schools that wish to use IRI in other grades.

### **E. iPods**

The mp3 player initiative under the QUESTT project was launched as a pilot project in 2007 in response to the relatively high numbers of schools that were unable to receive the IRI broadcasts on either ZNBC or community radio stations. Because these schools were often in the most difficult to reach areas, they had less access to teaching and learning materials such as mentor's guides, readers, posters, and often missed out on supervision visits, demonstrations of good teaching practices and teaching difficult content. The Grade 6 IRI programs were launched in 2007 and it was realized the concepts taught at this level created greater demands on teachers' knowledge and skills. Digital technology made it possible to store and deliver on demand the kind of information not available in remote schools. Video and print materials was loaded onto the mp3 players and viewed by the teacher preparing for the lessons. In the following year, as the results of the achievement tests showed that literacy levels were low, guidance on the teaching of literacy was added to the resources on the iPods.

The iPod initiative was launched to address the shortage of teaching/learning resources, especially in schools residing in the most difficult to reach areas. At the close of QUESTT, there were 262 Community and GRZ schools using iPods countrywide. Overall 786 teachers and head teachers were trained at schools in use of iPods.

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<sup>5</sup> Zambia Annual School Census EMIS data 2007

The capacity of the iPods enabled QUESTT to make available all the LTM lessons and the mentor's guides, as well as the teaching guidance. QUESTT used mp3 technology to decentralize the 'broadcasting' event to the classroom level, delegating to the teachers complete control of their preparation and the scheduling and pace of the LTM lessons.

Prior to implementing this activity, alternative models of the technology were reviewed, including several mp3 player models and smart phones as well as various power sources such as foot powered generators and solar panels. The iPod was selected for implementation as the mp3 player because of its storage capacity and versatility and both a foot-powered generator model and solar panels were selected to use during the implementation.

The iPod initiative played out in 3 phases:

Phase 1 with 12 schools. The first phase was the pilot, with 12 schools receiving iPods along with computer speakers, a battery, and either a foot powered generator or solar panel. Grade 6 was selected as the level of instruction because the Grade 6 concepts to be learned were sufficiently complicated to warrant extra teaching/learning resources offered through the iPod. The iPods were loaded with all Grade 6 IRI programs, the teacher's guide in pdf format, as well as 60 lesson specific resource videos on Science, English and Math. These materials were intended to improve the mentor's classroom practice and provide for increased information, practice and evaluation for the learners. In this way, the pilot delivered an enriched version of grade 6 *Learning at Taonga Market*.

Phase 2 with 40 schools. The second phase of the pilot saw further expansion to 40 iPods distributed mainly to community schools. In this phase, new iPods were uploaded with grades 1-3 of *Learning at Taonga Market* and 12 resource videos specifically relating to literacy development. This concentration on early literacy was due to evaluation results from QUESTT that showed relatively low rates of literacy in both government schools and IRI schools. The videos were about 5 minutes in length, and demonstrated various teaching strategies that could be used in literacy instruction in the classroom. In this phase, different technology was tested. It was found that the most efficient power source was solar panels – and thus the foot powered generator was eliminated. In addition, QUESTT used an FM broadcaster device that, when hooked up to the iPod, would "broadcast" the iPod signal to the Freeplay radios. Thus, the Freeplay radio speakers could be used to amplify the programs. Being able to use the radio speakers eliminated the cost of additional iPod speakers, and enabled teachers to use radios which they already had.

Phase 3 (210 schools and resource centers). In the third phase, QUESTT purchased and delivered 210 iPods to community and GRZ schools and district resource centers. After analyzing the costs once again, QUESTT decided to offer a technology package including the iPod, a set of speakers, a battery and solar panel, as well as storage boxes for the materials. Training workshops took place in January 2009 at Mufulira College of Education, Malcolm Moffat College and NISTCOL. Zonal In-Service Coordinators were trained in the use of the iPod and planned a teacher training which took place afterwards in their zones.

### ***Teacher Training***

Within each phase of the iPod rollout, teachers receiving iPods were trained on their use as well as on the resource materials in them. Teachers were given a user's guide on the operation of the iPods, solar panels and other components, and were also given practice time where they worked in groups to practice delivery of an IRI lesson on the iPod. Other sessions in the trainings focused on reflective practice and teacher collaboration, as well as the development of classroom activities using locally available materials. The training sessions focused on how teachers would work together to share the resource materials and reflect on their usage of them in the classroom.

### ***Evaluation***

Equipment. The iPod systems generally functioned well, with very minor problems. Some batteries had to be returned to QUESTT and repaired. Occasionally, iPods were accidentally locked by their users and needed to be unlocked. Additionally, some teachers accidentally changed the language setting on their iPods. QUESTT rectified these problems through training and ensuring that teachers did not change iPod settings.

Utility of iPods. A case study was conducted to investigate whether the use of IRI through iPods in schools, both community (including IRI centers) and GRZ schools, improved the quality of teaching and learning in the classroom.

A semi-structured questionnaire was developed to collect data from community schools, IRI centers and GRZ schools. These questionnaires were largely administered by ZICs in the piloted districts. The data collection was done in two rounds. Round 1 established a baseline of data collected from 45 GRZ schools and community schools not using the iPods from Lusaka and Southern Provinces. Post-implementation data for comparison was collected in Round 2 from 80 GRZ and community schools from Central, North Western and Southern Provinces that were using the iPods.

Findings. From a comparison of the data collected at the outset of the iPod activity during Phase 3 and at the completion of the activity, we found the following information.

#### **1. More teachers were prepared for the day's lesson**

90% of the teachers in the second round were prepared for the day's lesson as compared to only two-thirds of the teachers observed in the first round. 66% of the teachers indicated that their use of the teaching/learning resources found on the iPod helped their learners to read and write. The teachers commented that the features of Pause/Stop and Replay features helped the learners move with each progression of the lesson.

#### **2. iPod teaching/learning resources were used frequently by teachers**

Most teachers used the teaching/learning resources that had been loaded onto the iPod. 48% of the teachers used the resources that were promoted or demonstrated on the iPod at least five times a week.

#### **3. More student-centered activities, especially group activities, were conducted**

During Round 1 observations, 42% of the teachers had not conducted any pupil group activities whereas, in Round 2, 65% of the teachers conducted more than one pupil group activity. Most of

the teachers used one or more of the iPod-suggested activities during their lessons, like conducting an introductory activity or game, conducting a song or rhyme, phonics, group work, asking the learners to write on the board. This suggests that the iPod-delivered resources resulted in increased involvement of learners in the teaching and learning activities.

#### **4. Learners were involved in more activities**

In most classes observed, the learners had an opportunity to practice reading and writing, participated in a song or rhyme as well as played a learning game or activity. 93% of the teachers equally involved boys and girls in the lessons.

#### **F. Achievement Testing**

Achievement tests were conducted each year to assess the impact of the IRI programs on learners in IRI centers, community schools and government schools.

##### ***Testing in Grade 1 IRI centers and community schools - 2005***

The major findings of the 2005 evaluation were that:

- Demand in 2005 was greater than in the past with a rise in enrolment at Grades 1 to 5 from 38,513 in 2004 to 56,233 in 2005.
- The program met the needs of girls, as the overall enrolment ratio was 50.5 percent girls and 49.5 percent boys.
- Grade 1 learners made satisfactory gains in numeracy and English.
- The majority of Grade 1 learners could not read at the expected level.

