



# Elimu kwa Teknolojia

a BRIDGE*it* program

## **ANNUAL REPORT OCTOBER 2008 - SEPTEMBER 2009**

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# **Bridgeit 2009 Annual Project Report**

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Standard 5 students wait to enter their Bridgeit class at Mgulani Primary School in Dar es Salaam

## **I. Background**

In 2007 the International Youth Foundation (IYF) was awarded a two-year cooperative agreement by USAID/Tanzania to implement the *Bridgeit* program in Tanzania, after a successful initial implementation of the *Bridgeit* program in the Philippines. In Tanzania, IYF is implementing *Bridgeit* in partnership with the Ministry of Education and Vocational Training (MoEVT), the Forum for African Women Educationalists (FAWE), the Nokia Corporation, the Nokia Institute for Technology (INdT), the Pearson Foundation and Vodacom Tanzania. The main goal of the *Bridgeit* program is to significantly increase the educational quality and achievement among students at primary school level in mathematics, science and life skills through the innovative use of cell phones and digital technology. Following the two year “pilot” program, USAID/ Tanzania granted the project a 15-month extension through December 2010.

### ***Bridgeit* works to achieve three specific objectives:**

- To work with the MOEVT and others to launch and expand *Bridgeit* in Tanzania and integrate it into the education system, at low cost, in order to reach the greatest number of children and teachers possible;
- To improve teacher performance in *Bridgeit* classrooms, as determined by changes within the quality of interaction and teaching and learning in the classroom;
- To increase learning gains among Standard Five and Six students in math, science, and life skills in *Bridgeit* classrooms, with a particular emphasis on girls.

This 2009 annual project report is organized in a manner that is outlined in the Cooperative Agreement. It gives a summary of year-two project activities, then outlines the impact and benefits of the project, including the beneficiaries and the summative and life skills evaluation results. The report also describes the challenges and opportunities encountered during the second year of the project, as well as lessons learned. A more comprehensive description of project activities, detailing *Bridgeit*'s progress according to its USAID-approved work plan, can be found in the year's four quarterly reports.

## **II. Summary of Activities**

As presented in the Year Two *Bridgeit* work plan, the second year of the project was devoted to equipping 130 additional schools with equipment packages; training teachers from the 130 schools; launching the program in all 150 schools; creating new videos and accompanying lesson plans; and monitoring and evaluating the project.

### **A. Introduce the project in the newly selected areas**

For the selection of the 130 additional schools for the pilot phase, the project used the same criteria and consultative process as it did in the pre-pilot phase. The criteria included: educational need, access to electricity and the Vodacom 2.5 EDGE or 3 G cellular network, and proximity to Dar es Salaam. In addition to the pre-pilot regions of Dar es Salaam, Coast, and Lindi, four additional regions (Kilimanjaro, Tanga, Dodoma, and Mtwara) and 13 additional districts were selected for the pilot. The Bridgeit team first introduced the project at the regional level and then in the selected districts. These introductions began at the regional and district levels in September 2008 and continued until the beginning of November 2008. The project then partnered with district education offices to introduce Bridgeit at the school and community levels. Each district appointed one school inspector to be their Bridgeit focal person, and these focal people supported the selected schools to prepare for the equipment delivery and installation.

### **B. Equip schools with infrastructure (reception packages) and security:**

The project dedicated the sixth quarter to the delivery and installation of Bridgeit equipment in all 130 pilot schools, after a delay due to the length of time it took to receive the equipment VAT waivers. Each Bridgeit school received an equipment package that included one 29" inch TV, one Nokia N95 cell phone, one iron security cage for the TV, one small iron box to secure the phone, extension cables, power surge protectors and padlocks. Three companies were selected to conduct the installation and handover of the Bridgeit equipment to the selected schools. These companies were given a two-day orientation on how to conduct this activity and then taken into a nearby school in Dar es Salaam to observe the process.

After the completion of each installation, there was a small handover ceremony in each school, in which teachers, students and members of the school management committee were invited to test the installed equipment and sign the official paperwork indicating the school's responsibility for the equipment. The installation and handover was completed in all schools at the end of February 2009.

### **C. Adapt life skills curriculum and implement life skills pilot program:**

During year two, the project adapted the Passport to Success (PTS) life skills curriculum, trained 20 teachers, and implemented the program as a pilot in 20 schools. Ms. Zamaradi Said, Bridgeit's Life Skills & Gender consultant, led the process of adaptation, translation, and review, and the Life Skills Committee, consisting of representatives from IYF, MoEVT and FAWE, reviewed and endorsed the adapted set of 32 life skills lessons.

