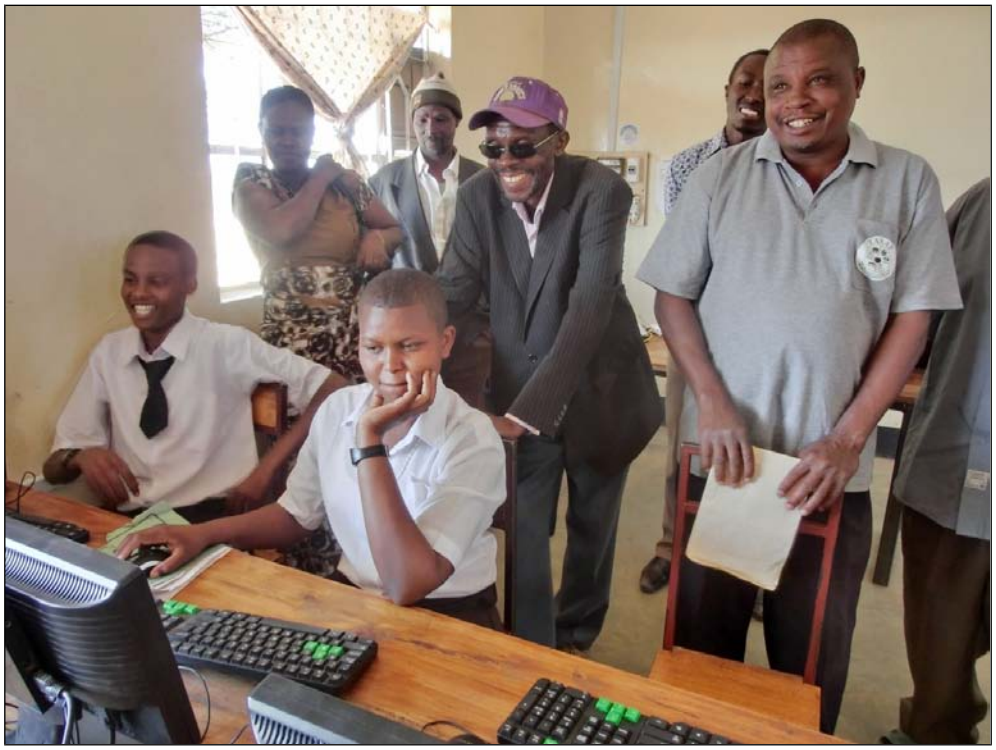
Powering Potential Inc.

Educating-Through-Technology

www.poweringpotential.org

Evaluation Report of the Powering Potential *Educating-Through-Technology* Program

Conducted in Karatu District, Tanzania on August–September 2013



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List of Abbreviations/Acronyms

A/C	Accounts/Accounting
AIDS	Acquired Immunodeficiency Syndrome
BK	Book-keeping
BMATHS	Basic Mathematics
BSC	Budget Scrutinization Committee
COM	Commerce
DC	District Council/District Commissioner
DEO-SEC/DSEO	District Secondary Education Officer
EMIS	Education Management Information System
FDG	Focus Group Discussion
FYDP	Five-Year Development Plan
GER	Gross Enrolment Ratio
HIV	Human Immunodeficiency Virus
HM	HeadMaster
IAE	Institute of Adult Education
ICS	Information and Computer Studies
ICT	Information, Communication Technology
IEC	Information Education and Communication
IMTC	Inter-Ministerial Technical Committee
INSET	In-service Training
KDC	Karatu District Council
LGA	Local Government Authority
M&E	Monitoring and Evaluation
MDA	Ministries, Departments and Agencies
MoEVT	Ministry of Education and Vocational Training
MoF	Ministry of Finance
NA	Not applicable
NACTE	National Council of Technical Education
NECTA	National Examinations Council
NER	Net Enrolment Ratio
NGO	Non-Governmental Organization
NIR	Net Intake Rate
ODL	Open Distance Learning
PC	Personal computer

PD	Periods per day
PEDP	Primary Education Development Plan/Program
PMO-RALG	Prime Minister, Regional Administration and Local Government
POPC	President's Office Planning Commission
PPP	Powering Potential Program
PQTR	Pupil-Qualified-Teacher Ratio
PSC	Parliamentary Sectoral Committees
PTR	Pupil-Teacher Ratio
PW	Periods per week
RACHEL	Remote Areas Community Hotspots for Education and Learning
RBM	Results-Based Management
REO	Regional Education Officer
RS	Region Secretariat
SEDP	Secondary Education Development Plan/Program
SLADS	School of Library Archives and Documentation Studies
STD	Standard
TANESCO	Tanzania National Electric Supply Company
TC	Teachers' College
TIE	Tanzania Institute of Education
TLM	Teaching-Learning Material
ToR	Terms of Reference
TRC	Teachers' Center
TTC	Teachers' Training College
TZS	Tanzania Shilling
US$	United States Dollar
USA	United States of America
VCT	Voluntary Counseling and Testing
VETA	Vocational Education and Training Authority
WEC	Ward Education Officer

Executive Summary

Current developments in science and technology have stimulated the use of Information and Communication Technologies (ICT) as one of the basic building blocks of knowledge in society. Tanzania is facing challenges in her endeavor to provide quality education. High failure rates in science, mathematics and English subjects, especially in secondary national examinations, are clear signs of the challenges prevalent in the education sector.

Tanzania has in response to these challenges, geared itself towards integrating ICT in the education system which will ensure improvement of delivery of education and, in part, help address a wider range of socio-economic issues. Strategically, ICT is being given priority because it helps to alleviate the critical shortage of teachers and quality learning resources in schools. As such, Powering Potential is a program that is supporting these efforts.

The Powering Potential *Educating-Through-Technology* Program (the Program) has three main goals:

1. to provide secondary schools with technology infrastructure (computers and solar power equipment) so that they can offer the national Information and Computer Studies curriculum;
2. to install digital educational content (*Remote Areas Community Hotspots for Education and Learning* - RACHEL); and
3. to offer technology training because computer literacy is essential for Tanzanian youth to realize their full potential and to contribute to the development of their country in our increasingly interconnected world.

This assessment was intended to collect and document data to inform the stakeholders about the implementation and contribution of the Powering Potential *Educating-Through-Technology* Program in the Education Sector. Technically, the assessment followed two principle exercises: data collection; and consultative meetings/sessions to further gather relevant data. Since its inception in 2006 Powering Potential in collaboration with Karatu District Council and community, has undertaken the *Educating-Through-Technology* Program activities in six secondary schools.

Powering Potential was noted to operate efficiently by using systematic plans and procedures. Efficiency can be attributed to its streamlined lean organizational structure; decision-making processes ensured expedited execution of program tasks. Powering Potential was noted to have provided support to the schools effectively. Three schools received support of a two-phased installation. This approach afforded stakeholders ample time to monitor and review progress of implementation(s) to avoid losses should the targeted beneficiary falter or default. Risks of suffering losses that occur where a single-shot approach is used could be avoided.

It was documented that there were a total of 104 computers in 29 secondary schools across Karatu District. It was particularly significant to note that 72% of those had been supplied and deployed in six secondary schools by Powering Potential. Those supplied by the Program utilized appropriate technologies across the board, especially: solar power; energy-efficient computer networks - (some) enabled with internet connectivity; and software (*Linux* and *Open Office*).

It was noted that the Program monitors and reports at convenient frequencies, but there existed no formal framework for monitoring and evaluation. Though the Department of School and College Inspection plays an import role in ensuring efficient and effective

implementation of programs, it was noted that the Karatu District Inspectors of Schools and Colleges were not participating directly in the Program.

Having gained notable achievements, Powering Potential and its partners are gearing up to embark on a national rollout. Trainers and students demonstrated competency such that the Program curriculum was very appropriate and user-friendly. However, a majority of teachers expressed their lack of sufficient knowledge and skills to be able to use the computers accordingly.

Powering Potential was noted as being in the process of developing a standard M&E framework that will ensure regular monitoring and evaluation activities that provide evidence for precise decision-making and planning.

Recommendations in this report include:

(a) Powering Potential curriculum has proved to be effective; it should be harmonized with those of VETA and NACTE so that graduates with the same certification consequently enjoy equal opportunities.
(b) Training courses from the Powering Potential curriculum should be open to any qualifying Form 4 graduate (depending on requisite resources).
(c) Every school under the Program should establish a specific timetable of training sessions to provide the required knowledge and skills to both teachers and students.
(d) Powering Potential should finalize and adhere to a formal M&E framework.
(e) Powering Potential should initiate for the Karatu District Council to pursue with higher Government authorities, the issue of structural and institutional arrangement of the Department of Inspection of Schools and Colleges so that the District level is given mandate to cover secondary schools in its area as well.

Chapter 1. Introduction

1.1 Background to the Program

The current developments in science and technology have stimulated the use of Information and Communication Technologies (ICT) as one of the basic building blocks of knowledge in our society. In the process of improving the quality delivery of education, the use of ICT is an inevitable component. Tanzania is facing challenges in her endeavor to provide quality education. High failure rates in Science, Mathematics and English subjects, especially in secondary national examinations, are clear signs of the challenges prevalent in the education sector. The challenges are compounded by a critical shortage of quality teachers and learning materials given the recent and unprecedented enrollment expansion in secondary schools following the successful implementation of the Primary and Secondary Education Development Programs (PEDP and SEDP respectively).

Tanzania has in response to these challenges, geared itself towards integrating ICT in the education system which will ensure improvement of quality delivery of education and, in part, help address a wider range of socio-economic issues. Strategically, ICT is being given top priority because it helps to alleviate the critical shortage of teachers and quality learning resources in schools and other educational institutions. To enhance the pace towards reaching her goals and objectives, Tanzania has developed strategies that exploit opportunities abundant in the Public-Private-Partnership environment.

Powering Potential was started in 2006 as a Non-profit Organization (also known as an NGO). The Organization is based in New York City, United States of America. It has a branch office at Karatu Township, within Karatu District, in Arusha Region, Tanzania. The branch office serves as operational base for the Powering Potential Program known as '*Educating-Through-Technology*'. The Program was initiated in response to the exuberant reaction of the Banjika Secondary School students when an American entrepreneur introduced herself in Swahili. Since 2006, the Program has expanded appreciably to cover more secondary schools and districts. The financial support for the Program is currently coming through collaborative efforts from the Governments of Tanzania and USA, corporations, foundations and individuals. The International Collaborative for Science, Education and the Environment serves as Powering Potential's 501(c)3 fiscal sponsor.

1.2 Objectives of the Program

The Powering Potential Educating-Through-Technology Program has three main goals:

(1) to provide secondary schools with technology infrastructure (computers and solar power equipment) so that they can offer the national Information and Computer Studies curriculum;

(2) to install digital educational content (*Remote Areas Community Hotspots for Education and Learning* - RACHEL); and

(3) to offer technology training because computer literacy is essential for Tanzanian youth to realize their full potential and to contribute to the development of their country in the increasingly interconnected (globalized) world.

1.3 Purpose of this Evaluation

The Powering Potential *Educating-Through-Technology* program that started with the donation of one laptop to Banjika Secondary School, is expanding rapidly to cover more schools including Baray, Endallah, Florian, Slahhamo and Welwel. The program is gaining visibility and thus attracting a surge of stakeholders seeking rapid expansion.

There is evidence that regular monitoring and evaluation strengthens dialogue between all concerned parties and enhances the quality of outcomes and speed of completing each activity. It was with this belief that the Program's principle stakeholders decided that there be an evaluation, but which would be an episodic assessment of progress made towards the achievement of the stated Program goals and objectives. The evaluation aims to understand the progress that has been made towards the achievement of desired intermediate and long-term outcomes. It also provides analysis of key strategic issues such as the relevance, efficiency, effectiveness, impact and sustainability of the Program.

The process of evaluation was initiated mid-2013. According to the terms of reference (*Annex 1.1*), the evaluation was scheduled to cover six Secondary Schools, namely; Banjika, Baray, Endallah, Florian, Slahhamo and Welwel during the second and third weeks of August, 2013. The evaluation focused mainly on issues related to the implementation of the Powering Potential *Educating-Through-Technology* Program. By applying monitoring and evaluation (M&E) principles, it was envisaged that the evaluation would provide space for evidence-based dialogue and subsequent decision-making for the planning of future expansion.

1.3.1 Main Objective of the Evaluation

The evaluation was intended to collect and document data to inform the stakeholders about the implementation and contribution of the Powering Potential *Educating-Through-Technology* Program in the Education Sector.

1.3.2 Specific Objectives of the Evaluation

(1) to verify availability and condition of computers and solar power equipment;
(2) identify key challenges and opportunities related to the teaching and learning environment under the Program; and
(3) to assess the impact of the Program in the form of outcomes.

1.4 Approach and Methodology

The approach and methodology placed emphasis on Results-Based Management (RBM). This choice was made because RBM focuses on performance and achievement of outputs, outcomes and impacts of programs/projects. The choice was made against the Program context so that ultimately the evaluation report would present the Program in terms of inputs, outputs, outcomes and impacts. Furthermore, the decision took into account that currently, a majority of stakeholder focus is looking not only at inputs (what is spent), activities (what is done), and outputs (what is produced) but also focusing on actual results: outcomes – the changes made, and contributed to, by the program.

Technically, the evaluation followed two principle exercises: data collection; and consultative meetings/sessions to further gather relevant data. The assignment was estimated to take nine (9) days according to the Gantt Chart (*Table 1a*) below:

***Table 1a*: Proposed Evaluation Work Plan**

S.N.	Activity	Day								
		1	2	3	4	5	6	7	8	9
1	Preparation of drafts of evaluation instruments and formal communication with Karatu DC and respective Schools									
2	Field work:									
2.1	D'Salaam - Karatu trip									
2.2	Courtesy call at KDC trial testing of draft sample evaluation instruments									
2.3	School visits:									
	(i) Banjika									
	(ii) Welwel									
	(iii) Baray									
	(iv) Florian									
	(v) Endallah									
	(vi) Slahhamo									
3	Debriefing at KDC									
2.4	Data analysis and Report drafting									
3	Submission of First Draft Report									
4	Incorporation of inputs/comments and submission of Second Draft Report to PPP (Client)									
5	Karatu – D'Salaam trip									

However, as can be noted on *Table 1b* below, the execution of the fieldwork lasted for 15 days. Furthermore, *Table 1c* shows how the Focus Group Discussions (FGDs) were conducted during the fieldwork and *Table 1d* summarizes the written questionnaire receipts.