##### ***Testing in Grade 1 GRZ schools - 2005***

An evaluation of *Learning at Taonga Market* (LTM) at Grade 1 was also conducted in GRZ schools during 2005. In 2005, LTM was piloted at Grade 1 in 36 government schools. Learners in the 36 pilot schools and 14 non-IRI schools were tested at the beginning and the end of the year. The pilot results showed:

- Learners using LTM had greater gains in English and numeracy
- Girls and boys using LTM had equal learning gains
- Enrolment increased in LTM classes
- LTM motivated learners and promoted good time and class management

##### ***Testing in Grade 2 – GRZ and community schools – 2006***

Achievement tests were conducted in Grade 2 in 2005 in IRI community schools and in the GRZ schools which started piloting IRI in 2005. Overall performance was at about 50 percent for math and life skills, and quite poor in Zambian Language and English (17.5 percent and 29.7 percent, respectively). Comparison between provinces showed Western province as performing higher than other provinces in 3 of 4 learning areas, but not performing as well in the English Language test. Table 6 presents the mean scores for each test section and for the overall test by the type of school.

Table 6: Overall mean scores, by school type and subtest

Type of school		Math [13 points]	Zambian Language [36 points]	Life Skills [8 points]	English Language [29 points]	Overall Test [86 points]
IRI GRZ School	Mean	7.1	7.6	3.5	10.2	28.5
	Percent	54.6	21.1	43.8	35.2	33.1
Non-IRI GRZ School	Mean	5.6	8.0	3.6	8.1	25.4
	Percent	43.1	22.2	45.0	27.9	29.5
IRI Centre	Mean	6.7	5.9	4.5	7.4	24.6
	Percent	51.5	16.4	56.3	25.5	28.6
IRI Community School	Mean	6.3	3.8	3.8	8.4	22.2
	Percent	48.5	10.6	47.5	29.0	25.8
Non-IRI Community School	Mean	6.5	7.1	4.2	8.6	26.3
	Percent	50.0	19.7	52.5	29.7	30.6

Performance in GRZ schools followed the same pattern found in the Grade 1 evaluation of IRI in GRZ schools in 2005 (DODE & QUESTT, 2005, *LTM in GRZ Schools*). Learners who used IRI performed better than the non-IRI group in Math and English, while IRI learners and the non-IRI group had similar levels of performance in Zambian Language Literacy. IRI and non-IRI learners also had similar performance in the area of Life Skills.

Performance of IRI learners in IRI centers and in community schools differed from the trend found in GRZ schools. Learners in IRI centers performed better than non-IRI learners in community schools in the areas of Math and Life Skills; however, the IRI learners did not perform as well as the non-IRI learners in Zambian Language Literacy or English. In general, IRI learners in community schools did not perform as well as learners at IRI centers. IRI learners at community schools obtained similar scores to their counterparts in the non-IRI group in Math and English, but IRI learners performed below the level of the non-IRI group in Zambian Language Literacy and Life Skills.

### ***Testing in Grade 3 – IRI Centers and community schools – 2006***

Overall learners in IRI schools performed better than learners in non-IRI control schools (48.9 percent compared to 42.9 percent). IRI learners performed better than the non-IRI group in Math and English and Social Studies; performed at par in Science (a mean of 65.6 percent for each group); all learners performed poorly in Math and English, though IRI learners performed significantly better in both subjects than their non-IRI counterparts. The Western Province registered the highest overall performance (69.9 percent). In Central province non-IRI groups performed significantly better than IRI learners in all subtests.

Table 7: Grade 3 Testing: Mean Scores for all learners by school type and subtest-

School Type		Math 27 points	English 35 points	Science 27points	S. Studies 20 points	Overall 109 points
IRI learners	Mean	10.5	11.5	17.7	13.6	53,3
	Percent	38.9	32.9	65.6	68.0	48.9
Non-IRI learners	Mean	7.6	8.9	17.7	12.5	46.8
	Percent	28.1	25.4	65.6	62.5	42.9

Boys performed better than girls in Math, English and Social Studies, while boys and girls performed at par in Science. Disparities were wider in Math, both for IRI and non-IRI control schools. The differences were significant only in Math. Older learners performed better in both IRI and non-IRI schools. Performance was better for IRI learners, both orphans and non-orphans, with children who have the mother as the one living parent performing best, followed by double orphans.

This evaluation also produced some other interesting findings about the IRI student population. Enrolment at the lower primary grades was about equal for boys and girls. However, the 2006 enrolments indicate that girls drop out of school at a higher rate than boys at the upper grades (44.2 percent of boys compared to 55.8 percent of girls in Grade 7). Other characteristics of IRI learners are a high proportion of above-age learners, which reflects the difficulty that children have experienced in gaining access to education; hence the IRI program does provide a second chance for such learners.

The proportion of Grade 3 learners that were older than 9 years, the recommended age, in 2006 was 76.0 percent. The evaluation also highlights the fact that at 35.0 percent, the proportion of orphans was much higher for IRI learners compared to 20.0 percent GRZ schools. The proportion of orphans in IRI community schools and GRZ schools was much higher than 35% in some provinces.

#### ***Testing in Grade 1 – GRZ Schools - 2007***

In 2007, Grade 1 learners in GRZ schools were tested to assess the impact of making the IRI program available to all GRZ schools. Testing took place in four provinces and a total of 928 learners from the 31 IRI GRZ Schools and 14 Non-IRI GRZ schools were tested.

Overall performance in numeracy was good with learners scoring an average of 66.7% and learners from IRI schools performing better (71.7%) than those from non-IRI schools (56.8%). Poor overall performance was recorded in literacy, however, with an average of 23.2%. Still, learners from IRI GRZ schools at 28% scored higher than learners from non-IRI schools at 13.7%. The findings are presented in the table below.

Table 8: Grade 1 Testing: Mean scores for all learners by school type and sub test

Type of school		Literacy (29 points)	Numeracy (26 points)	Total Overall (55 points)
Non-IRI schools [N=312]	Mean	4.0	14.8	18.8
	Percent	13.7%	56.8%	34.1%
IRI 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%

Performance by school type, sex and sub test

Results showed a very minimal difference in performance between female and male learners. Overall performance showed that male learners scored 44.6% and female learners scored 42.8%. In numeracy, male learners performed slightly better than female learners by scoring 67.8% achievement rates while female learners' scores were at 65.5%. Male learners performed better in both sub-tests than female learners in IRI and non-IRI schools. However, the male and female learners in IRI schools performed better than their counterparts in non-IRI schools in numeracy and literacy sub tests.

***Testing in GRZ Grade 2 classes – 2008***

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 3.35% difference in performance between IRI and Non-IRI learners. Learners who used IRI performed better than the non-IRI group in Math and English, while IRI learners and non-IRI learners performed similarly in Zambian Language Literacy and Life Skills.

Table 9: Grade 2 GRZ schools - results by school type and sub-test

Type of school		Math [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%
Non-IRI 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 non-IRI schools, girls performed slightly better in Life Skills and English Language, while boys performed slightly better in Math and Zambian Language.

Table 10: Grade 2 GRZ schools - results by school type, sub-test and sex

Type of School	Sex of learner		Math [13 pts]	Zambian Language [36 pts]	Life Skills [8 pts]	English Language [29 pts]	Overall [86 pts]
IRI GRZ Learners	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%
Non-IRI GRZ Learners	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 GRZ Learners	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%

#### ***Testing in Grade 4 in community schools - 2008***

A total of 756 Grade 4 learners in community schools were tested in English, Mathematics, Science and Social Studies 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 non-IRI and IRI schools was satisfactory with a mean score of 47.6%, although performance in English, with a mean score of 37.4%, was poor. Performance was slightly better across all the provinces in IRI schools with overall mean scores of 49.2% in IRI schools and 44.2% 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 11: Grade 4 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]
Non-IRI [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 [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 non-IRI schools with an overall score of 51.8% and 46.2% for males and females respectively as compared to 45.7% and 42.7%. Results in the following table below show that in non-IRI 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 12: Grade 4 Community schools: Results by school type, sub-test and sex

Non-IRI or IRI	Sex		English [38 Points]	Mathematics [24 Points]	Science [24 Points]	Social Studies [26 Points]	Overall Total [112 Points]
Non-IRI [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

## G. Challenges and Lessons Learned

### Challenges

- Using MOE staff to develop and produce IRI programs relegates project staff to an advisory role and causes difficulty in meeting deadlines.
- The Directorate of Open and Distance Education was allocated inadequate funds in their budget to support the program both in the production of materials and in the training and supervision of teachers.