In the first week of February the project trained 20 teachers, one from each of the pre-pilot schools, on the Passport to Success life skills program. The four-day life skills training workshop was conducted in Kibaha and was facilitated by a master trainer from Morocco, Ms. Meriem Taouzi, and

Zamaradi Said. The trained life skills teachers began implementing the after-school program in February. Due to the high demand of students to be in the program, the enrollment was limited to Standard VI students in this pilot phase.

The implementation of the life skills program required significant monitoring and follow-up, and therefore Brigitte had a team of three individuals (from IYF, FAWE and MoEVT) to oversee the progress of the teachers and the program. The project conducted regional meetings at the beginning and the end of program implementation. These regional meetings brought together the life skills teachers to address implementation challenges and discuss lessons learned. In addition, the project visited every PTS classroom, observed the teachers, and provided feedback, as noted in the Monitoring section of this report.

#### **D. Collect pretest data in participating experimental and control schools:**

In January 2009, international M&E consultant from the Philippines, Dr. Joy Natividad, traveled to Tanzania to work with local M&E consultant Frank Kaduma to finalize M&E tools for the pre-test, to train the team of evaluation consultants for data collection, and to oversee the administration of the pre-test in seven regions. The international and local M&E consultants spent one week refining the summative evaluation tools, testing the tools, and training assistants.

From January 18-February 1, the M&E teams traveled to 15 study schools and 15 control schools in seven regions and administered the pre-test, which was designed to assess the learning gains in Standard V and VI students in mathematics and science. In February, the M&E team used the Teaching and Learning Qualitative (TALQ) evaluation tool to conduct classroom observations in the study and control schools. The TALQ evaluation tool is used to assess teachers' knowledge and skills, classroom environment, student participation, student activities in the classroom, and gender. During the post-test data collection phase, the same teachers were assessed with the TALQ tool.

In addition to the pre-test data collection for the summative evaluation of the math and science components of the project, Brigitte also conducted a baseline survey in all 20 schools where the life skills program was to be conducted. The survey included behavior and attitudes questions and was completed by the students. Mr. Tom Leavitt, a life skills evaluation expert who has led evaluations of the life skills program in the Philippines and several other IYF life skills programs, developed the survey and provided technical assistance on the data gathering process.

**E. Launch programs in 150 pilot schools:**

Year two of the Bridgeit project marked its expansion into all 150 schools. As noted above, all schools were equipped with the Bridgeit package during quarter six, and the project implementation began in the 130 new schools.

During quarter six, the Bridgeit server that houses the videos was also installed at Vodacom. The software interface used on the N95 cell phone to access the video via the 3G delivery system was tested with help from INDT and Vodacom Tanzania. The technology system went live in April 2009.

The Bridgeit project was officially launched on the national level on 15<sup>th</sup> April 2009 at Mwenge Primary school in Dar es Salaam. All Bridgeit partners were represented at the national launch. The event included a demonstration of Bridgeit technology; speeches by special guests USAID Mission Director Robert Cunnane, Deputy Minister of Education and Vocational Training Ms. Mwantumu Mahiza, and IYF President and CEO Bill Reese; and song and dance performances by Bridgeit students from several different schools. Others who attended the launch included USAID Bridgeit CTO Maggie Hiza, and senior representatives from the International Youth Foundation, Vodacom Tanzania, Nokia Siemens Networks, Pearson Foundation, FAWE Tanzania, and IYF Board Member and CAMFED Tanzania director Penina Mlama.

**F. Train teachers in program in 150 pilot schools:**

The project selected ten of the best teachers and district inspectors from the 43 teachers and inspectors who were trained during the pre pilot phase, based on their performance during the pre-pilot phase as well as their motivation towards the Bridgeit project. In November 2008 the project trained these 10 master trainers in a week-long training. Among other things, the master trainers were equipped with skills on the application of the Bridgeit program: to lead an interactive teaching session, enhance students understanding through the use of Bridgeit videos, and troubleshoot when equipment issues arise. The workshop also included facilitation skills for training adults such as their fellow teachers. Pearson's education specialist provided technical assistance in the planning of this workshop.