***Table 1b*: Evaluation Field Trip Journal: August-September, 2013**

Day	Date	Place/Route	Distance Covered (Kms)	Work Done	Remarks/Comments
1st	25 Aug	• Destination: **Moshi** • Route: D'Salaam – Moshi	545	1st sector duty/fieldwork trip	One rear LH tire of the SUV was punctured and found to be beyond repair and thus replaced at Chalinze (over 100km. from D'Salaam)
2nd	26 Aug	• Destination: **Karatu** • Route: Moshi - Karatu	220	2nd sector duty/fieldwork trip	Replaced damaged tire
3rd	27 Aug	• Destination: **Banjika S.S.** • Route: Karatu-Banjika S.S.-Karatu	40	Interviewed: (i) 1 Head Master (male) (ii) 1 Second Master (male) (iii) 1 Computer teacher (male) (iv) 1 Teacher in-charge of the School Library (male) (v) 2 other teachers (females) (vi) 5 students (2 boys and 3 girls – from Form 1-4)	• parents as FGD#3 were not available for interviews/discussions, but another date was set • the Computer Teacher was under the Government employment of permanent and pensionable terms
4th	28 Aug	• Destination: **Baray S.S.** • Route: Karatu-Baray S.S.-Karatu	130	Interviewed: (i) 1 Head Master (male) (ii) 1 Assistant Computer teacher (male) (iii) 7 teachers ((iv) 16 students (9 boys and 7 girls – from Form 1-4) (v) 5 parents (1 female and 4 males)	• FGD#3 (parents) included the Ward Councilor • the Assistant Computer teacher was under the Government employment of permanent and pensionable terms, but had not received any Powering Potential program (PPP) training course

Table 1b: Evaluation Field Trip Journal: August-September, 2013 (continued)

Day	Date	Place/Route	Distance Covered (Kms)	Work Done	Remarks/Comments
5th	29 Aug	• Destination: **Florian S.S.** • Route: Karatu-Florian S.S.	195	Interviewed: (i) 1 Head Master (male) (ii) 1 Second Master (female) (iii) 1 Computer teacher (female) (iv) 9 teachers (4 females and 5 males) (v) students	• parents as FGD#3 were not available for interviews/discussions • the Computer Teacher was under the Government employment of permanent and pensionable terms • interviews/discussions focused on issues related to the PPP
		• Destination: **Endallah S.S.** • Route: Florian S.S. - Endallah S.S.		Interviewed: (i) 1 Head Master (male) (ii) 1 Second Master (male) (iii) 1 Academic Master (male) (iv) 1 Computer teacher (male) (v) 1 Teacher in-charge of School Library (male) (vi) 8 teachers (3 females and 5 males) (vii) 68 students (35 boys and 33 girls – all from Form 4)	• parents as FGD#3 were not available for interviews/discussions • the Computer teacher was hired on temporary basis after receiving the PPP training courses • during the session a student (male) shared with the evaluator mobile phone conversation with Ms Janice Lathen in who called from the US
		• Destination: **Slahhamo S.S.** • Route: Endallah S.S. - Slahhamo S.S. - Karatu		Interviewed: (i) Head Master (male) (ii) Assistant Computer instructor (female)	• Interviews/discussion were limited due to shortage of time, but later date was set • the Assistant Computer instructor was hired on temporary basis, but she had not received any teacher's course or the PPP training courses

Table 1b: Evaluation Field Trip Journal: August-September, 2013 (continued)

Day	Date	Place/Route	Distance Covered (Kms)	Work Done	Remarks/Comments
6th	30 Aug	• Destination: **Banjika S.S.** • Route: Karatu - Banjika S.S.	50	Interviewed: (i) 7 parents (4 females and 3 males) (ii) 5 teachers (2 females and 3 males) (iii) 5 students (3 girls and 2 boys)	• FGD#3 (parents) included the School Board Chairperson
		• Destination: **Welwel S.S.** • Route: Banjika S.S. - Welwel S.S. – Karatu		Interviewed: (i) 1 Head Mistress (female) (ii) 2 Computer teachers (males) (iii) 4 teachers (3 females and 1 male) (iv) 5 students (all girls)	• parents as FGD#3 were not available for interviews/discussions • the Computer teachers were hired on a temporary basis after receiving the PPP training courses
7th	31 Aug	Karatu Township	5	Collation of collected data	
8th	01 Sep	Karatu Township	5	Collation of collected data	
9th	02 Sep	Karatu Township	5	Collation of collected data	
10th	03 Sep	• Destination: **Slahhamo S.S.** • Route: Karatu – Slahhamo S.S. – Karatu	120	Interviewed: (i) Head Master (male) (ii) Second Master (male) (iii) Assistant Computer instructor (female) (iv) Teacher in-charge of School Library (female) (v) Teachers (3 females and 4 males) (vi) 10 students (5 boys and 5girls – from Form 1-4)	• parents as FGD#3 were not available for interviews/discussions • the Assistant Computer instructor was hired on temporary basis, but she had not received any teacher's course or the PPP training courses
11th	04 Sep	Karatu Township	5	• synthesis of the collected data	
12th	05 Sep	Karatu Township	5	• synthesis of the collected data • review of the Evaluation Report outline/frame	

Table 1b: Evaluation Field Trip Journal: August-September, 2013 (continued)

Day	Date	Place/Route	Distance Covered (Kms)	Work Done	Remarks/Comments
13th	06 Sep	**Karatu District Commissioner's Office** (Karatu)	40	Interviewed District Chief Inspector of Schools & Colleges (male)	Interview focused on issues related to the PP Program
		Karatu District Council Office (Karatu)		Interviewed: (i) District Secondary Education Officer (male) (ii) District Secondary Education (Academic) Officer (male) (iii) Interviewed District Education - Statistics & Logistics Officer (female)	Interviews focused on issues related to the PP Program
		Ganako S.S. (Karatu)		(i) Visited KEAR Computer Training Lab	• there were 3 old computers that were acquired through donation, but were no longer working. • the School Administration pleaded for PPP support (would be ready to rehabilitate the room for a feasible computer program)
				(ii) Visited School Library	• the School Library was undergoing rehabilitation through donation of family from Spain • the building would also have space for digital teaching-learning
		Welwel S.S. (Karatu)		(i) Interviewed Endallah S.S. Head Master	• The interview focused on costs of diesel generator *vs* solar energy equipment • The Head Master was available as member of exams marking team
				(ii) Collected questionnaire forms from Welwel S.S.	• the questionnaire forms were pending work partly done earlier on by some teachers
14th	07 Sep	• Distanation: **Moshi** • Route: Karatu – Moshi	220	3rd sector duty/fieldwork trip	One rear RH tire of the SUV was punctured during the trip

Table 1b: Evaluation Field Trip Journal: August-September, 2013 (continued)

Day	Date	Place/Route	Distance Covered (Kms)	Work Done	Remarks/Comments
15th	08 Sep	• Distanation: **D'Salaam** • Route: Moshi – D'Salaam	540	4th sector duty/fieldwork trip	the rear RH tire of the SUV that was punctured was found to be beyond repair and thus replaced at Moshi

***Table 1c*: Focus Group Discussions (FGDs) Made as at 30 September, 2013**

S.N.	INSTITUTION	FGD #1		FGD #2a		FGD #2b		FGD #3		FGD #4a		FGD #4b	
		ISSUED	DONE	ISSUED	DONE	ISSUED	DONE	ISSUED	DONE	ISSUED	DONE	ISSUED	DONE
1	Banjika S.S.	2	5	1	1	1	3	2	7	1	1	1	1
2	Baray S.S.	2	16	1	1	1	7	2	5	1	1	1	1
3	Endallah S.S.	2	28	1	1	1	8	2	0	1	1	1	1
4	Florian S.S.	2	23	1	1	1	8	2	0	1	1	1	1
5	Slahhamo S.S.	2	10	1	1	1	7	2	0	1	1	1	1
6	Welwel S.S.	2	5	1	1	1	3	2	0	1	1	1	1
TOTAL		12	87	6	6	6	36	12	12	6	6	6	6
PERCENTAGE [%]		100	725	100	100	100	600	100	100	100	100	100	100

***Table 1d*: Returns of Written Questionnaire Responses as at 30 September, 2013**

S.N.	INSTITUTION	H/M-1		H/M-2		TEACHERS		DEO-1	
		Issued	Complete	Issued	Complete	Issued	Complete	Issued	Complete
1	Banjika S.S.	1	1	1	1	6	3	0	0
2	Baray S.S.	1	1	1	1	6	4	0	0
3	Endallah S.S.	1	1	1	1	6	5	0	0
4	Florian S.S.	1	1	1	1	6	3	0	0
5	Slahhamo S.S.	1	1	1	1	6	2	0	0
6	Welwel S.S.	1	1	1	1	6	2	0	0
7	Karatu D.C.	0	0	0	0	0	0	1	1
TOTAL		6	6	6	6	36	19	1	1
PERCENTAGE [%]		100	100	100	100	100	53	100	100

1.4.1 Development of Evaluation Framework

The Evaluation of the Powering Potential Program would have been carried out according to a standard framework with the following steps:

(1) Reaffirming the Powering Potential Program Results Framework;
(2) Reaffirming Program Indicators & Data Element Definitions;
(3) Program Indicators Data Sources and Data Collection Tools;
(4) Context Monitoring; and
(5) Strategic Issues for Assessment, i.e.
    (a) appropriateness of the program logic chain (design),
    (b) implementation of the program activities,
    (c) Achievements of program objectives and outputs including progress in the monitoring indicators,
    (d) evaluation of program outcomes and impacts,
    (e) program efficiency and sustainability, and
    (f) identification of lessons learned.

However, since the Powering Potential Program documents do not explicitly provide any standard or specific framework at the time of the evaluation, it was not possible to obtain the necessary information in the form of standard matrices/tables for Steps 1–3 above, such as:

(1) table that indicates the required information (*Result Chain Level; Planned Project Results; and Key Assumptions*) for putting together the results framework;
(2) table that indicates a format for the M&E Indicator information (*Result Chain Level; Indicators; Baseline Year's Data;* and *Target Year*) for putting together at the outset of the evaluator assignment;
(3) table that gives a framework (*Agreed Results Indicators*; *Indicator Definition*; *Definition of key data elements; Data Source; Reference to Questionnaire item/ element of a data collection form*) for identification and developing the data collection forms;

Instead, *Table 2* was prepared as template of an improvised *PPP Implementation Status Matrix* to guide the evaluation exercise. Steps 4 and 5 of the evaluation were carried out accordingly.

***Table 2*: Improvised PPP Implementation Status Matrix *vs* Action Plan**

Output / Milestone	Planned Targets	Status as of 31-Aug-2013 and Comment(s)
ICT Application to teaching-learning in secondary schools in Tanzania		
Outcome 1: Human Resource capacities developed		
1.1 Technology trainers training courses provided to designated secondary schools' beneficiaries under PPP		
1.2 PPP supported Train-the Trainer courses provided to designated secondary schools' beneficiaries under PPP		
1.3 Local three-month technology training courses provided to beneficiaries at designated secondary schools		
1.4 Staff graduated from PPP supported training courses provided by designated secondary schools		
1.5 Students graduated from PPP supported training courses provided by designated secondary schools		
1.6 Qualified computer teachers deployed by Government to teach in designated secondary schools under PPP		
Outcome 2: Digital Curriculum Content Developed		
2.1 PPP supported digital educational content (RACHEL) applied in designated secondary schools under PPP		
Outcome 3: Teaching-Learning Environment Improved		
3.1 Furnished computer classrooms secured at designated secondary schools for PPP		
3.2 Solar power system installed at designated secondary schools for PPP		
3.3 Energy-efficient computer Local Area Network (LAN) power system installed at designated secondary schools for PPP		

1.4.1.1 STEP 4: Context Monitoring

Evaluation was carried out to assess the extent to which the general context of the Program has changed between the time of starting it and the time of evaluation to establish any major shifts which may have occurred, and their implications. However, as it is practically neither really necessary nor advisable to evaluate each aspect of a program/project, the exercise was selective and focused only on those outputs and outcome indicators that, when tracked, could provide an adequate picture of the Powering Potential Program progress and results which

would raise key lessons and issues. For this evaluation both primary and secondary information sources were consulted. Specific questionnaires (Annex 1.2) were designed to facilitate collection of written responses.

1.4.1.2 STEP 5: Strategic Issues for Assessment

Based on the Terms of References and best practice in undertaking end-of-cycle program/project evaluations, the following broad strategic issues were assessed as part of this assignment:

(1) appropriateness of the Powering Potential Program (design);
(2) implementation of the Program activities;
(3) achievements of the Program objectives and output including progress in the monitoring indicators;
(4) evaluation of the Program outcomes and impacts;
(5) program efficiency and sustainability; and
(6) identification of lessons learned.

1.4.1.3 Appropriate Program Logic and Implementation Plan Assessment

This assessment focused on the strengths and logic of the Program design. The intention was to assess if the Program, as designed, was appropriate. The quality of the design, the reasonableness of assumptions about relevant external factors and projects risks were also assessed and compared to the quality at entry. This assessment considered the extent to which the Program could reasonably have been expected to meet its objectives despite known risk factors. It also considered how demanding the Program was for the implementing parties.

The assessment also sought to establish whether the objectives were well defined so that outcomes could be stated in measurable terms and whether a suitable Program implementation plan was put in place at the outset.