- Opposition to the expansion of IRI came from MOE officials who did not fully understand the program and had not personally observed its impact on the children and the teachers.
- The communities experienced difficulties in providing adequate compensation to the volunteer teachers and mentors with the result that there was a high turnover.
- The cost of supplying iPods with solar panels, batteries and speakers to schools is very high.

### ***Lessons Learned***

- Using MOE staff to develop and produce IRI lessons results in staff who have the capacity to sustain the IRI program and have a high level of ownership of the program
- Adequate provision for the training of volunteer teachers every year is needed to compensate for the high turnover.
- Training of teachers at zonal resource centers is more cost-effective, as accommodation and transport is not needed. Zonal in-service coordinators are able to share the funds available among the teachers and the teachers do not claim full allowances.
- Other NGOs and organizations, such as World Vision and UNICEF, are willing to contribute to the program once they see that it is effective and that it is a program of the Ministry.
- Intensive sensitization of all MOE officials is essential to obtain their support for the program.
- MOE officials responsible for the program should have that role in their job description
- MOE officials at provincial, district and zone levels are able and willing to conduct IRI activities provided they are given the necessary tools, such as transport and operational funds.
- iPods were very popular with the teachers as they gave them control over the program schedule and greater control over the conduct of the IRI lesson.
- Technical equipment that is going to be used in rural schools needs to be robust, easy to use and have minimal moving parts.

#### **IV. Small Grants Program**

Many communities have established IRI centers and community schools but face difficulties in providing continuing support for the schools and the mentors who teach the children. The majority of community schools are temporary structures made of mud and grass thatch. The children often have no desks or chairs and sit on bricks or logs or on the floor. Other communities have no learning structure at all, holding their classes in church buildings or under trees. Many community members including parents are subsistence farmers and fishermen who have few resources to construct and equip new schools or to pay stipends to volunteer teachers.

In response, QUESTT with USAID support established a small grants program in order to contribute to the effectiveness and long term sustainability of the IRI centers and community schools and to improve pupils' learning environments.

The grants program was designed to:

- a) provide support for those communities who had established and shown commitment to their IRI centers and community schools;
- b) improve the quality of instruction in the centers and community schools;
- c) contribute to the sustainability of the centers and community schools; and
- d) generate increased active interest and support by the community to the schools' mentors and teachers.

In 2006, grants of \$700 were awarded to 41 communities. In 2007, the grant ceiling was raised to \$2,000. A total of 158 communities benefited from the grant program in 2007-2008 and 40 communities in 2008-2009.

##### **A. Uses of the Community Grants**

The grants were used to construct relatively cheap but permanent learning structures, or to complete unfinished structures and acquire classroom furniture. Some communities used the funds to embark on income generating activities to raise income to support the teachers and the schools in general.

Funds were awarded to communities that met the grant criteria. Communities were awarded grants based on the strength of their proposals and budget plans. Each community received between \$600 and \$2500 to enable them to improve the infrastructure of their center and to start income generating projects to enable them to support the mentors and the centers.

The level of community commitment and involvement in their grant-supported activities was seen as a measure of the extent to which the communities made their own monetary or in-kind and required contributions. Contributions from the communities varied from community to community depending on the type of project that was being undertaken by the community. The contributions included provision of free labor to undertake the project works, the provision of transport, and the collection of sand, crushing stones and any other services or goods that would be used to complete the projects. Therefore, the success of community projects to a large extent depended on the commitment and involvement of the communities in the projects. The more the

communities were involved and committed to the projects the more likely that the projects would succeed.

### **B. Training**

Prior to disbursement of funds, grant recipients were trained in book keeping and financial management in order to manage the grants and keep proper records. The POCs conducted these trainings for school committees in collaboration with MOE officials. The communities were encouraged to open bank accounts to facilitate the disbursement of funds but where banking facilities were unavailable, funds were disbursed through the district education office.

### **C. Environmental Impact Assessment**

An assessment of the possible impact of the projects on the natural environment was undertaken. This process was designed to identify, evaluate and, if necessary, mitigate the biophysical, social, and other relevant effects of the projects. However, it was found that the projects would have minor or negligible environmental effects given their small scale nature since the total surface area of land disturbed was less than 10,000 sq. ft. (USAID working definition of small scale construction).

A USAID environmental impact assessment form was adopted and was used for this purpose. Provincial Outreach Coordinators conducted this exercise after guidance on how to proceed with the assessment during the POC/SEO workshop in Lusaka.

### **D. Project Performance**

Community project performance over the three phases of the grants program (Years 2006, 2008, and 2009) was impressive. Over 200 communities spread across all nine provinces of Zambia completed their grant projects and can now boast of accomplishments such as completed classroom blocks, plastered with concrete floors and roofed with iron sheets, and classroom furniture such as desks, chairs, and tables.

Table 13 indicates the number of grants made to communities each year and the numbers of community activities per activity category. (Note: No funding for grants in 2007 was available; therefore, no grants were made during that year.)

Table 13: Number and type of grant project activities by year

YEAR	CATEGORY								Total
	Construct- ion of school Structures	Improveme- nt of School structures	Acquisi- tion of School Furnit- ure	IGA	Constru- ct-ion of school structur- e and IGA	Improve school infrastruct- ure or acquisition of school furniture and IGA	Construct- ion of school structure and acquisition of school furniture	Improve infrastruct- ure and acquisition of school furniture	
2006	8			24	9				41
2008	80	8	3	8	17	10	22	10	158
2009	28	3	1	4		2	2		40

In 2006, grants of about US\$700 each were awarded to the communities of 41 schools using IRI. The majority used the funds to establish income generating activities (IGAs) but 17 communities put the funds towards the renovation of their classroom structures.

In FY 2008, the year that FTI funds became available, 158 grants were awarded with the maximum amount being about \$2,500 per grant. With the increased amount available, the majority used the funds for construction, while some still used the funds for IGAs. The table indicates the way the communities utilized the funds.

In FY2009, again with grants up to \$2,500 each, thirty communities used the grants for classroom construction while four used them to construct VIP toilets. Another four started IGAs with the funds and one community purchased desks. Classroom furniture was also purchased or fabricated by three other communities using some of their funds.

### **E. Successes**

The impact of the grants was far greater than had been expected. The grants became a focal point around which communities rallied to improve the learning environment for their children with community members showing increased commitment in terms of time and effort spent supporting their schools. Although the amount of each grant was small, the communities were able to construct permanent classrooms for their children, which has given them increased visibility in their areas. The result has been that many have been able to access other funds, such as the Constituency Development Fund or funds from other donors, to make further improvements to their children's learning environments.

### **F. Challenges and Lessons Learned**

#### ***Challenges***

- The major challenge faced by the communities was inflation. The cost of materials required for the communities' projects kept increasing and cost more than had been budgeted.
- The increased costs were compounded by increases in transportation cost and the distances of the communities from the supply centers. This meant that communities either could not purchase all the required materials to complete their projects or forced them to readjust budgets and purchasing priorities to include only the most critical of materials.