Following the Master Training, a series of training of teachers (ToT) workshops were held in three training centers in Dar es Salaam, Mtwara and Tanga. These workshops trained a total of 15 school inspectors and 267 teachers, including 2 from each of the 130 newly selected schools. During these training workshops, the teachers were trained on the program components noted above, as well as conducting 3-day workshops for their fellow teachers in their respective schools. The district inspectors (Bridgeit Focal People) reported that a total of 1,244 teachers were trained in the 3-day training sessions, but the project is now following up with each school to verify this number.

## **G. Monitor schools and provide training support:**

- **Help Desk**

During quarter six the project established a Bridgeit Help Desk to provide support to teachers. In February 2009 IYF identified a Bridgeit Project Assistant, Othman Madati, to manage the project's Help Desk, which responds to teachers' challenges and questions on various aspects of the project implementation. The majority of teachers' questions relate to the use of the technology, but the Help Desk also provides support to teachers on classroom strategies, peer training, use of the lesson plans, and other project-related areas. Vodacom Foundation provides free SMS services from the Bridgeit phones to the help desk line. Teachers, however, are not using this free service as often as anticipated, so the project team continues to encourage teachers to do so during teacher training workshops, monitoring trips and other field visits.

- **Refresher trainings**

In February and March 2009 the project offered one-day refresher courses for all 40 teachers who were trained during the pre-pilot phase. The refresher training sessions were conducted in each of the four pre-pilot districts and were facilitated by master teacher trainers who trained pilot teachers in December 2008. The refresher training workshops updated teachers on the technology platform changes and sharpened their participatory teaching skills, which is central to the Bridgeit model.

In June and July 2009 Bridgeit conducted one-day technology training workshops for teachers in each of the 17 districts in order to address the challenges that teachers were facing in using the technology. The District Education Offices paid for all of the participant travel and training expenses, and the project covered the cost of Bridgeit staff time and travel. Through these workshops teachers were provided with additional support in the use of the technology in the classrooms, particularly in downloading a new software interface and new Bridgeit videos.

- **Monitoring visits**

Over the course of the past year, the Bridgeit team visited a cross-section of schools in each region to assess teachers' use of the Bridgeit technology, integration of the videos into the lessons, and effective use of student-centered teaching methodologies. The IYF Teacher Training Coordinator also conducted classroom observations and provided feedback to teachers on ways they could improve their use of participatory teaching methodologies.

The life skills project team—Zamaradi Said of IYF, Anita Masaki of FAWE, and Laurentia Msangi of MoEVT—traveled to the field to follow up with the implementation of the life skills program, conduct classroom

observations, and provide feedback to the teachers in all 20 pre-pilot schools. While the team was collecting the post-test data, they also met with each of the life skills teachers to gather feedback on the program, which is being used to edit the life skills lessons and inform implementation in the next school year.

In early March 2009 two USAID staff visited Bridgeit schools in Bagamoyo and Lindi to see how the project is implemented in schools and gather feedback on how the project has been received. Former Bridgeit AOTR, Magdalena Hiza, also had the opportunity to visit two Bridgeit schools in Bagamoyo, where she participated in Bridgeit classes and conducted individual meetings with Bridgeit teachers to gather their feedback on the project. The visits went well with positive feedback from USAID staff and from teachers as well as parents.

#### **H. Collect post test data:**

In late August, Dr. Joy Natividad worked with the local M&E team to collect the post-test evaluation data. She began by conducting a two-day refresher training for six M&E team members. The data collected included student post-test examinations in mathematics and science, teacher and student attitude assessments and classroom observations using the TALQ tool.

In late July and early August, the three life skills team members from IYF, MoEVT and FAWE, traveled to the field to collect the post-test evaluation data in the 20 schools where the life skills program was implemented. A total of 566 students and 20 teachers participated in the program.

The results from both the summative and life skills evaluations are included in the Program Impact/Benefits section.

#### **I. Develop case study of Bridgeit Program:**

The project created a short documentary film on the implementation of Bridgeit project in Tanzania. IYF Digital Content Specialists, Theo Smith and Farida Nyamachumbe, interviewed key project stakeholders and gathered classroom footage in April 2009, and the Pearson Foundation collaborated with the project to edit the short film. The documentary provides both background to the project and some highlights on the achievements registered by the project, challenges encountered, and lessons learned in the course of implementation. This documentary also captures feedback from several key implementing partners, including IYF President and CEO, Bridgeit local staff, MoEVT, Nokia Siemens Networks, and Pearson Foundation. Teachers, students, and community members are also featured in the documentary sharing their views on the implementation of the project. The film has been finalized and will be on the IYF website and disseminated among partners and other organizations.