1.4.1.4 Implementation of the Programme

In assessing the implementation of the Program, focus was concentrated on the following areas:

(a) Implementation Progress

Progress in the implementation of all planned Program activities, establishing the overall Program and progress of specific components.

(b) Plan *vs* Implementation Correspondence

Assessment of the correspondence between the Program plan and implementation was carried out – in overall and component-wise - to establish reasons for any deviations or changes.

(c) Quality of Delivered Infrastructure

Assessment to establish the Program's "value for money" based on the quality of the infrastructure (computer systems, solar power equipment, furnished classrooms-cum-computer rooms) was based on face-value assessments.

(d) Extent of Institutional Capacities Gained

Institutional capacities achieved through the Program were quantified by computing the increase in each school's capacities. Strong focus was put on getting quantified statistics on what was achieved by the Program and what critical unmet capacity still existed e.g. how many students were being served by the new facilities and how many remain to be served.

(e) Adherence to Program Costs, Disbursements and Financial Arrangements

Assessment was carried out to determine the extent of adherence to the Program costs, disbursement and financial arrangements. To calculate total actual costs in TZS, foreign currency costs of each year was planned to be converted by using prevailing exchange rates. This was aimed mainly at determining actual expenditures against the budgets involved. Furthermore, reasons for cost over-runs or under-runs, such as design and quantity changes, price increases, and currency exchange fluctuations would be examined. Ultimately, the exercise could precisely provide Program and overall school asset values.

(f) Procurement Management

Assessment of overall implementation of the procurement function related to the Program based on existing procurement related regulations and procedures.

(g) Project Management, Reporting, Monitoring and Evaluation

Assessment was made to establish efficacy of the set institutional arrangements for managing the Program at overall Program and institutional levels. The assessment was intended to establish key strengths, weaknesses, opportunities, challenges and lessons. It also covered the extent to which the stipulated reporting requirements in the Program agreement(s) were adhered to by the parties as well as the quality of the progress reports.

More specifically, focus was directed on examining whether standard M&E mechanisms were in place; the role these mechanisms played, or could have played in helping the Program achieve its development objectives. The mechanisms included: availability of indicators, data collection templates, reporting templates and so on. Special focus was placed on the extent to which performance indicators were included in the M&E system. Other data were used to monitor progress and adjust the Program components/activities and outputs to changing circumstances.

(h) Other Implementation Challenges

Assessment was also made on other factors that might have affected implementation, such as:

(i) logistical challenges faced by the Program e.g. importation tariffs and system;
(ii) how the existing institutional structures have facilitated or constrained the Powering Potential Program implementation; and
(iii) how the Program is keeping pace with scientific and technological development and innovations.

1.4.1.5 **Assessment of Program Relevance, Efficiency and Sustainability**

(a) Relevance

This assessment was intended to examine whether the Program goals and objectives were consistent with Tanzania's overall development priorities, strategies and plans.

(b) Efficiency

The efficiency assessment of the Program focused on the extent to which it benefits; actual or expected at time of evaluation, are commensurate with inputs, looking at cost and implementation time.

(c) Sustainability

The assessment of sustainability centred on the likelihood that the Program benefits, actual and expected at the time of evaluation will be maintained after the Program has ended. The main factors considered in establishing likely sustainability included: technical soundness; government commitment, including supportive legal/regulatory framework; institutional commitment; continued financing of operational issues such as maintenance; institutional, organisational and management effectiveness; and resilience to external factors such as risks.

1.4.1.6 **Assessment of Lessons Learned**

Assessment was carried out on the lessons learned at various levels. The stakeholders who were consulted during the in-depth and focus group discussions were requested to reflect upon their experience in participating in various activities and levels of the Program. Their generalizable insights gained from the current Program are expected to inform future phases of the Program or other similar initiatives.

Chapter 2. Key Findings: Lessons Learned and Emerging Issues

1.5 Design of the Program

1.5.1 Organizational Structure of Powering Potential

As an NGO, Powering Potential was noted to rely on individual and foundation donors to achieve its goals and objectives. Its Organizational structure could be constructed to reflect the fact that while based in New York City, United States of America, Karatu branch office was running most of the Program activities in Tanzania. The structure could be constructed as illustrated in *Figure 1* below.

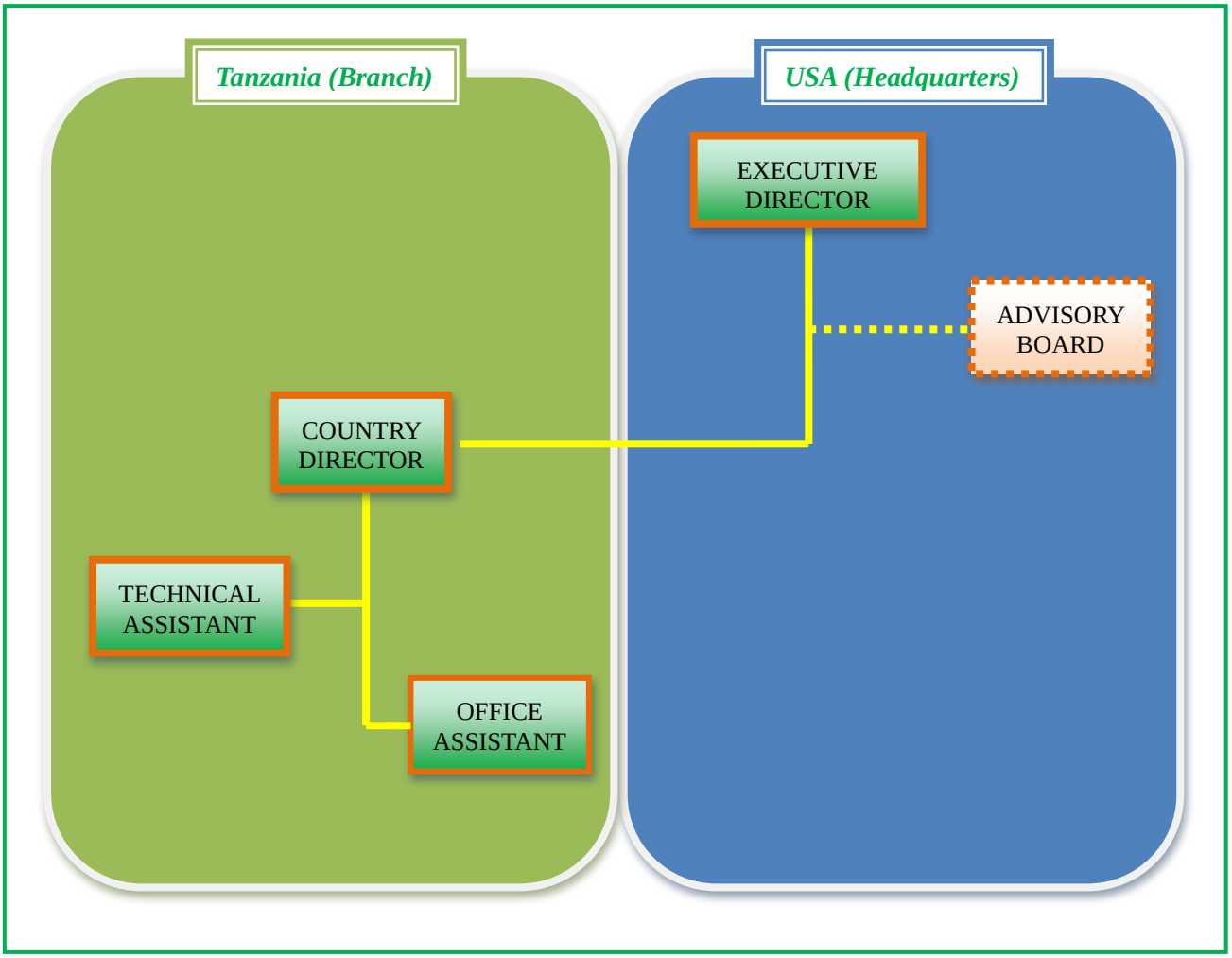


Figure 1: Organizational Structure of Powering Potential

1.5.2 Description of the Educating-Through-Technology Program

(1) Educating-Through-Technology Program was noted to use a two-phased implementation plan within a selected secondary school. The phases were characterized mainly by type and quantity of support provided as summarized in *Table 3* below.

***Table 3*: Two-Phased Program Design for a School**

PHASE	ACTIVITY	QUANTITY	RESPONSIBLE
1	Provision of secure classroom furnished with desks/tables and chairs	1 classroom	LGA and partnering school
	Provision of two Tanzanian technology trainers	2 trainers	Powering Potential
	Development and implementation of Program curriculum	1 package	
	Supply and installation of solar power system	1 system	
	Supply and installation of energy-efficient computer network enabled with internet connectivity	5 desktops with accessories	
	Supply and installation of locally stored digital educational content *Remote Areas Community Hotspots for Education and Learning (*RACHEL*)*	1 installation	
	Selection of two secondary school graduates to undergo a twelve-week (or longer) local computer course	2 Form 4 graduates	
	Provision of local three-month technology training course	Multiple training sessions	
	Provision of a two-week specialized Train-the-Trainer course	Multiple training sessions	
	Effect three-month wage payments to school internally trained-cum hired Program trainers	2 teachers x 3 months	
	Effect twelve-month wage payments to school internally trained-cum hired Program trainers	1 or 2 teacher(s) x 12 months	School
	Provision of qualified computer teacher (s) employed by Government on permanent and pensionable terms	1 (or more) teachers(s)	LGA
	Provision of budget for solar and computer maintenance	lump sum	LGA and partnering school
2	Supply and installation of additional energy-efficient computer network enabled with internet connectivity	15 desktops with accessories	LGA and partnering school
	Provision of the Ordinary Level National curriculum of Information and Computer Studies	1 package	School, LGA, NECTA

(2) The Program also was noted to have developed and disseminated guiding instruments/tools including: Program curriculum; training schedule(s)/timetable(s); and accompanying training materials as *Annexes 2–4* show.

1.5.3 Implementation of the Program Activities

Since its inception in 2006 Powering Potential in collaboration with Karatu District Council and community has undertaken the *Educating-Through-Technology* Program activities in the six secondary schools and recorded achievements as summarized in *Table 4*.

***Table 4*: 'PPP Implementation (Improvised*) Status Matrix *vs* Action Plan'**

ICT (Computer) application to teaching-learning in secondary schools in Tanzania

Output / Milestone		**Planned Targets by 30-06-2013**		**Status as of 31-08-2013 and Comment(s)**	
PHASE	**ACTIVITY**	**QUANTITY**	**RESPONSIBLE**	**ACTIVITY & QUANTITY**	**RESPONSIBLE**
1	Provision of secure classroom furnished with desks/tables and chairs	1 classroom	LGA and partnering school	A total of 6 classrooms had been secured and furnished in 6 schools as follows: • Banjika – 1 c/room secured by Feb. 2008 • Baray – 1 c/room secured by Oct. 2012 • Endallah – 1 c/room secured by Oct. 2012 • Florian – 1 c/room secured by Nov. 2011 • Slahhamo – 1 c/room secured by Oct. 2012 • Welwel – 1 c/room secured by Nov. 2011	LGA (Karatu District Council) and 6 partnering schools, namely: • Banjika • Baray • Endallah • Florian • Slahhamo • Welwel
1	Provision of two Tanzanian technology trainers	2 trainers	Powering Potential	A total of 10 Tanzanian technology trainers had been deployed in 5 schools as follows: • Banjika – 0 PPP trainers because 2 permanent ICT teachers assigned by 2012 • Baray – 2 trainers deployed by Nov. 2012 • Endallah – 2 trainers deployed by Nov. 2012 • Florian – 2 trainers deployed by Nov. 2011 • Slahhamo – 2 trainers deployed by Nov. 2012 • Welwel – 2 trainers deployed by Nov. 2011	Powering Potential

Table 4. 'PPP Implementation (Improvised) Status Matrix vs Action Plan' (continued)*

Output / Milestone		**Planned Targets by 30-06-2013**		**Status as of 31-08-2013 and Comment(s)**	
PHASE	**ACTIVITY**	**QUANTITY**	**RESPONSIBLE**	**ACTIVITY & QUANTITY**	**RESPONSIBLE**
1	Development and implementation of Program curriculum	1 package	Powering Potential	Program curriculum had been developed and disseminated to designed schools as follows: • Banjika – training implemented Jun. 2009 • Baray – 2 trainers deployed by Nov. 2012 • Endallah – 2 trainers deployed by Nov. 2012 • Florian – 2 trainers deployed by Nov. 2011 • Slahhamo – 2 trainers deployed by Nov. 2012 • Welwel – 2 trainers deployed by Nov. 2011	Powering Potential
1	Supply, installation and commissioning of solar power system	1 set	Powering Potential	A total of 6 sets of Solar power system had been supplied, installed and commissioned in 6 schools as follows: • Banjika – 1 set by Nov. 2008 • Baray – 1 set by Oct. 2012 • Endallah – 1 set by Oct. 2012 • Florian – 1 set by Oct. 2011 • Slahhamo – 1 set by Oct. 2012 • Welwel – 1 set by Oct. 2011	Powering Potential
1	Supply, installation and commissioning of energy-efficient, Internet-ready computer network	5 desktops with accessories	Powering Potential	A total of 5 sets under Phase 1 of energy-efficient, Internet-ready computer network had been supplied, installed and commissioned in 6 schools as follows: • Banjika – 1 set of 5 by Feb. 2008 • Baray – 1 set of 5 by Oct. 2012 • Endallah – 1 set of 5 by Oct. 2012 • Florian – 1 set of 5 by Oct. 2011 • Slahhamo – 1 set of 5 by Oct. 2012 • Welwel – 1 set of 5 by Oct. 2011	Powering Potential

Table 4. 'PPP Implementation (Improvised) Status Matrix vs Action Plan' (continued)*