#### ***Lessons Learned***

- A small contribution to a community school committee provides powerful motivation and serves as a catalyst to bring the community together to work for the education of their children
- The school committees need training and assistance in preparing proposals and developing realistic budgets
- Increasing the maximum grant to \$3000 or \$4000 would enable a community to complete a classroom with all the fittings and furniture.

## V. Community Radio Stations

The partnership with community radio stations began in 2003 in EDC's previous project as a campaign to increase access to education by children of school-going age especially OVC. This campaign was intensified in 2005 when QUESTT in collaboration with the MOE partnered with community radio stations to set up IRI centers for out-of-school children within their communities. The goal of the community radio station program was to involve the communities in the provision of basic education through interactive radio instruction in partnership with radio stations.

The radio stations produced programs that changed the way people perceived education and made them realize that it is a universal right that every child goes to school. The programs helped communities understand the challenges the MoE faced which continue to hinder many children, especially in rural communities, to have access to quality education. Through radio programs, they learned about cost sharing with the MoE and what it meant. The radio programs mobilized communities to take an active role by mobilizing them to provide venues for IRI centers and IRI volunteer mentors to teach their children.

### A. Education for All Radio Programs

Radio programming was designed according to the educational needs identified through feedback received from teachers, MoE, learners, community members and other local leaders. These programs were called *Education for All*. QUESTT trained radio producers in production techniques, oriented them on education issues and gave them an understanding of government policies on education. QUESTT also provided equipment for the radio stations, which streamlined production capabilities. With this support, community radio stations acted as a voice for the underprivileged in their communities and as a medium through which communities could be reached with important information. Visits by community radio station producers to the communities instilled trust and made it possible for members to the communities to be interviewed and broadcast. Hearing their voices on radio and hearing what their neighboring communities were doing to support children created a positive competitive spirit among the communities of listeners and motivated them to do more to support their IRI schools.

*Education for All* program discussion topics were developed to sensitize communities about OVC issues such as early marriage, girls staying at home to do the chores, boys herding cattle or going fishing instead of going to school.

QUESTT worked with community radio stations (CRSs) based in all the nine provinces of Zambia and, through them, produced over 1,700 radio programs. A table detailing the programs broadcast by community radio stations is included in Annex C. Annex D describes the various topics that community radio programs covered in 2009.

By the end of QUESTT, all partner community radio stations signed a letter of commitment stating they would broadcast *Learning at Taonga Market* for the next year after the end of the QUESTT project.

## **B. Training for community radio station managers and producers**

QUESTT conducted an annual training workshop for the radio station personnel, led by EDC radio and communications specialists. The first was held in December 2005. Apart from planning the programs to be broadcast by each station, the meeting looked at ways in which the radio stations could support the IRI programs and promote the education of OVC. The second workshop was held in May 2006 and was attended by the producers from each station who were responsible for the 'Education for All' programs. The result of the training was that the producers started to visit schools and record programs that featured the achievements of IRI schools. A second training workshop for the producers was held in February 2007 and built on the skills which had been developed in the previous workshop.

In November 2008, a workshop attended by station managers and their marketing staff was held to prepare the radio stations for the end of the QUESTT project, so that they would have the capacity to sustain their contributions to education through using a sustainable business model, developing better business plans, and better management. On the last day of the workshop, the managers met with officials from the Ministry of Education to negotiate their roles in promoting education. A follow up workshop was held with the station managers in July 2009, at which time the managers committed themselves to continuing to broadcast *Learning at Taonga Market* programs until the end of 2010 as part of their service to the communities they serve.

## **C. Zambia Community Radio Project (In Our Village Programs)**

In 2006, USAID gave EDC funds to continue the Zambia Community Radio Project in the Eastern Province for six months under the QUESTT project. ZCRP had been a separate project, fostering HIV/AIDS mitigation and development through village-to-village information sharing via radio. The focus of the six-month extension was the transfer of necessary skills and resources to allow the two partner radio stations to continue the "In Our Village" broadcasts on their own. QUESTT facilitated the extension of this project by:

- Providing the stations with copies of all previously produced programs on CD for re-broadcast at the stations' discretion.
- Providing technical assistance in program production by working jointly on producing and editing new programs.
- Providing technical assistance in creating and maintaining village profiles and other means of monitoring and evaluation.
- Providing technical assistance in creating a program sustainability plan for each station.

A total of 50 village programs were recorded in villages in Lundazi, Chipata and Chadiza. The program themes during the extension focused on QUESTT concerns such as income generation and support for education.

The previous project had established 104 listener groups in the villages involved in radio production. These groups continued to listen to the weekly broadcasts, while another 51 groups were formed during the extension. A survey of 59 listener groups in four districts found that 46 groups were already implementing activities based on what they had heard on the radio, while ten groups were still at the planning stage. Three groups had done nothing.

At the end of the six-month extension, the computers, recorders and motorbikes were handed over to the two radio stations so that they could continue to visit villages and record “In Our Village” programs. Radio Breeze continued for three years but Radio Chikaya had equipment and management problems and went off the air in 2008.

#### **D. Challenges and Lessons Learned**

##### ***Challenges***

- Lack of transport hindered producers from reaching remote areas
- Breakdown of studio and transmitter equipment prevented some of the stations from broadcasting every day
- Lack of the full commitment of the MOE to work with community radio stations as equal partners hindered the forging of strong, collaborative partnership being formed
- Lack of viable systems for revenue generation or consistent sponsorship for education programs creates uncertainties regarding community radio stations future role in promoting basic education and life skills in communities
- The turnover of community radio station staff has affected the consistency of programming

##### ***Lessons Learned***

- A large audience can be reached through community radio stations
- Locally produced radio programs featuring local people attract a large audience
- The management of community radio stations need training in entrepreneurship in order to establish them as viable and sustainable enterprises
- Community radio stations supported by churches have a commitment to the communities they serve and have access to funds which enable them to sustain their efforts

## VI. OVC Program

In 2006 EDC submitted a proposal to extend the impact of the QUESTT project on Orphans and Vulnerable Children (OVC) with support from the President's Emergency Fund for AIDS Relief (PEPFAR) to develop a series of radio programs to impart life skills to OVC. The program aimed to raise awareness among members of the community on the problems OVC face and to enable all members of the community to provide psychosocial support for the OVC. QUESTT developed interactive radio programs devoted to improving the life skills of children and mitigating their vulnerability and radio programs targeting the children's caregivers. Using community radio stations as a delivery mechanism, the program engaged learners, teachers and the community at large, through an interactive delivery of life skills using community listening groups and interactive drama. Entitled "Our Family," the radio series also provided an essential link between the classroom (children) and the home (their caregivers), helping to develop a safe and protective social environment for the children.

As of 2009, approximately 25,079 school children and 1,130 listener groups had participated in this program in five provinces.
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The OVC radio series was designed to last two years, with a series of 30 sets of programs to be broadcast during the first year and another series of 30 sets of radio programs to be broadcast during the second year. A single set of three radio programs was broadcast each of 30 weeks each year (i.e., a total of 60 sets of programs). Each weekly set of programs included the following radio shows:

1. A 15-minute soap opera – written in the local language
2. A 15-minute discussion program for in-school children
3. A 30-minute feedback program, where local community radio producers collected feedback regarding that week's radio programs from teachers and listener groups and reported their findings on the issues.

In addition to the radios programs, a teacher's guide for the schools broadcasts was produced for each year's programs to provide the teacher with some background information, the objectives of the lesson and activities to be conducted with the learners.

15-minute soap opera. This was broadcast in the local language, once a week, to listening groups comprised of a mixture of school children and adults including caregivers. Each soap opera illustrated life skills topics. At the end of each soap opera, a radio presenter provided a list of provocative questions for the whole community, adults and children, to discuss in their listening groups.