**J. Develop expansion options:**

USAID granted IYF a 15-month project extension to allow the project to be implemented throughout two full school years. This extension provides additional time and resources for the project to continue tracking results; enhance its current training and educational materials; and build the capacity of MoEVT staff, district government officials and individual schools and communities to take over the project after this period. During this extension, the project will relocate to MoEVT in order for the IYF/ Bridgeit team to operate in close collaboration with their counterparts in the Ministry. This will also provide an opportunity for MoEVT staff to enhance their skills in various aspects of the project.

In addition to the move to the MoEVT and extensive capacity building, the project began to work with MoEVT and other partners such as Nokia to develop other mechanisms that will sustain the project beyond the USAID funding. All of this will continue throughout the next year.

**K. Work with MoEVT to develop plan to institutionalize teacher training within the MOEVT system:**

At the end of year two, IYF hired Ms. Zamaradi Said, formerly a gender and training consultant, as the Education and Training Specialist, to spearhead the institutionalization of the Bridgeit teacher training into the Tanzanian system. Ms. Said has begun to assess options for this process and will work closely with her MoEVT counterpart to revise the training manual and develop a plan to carry out this institutionalization.

**L. Continue to develop/adapt content and lessons plans:**

During this year, a total of 96 mathematics, science, and life skills videos were developed. Lesson plans were also developed to accompany each of the videos. The project contracted a total of six local film producers to create the video content.

**List of the new videos developed in Year 2:**

<b>Grades</b>	<b>Science</b>	<b>Mathematics</b>	<b>Life Skills</b>
Standard 5	23	29	0
Standard 6	16	25	3
<b>Total new videos created</b>	<b>39</b>	<b>54</b>	<b>3</b>

**M. Provide technical assistance to MOEVT and content providers:**

Throughout year two, IYF International Digital Content Specialist Theo Smith and his local counterpart Farida Nyamachumbe worked closely with the video producers to build their capacity in educational video production through ongoing guidance and support. The quality and the pedagogy of the videos improved with each successive round. In particular, the IYF Digital

Content Specialists worked closely with the Pearson Production Team, a group of youth who were trained by the Pearson Foundation through the Jane Goodall Institute and are now aspiring producers.

During quarter seven, Theo Smith traveled to Tanzania to provide support to the video production portion of the project. During his trip he met with each of the producers to provide feedback on their videos and make suggestions for improvement. Mr. Smith also held a day-long workshop on editing and graphics for the Pearson Production Team. In addition, he met with the MoEVT Brigit Coordinator and the entire Media for Education Unit, which is a new configuration of the former Radio Unit, in order to evaluate the capacity within MoEVT to produce video content.

IYF and Pearson Foundation worked closely with MoEVT staff and teachers to build their capacity in lesson plan development and video conception and script review through ongoing workshops organized as part of the content development process. In November 2008, Pearson Foundation educational specialist Nancy Chou traveled to Tanzania to provide capacity building support in the area of teacher training and participatory lesson plan development.

During quarter eight, the MoEVT also began to identify key technical staff who will work more closely with the project to gain knowledge and skills on project management, monitoring and evaluation, teacher training, learner-centered and gender-responsive pedagogies, among others. In the upcoming year, IYF will continue to build the capacity of the MoEVT staff through targeted workshops on various aspects of the project and through IYF-MoEVT staff pairs, who will work together on a daily basis and transfer skills.

### **III. Program Impact/Benefits**

#### **A. Beneficiaries Reached**

In year two, the project reached a total of 287 teachers, 15 district inspectors, and 38,108 standard five and six students. In addition, 10 master trainers were selected and trained from the teacher and district inspector beneficiaries from 2008. During the 5-day Brigit teacher training workshops, the teachers were trained to train their fellow teachers in 3-day training sessions at their own schools. The number of teachers who received the full 3-day training is being verified through individual school visits, which are taking place in all 150 schools and will be completed in December 2009.

#### **Direct Adult Beneficiaries:**

	<b>Female</b>	<b>Male</b>	<b>Total</b>
Math & Science Teachers	137	130	<b>267</b>
Life Skills Teachers	15	5	<b>20</b>
District School Inspectors	4	11	<b>15</b>

**Student Beneficiaries:**

<b>Boys</b>	<b>Girls</b>	<b>Total</b>
19,043	19,065	<b>38,108</b>

**B. Summative Evaluation Summary Findings**

The summative evaluation assessed the impact of the program on standard 5 and 6 student learning gains in math and science, student and teacher attitudes, and the quality of teaching and learning in the classroom. The study was planned for 15 study schools and 15 control schools distributed across 6 districts spread throughout the project interventions areas.