Output / Milestone		**Planned Targets by 30-06-2013**		**Status as of 31-08-2013 and Comment(s)**	
PHASE	**ACTIVITY**	**QUANTITY**	**RESPONSIBLE**	**ACTIVITY & QUANTITY**	**RESPONSIBLE**
1	Supply and installation of locally stored digital educational content *Remote Areas Community Hotspots for Education and Learning* (RACHEL)	1 package	Powering Potential	Digital educational content (RACHEL) program packages had been supplied and installed in six (6) PP Program designated secondary schools, as follows: • Banjika by Sept. 2010 • Baray by Oct. 2012 • Endallah by Oct. 2012 • Florian by Oct. 2011 • Slahhamo by Oct. 2012 • Welwel by Oct. 2011	Powering Potential
1	Selection of 23 Karatu District secondary school graduates to undergo a twenty-week local train the trainer course.	23 secondary school graduates	Powering Potential	Twenty-week local train the trainer course designed by PPP and delivered by two Tanzanian computer teachers June through Oct. 2011.	Powering Potential
1	Provision of the Program's two-week training in computer basics for students and teachers.	1 session/ package	Powering Potential	The two-week computer basics course was conducted in Banjika when school was not in session as follows: • Sep. 2009 • Dec. 2009 • Mar. 2010 • Jun. 2010 • Nov. 2010 • Dec. 2010 • Jun. 2011	Powering Potential

Table 4. 'PPP Implementation (Improvised) Status Matrix vs Action Plan' (continued)*

Output / Milestone		**Planned Targets by 30-06-2013**		**Status as of 31-08-2013 and Comment(s)**	
PHASE	**ACTIVITY**	**QUANTITY**	**RESPONSIBLE**	**ACTIVITY & QUANTITY**	**RESPONSIBLE**
1	Provision of the Program's three-month technology training course	1 session/package	Powering Potential	The three-month technology training courses had been conducted in secondary schools as follows: • Baray Nov. 2012 - Feb. 2013 • Endallah Nov. 2012 - Feb. 2013 • Florian Nov. 2011 – Feb. 2012 • Slahhamo Nov. 2012 - Feb. 2013 • Welwel Nov. 2011 – Feb. 2012	Powering Potential
1	Effect three-month wage payments to school Program trainers	2 teachers x 3 months per school	Powering Potential	Two teachers were paid TZS 300,000 each to conduct 3 months of training in each of the schools as follows: • Baray Nov. 2012 - Feb. 2013 • Endallah Nov. 2012 - Feb. 2013 • Florian Nov. 2011 – Feb. 2012 • Slahhamo Nov. 2012 - Feb. 2013 • Welwel Nov. 2011 – Jan. 2012	Powering Potential
1	Effect twelve-month wage payments to Program trainers hired by schools	1 of 2 teacher(s) x 12 months	Partnering School	• Banjika 0 PPP trainers because 2 permanent ICT teachers assigned by 2012 • Baray 1 trainer paid Feb. 2013 – May 2013 • Endallah 1 trainer paid from Feb. 2013 who is still employed as of the date of this report • Florian 2 trainers paid from Feb. 2012 – Jun. 2012 • Slahhamo 1 trainer paid from Feb. 2013 through May 2013 HM replaced with VETA trained teacher • Welwel 1 trainer paid from Feb. 2012 who is still employed as of the date of this report	Partnering schools

Table 4. 'PPP Implementation (Improvised) Status Matrix vs Action Plan' (continued)*

Output / Milestone		**Planned Targets by 30-06-2013**		**Status as of 31-08-2013 and Comment(s)**	
PHASE	**ACTIVITY**	**QUANTITY**	**RESPONSIBLE**	**ACTIVITY & QUANTITY**	**RESPONSIBLE**
1	Provision of budget for technology program maintenance	lump sum	LGA and partnering school	• Banjika budgeted TZS 2.5 M for 2014 based on collecting student technology fee of TZS 5,000 • Baray uses capitation funds • Endallah budgeted TZS 1.3M for 2014 • Florian asks students for TZS 5,000 each but uses the fee to cover other items as well as technology maintenance • Slahhamo budgeted TZS 2.45 M for 2014 based on collecting student technology fee of TZS 5,000 • Welwel funds technology replacement and repairs as needs arise	Karatu District Council (LGA) and partnering school
2	Provision of qualified computer teacher (s) employed by Government on permanent and pensionable terms	1 or more teacher (s) per school	LGA	A total of 3 qualified computer teachers employed by Government on permanent and pensionable terms deployed at secondary schools as follows: • Banjika • Florian • Welwel	Karatu District Council (LGA)
2	Supply, installation and commissioning of additional energy-efficient computers on the school network	15 desktops with accessories	LGA and partnering school	A total of 15 additional sets under Phase 2 of energy-efficient computers supplied, installed and commissioned in 3 schools as follows: • Banjika – 1 set of 15 by May, 2011 • Florian – 1 set of 15 by May, 2013 • Welwel – 1 set of 15 by May, 2013	Karatu District Council (LGA), Powering Potential and partnering schools
2	Provision of the Ordinary Level National curriculum of Information and Computer Studies curriculum	1 package	School, LGA, NECTA	The three Phase 2 schools eligible to teach the National ICT curriculum began the program as follows: • Banjika Jan. 2012 • Florian Jan. 2013 • Welwel Jan. 2014	Partnering schools, LGA, NECTA

1.5.4 Efficiency and Effectiveness of the Program

1.5.4.1 Efficiency

Powering Potential was noted to operate by using systematic plans and procedures efficiently. The efficiency could be attributed to its streamlined lean organizational structure that did not attract bureaucratic operations as is usually noted in large and complex organizations. Efficient decision-making processes ensured expedited execution of tasks. As an illustration, successful implementation of programs was being achieved despite using the participatory method/style that ensured democratic involvement of the beneficiaries. Under SEDP II the government would have spent a total of TZS 8,395 Million between July 2010 and June 2013 to provide computers to Government secondary schools (*Annex 2 – Component. 1.6.2*). However, the evaluation showed that the situation in the schools Karatu District had not improved, save for the support from Powering Potential that had managed to provide 75 out of 104 computers and training (*Annex 3*) within five years.

It can be argued that the design of Powering Potential and strict adherence by actors to rules, procedures and plans at all levels; and strong emphasis on training to all actors further enhanced efficiency across the board.

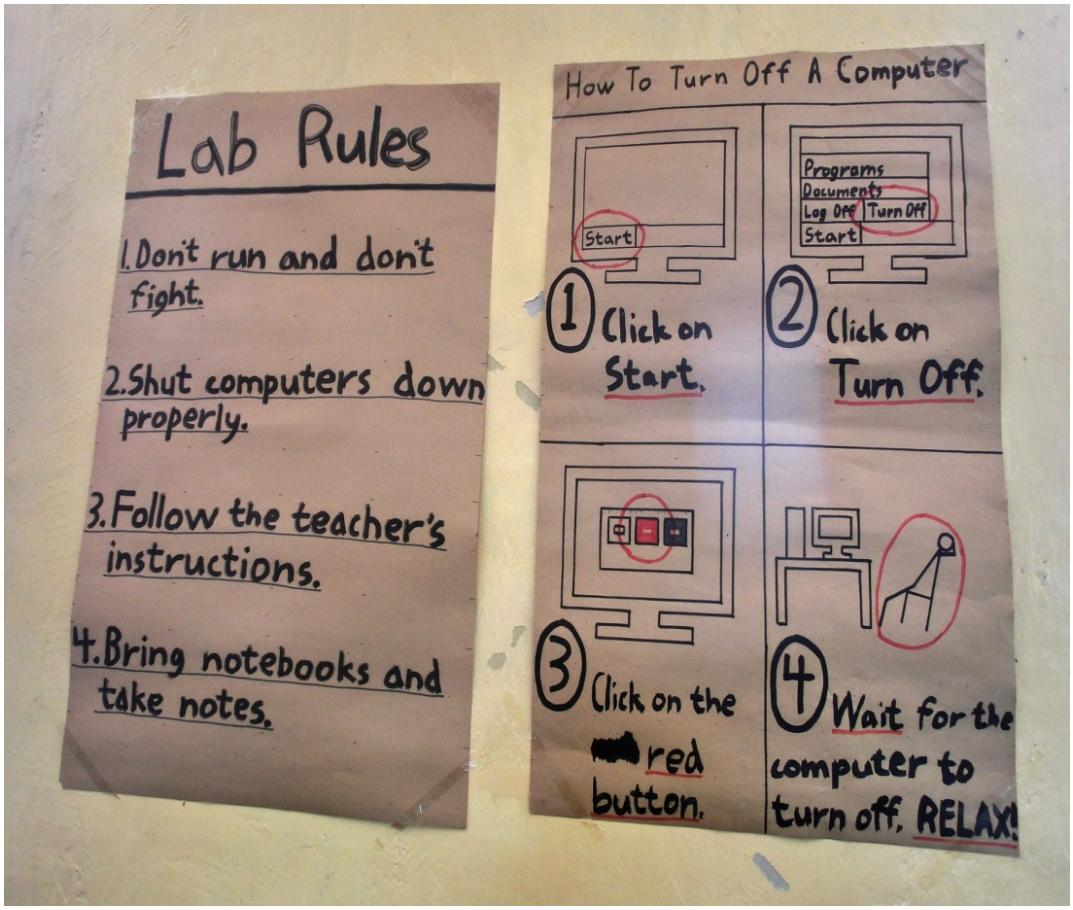


Figure 2: Poster in the Computer classroom at Endallah Secondary School

1.5.4.2 **Effectiveness**

Powering Potential was noted to have provided support to the schools effectively. The effectiveness could be attributed to key factors. Each selected school had to receive the support as a two-phased package. That approach afforded the stakeholders ample time to monitor and review progress of implementation to avoid heavy losses should the targeted beneficiary falter or default. In that manner, risks of suffering heavier losses that occur where a single-shot approach is used could be avoided. Apart from giving top priority to schools with least developed teaching-learning environment, Powering Potential insisted on appropriate technologies across the board especially: solar power system; energy-efficient computer network enabled with internet connectivity; and software (*Linux* and *Open Office*) that did not require protection such as antivirus. It is important to note that until at the time of the evaluation exercise all items provided under Powering Potential were still serviceable.

Figure 3: Solar power system installed at Banjika Secondary School (and other Schools under the Program).

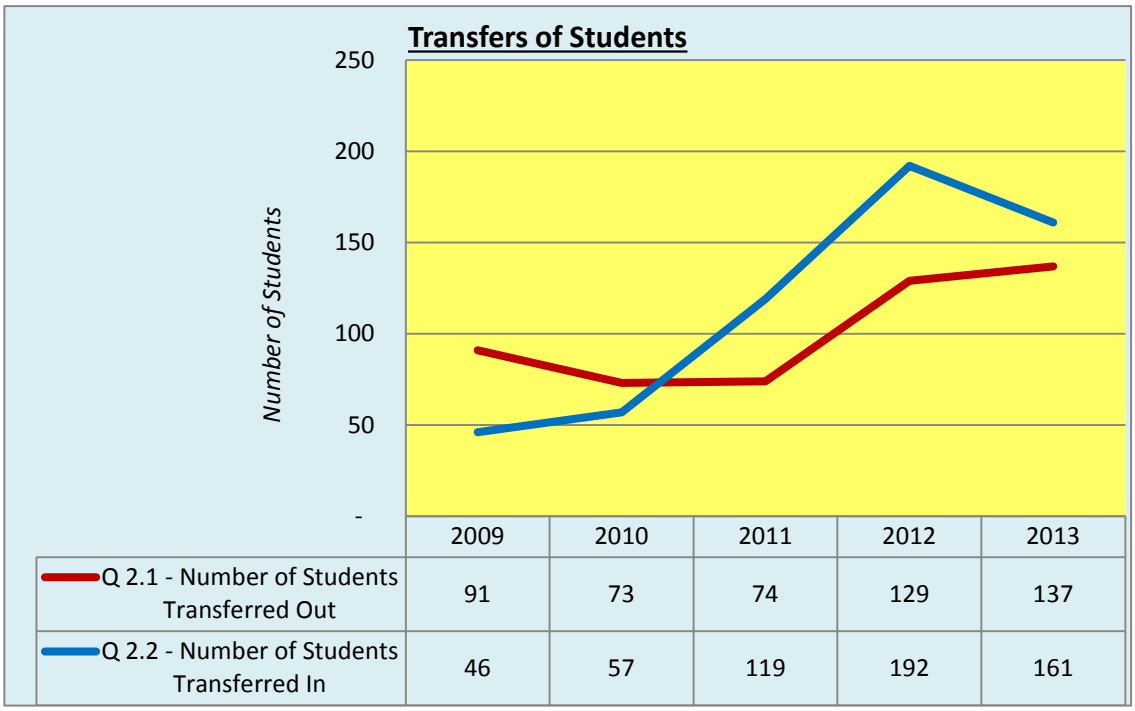
Figure 4: Energy-efficient computers installed at Welwel Secondary School (and other Schools under the Program).

1.5.5 Impacts of the Program

The evaluation recorded significant achievements that Powering Potential and its partnering stakeholders had made. The following milestones illustrate progress and impact:

- Six (6) solar power systems had been supplied, installed and commissioned in six (6) secondary schools.
- 75 sets of energy-efficient computers that were network-enabled with internet connectivity were supplied, installed and commissioned in six (6) secondary schools.
- More than 2,000 hours of technology training had been delivered to give more than 4,500 teachers and students different levels of exposure to computers (*Annex 7*).
- More than 1,500 teachers and students had completed the Powering Potential technology training course.
- 23 secondary school graduates have completed the five-month Train-the-Trainer course.

- 10 Train-the-Trainer graduates were employed as technology trainers.
- Three (3) teachers had enrolled in colleges to earn Bachelor's degrees related to Computer Science.
- There was a 500% increase in the number of students who transferred into the pilot (Banjika) Secondary School; and the trend was noted to persist i.e. an upsurge of students transferring into the six schools under the Program, while the trend of those who transferred out decreased notably as illustrated in *Figure 5*.