15-minute discussion program for in-school children. The day after the soap opera was broadcast, the children in school listened to a fifteen-minute broadcast in English with their teachers. The school broadcast provided follow-up to the previous day's drama broadcast and dealt with the issues highlighted in the drama and the questions for discussion. Using their teacher's guide, classroom teachers guided the children through the broadcast and the follow-up activities. The teacher's guides contained pre- and post-broadcast activities to conduct with the

children. Follow-up activities included homework for children to complete with their caregivers. This helped the children to become active agents in family-based behavior change.

30-minute feedback program. A final 30-minute feedback program produced in the local language by community radio producers targeted the community-based listener groups which reported back to the community radio stations. These programs featured interviews with listener groups to find out what they thought of that week's program, what they agreed or disagreed with, what they had learned, and the kinds of positive discussions or actions that resulted from their participation. The community-based discussion groups enhanced the support given to OVC, providing a forum to reinforce and reflect upon both the OVC issues and the network of support services available to them.

#### **A. Production and Implementation**

Funding for the OVC program was released in FY2007. A coordinator based in Lusaka was recruited for the program and a producer was attached to each station to manage the program in the province. The producers played a key role in liaising with the Ministry of Education officials, training the teachers, establishing listener groups and training the group leaders, and producing the feedback programs. In the first year the dramas were all produced by an experienced radio drama group in Lusaka, but in subsequent years, training was provided for local drama groups and the producers, based in the community radio stations, were responsible for the production of the dramas using local actors.

The school programs were written and produced in Lusaka by producers from Educational Broadcasting Services, who were experienced in developing IRI programs, with teachers and other Ministry of Education officials. During the first year, the design and scriptwriting was facilitated by an EDC media and communications specialist. In the second year, a specialist was recruited from Zambia's National AIDS Council to guide the design of the programs.

The program was implemented in 2007 first with two radio stations, Mosi-o-Tunya in Livingstone and Maria in Chipata, using two local languages, Chitonga and Chinyanja. In 2008 two more radio stations were added, Radio PASME in Petauke, which also broadcast in Chinyanja, and Radio Mano in Kasama which broadcast in Icibemba. Two more radio stations were added in 2009, Liseli in Mongu and Yangeni in Mansa. The dramas were recorded for these stations in Silozi and in the Luapula version of Icibemba. The program was thus implemented in five provinces: Northern, Western, Eastern, Southern and Luapula.

#### **B. Listener Group Training**

By the end of the project, a total of 1,130 listener groups had been established and their leaders trained. The following were the active radio listener groups working with each partner radio stations:

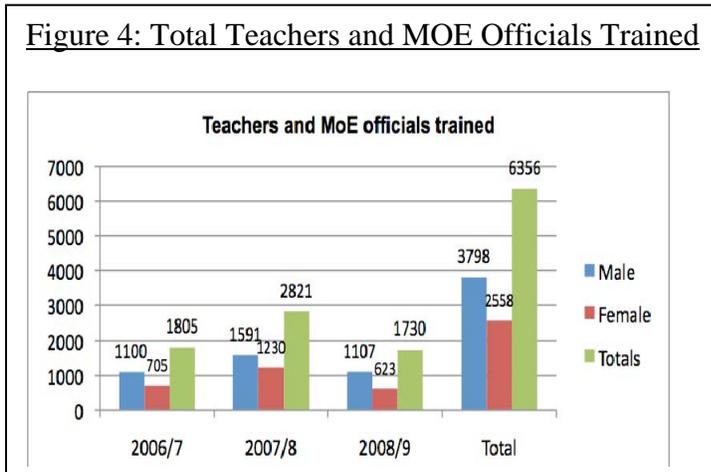
Table 14: Active Listener Groups

Radio Station	Listening Groups
Radio Maria, Chipata	260
Radio Mano, Kasama	245
Radio Liseli, Mongu	155
Radio Yangeni, Mansa	165
Radio PASME, Petauke	160
Radio Mosi o Tunya, Livingstone	145

Training for the group leaders was provided each year, with over 2000 group leaders given a one-day training in managing the group and the key psycho-social issues for OVC.

### C. Teacher Training, Teacher’s Guides

Figure 4: Total Teachers and MOE Officials Trained



The major success of the OVC program has been in the capacity building of teachers and community members. These are a vital resource in ensuring that OVC receive the needed psychosocial and educational support. At left is a graph on the cumulative number of teachers and MoE officials trained to implement the OVC program.

The radio stations and local producers worked 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.

### D. Provision of Radios

Freeplay Foundation was instrumental in raising funds for Lifeline radios for the schools and listener groups. In the first year they provided 250 radios with funds donated by Reuters. In the second year, Freeplay Foundation provided the program with 300 radios from donations from Reed Elsevier. In the final year they raised funds from Rotary International to provide 200 radios and a further 200 were purchased with project funds.

## **E. Impact**

While no well-controlled research was conducted on this OVC program due to its short duration and lack of funds, testimony and anecdotal information indicates that the programs were highly valued by the community, did increase school/community dialogue about the importance of life skills as well as care and support for school-age children.

## **F. Challenges and Lessons Learned**

### ***Challenges***

- Inadequate links between schools and listener groups resulted in some children not attending listening groups and the children in other listening groups missing the schools broadcasts.
- It was difficult for local drama groups to understand the requirements for acting for the radio and acting from a script.

### ***Lessons Learned***

- Listening groups need to be formed in the villages where the school children live.
- Many communities have already established groups for other programs and these can be used effectively as the basis for listening groups.
- Local drama groups need training in acting for the radio and following a script.
- Audiences prefer programs, especially dramas, which are produced in the local dialect.

## **VII. Teacher Education**

The appointment of a Teacher Education Advisor in 2005 and a Teacher Education Coordinator in 2006 enabled the project to undertake more initiatives in the area of teacher education. In 2005 the Advisor played a leading role in the evaluation of the Ministry's Primary Teacher Diploma by Distance Learning (PTDDL) and in the piloting of IRI in government schools. In 2006 in partnership with Celtel, a pilot cell phone program was implemented to enable both pre-service and in-service teacher educators to maintain contact with their students and teachers. A manual containing 30 integrated science lessons was developed to demonstrate learner-centered science teaching and the use of local materials. Six of the lessons were filmed and the videos were used in training teachers. Finally the advisor and coordinator developed and implemented a distance education course for community school teachers which enabled them to gain a teaching qualification.

### **A. PTDDL Evaluation**

At the request of the Ministry of Education, the Teacher Education Advisor and COP conducted an evaluation of the Primary Teachers Diploma by Distance Learning (PTDDL). The PTDDL was scheduled for review in 2005 because the first set of students from the national rollout had completed their coursework in January 2005 and the Teacher Education Department wanted to see what improvements could be made before the next group of teachers was inducted in the program. The evaluation found that the content of the PTDDL program improves the quality of education and has a positive impact on classroom practice and teacher morale; however, the program needed a better organizational structure. The report gave detailed recommendations for committee structures at the national, provincial and district levels.

### **B. Cell Phones**

A survey conducted in 2005 to review the technology available in the colleges of education and teacher resource centers found that cell phones were most readily accessible to all. The information from this survey was used to inform the decisions of a workshop on the use of technology in in-service and pre-service education. The first initiative to be developed was the use of cell phones to support pre-service and in-service teacher education.

QUESTT's cell phone pilot was initiated to improve communication between teacher education students and college lecturers on social and academic issues during students' third, school-based year of training.