However, due to the fact that one study school had not yet implemented the project, and one control school had too few respondents (only 6 students took the pre test), the post tests were administered in only 28 schools, 14 study schools and 14 control schools.

The districts in the study included Moshi, Korogwe, Dodoma, Temeke, Kibaha, Mtwara, and Lindi, and the pre and post tests were administered to the same pupils and teachers. In order to ensure data quality, each control school was carefully selected to match with a study school, using a variety of characteristics (social economic status of community, size, rural versus urban, etc).

Four different evaluation tools were used for the study:

- 45-question multiple choice mathematics and science pre and post tests for standard 5 and 6 students
- 6-question student attitude index that evaluated students' positive and negative outlooks on school and their futures through education.
- 10-question Teacher attitude scale designed to measure teacher attitudes toward the use of technology in classroom instruction and of participatory methods in teaching
- Teaching and Learning Quality (TALQ) tool for classroom observations.

The pre and post tests in science and math for standards 5 and 6 were prepared by primary school teachers from Dar es Salaam and were tested in December 2008 in Kunguru primary school in Dar es Salaam.

The total number of students who participated in the pre and post tests is shown in the table below. The fact that a higher percentage of students from study schools participated in both tests may be a sign of higher attendance in Bridgeit schools, as compared to control schools. This would confirm qualitative accounts of increased student attendance from focus group discussions and interviews with teachers and head teachers.

	Standard 5 Students			Standard 6 Students		
School Type	Pre test	Post test	Percent who completed both tests	Pre test	Post test	Percent who completed both tests
Control	834	544	65.2	890	640	71.9
Study	1042	744	71.4	980	757	77.2
<b>Total</b>	<b>1876</b>	<b>1288</b>	<b>68.7</b>	<b>1870</b>	<b>1397</b>	<b>74.7</b>

The key findings of the summative evaluation include:

- There was a statistically significant difference in standard 5 student learning gains between study and control schools for both science and math. This means that there is less than a 5% chance that the learning gains occurred by chance. The analysis shows that for standard 5 math students, the type of school (study versus control) and age are significant predictors of learning gain. As age increases, predicted learning gains in standard 5 math decreases. For science, the significant predictors are type of school and gender. Being male has a positive effect of increasing the learning gains of standard 5 science students. There was no indication of why boys improved more than girls in science, and this is an area that will require further investigation. Possible factors to review are the science videos, accompanying lesson plans, and teaching strategies in the classroom.
- No significant difference was found for standard 6 students in either science or math. But as in standard 5 math, age also has a significant negative effect. Older students are predicted to have lower learning gains in math. None of the predictors of age, gender and type of school significantly predicted learning gain for standard 6 science. This may be due to the fact that there were fewer math and science video lessons in standard 6 than in standard 5. There is need to examine the differences in the implementation of Bridgit between the two grade levels to understand the reasons behind these results.
- The self administered attitude tests showed positive results for Bridgit students in both standard 5 and 6. Generally the proportion of all pupils who agreed with positively worded statements expressing optimism about the future through education increased between the pre- and post tests. For both standard 5 and 6 pupils, the percent change in proportion agreeing with positive statements is slightly

higher for study than control schools. As for the negative statements, pupils in study schools also showed consistently higher negative percent change or a decrease in the proportion who agree with the negative statements. For Bridgeit pupils there is a higher decrease in the proportion who say they do not really like school, as compared with control school pupils.

- In regards to the teachers, the Bridgeit program also had a positive impact, as determined by changes in the teacher attitude assessment. Of the 54 teachers who correctly filled out the attitude scale at the pre-test, 46 filled it out again in the post test for a follow up rate of 85 percent. Analysis shows that the mean attitude score at pre-test was slightly lower among teachers in the study schools but mean change in attitude was significantly different between study and control teachers. At post test, Bridgeit teachers had higher attitude scores and gained more points. Regression analysis shows that being in the study school and being young (below 29 years old) are significantly related with higher attitude scores. Teachers of study schools and young teachers have more positive attitudes toward the use of digital technology and participatory methods.
- Although the attitudes of teachers did improve, the TALQ tool classroom observation results were less conclusive. Only 22 teachers, 16 study and 6 control teachers, were observed in both the pre and the post tests. Both study and control teachers registered improvement, and the differences between the two sets of teachers were not statistically significant. This may indicate that a great emphasis needs to be placed on teacher training and support to improve teachers' use of gender-responsive and learner-centered pedagogies. However, the TALQ data quality also is questionable, due to the fact that teachers were observed after the Bridgeit training workshops, few teachers were observed in both the pre and post tests, and not all of the observers were the same in the pre and post tests. There is a need for the program to improve its monitoring of teachers and to use the TALQ more carefully.