	2009	2010	2011	2012	2013
Q 2.1 - Number of Students Transferred Out	91	73	74	129	137
Q 2.2 - Number of Students Transferred In	46	57	119	192	161

Figure 5: Trend of Transfers of Students

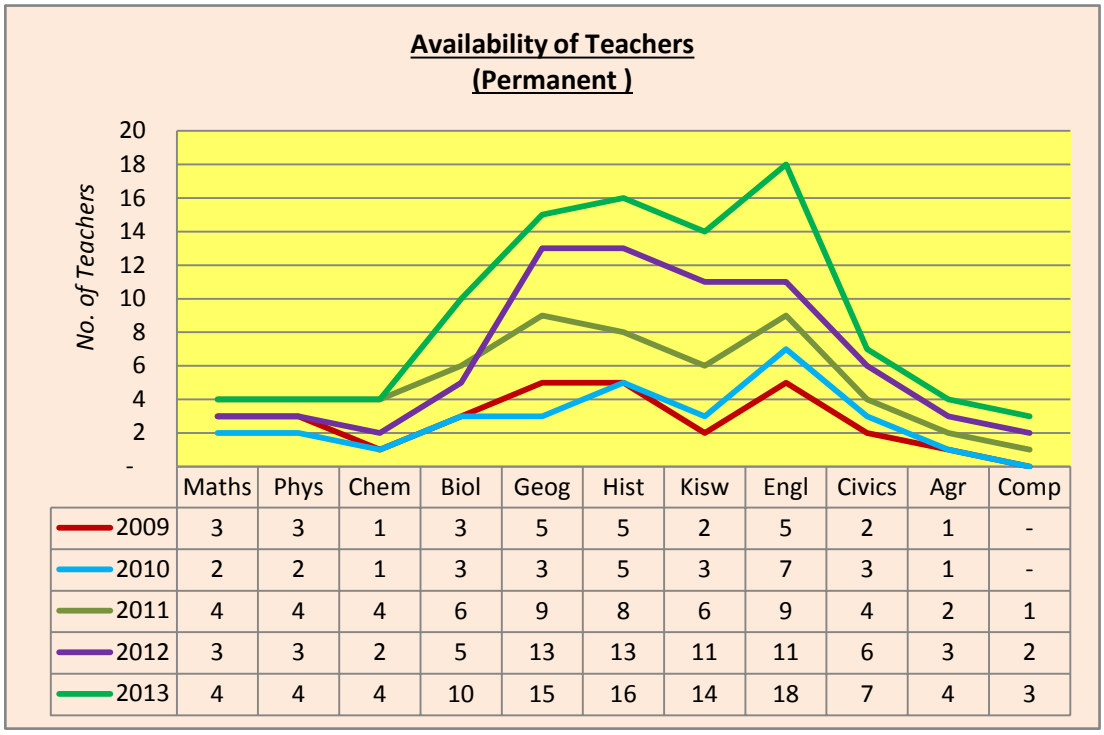
1.5.6 Strengths and Weaknesses

1.5.6.1 Availability of Teachers/Trainers

(1) Teachers:

It was revealed that overall, there was shortage of secondary schools teachers in Karatu District. As can be noted on *Annex 4* whereas, the District total requirement of teachers was 731 the actual was only 412 teachers (or 56% of the total requirement). The shortage was even more aggravated when expressed on a per-school basis: Endabash and Upper Kitete Secondary Schools ranking with the lowest of 23% of their respective requirements. The gravity of the shortage could be even more aggravated if further desegregated according to qualifications on teacher's respective teaching subjects (that was not possible to carry out due to time constraints). Consequently, this analysis could not be done according to *Teachers Student Ratio (PTR)* and *Qualified Teachers Student Ratio (PQTR)* on the basis of teachers' qualifications and on specific subjects areas at the District level. However, it was possible to derive some key indications from the written responses submitted by individual teachers

(FGD#2) as Figure 6 illustrates. The challenge of deploying adequately Mathematics and Science (Physics, Chemistry and Biology) teachers was noted to be still persistent.



	Maths	Phys	Chem	Biol	Geog	Hist	Kisw	Engl	Civics	Agr	Comp
2009	3	3	1	3	5	5	2	5	2	1	-
2010	2	2	1	3	3	5	3	7	3	1	-
2011	4	4	4	6	9	8	6	9	4	2	1
2012	3	3	2	5	13	13	11	11	6	3	2
2013	4	4	4	10	15	16	14	18	7	4	3

Figure 6: Availability of Teachers in Six Program Schools

As can be noted on *Annex 5* out of 19 teachers, 14 qualified to teach in secondary schools i.e. ten (53%) were degree holders and 4 (21%) were diploma holders. Furthermore, it was very likely that most of them were recent graduates as 16 (85%) of the 19 teachers had been in their respective schools for not more than five years following their first appointment. It was likely that by being fresh from colleges, most of those them were dynamic and innovative enough to fill gaps where there were no trainers.

(2) Trainers:

It was noted that overall that the shortage in the six secondary schools was acute. As can be noted on *Annex 6*, though ten (10) trainers had been deployed in five of the six secondary schools under the Program, in less than five years, eight (80%) had already left their respective posts. The gaps they left behind were yet to be adequately filled. The impact of the acute shortage could be felt especially at Baray and Slahhamo Secondary schools where volunteers were struggling to fill the vacant posts.

It was established that the trainers left for three principal reasons. Firstly, insecurity created by the inability by Karatu District Council to provide employment on permanent and pensionable terms (due to prevailing regulations). Secondly, low wages which were in most cases being paid inconsistently by majority of the schools. Thirdly, as the training provided by the Program improved their competencies and chances to obtain other vocational training courses, some of them left to join colleges to receive more formalized training offered by institutions registered by National Council for Technical Education (NACTE) and/or Vocational Education and Training Authority (VETA). Successful graduation from those

institutions would earn them certificates that command higher recognition and offer them better chances of better employment. N.B. This last reason is viewed by Powering Potential as a positive outcome of the program.

1.5.6.2 **Availability and Usability of Computers (ICT)**

(1) Availability of Computers (ICT):

It was revealed that there were a total of 104 computers in 29 secondary schools across Karatu District. It was particularly significant to note that 72% (75) of those had been supplied and deployed in six secondary schools by the Program (*Annex 3*). Since the three schools under Phase 1 of the Program were seen to be doing well according to contractual obligations, it was evident that they would sooner than later be receiving the remaining lot of 45 computers thus increasing the number to 120. It was projected that by then the total contribution of 120 computers from the Program would be serving about 3,000 students and 100 teachers in the six secondary schools (*Annex 11*).

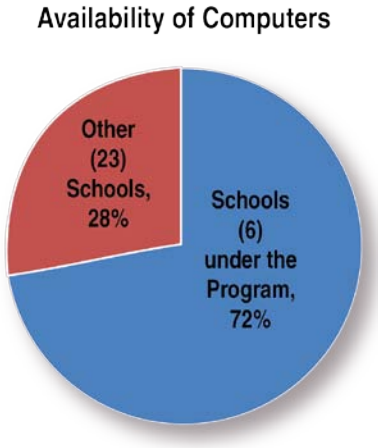


Figure 7: Impact of the Program's contribution in Karatu District

Significant technological differences were also noted including those illustrated in *Figure 8* and *Figure 9*. Those supplied by the Program were seen to be hand-picked with emphasis on appropriate technologies across the board, especially: solar power system; energy-efficient computer network enabled with internet connectivity; and software (*Linux* and *Open Office*) that did not require routine protection such as antivirus like other computers supplied to schools. The computer sets supplied by the Program were found to be extremely adaptable and suitable for use in schools that were yet to be connected to the National Grid (TANESCO) supply network (yet even where those that were covered, the power supply was often inconsistent). More importantly, was the aspect recouping bigger savings through enormous energy cost cuts.

Figure 8: Sample of computers deployed at Ganako Secondary School

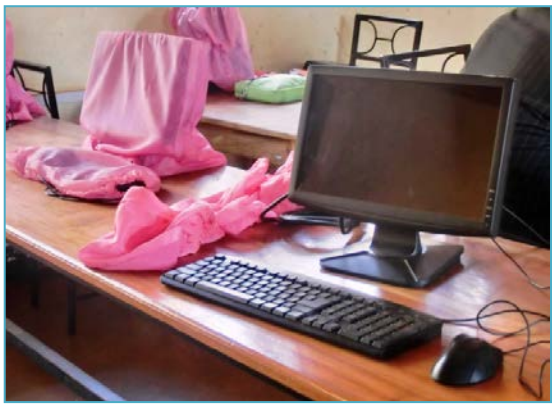


Figure 9: Sample of computers deployed at the Program secondary schools

The use of solar power supply systems that were provided by the Program was noted as another important factor towards lowering of running costs. Submission by Endallah Headmaster

provided a practical contrast between the two power supply systems that typified rural Tanzania. His School has 5 computer sets provided by the Program (under Phase 1) and 15 PCs and 8 Laptops obtained from other sources. The former sets were being powered from the accompanying solar power system while the latter sets were being powered from a diesel/gasoil generator thus they consumed much more power. The Headmaster insisted that the school almost abandoned the use of the latter in favor of the Program-supplied computers due to their high operating costs. According to his submission, it was costing the school at least an equivalent of US$15 per week (five working days) to run the generator for 7 hours a day.

The strategic choice of tailor-made application software was noted as being another merit. Apart from choosing *Linux* and *Open Office* for all computers sets they supplied, the Program opted for an application called, '*Remote Areas Community Hotspots for Education and Learning (*RACHEL*)*'. The pre-installed software that provided a wide range of educational content came from *worldpossible.org*. The software included selected Wikipedia articles, Khan Academy Mathematics and Science instructional videos; e-books of World literature from Project Gutenberg; and medical reference books. On the other hand, computers from other sources did not contain any software like RACHEL except at Endallah where there was standard *Wikipedia*. The trainer at the school emphasized that the former software was more favorable because it presented the educational content in great depth and more clarity.

Although direct provision of hand-picked computer sets by the Program to the government (LGA) secondary schools proved to have many strategic advantages, the method was noted to pose a few challenges. Local dealers were not able to provide vital rapid 'after-sale' support services to the schools. Non-existence of local dealers denied the schools from accessing any alternative local supply chain centers from where they procure directly any requirements whether additional, similar computers or compatible accessories. More so, the procuring regulations that governed their school finances was a complex constraint.

(2) Usability of Computers (ICT):

It was noted that the usage of available computers especially to access RACHEL for teaching and learning purposes was gaining momentum. Students in all schools under the Program demonstrated their competency to access and manipulate it to obtain the content they needed to learn. On their part teachers, expressed the wide range of advantages they got from using the computers especially in handling *Education Management Information System (EMIS)* activities. They cited examples like management of examinations, data processing and reporting. Regarding RACHEL some of them even wished it provided room for editing so that they could use to prepare their lesson notes.

Despite the successes, some challenges were noted regarding the usability of the computers. As can be noted on *Annexes 5* and *8, a* significant number of teachers and even some Heads of Schools expressed their strong opinions regarding the importance for them to receive training/orientation as target beneficiaries as well as facilitators to students. They felt that training/orientation sessions at different levels were essential for equipping them with the necessary knowledge and skills. Responses from both school administrations and teachers indicated that a significant number of them were not able to maximize use of the computers because they lacked sufficient knowledge and skills. Nor were timetables availed by the

schools to show that there were formal training sessions being implemented by the schools as per the Program procedures.

They concurred on the importance of providing more cross-cutting training especially through inclusive in-service training/orientation courses. It was imperative that once all teachers became familiar and competent enough to operate the computers they would build confidence. Otherwise, some teachers who felt they lacked the necessary competency exhibited symptoms tantamount to alienation.

1.5.6.3 **Availability of Financial Resources**

It was noted that like most NGOs, Powering Potential obtained 'seed' funds mainly from individuals and foundation donors. The Organization then uses the seed funds to attract partnering LGAs (district) and individual schools (community) to begin a project. The cost sharing approach has a major advantage of instilling the sense of ownership and hence enhances sustainability. It was clear indication that the rapid expansion from phase one to the second reflected the rapid financial contributions from the Karatu District Council and respective individual schools. The District as well as the six schools under the Program expressed their positive stance on the approach and were ready to collaborate even further. On the other hand, it was noted that though under SEDP II by 2014 as per component 1.6.2 (*Annex 2*) there would be funds for provision of computers for 1,500 Government secondary schools; the Program did not reflect how that could influence its plan.

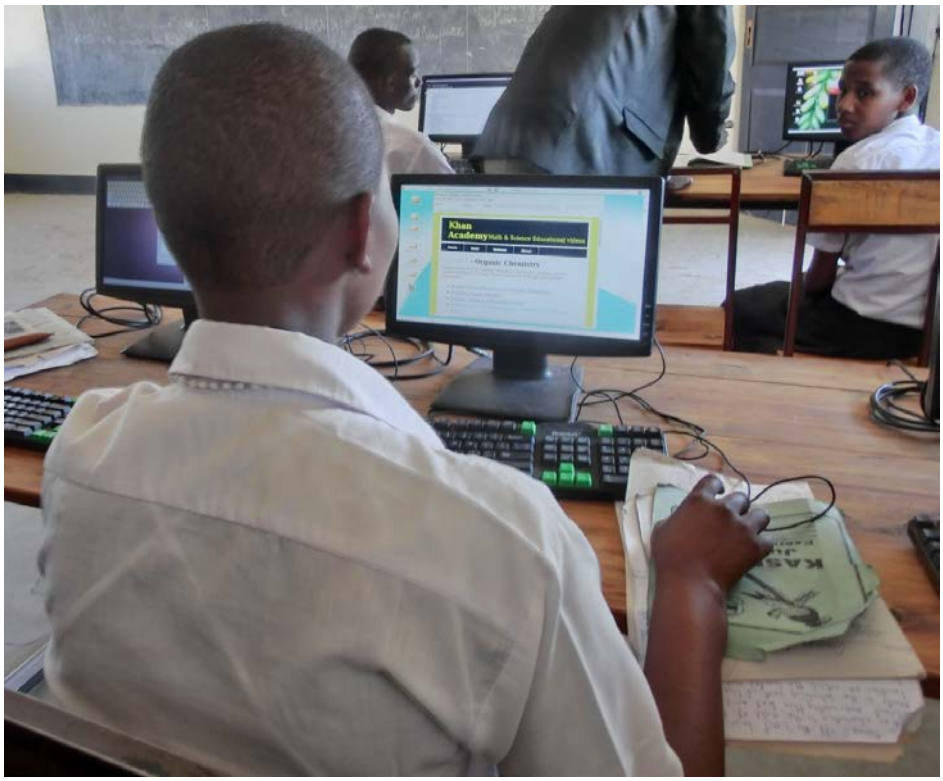


Figure 10: A student at Baray Secondary School accessing RACHEL

Despite the successful partnering, still Karatu as an LGA, submitted that it was facing some challenges in the collaboration with Powering Potential. It was noted that due to different entry points in fiscal years, the two sides could not synchronize their budget calendars and

activity plans. As a result, the district often had to struggle to meet its obligations and that sometimes affected implementation of joint projects.