In May 2006 three colleges of education, six teacher resource centers and the Teacher Education Department (TED) were supplied with cell phones to assist PTDDL teachers and ZATEC student teachers. The colleges of education, teacher resource centers and TED each had a Fixed Cellular Terminal connected to a computer for official calls and SMSs. These institutions were agents for the sale of scratch cards and talk time over mobile cell phones to generate income to pay for official calls. Likewise, 18 groups of ZATEC student teachers in their school-based year used the sale of scratch phone cards to pay for official mobile phone calls to their college lecturers. The student teachers met for weekly group discussions in which they shared their progress and their

problems. They then called a lecturer at the college to seek advice on academic and social problems. While each group of ZATEC student teachers managed a cell phone, the PTDDL teachers were expected to use phones at the teacher resource centers when they wanted to contact a lecturer with questions.

The QUESTT project covered the costs of designing the program and training participants, while Celtel provided 31 Motorola C-113s at no cost and ten Fixed Cellular Terminals (FCTs) at a 20% discount. The FCTs were designed to send emails, faxes, SMS and phone calls over the cellular network. The MOE provided appropriate personnel for training, monitoring and evaluation activities. Celtel held a launch of the partnership among MOE, Celtel and QUESTT at NISTCOL on the morning of 22<sup>nd</sup> June 2006. Clips of the function were televised and broadcast over the radio.

Training was provided in the use of the phones, business management and listening and referral skills. The cell phone project was evaluated in October 2006 and concluded that the use of cell phones had not been successful because of the very high fixed charge of \$35 a month for the FCTs, the inability of Celtel to get the FCTs to work and the delayed start of the PTDDL program. However student teachers had been encouraged to have meetings and to communicate by personal phones with their college tutors. TED requested that the pilot be redesigned without the FCTs and tried again in 2007. The program was redesigned in 2007 with Kasama, Mansa and Mufulira colleges, eliminating the inefficient and expensive FCTs and using a basic cell phone which could not be blocked. 54 students, as well as college lecturers and teacher resource center coordinators, were trained during the program.

Cell phones were given to groups of students during the year of teaching practice in the classroom. These groups met regularly to discuss assignments and raise social and academic issues. Using the cell phone, they would be able to text questions or issues raised to the colleges of education for an immediate response. Prior to these cell phones, students would need to wait 4 months in between monitoring visits to address these issues. A cell phone was kept by a guardian in each student group and was returned to the college of education after the group completed their school-based year. The program was implemented in 3 colleges of education: Kasama, Mufulira and Malcolm Moffat.

The program worked in partnership with Celtel, which participated in the training and offered the student groups discounts on scratch cards which they could sell to make a profit. The pilot project was discontinued after Celtel withdrew its support in late 2007 citing lack of training capacity and inability to support a long-term project.

### **C. Radio Programs for Teachers**

Prior to QUESTT, *Fastele! Fastele!* was a weekly 15 minute radio broadcast that had been broadcast by the Ministry of Education for a number of years to introduce teachers to the new curriculum and new methods. The QUESTT project was asked by the Ministry to help resurrect the program in 2006 and, since then, designed and produced 110 programs. The programs aimed to enhance teacher skills and

Since 2006, the QUESTT project, working with Ministry of Education and Educational Broadcasting services financed the design and production of 110 <i>Fastele! Fastele!</i> programs.
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promoted continuing professional development of teachers with classroom and management skills. Each broadcast contained radio drama, interviews based on the topics of the drama and the sharing of teaching tips that were relevant to the teachers' lives. The program benefited any teacher that chose to listen in, as it was broadcast across the country and targeted all teachers in Zambia. Topics covered in this radio program included lesson planning, reflective practice, counseling skills, using teaching aids, problem-solving, conflict resolution, and specific learner-centered teaching techniques in mathematics science and life skills. Teachers reported that the program helped them understand difficult concepts through examples and teaching tips, and answered many of their frequently asked questions. The program also complemented other MOE professional development initiatives.

This program began in 2006 and was broadcast from July to December and again from January to June 2007. Brochures were printed and sent to districts for distribution to zonal centers. QUESTT staff worked with Teacher Education and EBS to produce and record 23 new radio programs for broadcasting between July and December 2007 and again in 2008.

The program was not broadcast in 2009 as the funds for the payment of broadcast fees were cut from the Ministry's teacher education budget when the allocations were reduced. It was noted that, by the end of the QUESTT project, Teacher Education was planning to re-visit the activity and give the program a different name to better reflect teacher professionalism.

#### **D. Sample Science Lessons for Grades 5 to 7**

A Science Manual for Teachers consisting of 30 integrated science lessons was produced in conjunction with teachers, curriculum specialists, teacher educators and the National Science Center. These lessons were designed to demonstrate activities which let the learners use their prior knowledge, discovery activities, and activities in which they could share their knowledge. The lessons also demonstrated the use of local materials and the use of the science kits which had been distributed to all schools from the National Science Center. Six of the lessons were videotaped and put on CDs to be used during training.

In 2007, 116 teachers in Lusaka, Mansa and Samfya districts were trained in the use of the Manual. In 2008, twenty-two Zonal In-service Coordinators from Mpika district were trained as trainers so that they could train the teachers in their zones in the use of the manual. In 2009 one thousand Science Manuals and 300 Training Manuals for trainers were printed and 100 DVDs produced. These were issued to all the District and Provincial Resource Center Coordinators at a workshop in Kabwe and the DCOP explained how they could be used for training teachers. Further training was given to resource center coordinators and 93 ZICs from Northern and Luapula provinces and they were supplied with training materials to train teachers in their zones.

#### **E. Zambia Teacher Education Course by Distance Education for Community School Teachers**

The QUESTT project supported the Ministry of Education through the Teacher Education Department to implement a Zambia Teacher Education Course by distance learning for Community School Teachers (ZATEC-CST). The target was to train 500 community school teachers. 453 students (297 male, 156 female) were enrolled in April 2007. The two-year course

was implemented in eight basic Colleges of Education in Solwezi, Kitwe, Mufulira, Mansa, Kasama, Malcolm Moffat, Mongu and Chipata.

The purpose of the program was to improve the quality of teaching among community school teachers and to upgrade them with Primary Teachers' Certificates. The course would also provide an incentive for the teachers to continue teaching in the community schools as they were bound to stay in their school during the course and had to undertake to teach for a further year in the school after completion of the course. The community school teachers were provided with modules in all study areas and followed a two year course while they continued teaching in Community Schools. In addition to study materials, the students attended four two-week residential sessions and one three-week residential session at the colleges during the school holidays.

### ***Selection***

The District Education Board Secretaries advertised for community school teacher applicants for the ZATEC-CST in their districts. The community school teachers were recruited by Colleges of Education under their standard selection criteria. The students who were enrolled had their Grade 12 results verified by the Examinations Council of Zambia. Students who did not have genuine results were dropped from the course. Below is the data on Community School Teachers (CSTs) that were enrolled.

Table 15: CSTs Enrolled in ZATEC Distance Education Program

College of Education	Enrolment April 2007		# November 2008		# of drop outs		# writing examinations in November 2008	
	M	F	M	F	M	F	M	F
Chipata	48	12	44	12	04	00	44	12
Kasama	26	04	25	03	01	01	25	03
Kitwe	36	34	29	26	07	08	29	26
Malcolm Moffat	36	14	34	13	02	01	34	13
Mansa	36	24	35	24	01	00	35	24
Mongu	32	21	32	21	00	00	32	21
Mufulira	38	22	36	20	02	02	36	20
Solwezi	45	25	44	24	01	01	44	24
<b>Total:</b>	<b>297</b>	<b>156</b>	<b>279</b>	<b>143</b>	<b>18</b>	<b>13</b>	<b>279</b>	<b>143</b>

In December 2008, 422 Community School Teachers (297 males and 143 females) wrote their ZATEC final examinations.