In summary, the Bridgeit program resulted in statistically significant learning gains in Standard 5 students and math and science but did not have an impact on Standard 6 students' learning gains in either math or science. This may be due to the number of video lessons available and therefore taught in standard 5 versus standard 6. Below is a table indicating the number of videos and lessons available to Bridgeit teachers. The top part of the table includes the videos and lessons that could have been taught by the time the post-test data collection occurred. Attitude assessments of students and teachers, however, indicated a positive program impact for all Bridgeit beneficiaries.

**Videos and Lesson Planned Produced and Distributed to Schools:**

	Standard	Math	Science
Adapted Videos & Locally Produced Round A & B Videos	V	37	17
	VI	32	13
Adapted, Round A & B Lesson Plans	V	38	20
	VI	32	13
Round C & D Videos	V	18	9
	VI	10	13
Round C & D Lesson Plans	V	18	8
	VI	11	13

**C. Life Skills Evaluation Findings**

The life skills evaluation report describes findings from a comprehensive evaluation of the Passport to Success (PTS) life skills pilot program in 20 schools in Lindi, Coast, and Dar es Salaam. Altogether, 566 students, 303 of which were girls, participated in the program. The main evaluation activities were pre-program and post-program surveys of PTS students and a post-program survey of PTS teachers. Of the 566 participating students, 439 (78%) took both pre and post surveys. All 20 PTS teachers completed the teacher survey.

Both teachers and students express very positive opinions about the PTS program. Teachers commented on the significant socialization and behavioral changes they have seen in life skills students. They feel PTS students have shown increased ability to get along well with each other and with teachers, parents, and other adults; greater interest in school; and, notably, better school attendance. They have seen willingness among students to collaborate and cooperate. Because of increased self-confidence, PTS students are, according to their PTS teachers, much more willing to ask questions when they don't understand something, which can and has led to better educational outcomes. Due to the curriculum's emphasis on health and gender issues, teachers have seen students taking better care of themselves and becoming more willing to act outside traditional gender roles.

Teachers gave high marks to the participatory teaching methods in PTS and credit these methods with involving students to a much greater extent than in other classes.

High percentages of students indicated that they wish PTS classes were continuing and that they would tell friends to participate in PTS if they have the opportunity. In addition, they point to a number of program impacts, including getting along better with other students, parents, and other adults and understanding how to lead a healthier lifestyle. Most students indicate that people have noticed positive changes in their behavior since starting PTS.

A comparison of pre-program and post-program responses to statements related to life skills, HIV/AIDS knowledge, and gender issues is less conclusive of positive program effect. While there were increases in average scores for 11 of the 12 indices measured, the increases are statistically significant for only 2 of the 11 indices – goal setting and HIV/AIDS knowledge. This means that the positive changes are large enough to be considered ‘real’ rather than due to normal statistical variation in only two measures. However, by another standard there was a noteworthy positive change in skill levels. Focusing on the students with lower index levels before the program – those with significant room to improve – between 24% and 78% of students experienced an increase in index scores, depending on the index measured. For 8 of the 12 indices, more than 60% of those with significant room to improve actually improved. Overall, 80% of those who had substantial room to improve in one or more indices showed some improvement.

#### **D. Other Impact/Benefits**

- The Tanzanian government’s interest in and acceptance of Bridgeit has increased significantly; the following examples can be shared:
  - Bridgeit has been featured in the MoEVT 2008-2009 and 2009-2010 budgets; as such the ministry has allocated funds to support Bridgeit’s expansion in this year’s budget.
  - Bridgeit is one of the few projects in the MoEVT that is implemented in close collaboration between ministry officials and an NGO partner. The MoEVT has dedicated staff to the project, and Bridgeit is scheduled to begin to relocate to the Ministry in the upcoming quarter.
  - The Tanzanian government has invited Bridgeit to showcase its teaching and learning model at several official events. On these occasions Bridgeit has been introduced to high profiled figures in the country, including Members of Parliament, ministers, Hon. Prime Minister Mr. Mizengo Pinda and President of the Republic of Tanzania His Excellence Jakaya Kikwete.
  