(1) Monitoring and Evaluation

It was noted that the Program used to monitor and report at convenient frequencies, but there existed no framework that could ensure regular monitoring and evaluation to produce consistent evidence for precise decision-making and planning. Similarly, though the Department of School and College Inspection plays an import role in ensuring efficient and effective implementation of programs, it was noted that the Karatu District Inspectors of Schools and Colleges were not participating directly in the Program because of structural arrangement. Inspection of secondary schools (and others) was the responsibility of the Zonal and Regional levels whereas the District dealt with Primary and Adult education only.

Chapter 3. Conclusions and Recommendations

1.6 Conclusions

(1) Organizational Structure of Powering Potential

Powering Potential is an NGO that is based in New York City, United States of America, but has a branch office in Tanzania at Karatu Township in Arusha Region. The Organization provides technology infrastructure (computers and solar power equipment) and offers technology training to government secondary schools. Collaborations with the beneficiaries were noted to be varied from District to school level. Having gained notable achievements, the Organization and partners are gearing up to embark on national roll-out. It is important that structural and institutional restructuring will be required to enhance efficiency, effectiveness and sustainability.

(2) Mobilization of Funds for the Program

Powering Potential obtains financial resource from individuals and foundation donors. The Organization uses the money to stimulate the potential inherent within a particular school community and partnering LGA (district) to jointly formulate and implement a project. Since it was noted that Powering Potential and Karatu District Council as major partners were experiencing some difficulties in mobilizing funds in good time, it became apparent that the two should review their budget calendars and activity plans to enhance efficiency. Furthermore, it is important that initiatives from multiple partners and even potential ones should be synergized. There are other sources of funds including SEDP II that Powering Potential can utilize directly or indirectly as a catalyst to accelerate the scheduled activities. According to SEDP II a total of 1,500 Government secondary schools are expected to receive ICT (computers) facilities (and other support services) by 2014. Through participation by Powering Potential in such key plans, schools as ultimate beneficiaries are bound to get their fair share of benefits. The cost-sharing scheme is also another viable source of funds, particularly at the school level.

(3) Training Courses under the Program

The competency that the trainers (though only a few were still remaining) and students demonstrated enough proof that the Powering Potential curriculum was very appropriate and user-friendly. However, a majority of teachers and even heads of schools expressed their lack of sufficient knowledge and skills to be able to use the computers accordingly. However, according to the Program, each school was supposed to have two trainers who would teach the teachers and students. Therefore, those teachers' responses constituted enough evidence to prove that the role that was supposed to be played by the two trainers at the school level was not adequately handled. The teachers' responses underscored the fact that the challenge required a different strategic approach in order for the beneficiaries to realize maximum advantages.

(4) Employment of Teachers/Trainers under the Program

Teachers who qualify to teach the Powering Potential curriculum must have trained in computer course(s). Trainers who are graduates of the Program tend to be more competent,

they are employed by individual schools on temporary terms – earning low wages. On the other hand, their counterparts who happen to be teachers employed by the Government are covered by specific conditions of the Permanent and Pensionable Terms. Although the latter category constituted the majority, only a few were noted to be teaching the Program curriculum. It is clear that employment conditions that can ensure maximum retention of trainers is currently not in place as reflected by teachers leaving their posts after completing their Powering Potential sponsored tenure.

(5) Procurement of Computers (ICT) under the Program

Government (LGA) secondary schools as well as the District (as an LGA) are required to adhere to the Government procurement regulations. Therefore, their participation in the procurement of computer sets as currently provided by the Program becomes limited in a number of ways. Also, the method of direct importation does not enhance development of local dealership and local supply chain centers.

(6) Monitoring and Evaluation

Powering Potential was noted as being in the process of developing a standard M&E framework that will ensure that regular monitoring and evaluation activities are carried out accordingly to produce consistent evidence for precise decision-making and planning. Similarly, the Department of School and College Inspection at Karatu District office was noted as consulting with the higher authorities to review the structural arrangement so that the District level could also participate directly in the Program.

1.7 Recommendations

In light of the above deliberations, the following recommendations are presented to form part of future implementation strategies of Powering Potential.

(1) Organizational Structure of Powering Potential

Since Powering Potential is bound to roll-out a national program it is recommended that its country office be moved to Dar-es-Salaam or Arusha. The change of location is intended to facilitate efficient and effective interaction with active as well as prospective donors. Likewise, the proposed organizational structure as illustrated in *Annex 9* takes into account the expanded scenario of the Organization envisaged to be implemented soon. It is clear that such structural and institutional changes will enhance visibility of the Organization nationally and improve synergies among development partners.

(2) Mobilization of Funds for the Program

It is recommended that:

(a) Basing on the, '*Tanzania National Budget Process*' (*Annex 10*) as extracted from the '*Tanzania Five-Year Development Plan (FYDP): 2011/12-2015/16*' Powering Potential and Tanzania partners (Karatu District Council etc.) should prepare a joint developed master plan that covers the remaining fiscal years. In such a master plan it will be possible to address the issue of different entry points along the time line.

(b) Linkages which will create platforms for information sharing between Powering Potential and other partners should be established (the Organization's choice of computers could be very appropriate as per SEDP II component 1.6.2). Also, the linkages will make the Organization's strategic contribution reflected more visibly in the Government plans at different levels.

(c) Partners in the Program should use local governments such as school boards to encourage beneficiaries, particularly students and teachers, to pay computer fees as part of cost-sharing schemes whch also enhance sustainability.

(3) Training Courses under the Program

It is recommended that:

(f) Since Powering Potential curriculum has proved to be so effective, it should be harmonized with those of VETA and NACTE so that graduates with the same certification consequently enjoy equal opportunities.

(g) The training courses on Powering Potential curriculum should be open to any qualifying Form 4 graduate depending on requisite resources, instead of being offered only to those candidates who are earmarked to teach in the respective schools after successful graduation.

(h) Every school under the Program should establish a specific timetable of training sessions to provide the required knowledge and skills to teachers and students.

(4) Employment of Teachers/Trainers under the Program

To ensure that competent trainers are deployed and retained in schools, it is recommended that those should be selected and trained from among teachers employed by the Government under Permanent and Pensionable Terms. Otherwise, trainers hired on temporary terms should not be expected to take full responsibility of the teaching workload.

(5) Procurement of Computers (ICTs) under the Program

Powering Potential should encourage the overseas source(s): whether manufacturers or sole distributors to establish a strong base locally by even simply appointing an appropriate local computer dealer(s) who will serve as local agent(s) to supply the goods and services. The overseas source(s) must also provide the necessary expertise to human resources that will be locally-based.

(6) Monitoring and Evaluation

It is recommended that:

(a) the 'joint development master plan' recommended in 3.2 (2)(a) above should include broader M&E section that will carry a specific M&E framework. Thereafter, each annual implementation plan that will be prepared by the implementing partner should include a more detailed M&E section with appropriate specific M&E framework and accompanying tools (proposals provided as *Annexes 12-15*).

(b) Powering Potential should initiate for the KDC to pursue with higher Government authorities, the issue of structural and institutional arrangement of the Department of Inspection of Schools and Colleges so that the District level is given mandate to cover secondary schools in its area as well.

Powering Potential Inc.

Educating-Through-Technology

www.poweringpotential.org

Annexes

to the

Evaluation Report of the
Powering Potential *Educating-Through-Technology* Program

Conducted in Karatu District, Tanzania
on August-September 2013

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Annex 1.1 | ToR for Evaluation of Powering Potential *Educating-Through-Technology* Program - 2013

1.0 Background

Tanzania is facing challenges in her endeavor to provide quality education. High failure rates in Science, Mathematics and English subjects especially in secondary national examinations are clear signs of the challenges prevalent in the education sector. The challenges are compounded by the critical shortage of quality teachers and teaching and learning materials given the recent unprecedented expansion in students' enrollment in secondary schools following the successful implementation of the Primary and Secondary Education Development Programs (PEDP and SEDP respectively). Strategically, therefore, Information and Communication Technology (ICT) is being given top priority in order also to leverage in alleviating the critical shortage of teachers and quality learning resources in secondary schools and teachers' colleges.

The Powering Potential *Educating-Through-Technology* Program in Tanzania was started in 2006. Currently, the Program is being implemented in six Secondary Schools in Karatu District, Arusha Region through financial support from the Governments of Tanzania and USA, corporations, community and individuals. The International Collaborative for Science, Education and the Environment serves as Powering Potential's 501(c)3 fiscal sponsor.

The ***Educating-Through-Technology*** **Program** has three main goals, namely:

(1) provide secondary schools with technology infrastructure (computers and solar power equipment) so that they can offer the national Information and Computer Studies curriculum;
(2) install digital educational content (RACHEL); and
(3) offer technology training because computer literacy is essential for Tanzanian youth to realize their full potential and to contribute to the development of their country in the increasingly interconnected (globalized) world.

This evaluation will focus on issues related to the implementation of the Powering Potential *Educating-Through-Technology* Program, thereby enhancing focused dialogue for precise and realistic planning of subsequent program formulation. The terms of reference (ToRs) have been prepared to guide the personnel that will be involved in the assignment scheduled to be conducted in the second and third weeks of August, 2013.

2.0 Objectives

2.1 Main Objective

The evaluation is intended to collect and document data that will serve to inform the stakeholders about the practical implementation and contribution of the Powering Potential *Educating-Through-Technology* Program in the education sector.

2.2 Specific Objectives

(1) to verify availability and condition of computers and solar power equipment;
(2) identify key challenges and opportunities related to the teaching and learning environment under the Program; and
(3) to assess the impact of the Program in the form of outcomes.

3.0 Methodology

3.1 Scope and Coverage

The evaluation will take place in the Karatu District Council and six secondary schools. The schools include: Banjika, Baray, Endallah, Florian, Slahamo and Welwel (within the District).

3.2 Methods of Data Collection

3.2.1 Focus Group Discussions (FGD)

3.2.1.1 FGD Participants

FGD #1	12 students
FGD #2a	6 Teachers (applying RACHEL)
FGD #2b	6 Teachers (not applying RACHEL)
FGD #3	12 Parents/School Board Members
FGD #4a **FGB #4b**	6 School Heads 6 Assistants
Total	**48 participants**

NB: FGD Criteria:

1) Focus group participation should be gender balanced, including equal numbers of male and female participants, whenever possible.
2) Participants should be drawn from each of the 6 schools.

3.2.2 Observation

Observation methods will be used when visiting school premises to assess various factors related to teaching, learning and application of the *Educating-Through-Technology* Program.

3.2.3 Courtesy Call and Debriefing

Courtesy call and debriefing will be conducted in District Council Headquarter with senior officials including the District Commissioner, District Executive Director, District Planning Officer, District Education Officer, and Councilors' Chair

NB: A checklist should be developed to help standardize the categories of observation used at all schools.

3.3 Priority Areas of Interest

The following areas of interest will be reflected in the monitoring tools that will be used in the Fieldwork; e.g.:

(a) qualifications of teachers and their professional development
(b) teaching and learning environment
(c) teaching and learning process
(d) assessment of students and teachers
(e) assessment of financial investments and school management.

NB: under each component, questions in the monitoring tools that will guide the discussion shall be probed by using a gender perspective; e.g.:

3.3.1 Strengths and weaknesses in terms of:

- ✓ availability of teachers – number of qualified and non-qualified (Teachers Student Ratio and Qualified Teachers Student Ratio);
- ✓ teacher absenteeism;
- ✓ student dropout;
- ✓ relevance of RACHEL;
- ✓ effectiveness of Powering Potential three month curriculum
- ✓ availability and quality of textbooks (Book Pupil/Student Ratio);
- ✓ teaching methods; and
- ✓ other relevant aspects regarding the teaching and learning process.

3.3.2 Situation of school in terms of:

- ✓ availability and condition of computers (and other Program ICTs), library, laboratories, workshops;
- ✓ availability of required furniture (e.g. students' desks);
- ✓ availability of clean water (for sanitation - importance of clean hands before using computer); and
- ✓ other relevant aspects regarding the learning environment.

3.3.3 Assessment of pupils/students in terms of:

- ✓ allocation of time for assessment of students;

- ✓ feed-back mechanisms – questions, tests/exams, etc.
- ✓ comparative pass rates 2007 - 2012 (national examinations/school examinations);
- ✓ factors contributing to performance trends; and
- ✓ other relevant aspects regarding the assessment of pupils/students.

3.3.4 Status of teachers in terms of:

- ✓ Teachers' qualifications, experience and attitudes towards work;
- ✓ Incentives of teachers to teach;
- ✓ Recruitment, deployment and retention processes;
- ✓ In-service training opportunities; and
- ✓ Other relevant aspects regarding teachers' professional development.