From April 2007 to November 2008, out of 453 students that were enrolled, 31 (7.34 %) students dropped out of the course. The following were the reasons for dropping out:

- a) 2 students from Mufulira college were found to have forged certificates
- b) 3 were absent from the face to face sessions and missed assignments
- c) 6 students found employment in mines and pastoral work
- d) 1 stopped on health grounds
- e) 8 had their results rejected by ECZ after verifications

- f) 4 lacked interest or found the course difficult
- g) 7 thought they would not write the same examinations as those on full time and left for private colleges of education course

It was observed that the low dropout rate was due to great interest of the community school teachers and the value they placed on the support given them by the colleges and the QUESTT project.

### ***Financial support***

QUESTT project committed a total of US\$571,429 to full support of the students. The following was the breakdown of the activities that were funded: development of distance education modules for students, registration fees, administration fees, tuition fees, examination fees, accommodation and meals, transport refund and allowances during face to face sessions.

### ***Materials***

QUESTT, in collaboration with lecturers from the colleges of education and the MOE, designed the distance education modules to deliver the ZATEC curricula, mostly through print-based modules and with only minimum face-to-face training provided by college lecturers. The 22 modules were edited by an instructional design specialist, and reviewed and modified over the course of several workshops.

From February 18 to 22, 2007, Teacher Education held the first module development workshop with 12 lecturers from 6 colleges to plan and develop modules in the six ZATEC learning areas. Module writing by lecturers continued after the workshop in their own colleges. Modules were submitted electronically or in hard copy to QUESTT, where they were then edited by a team consisting of representatives from the MoE Teacher Education, NISTCOL and QUESTT. A workshop to finalize and validate the distance education modules for ZATEC students was held on March 26 and 27, 2007. Specialists from each of the study areas were invited from CDC and TED to work with representatives from the Colleges of Education and QUESTT Project.

The content and objectives of the distance education modules were no different from that of the regular ZATEC program. This is important in that the distance education students were obliged to sit the same exams as the regular ZATEC students.

In addition to the modules, the community school teachers were given support materials by Colleges of Education and used college libraries when they went for face to face contact sessions during the holidays in their respective colleges. These residential sessions enabled them to attend lectures and share ideas with lecturers and fellow students.

The following are the results of the community school teachers that sat for the final examinations in November 2008. Note that while only 21.6% passed the final examination, an additional 57.8% were “referred,” meaning that the candidates might have failed 1 or 2 tests, but would be allowed to re-take the subject(s) they failed and allowed to re-take the exams for those subjects.

Table 16: Summary results for ZATEC Community School Teachers

Performance of Community School Teacher Candidates			
Passed	Referred	Failed	Absent
21.6%	57.7%	20%	0.7%

**F. Challenges and Lessons Learned**

***Challenges***

- Private companies, such as Celtel, want a short-term commitment that produces quick results and maximum publicity
- Radio broadcasts do not reach many teachers in urban areas as they are watching television
- When MOE has to reduce the budget, programs that are additional to the main activities, such as radio programs, are the first to be cut
- Many MOE officials had little knowledge of community schools and a low opinion of community school teachers
- Many MOE officials believe that teachers cannot be trained through distance education.
- Continuous assessment and examinations for teacher education are moderated by the Examinations Council without consultation with the college tutors

***Lessons Learned***

- Cell phones have the potential for maintaining contact between student teachers and their tutors
- Zonal in-service coordinators can run workshops for teachers at no cost if provided with the materials to do so
- The opportunity for community school teachers to gain a teaching qualification provides strong motivation for them to remain teaching at their community schools
- Many community school teachers are qualified to enter teacher training but lack the funds to do so

## Annex A: QUESTT Partnerships

Count	Name of Organization	Type	Provinces operating	Type of support
1	World Vision	NGO	Western Lusaka Luapula North Western Northern Southern	School Feeding Program Teaching and learning materials OVC support School infrastructure support Education / Training
2	Program for Urban Self – Help (PUSH)	NGO	Lusaka Central Western	1. School infrastructure support 2. Education / Training
3	Project Concern International (PCI)	NGO	Lusaka Western	1. Education / Training 2. School infrastructure support
4	Care International Zambia	NGO	Eastern Southern Lusaka Central Copperbelt	1. OVC support 2. School Feeding Program 3. School infrastructure support 4. Education / Training
5	Young Men Christian Association of Zambia	NGO	Southern Copperbelt	1. Teaching and learning materials 2. OVC support 3. School Feeding Program
6	People Action Forum (PAF)	NGO	Central Eastern Southern	1. School Feeding Program 2. Infrastructure support 3. Teaching and learning materials
7	Children International Zambia (CIZ)	NGO	Lusaka	1. Teaching and learning materials 2. Education / Training
8	Zambia Open Community Schools (ZOCS)	NGO	Lusaka	1. School Feeding Program 2. OVC support 3. Teaching and learning materials
9	Chipata Catholic Diocese	FBO	Eastern	1. School Feeding Program 2. Teaching and learning materials
10	Peace Corps Volunteers	NGO	Central Eastern Lusaka North Western Northern Southern	1. Education / Training
11	HUMANE DAPP	NGO	Central	1. Education / Training
12	Teachers Against HIV / AIDS Network (TAHAN)	CBO	Copperbelt	1. Education / Training 2. Teaching and learning materials
13	Community Health Restoration Program (CHReP)	CBO	Copperbelt	1. Teaching and learning materials 2. School Feeding Program
14	Save The Children Zambia	NGO	Lusaka	1. Education / Training

Count	Name of Organization	Type	Provinces operating	Type of support
			Southern	
15	Mongu Catholic Diocese	FBO	Western	1. Education / Training
16	Community Response to HIV / AIDS (CRAIDS)	NGO	All Provinces 9	1. School Infrastructure support 2. OVC support
17	Eastern Province Women Development Association	CBO	Eastern	1. Teaching and learning materials
18	Chikuni Parish	FBO	Southern	1. Teaching and learning materials
19	BP Filling Station	Company	Luapula	1. Teaching and learning materials
20	Musenga Women's Club	CBO	Luapula	1. OVC support 2. Teaching and learning materials 3. School Feeding Program
21	Kasenda Women's Club	CBO	Northern	1. OVC support
22	Brother Dennis and Canadian Friends	Individual	Northern	1. School Infrastructure support 2. Education / Training
23	HODI	NGO	Southern	1. Teaching and learning materials 2. Education / Training
24	Livingstone Women Make a Difference (LIWOMADI)	CBO	Southern	1. Teaching and learning materials
25	Plan Zambia	NGO	Eastern Southern	1. School Infrastructure support 2. Education / Training 3. OVC support
26	Parents' Action Forum	CBO	Southern	1. School Feeding Program
27	Brother Hayes-Mazabuka Catholic Church	Individual	Southern	1. School Infrastructure support
28	RANET	NGO	Southern	1. Teaching and learning materials
29	Irish Aid	NGO	Northern	1. School Infrastructure support
30	Flemish Agency for International Cooperation (VVOB)	NGO	Lusaka	1. Education / Training
31	Reformed Open Community Schools (ROCS)	FBO	Lusaka	1. Teaching and learning materials 2. School Infrastructure support
32	Family Health Trust	NGO	Lusaka	1. Education / Training
33	Christian Health Association of Zambia (CHAZ)	FBO	Western	1. OVC support
34	AfriCare	NGO	Luapula	1. Teaching and learning materials
35	Luapula Foundation	NGO	Luapula	1. OVC support
36	International Trust for Education of Zambia Orphans (ITEZO)	NGO	Luapula	1. OVC support 2. Teaching and learning materials
37	United Church of Zambia	FBO	Luapula	1. OVC support
38	Anglican Church of Zambia-Mansa	FBO	Luapula	1. OVC support
39	Reformed Church in Zambia-Mansa	FBO	Luapula	1. OVC support
40	Grace Orphanage	CBO	Luapula	1. OVC support
41	Evangelical Church in Zambia	FBO	North Western	1. School Infrastructure support