- The interest in Bridgeit has been ever growing, and the union of private school owners has approached the project to consider including private schools in the program. They would pay for their own Bridgeit equipment packages and cover other costs related to the project such as teacher training costs. As part of the expansion plans, the project would consider this as a possible income-generation model.
  
- Several Bridgeit schools have invited neighboring schools to use the program. Since this is an informal arrangement among schools, the project has not officially tracked this phenomenon or the additional student beneficiaries. For example, in Dar es Salaam, Breyson, Oysterbay, and Kongowe primary schools have shared their Bridgeit

classrooms and lessons with Mburahati, Bongoyo, and Amani primary schools, respectively. In Moshi, Amani primary school has invited Kindi Juu primary school to participate in the Bridgeit program.

#### **IV. Challenges & Opportunities**

##### **A. Challenges**

- The implementation timeline for the first phase of the project was very short, given the scope and complexity of the program. There were delays in the equipment procurement, due to the length of time that it took to receive the VAT waivers. Therefore, the Bridgeit program was not fully operational until several months after the 2009 school year began. Teachers, however, were trained in December 2008, and they had a school break and a few months in between the time they were trained and the beginning of their implementation of the program, which may have had an impact on their use of participatory methodologies, video integration, and the technology. Due to the timing of the project, the summative evaluation also did not assess the use of all of the project videos, since the videos were produced on an ongoing basis and the post test data was collected several months prior to the end of the school year. The project extension, however, will allow the project to be implemented and evaluated over the course of an entire school year.
- During recent school monitoring visits, it was discovered that select schools have been severely delayed in their implementation of the Bridgeit program. In addition, it was discovered that not all of the 1,244 teachers who were reported to be trained in 3-day trainings completed the full training. These numbers were reported by the 17 Bridgeit Focal People (district school inspectors), who had committed to overseeing all of these workshops on the school level. In order to address this challenge, the project is now conducting monitoring visits in all 150 schools to assess the data and the implementation of the project and will re-train the district inspectors on monitoring and data collection. The school visit exercise will be completed in December 2009, and the district inspector training workshop will occur in early 2010.
- Tanzania has been badly hit with power shortages recently, and power has been rationed throughout the country. This problem therefore had negatively impacted the implementation of Bridgeit, which relies on the power to display the videos on the television and to charge the phones. In addition, a few schools' televisions have been burned due to the irregular power surges, despite the fact that the schools are using surge protectors. The project is now addressing this issue by replacing televisions that are covered under warranty, training

schools on equipment maintenance, and helping schools raise money to replace damaged equipment.

- Since the Bridgeit model depends on a stable source of power, and many rural schools are not connect to the national power grid, most rural children have not been able to benefit from Bridgeit. However, the project is working on finding alternative sources of power to be used in such areas, as part of the project expansion plan.
- Since Tanzania was the first country to pilot the use of the Nokia Educational Delivery (NED) software, several software updates were required after tests and feedback from the field. The update of the software required several steps, which was challenging for teachers unfamiliar with technology. In addition, the teachers were trained on downloading the videos many months before the technology went live, so they had difficulties performing this task. In order to address these challenges, the project held a series of technology workshops at the district level, is supporting teachers remotely through the Help Desk, and is assisting individual teachers during school monitoring visits.
- The MoEVT decision-making processes can be very slow, which impacts the implementation of the project. For instance, there has been a several month delay in appointing MoEVT counterparts and officiating office space for the Bridgeit relocation to MoEVT.

## **B. Opportunities**

- The Nokia Institute for Technology (INdT) is currently developing a software interface that will be compatible with less expensive phone models. INdT is also working to make the Nokia Educational Delivery (NED) software application more user friendly, which will minimize or eradicate all technological challenges that teachers are currently facing. In addition, the current initiative of looking for alternative phones and televisions provides a good opportunity for scaling up the project across the country.
- The willingness to support more schools with Bridgeit equipment from Members of Parliament and the Association of Private Schools Owners demonstrates some early signs of project sustainability and expansion opportunities within Tanzania.
- MoEVT has indicated an interest in using the Bridgeit platform to transmit other video content, including subjects such as English, Geography, etc., as well as in-service teacher training programs. This platform therefore provides a unique opportunity for MoEVT to reach many beneficiaries in a cost-effective way.