3.3.5 Aspects regarding management and financial issues related to deployment of the Program ICTs:

- ✓ Procurement of ICTs and other TLM (textbooks etc.);
- ✓ Deployment and retention of Science and Mathematics teachers;
- ✓ Usage of available resources;
- ✓ The role of school inspection reports; and
- ✓ Other relevant aspects regarding management and financial issues.

4.0 Time Frame

The Monitoring and reporting activity will take nine (9) working days plus three travel days to/from Dar es Salaam/Karatu.

5.0 Reporting

The monitoring report will be a synthesis that presents and analyses trends, highlights successes and challenges, identifies issues that require further follow-up, and includes lessons learnt that can be used to improve the future. It will be written in English.

6.0 Budget

The estimated cost for the Monitoring activity is 1,250,000 TZS / US$777 (exchange rate of 1,608) as per details shown in the following table:

S/N	ITEM	QUANTITY	RATE TSH/US$	TOTAL COST US$
1	**Per-diem for Monitor**	1 person x 9 days	$50/day	**$450**
2	**Travel/Fuel expense**	2,000 km@10k/ltr	2,100 TZS/liter	**$260**
3	**Communication costs**	1 participants		**$20**
4	**Report writing**	Lump sum		**$10**
5	**Contingency 5%**			**$37**
Grand Total				**$777**

Annex 1.2 | Questionnaires

Annex 1.2.1 | QUESTIONNAIRE #HM-1
Headmaster School Information - 1

Annex 1.2.2 | QUESTIONNAIRE #HM-2
Headmaster School Information - 2

Annex 1.2.3 | QUESTIONNAIRE #T-1
Teacher Information

Annex 1.2.1 | QUESTIONNAIRE #HM-1
Headmaster School Information - 1

1.0 S.S. ……., P.O. Box ……..,
……., Phone: ……...…

2.0 School Data:

2.1 Students:

FORM	2009		2010		2011		2012		2013	
	ML	FML	ML	FML	ML	FML	ML	FML	ML	FML
F.1										
F.2										
F.3										
F.4										
TTL										

2.2 Teachers - Permanent

TCHNG SBJCTS	2009		2010		2011		2012		2013	
	ML	FML	ML	FML	ML	FML	ML	FML	ML	FML
TTL										

2.3 Teachers – Temporary/Volunteer

TCHNG SBJCTS	2009		2010		2011		2012		2013	
	ML	FML	ML	FML	ML	FML	ML	FML	ML	FML
TTL										

3.0 Head of School:

3.1 My name is ……

3.2 I started heading this School in (year) ……

3.3 Subjects I qualify to teach are:

(a) ……..

(b) ……..

(c) ……..

(d) ……..

(e) ……..

3.4 Do you have competency to use the Program computers (ICTs) in the teaching and learning environment? '***Yes/No***'. If '*Yes*', you obtained the competency through training course(es):

(f) provided by ……. college/University

(g) provided as special course(es) by

……. at

…….

3.5 The training you obtained lasted for ……

3.6 Does your School offer special training to provide competencies for using the Program computers (ICTs) in teaching and learning environment? '***Yes/No***'. If '*Yes*', the teachers/trainers received the training:

(h) at ……. College(s)/University(ies)

(i) at ……. provided as special course by ……

3.7 In the implementation of, "Powering Potential *Educating-Through-Technology* Program":

(j) how many teachers/trainers received training on, "RACHEL" with an aim of using the Program computers (ICTs) in teaching and learning environment? ……

(k) how many teachers/trainers use, "RACHEL" with an aim of using the Program computers (ICTs) in teaching and learning environment? ……

3.8 Give your opinion(s)/view(s) on the "Powering Potential *Educating-Through-Technology* Program":

……
……
……
……
……
……
……
……

Annex 1.2.2 | QUESTIONNAIRE #HM-2
Headmaster School Information - 2

4.0 S.S. ……., P.O. Box. ……..,
……., Phone ……

5.0 Specific Data of School:

5.1 Students **TRANSFERRED OUT**:

FORM	2009		2010		2011		2012		2013	
	ML	FML	ML	FML	ML	FML	ML	FML	ML	FML
F.1										
F.2										
F.3										
F.4										
TTL										

5.2 Students **TRANSFERRED IN**:

FORM	2009		2010		2011		2012		2013	
	ML	FML	ML	FML	ML	FML	ML	FML	ML	FML
F.1										
F.2										
F.3										
F.4										
TTL										

5.3 Students already using or learning how to use the computers (ICTs) provided by 'Powering Potential *Educating-Through-Technology* Program' in the teaching and learning environment:

FORM	2009		2010		2011		2012		2013	
	ML	FML	ML	FML	ML	FML	ML	FML	ML	FML
F.1										
F.2										
F.3										
F.4										
TTL										

5.4 Students already using or learning how to use 'RACHEL' content in learning various subjects:

FORM	2009		2010		2011		2012		2013	
	ML	FML	ML	FML	ML	FML	ML	FML	ML	FML
F.1										
F.2										
F.3										
F.4										
TTL										

5.5 Teachers using the computers (ICTs) provided by 'Powering Potential *Educating-Through-Technology* Program' in teaching and learning environment:

SUBJECTS	2009		2010		2011		2012		2013	
	ML	FML	ML	FML	ML	FML	ML	FML	ML	FML
TTL										

5.6 Teachers using 'RACHEL' for teaching and learning various subjects:

SUBJECTS	2009		2010		2011		2012		2013	
	ML	FML	ML	FML	ML	FML	ML	FML	ML	FML
TTL										

Annex 1.2.3 | QUESTIONNAIRE #T-1
Teacher Information

1.0 My name (teacher's name) is: ……..

1.1 My level in teaching profession is ……

1.2 I started teaching in this School on (year): ……

1.3 Which subjects do you qualify to teach?

(a) ……..

(b) ……..

(c) ……..

(d) ……..

(e) ……..

1.4 Do you have competency to teach computer (ICT) subject and/or use computers (ICTs) in the teaching and learning environment? '***Yes/No****'. If '*yes*', how did you receive the training?

…….

(a) provided by College(s)/University(ies)*;

(b) through tailor-made training course(s)*;

(c) through self teaching*.

1.5 How long did the training take ……..

[year(s)/month(s)/week(s)/day(s)]

1.6 Do you have competency to utilize 'RACHEL' in the teaching and learning environment? As part of implementation of the 'Powering Potential *Educating-Through-Technology* Program'

(a) '***Yes/No****'. If '*yes*', how did you receive the training?

……

……

- ✓ provided by College(s)/University(ies)*;
- ✓ through tailor-made training course(s)*;
- ✓ through self teaching*.

(b) How many students attend lessons where 'RACHEL' is utilized for teaching and learning other subjects **(fill Table below*)**.

Form	2009		2010		2011		2012		2013	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
1										
2										
3										
4										
TTL										

(c) In your own opinion, 'RACHEL' is:

(i) **<u>best</u>** suited for teaching and learning the following subjects/topics:

- ✓ …….
- ✓ ……..……
- ✓ ……..
- ✓ ……..…...
- ✓ ……..…….
- ✓ ……..……
- ✓ ……..
- ✓ ……...

(ii) **well** suited for teaching and learning the following subjects/topics:

- ✓ …….
- ✓ ……..……
- ✓ ……..
- ✓ ……...
- ✓ …….
- ✓ ……..……
- ✓ ……..
- ✓ ……...

(iii) **Somehow** suited for teaching and learning the following subjects/topics:

- ✓ …….
- ✓ ……..……
- ✓ ……..
- ✓ ……...
- ✓ …….
- ✓ ……..……
- ✓ ……..
- ✓ ……...

(d) And therefore, in your own opinion, 'RACHEL' could suit better if:

……
……
……
……
……
……
……
……
……
……
……

(e) Provide your overall view/opinion on the 'Powering Potential *Educating-Through-Technology* Program':

……

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……..….

Annex 2.0 | SCENARIO 1 – Table B: Detailed Budget Estimates by Key Program Areas, 2010/11 – 2014/15*

(Figures in Millions Tshs)

S/N	KEY AREA	2010/11	2011/12	2012/13	2013/14	2014/15	Total
	Salaries	**213,191**	**263,376**	**315,680**	**369,298**	**424,558**	**1,586,103**
	1: Improvement of the Quality and Relevance						
1.1.2	Provide capitation grant of Tshs 25,000 for teaching and learning materials per pupil per year for Government schools	37,309	40,478	43,121	43,034	44,742	208,684
1.1.3	Capacity of TIE to produce curriculum support materials enhanced by 2012	420	1,050	630			2,100
1.1.4	Office of Commissioner of Education strengthened to provide quality control of educational materials	410	1,025	615			2,050
1.1.5	Schools having functioning laboratories increased from 150 in 2009 to 2500 in 2014	22,795	22,795	22,795	22,795	22,795	113,975
1.1.6	Well stocked libraries/ reading rooms present in 2500 schools by 2013	29,483	44,224	44,224	29,483	-	147,413
1.2.1	All secondary schools and teachers colleges inspected, including self evaluation, once per year by 2015	1,355	1,422	1,494	1,568	1,647	7,486
1.2.3	All heads of secondary schools, WECs and Council personnel oriented on school site supervision by 2013	725	870	870	435		2,901
1.2.4	Continuous professional development of teachers through school based training in place	43	48	52	57	63	264
1.2.6	Each S/M teacher to attend in service Training at least once in two years from 2012	4,725		5,197			9,922
1.3.1	A total of 550 Inspectors recruited and posted to zonal and district offices by 2014	137	205	205	68	68	685
1.3.2	A total of 143 Zonal and District inspectorate offices equipped and re-tooled by 2013	295	442	442	295		1,473
1.3.3	800 inspectors given professional development training by 2014	192	576	576	384	192	1,920
1.4.1	At least 3 institutions have facilities to train laboratory technicians by 2012	81	108	81			270
1.4.2	The capacity of SLADS increased to train 20% more library assistants than they are currently producing by 2013	34	85	51			170
1.4.3	A total of 150 library assistant and 150 laboratory technicians recruited and posted to schools and colleges by 2013	71	142	107	36		356

S/N	KEY AREA	2010/11	2011/12	2012/13	2013/14	2014/15	Total
1.5.2	Provision of necessary facilities for efficient execution of NECTA activities in place by 2011	580	870				1,450
1.5.3	Assessment and examinations policies and practices reviewed by 2012		78				78
1.5.4	NECTA personnel trained on appropriate assessment system by 2013	122	162	122			405
1.6.1	ICT facilities and Equipment-Maintenance-Plan in place and operational by 2011	0	47	0	0	0	47
1.6.2	Appropriate ICT facilities, equipment and teaching/learning materials availed to 1,500 schools and 21 IAE Regional centres by 2014	2,099	3,148	3,148	1,049	1,049	10,495
1.6.3	A total of 5,000 teachers trained in e-learning teaching by 2013.	900	1,800	1,350	450		4,500
1.6.4	Information and Computer Studies (ICS) subject taught in 1,000 secondary by 2013	170	179	187	197		733
1.7.1	Conduct fee structure survey for Non- Government secondary schools annually	-	51	56	62	68	238
1.7.3	Capitation Grants to 50,000 students from eligible schools disbursed by September of each year	625	656	689	724	760	3,454
1.8.1	A study on strengthening vocational skills into secondary education system conducted by 2011		389				389
	Sub Total	**102,569**	**120,852**	**126,013**	**100,637**	**71,385**	**521,455**
	2. Enhancement of Access and Equity						
2.1.1	Each region to have at least one eight streams, boarding school having A-level only students by 2013	821	1,642	1,231	410		4,105
2.1.2	Each district to have at least two boarding schools having both 'O' and 'A' level by 2013	5,747	11,493	5,747	5,747		28,733
2.1.4	All rural Government schools with no hydropower supplied with solar power by 2015	12,210	12,210	12,210	12,210	12,210	61,050
2.1.5	A-Level integrated curriculum, study materials and learners manuals developed by 2012	34	45	34			113
2.1.7	800,000 copies of modules and learners manuals reprinted and distributed by 2011	2,560	3,840				6,400
2.2.1	4000 teachers/ matrons/ patrons trained on guidance and counseling by 2014	520	780	520	390	390	2,600
2.2.2	Peer guidance and counseling strengthened in all schools by 2012	410	431	452			1,293
2.2.3	Communities sensitised and organized to contribute for their children's meals by 2013	300	315	331			946
2.2.4	50% of all day schools provide at least one meal per day to their students by 2014	27,135	27,135	27,135	27,135	27,135	135,675

S/N	KEY AREA	2010/11	2011/12	2012/13	2013/14	2014/15	Total
2.2.5	Facilities for extra-curricular activities including sports and games provided to 50% of all schools by 2013	1,350	1,350	1,350	1,350		5,400
2.2.6	Support annual sports events.	1,440	1,440	1,440	1,440	1,440	7,200
2.3.1	Report on number and status of unfinished structures be in place by July, 2010	123					123
2.3.2	A plan for completing the structures to be in place by August, 2010	72					72
2.3.3	70% of the incomplete structures to be completed by 2013	40,800	40,800	40,800	40,800	40,800	204,000
2.3.4	1200 schools without administration blocks to have these constructed and furnished by 2014	17,146	17,146	17,146	17,146	17,146	85,728
2.3.5	900 schools especially in the rural areas to have at least 2 staff houses by 2014	14,515	14,515	14,515	14,515	14,515	72,576
2.3.6	500 schools to have adequate sanitation facilities especially for girls by 2013	581	871	871	581		2,904
2.4.1	To have 60,000 (from 40,000 of 2008) youths and adults enrolled in the ODL programme by 2014	200	200	200	200	200	1,000
2.4.2	Four ODL study centres coordinators from each region receive training on counseling skills by 2014	25	25	25	25	25	124
2.4.3	One ODL centre in each region equipped with learning facilities of the standard given by the Institute of Adult Education by 2014	273	273	410	273	137	1,365
2.5.1	Scheme for identifying and sponsoring beneficiaries of Government scholarship fund reviewed by 2010	81					81
2.5.3	Increase from 43,000 to 80,000 scholarships provided to eligible secondary school students annually by 2014	1,850	1,850	1,850	1,850	1,850	9,250
2.5.5	Scholarship scheme monitored annually	88	92	97	102	107	486
2.6.2	A total of 20 hostels accommodating at least 48 students each constructed annually	1,521	1,597	1,677	1,761	1,849	8,404
2.7.2	Additional Capitation Grant to the tune of Tsh. 25,000.00 per pupil per year disbursed each year	0	237	249	262	275	1,022
2.7.3	50% of all government secondary schools to be modified/rehabilitated to make schools' infrastructure friendly to students/people with disabilities by 2014	234	351	351	234		1,170
2.8.1	A total of 50 Ablution and latrine blocks for girls in schools constructed annually	1,500	1,575	1,654	1,736	1,823	8,288
2.8.2	An additional 100 girls' Hostels constructed by 2015 including adequate security.	1,521	2,282	2,282	761	761	7,605
2.8.3	TUSEME activities extend to all regions by 2015	259	389	389	130	130	1,297
2.8.4	Review of TUSEME activities carried out by 2011		85				85