## Annex B: CBO Partnerships and Requested Training

No.	Province	Identified CBOs	Training Needs Identified	No. trained
1.	Northern	Kasenda Twafwane Care Group – to train	(i). Record keeping (ii). Simple financial books of accounting- ledger and cash book, writing income and expenditure account. (iii). IRI Community school Management. (iv). IRI methodology. (v). Project identification and development – income generating activity	20
		Musenga Nutrition Care Group	(i). Record keeping (ii). Simple financial books of accounting- ledger and cash book, writing income and expenditure account. (iii). IRI Community school Management. (iv). IRI methodology. (v). Project identification and development – income generating activity	20
2.	Southern	Livingstone Women Make A Difference  (LIWOMADI)	Capacity building (i). Leadership skills, (ii). Management of activities at the centers and financial controls (ii). Designing work plans (iii). Conflict management and resolutions.	20
		Family Care in Kalomo (Chikanta area)	- Capacity building in basic farming and agricultural methods/inputs for IGAs. - Teaching of hygiene, nutrition, sanitation, good health care, sanitation and proper protection of traditional wells.	15
3.	Northwestern	Kabompo AIDS Program	(i). Income Generating activities – chicken and goat rearing. (ii). Monitoring and evaluation. (iii). IRI program and methodology.	21
		Save Environment and People’s Agency (SEPA) based in Zambezi	(i). Office management (ii). Networking. (iii). Planning (iv). Budgeting.	23
4.	Central	Grace Orphanage	(i). Effective School Management. (ii). Accounting and record keeping.	11
		Buyantanshi Open Christian Community Schools (BOCCS)	(i). Effective school management. (ii). Accounting and record keeping. (ii). Income generating activity – gardening.	12
5.	Copperbelt	Zambia Education Development	(i). IRI methodology and management.	5

No.	Province	Identified CBOs	Training Needs Identified	No. trained
		Advocacy (ZEDAO)		
		Interdenominational Christian Care Organization (ICCO)	(i). IRI methodology and management of schools.	9
6.	Western	Mbeta Women's Club	Training in Income generating activity (IGAs) (i). Training of members in tie and dye.	10
		Nzuli Sisters' Fellowship	(i). Training of CBO members in Cutting and tailoring.	12
7.	Eastern	Tigwilizane in Kasenga area under Chief Change	(i). Management skills and Center/school administration. (ii). Agricultural skills in vegetable growing and selling for Income generating activities for center and mentor support.	22
		MWAMECO in Lundazi District	(i). School/center Management skills. (ii). Practical skills in income generating activities- gardening and chicken rearing (poultry) for center/school support.	21
8.	Lusaka	Holy Savior, Kafue	(i). IRI methodology and management of schools.	19
		Mwachiavwa Orphan Community School Organization (MOCSO)	(i). To train members of the CSC from MOCSO schools- in:- -School management skills - Record keeping. - Simple financial accounting.	7

## Annex C: Programs broadcast by community radio stations

YEAR	Community Radio Stations	# Radio programs produced	LTM Grades Broadcast	Comments
2003 - 2004	Breeze, Icengelo, Chikaya, Chikuni, Lyambai, Mazabuka	252	1, 2,3,4	All stations were broadcasting LTM Grade 1 & 2 with the exception of Chikuni
2005	Chikuni, Chikaya, Icengelo, Mazabuka, Breeze, Oblate Liseli	252	1,2,3,4, 5	Lyambai was unable to continue due to technical problems
2006	Chikuni, Chikaya, Icengelo, Mazabuka, Mano, Yangeni, Yatsani, Mkushi, Oblate Liseli, Mazabuka, Maria	330	1,2,3,4,5, 6	Chikuni took full ownership of the LTM program
2007	Chikuni, Chikaya, Icengelo, Mano, Yangeni, Yatsani, Maria, Oblate Liseli, Mazabuka, Maranatha	300	1,2,4,6,7	Chikuni had IRI learners sitting for G7 exam
2008	Chikuni, Icengelo, Mano, Yangeni, Yatsani, Maria, Oblate Liseli, Mazabuka, Maranatha, Solwezi FCC	260	1,2,4,5,6,7	Chikaya and Mazabuka stopped broadcasting due to technical problems
2009 to September	Chikuni, Icengelo, Mano, Yangeni, Yatsani, Maria, Oblate Liseli, Maranatha, Solwezi FCC	200	1,2,3,4,6,7	Stations were producing programs with a focus on what has been learnt, achieved and the future of LTM and education in general

Note: All the radio stations with the exception of Icengelo broadcast *Learning at Taonga Market*. The reason for this was that the ZNBC signal adequately covered almost all areas that Icengelo covered.

## Annex D: A few of the topics covered in 2009

<b>Program Title</b>	<b>Topic Description</b>
IRI Methodology	How children and communities benefited from Taonga Market in 2008, what they did not implement and way forward for their schools
Benefits of Education	Adults shared experiences of seeing their children undergo change as they learned to read and write and how this inspired them to go back to school
Adult Education	Importance of education and how the lives of adults have changed since going back to school
Former IRI Learners	How the learners who are now in Grade 8 are faring with new friends, subjects and teachers
Early Marriages	Sharing experiences of some children who stopped school and were married off but have gone back to school. Discouraged parents to accept dowry for school-going children
Benefit of having a school	Shared the benefits of having a school in an area where there has never been a school and how their lives have changed since LTM was introduced
Benefits of Partners	Highlighted how WFP has helped improve enrolment and school attendance through school feeding. WFP donated fuel/energy efficient stoves to facilitate cooking in IRI Schools
Way Forward for IRI	Highlighted how MoE was going to continue supporting IRI schools after the QUESTT project ended
IGAs	How schools who are involved in income generating activities have benefited

## **Annex E: A list of publications and reports**

### **PUBLICATIONS**

1. “Learning at Taonga Market” Mentor’s Guides Grades 1 to 7
2. “Learning at Taonga Market” Posters. Grades 1 and 6
3. “Learning at Taonga Market” Trainers Manual
4. ZATEC modules – 6 study areas, 22 modules
5. Sample Science Lessons
6. Sample Science Lessons DVD
7. Sample Science Lessons Trainers Manual
8. iPod Users Manual
9. Our Family Year One Teachers Guide
10. Our Family Year Two Teachers Guide
11. Small Grants Manual
12. Small Grants Training Manual

### **REPORTS**

1. Statistical report 2005
2. Statistical report 2006
3. Statistical report 2007
4. Statistical report 2009
5. Monitoring report 2005-1
6. Monitoring report 2005-2
7. Monitoring report 2006
8. Monitoring report 2007-GRZ
9. Monitoring report 2007-IRI
10. Monitoring report 2008
11. Monitoring report 2009 (Community schools only)
12. IRI Tracer Study Report
13. Evaluation 2005 Grade 1 IRI & CS
14. Evaluation 2005 Grade 1 GRZ Pilot
15. Evaluation 2006 Grade 2 GRZ Pilot & CS
16. Evaluation 2006 Grade 3
17. Evaluation 2007 Grade 1 GRZ Roll Out
18. Evaluation 2008 Grade 2 GRZ Roll Out
19. Evaluation 2008 Grade 4 CS