- More students want to take part into the life skills program, which is now piloted with about 25 students per school. This demonstrates the need for this program among students and provides another opportunity for the project to reach more children with the PTS life skills curriculum.

## **V. Lessons Learned & Recommendations**

- **Engaging the MoEVT and district education inspectors:**

To date, the project has garnered significant support from the Tanzanian government, particularly within the MoEVT, because of extensive efforts to involve them in every stage of the project. The project will engage the MoEVT much more closely in the next phase of the project, as the IYF Bridgeit staff will be paired with MoEVT counterparts and the project will move into the MoEVT offices. This is essential to ensure project ownership and sustainability.

In addition to engaging the national level ministry, it is necessary to involve District Academic Officers so they can work together with district school inspectors in their respective districts. The combination of academic and inspectorate departments will enhance on-the-ground support to Bridgeit teachers.

- **The need to introduce and integrate Bridgeit in TTC & TRCs.**

In order to create a sustainable teacher training system, the project will work within the existing training structures within Tanzania and institutionalize the Bridgeit training on the pre-service and in-service levels. The project will introduce the training program in Teacher Training Colleges (TTC) and Teacher Resource Centers (TRC). These institutions are used to support teachers in pre-service and in-service, and hence provide support to teachers involved in the Bridgeit program after the project period has ended.

- **Lessons from the Summative and Life Skills Evaluations:**

Based on the results from the summative and life skills evaluations, the team will need to follow up or make changes on several aspects of the project. These include:

- Investigation of the project implementation in the low performing Bridgeit schools that were anomalies in the evaluation.
- Review of the videos and lesson plans for gender-responsive pedagogies, since the learning gains in standard 5 science were greater for boys than for girls.
- Production of more standard six videos and lesson plans, since standard 5 had more videos and posted significant gains, as compared to standard 6.

- Improvement of the gender-responsive and learner-centered aspects of the teacher training and inclusion of more direct support to teachers to integrate these pedagogies.
- The need to revise some of the evaluation tools for next school year's evaluation and more closely oversee every aspect of the data collection.

- **The need for a comprehensive capacity building and awareness raising plan and implementation**

Over the last year, the project determined a need for an extensive and sustained capacity building and awareness raising plan to ensure program quality and sustainability. In response to this need, Bridgeit has developed a comprehensive capacity building and awareness raising plan that will focus on three levels of project implementation: local/school, district/regional, and national. In regards to capacity building, the project will work closely with MoEVT Bridgeit staff, district school inspectors, and school management committees.

The project has also learnt the need to strengthen its community awareness component. The project has therefore created a new position to head the community outreach component of the project. The Community Outreach Coordinator will work MoEVT staff at national, regional and district level as well as with school management committees in all Bridgeit schools to enhance their understanding as well as their sense ownership to the project.

- **Data verification exercise and the need to monitor and support teachers consistently**

There is a need to refine the system of school level monitoring and teacher support. This is necessary to ensure that teachers are thoroughly supported in the course of implementing Bridgeit project. This support is aimed at providing reliable on-the-ground support and feedback to teachers in their respective districts. The project is in the process of conducting monitoring visits in all 150 schools and will train and work closely with master teachers, district school inspectors, and school management committees to support the teachers on an ongoing basis.

- **Equipment maintenance and security**

Recently, the project has experienced some issues with damaged equipment and a stolen television and phone in two schools. As noted above, the project is in the process of visiting all 150 schools, and as part of the visits, the team will meet with head teachers, teachers, and SMCs on the issue of equipment maintenance and security. In addition, the project will include equipment maintenance and security in the upcoming teacher training and will develop a plan for long-term equipment and technology maintenance.

- **The need to revise teacher training approaches**

Based on the feedback received from project evaluations, classroom observations, and teacher interviews, the project has decided to revise the training and educational materials in order to enhance some components that Bridgeit teachers found challenging and still need to improve. These include gender responsiveness and some participatory teaching methodologies. This revision process will ensure that the upcoming teach training workshops address the identified shortcomings.

- **Growing interest from other organizations**

A growing number of organizations has indicated an interest in learning more about Bridgeit and whether the project platform can be used to support other development initiatives such as fighting HIV/AIDS, malaria, and other social-economic initiatives. This interest could provide opportunities for Bridgeit expansion to include other development sectors in addition to the education sector.