S/N	KEY AREA	2010/11	2011/12	2012/13	2013/14	2014/15	Total
2.8.6	School rules and regulations reviewed by 2011, including the re-entry policy for pregnant girls		77				77
2.8.7	Special feature articles appearing on papers every week from 2012			42	46	50	138
2.9.1	All schools with girls to have effective remedial and mentorship programmes by 2014	400	400	400	400	400	2000
2.9.3	Science and math camps for girls scaled-up to include more regions and classes by 2014	1,200	1,260	1,323	1,389	1,459	6,631
	Sub Total	**134,915**	**144,706**	**134,729**	**130,891**	**122,700**	**667,940**
	3. Improvement of the Teaching Force and Teaching Processes						
3.1.1	Existing 16 Diploma Teachers Colleges rehabilitated and expanded to accommodate not less than 1,000 students each by 2014	720	2,160	2,160	1,440	720	7,200
3.1.2	A total of 35,000 diploma teachers trained between 2010 and 2014	2,051	2256	2482	2730	3003	12,522
3.1.3	Online teacher training courses initiated by 2012	420	441	463			1,324
3.1.4	A total of 3 TCs introducing the concurrent A-Level and Diploma teacher training by 2013		99				99
3.2.3	Adequate quality A-Level and O- Level teachers and school managers developed by 2014	2,856	2,856	2,856	2,856	2,856	14,282
3.3.1	Training needs assessment for teachers/tutors competence conducted by 2010	173	-	-	-	-	173
3.3.2	In-service Training (INSET) programmes designed by 2010	115	-	-	-	-	115
3.3.3	A total of 8 TRCs institutionalized, expanded/increased and equipped with appropriate facilities by 2012	333	333	333	-	-	1,000
3.4.1	3,500 new graduates annually taking posts in difficult and hard- to-reach areas receive Tsh 500,000	1,750	1,750	1,750	1,750	1,750	8,750
3.4.2	2,000 housing units built every year throughout the programme time	16,128	16,128	16,128	16,128	16,128	80,640
3.4.4	6,000 teachers receive short term training annually	3,210	3,371	3,539	3,716	3,902	17,737
3.5.2	Deployment of teachers currently in the field carried out and sustained by 2012	1,575	1,733	1,906			5,213
3.5.3	M&E carried out by PMO-RALG in collaboration with MOEVT officials regularly from 2010	538	565	593	623	654	2,973
	Sub Total	**29,869**	**31,692**	**32,210**	**29,243**	**29,013**	**152,027**

S/N	KEY AREA	2010/11	2011/12	2012/13	2013/14	2014/15	Total
	4. Improving Management Efficiency and Good Governance						
4.1.1	Human Resources situational analysis completed and then capacity building strategy finalized and operationalized by end of 2011	293	0	0	0	0	293
4.1.2	Use results of the HR situational analysis to ensure appropriate capacity is built to Heads of schools, School board members, Mangers of Non-Government schools, WECS, DSEOs, REOs, Ministry staff in Governance and Management of secondary education their different needs and levels	8,724	8,724	8,724	8,724	8,724	43,622
4.1.3	Monitoring and Evaluation Plan developed and operationalized by 2010	269					269
4.1.4	Monitoring exercises SEDP II conducted and reports prepared semi- annually	605	636	667	701	736	3,344
4.1.5	Diagnostic evaluation conducted and reports prepared as required		304	319	320	336	1,280
4.1.8	Inter-Ministerial meetings conducted twice yearly from 2010	383	402	422	443	465	2,114
4.1.10	Study on success of D by D carried out by 2012			351			351
4.2.1	Procurement and installation of EMIS equipment up to Council level completed by 2011	419	419				838
4.2.2	Training on how to operate the equipment up to Council levels completed by 2011	551	578				1,101
4.2.3	Capacity building on Data Base Management provided at all levels by 2012	413	433	455			1,301
4.2.4	Integrate and harmonize Education Sector Database at all levels	479	479	479	479	479	2,394
4.2.5	IEC offices retooled by 2010	12	-	-	-	-	12
4.2.6	IEC personnel given/ having basic training by 2010	115					115
4.2.7	SEDP activities publicized quarterly every year from 2011	300	315	331	347	365	1,658
	Sub Total	**12,561**	**12,290**	**11,748**	**11,014**	**11,105**	**58,690**
	E. Cross Cutting Issues						
5.1.1	Curricula of Cross Cutting Issues in secondary education reviewed and shared with stakeholders by 2011	338	338				675
5.1.2	Capacity for handling HIV/AIDS and life skills education of 16,000 teachers strengthened up by 2014	1,232	1,232	1,232	1,232	1,232	6,160
5.1.3	Needs assessment for pupils and personnel affected and infected with HIV/AIDS conducted by 2010	162					162

S/N	KEY AREA	2010/11	2011/12	2012/13	2013/14	2014/15	Total
5.1.5	Special feeding programme for affected and infected students in place by 2010	940	987	1,036	1,088	1,143	5,194
5.1.6	Workplace intervention programmes (VCT and Skill based education) in place by 2010	162					
5.1.7	Health programmes for affected and infected students in place by 2014	870	914	959	1,007	1,057	4,807
5.1.9	Home based care instituted and strengthened by 2011	830	872	915	961	1,009	4,586
5.1.10	Psychological services in place by 2011		79				79
5.2.1	Strategic plan completed and the portion related to secondary education implemented by 2011	243					243
5.2.2	Guidelines for integration of environmental issues in teaching in all subjects developed and disseminated by 2010	229					229
5.2.5	70% of all schools having water and sanitation requirements by 2013	2,850	2,850	2,850	2,850	2,850	14,250
	Sub Total	**7,855**	**7,270**	**6,993**	**7,138**	**7,291**	**36,385**
	GRAND TOTAL	**500,959**	**580,186**	**627,373**	**648,221**	**666,051**	**3,022,601**

*NOTE: Extracted from, 'Secondary Education Development Programme (SEDP) II (July 2010 – June 2015), MINISTRY OF EDUCATION AND VOCATIONAL TRAINING, Dar es Salaam, June 2010'

Assumptions:

- All things being equal, Scenario I consider the actual requirements in implementing SEDP II
- Capitation Grants for Government Secondary schools was assumed to be Tshs 25,000/= per student while that of Non- Government secondary schools was assumed Tshs 12,500/= per student.
- Capitation Grants for students with special learning needs was assumed to be 50,000/= per student currently there are 4,744 students.
- One meal per day for all Day Student is funded by this plan

Annex 3.0 | Availability of Computers (ICTs) in Schools: Karatu District as at 30 September, 2013

SER. NO.	SECONDARY SCHOOLS	COMPUTERS AVAILABLE			PROGRAM SCHOOLS
		ALL	PROG. SUPPLIED		
			NO.	%	
1	Awet	0	0	0	
2	Banjika S.S.	20	20	19	Phase 2
3	Baray S.S.	5	5	5	Phase 1
4	Chaenda	0	0	0	
5	Diego	0	0	0	
6	Domel	0	0	0	
7	Dr. Wilbrod Slaa	0	0	0	
8	Endabash	0	0	0	
9	Endallah S.S.	20	5	5	Phase 1
10	Florian S.S.	20	20	19	Phase 2
11	Ganako	10	0	0	
12	Getamock	0	0	0	
13	Gyekrum Arusha	0	0	0	
14	Gyekrum Lambo	0	0	0	
15	Kainam Rhotia	0	0	0	
16	Kansay	0	0	0	
17	Karatu	2	0	0	
18	Kilimamoja	0	0	0	
19	Kilimatembo	0	0	0	
20	Mang'ola	0	0	0	
21	Marang	0	0	0	
22	Mlimani Sumawe	0	0	0	
23	Oldean	0	0	0	
24	Orboshan	0	0	0	
25	Qangdend	0	0	0	
26	Qaru	2	0	0	
27	Slahhamo S.S.	5	5	5	Phase 1
28	Upper Kitete	0	0	0	
29	Welwel S.S.	20	20	19	Phase 2
TTL	29	104	75	72	6

Annex 4.0 | Availability of Teachers in Secondary Schools: Karatu District as at 30 September, 2013

SER. NO.	NAME OF SECONDARY SCHOOL	TEACHERS			PROGRAM SCHOOLS
		REQRD	PRESENT		
		NO.	NO.	%	
1	Awet	32	18	56	
2	Banjika S.S.	22	28	127	Phase 2
3	Baray S.S.	15	7	47	Phase 1
4	Chaenda	19	8	42	
5	Diego	33	23	70	
6	Domel	20	7	35	
7	Dr. Wilbrod Slaa	18	10	56	
8	Endabash	30	7	23	
9	Endallah S.S.	26	19	73	Phase 1
10	Florian S.S.	45	18	40	Phase 2
11	Ganako	49	33	67	
12	Getamock	16	9	56	
13	Gyekrum Arusha	26	16	62	
14	Gyekrum Lambo	19	8	42	
15	Kainam Rhotia	19	10	53	
16	Kansay	36	13	36	
17	Karatu	38	31	82	
18	Kilimamoja	33	11	33	
19	Kilimatembo	37	21	57	
20	Mang'ola	20	9	45	
21	Marang	15	10	67	
22	Mlimani Sumawe	9	11	122	
23	Oldean	19	9	47	
24	Orboshan	16	9	56	
25	Qangdend	16	5	31	
26	Qaru	18	9	50	
27	Slahhamo S.S.	24	14	58	Phase 1
28	Upper Kitete	26	6	23	
29	Welwel S.S.	35	33	94	Phase 2
TTL	29	731	412	56	

Annex 5.0 | Teachers'/Trainers' (T) Responses: Questions 1.6[d] & [e]

SCHOOL	TCHR'S (T) N	RESP S N	TEACHER'S RESPONSE	CLUSTER CODE
Banjika	**T.1**	(d)	I do not know because I have never used it (RACHEL) before.	
		(e)	I think the Program is good for those who use it.	
	T.2	(d)	If the assigned trained teacher assisted other teachers learn RACHEL and its applications to enable them prepare their lessons.	
		(e)	The Program is very good because it helps students learn how to use computers.	
			More computers should be provided to enable students learn without inconveniences.	
	T.3	(d)	If teachers were given short training courses on how to use ICTs in teaching-learning.	
		(e)	All classrooms should be supplied with electricity so that *Power Point* could be used for teaching-learning.	
Baray	**T.1**	(d)	If training or special guidance were given to assigned personnel for the Program in order to attain the set goal.	
		(e)	The Program should give more emphasis from lower levels of education upwards to enhance beneficiaries' attainment in learning.	
			The Program is also good and should be improved to reach the target group	
	T.2	(d)	If sufficient number of computers were provided for students and teachers to receive short training in order for them to better manage the teaching-learning process through RACHEL.	
		(e)	I propose there be short training courses for making the Program sustainable and for the benefits of children. Teachers be given at least one month training courses in order for them to be able to teach more practically than theoretically according to modern trends.	
	T.3	(d)	If Solar power supply were increased more computers with RACHEL could be deployed for teachers to receive better training that will enable them improve their competencies.	
			There should be adequate number of teachers competent and experienced in teaching appropriate computer programs.	
		(e)	The Program should provide more training courses on computer applications and also increase the number of computers because those available currently do not suffice students' needs	

SCHOOL	TCHR'S (T) N	RESP S N	TEACHER'S RESPONSE	CLUSTER CODE
Baray	**T.4**	(d)	If the number of computers were adequate or increased accordingly.	
			If the number of teachers were adequate to teach RACHEL programs (teachers be taught RACHEL).	
			If it (RACHEL) it will be used as a wholistic system for other subjects in the School.	
			If there could be grid electric or solar energy supply.	
		(e)	The Program is good here at School.	
			I would request the number of computers be increased to meet the number of students in the School.	
			The Program be integrated within the curriculum in order for it to be within the normal subjects in the School.	
Endallah	**T.1**	(d)	If students and teachers were taught and instructed on how to use RACHEL.	
		(e)	The program is good which if used well by teachers and students, will be a catalyst of development for all users and attendant environment.	
	T.2	(d)	More improvements are needed in order for it to be applied well.	
			Students be taught on how to use the Program in their lessons.	
		(e)	It is a good Program which aims to assist students together with teacher especially who are far from electricity and internet services.	
			If used well in respective areas, the Program will bring about major developments in education.	
	T.3	(d)	If they improved the network service more, because we receive the computer network with difficulty. That is what compels us to fetch such services from town.	
		(e)	Overall, it is a good Program especially for teachers and students to study further.	
			It would be better if more improvements could be effected to make the Program support a larger community.	
			Furthermore, even the community members around our School should be facilitated so that they utilise this Program applications to obtain vital information relevant for their needs.	
	T.4	(d)	If teachers, students even the School community at large were trained to use RACHEL for their development and nation as a whole.	
		(e)	It is a good and important service for all people, especially considering that we are in the world or century of science and technology.	
	T.5	(d)	If it contained sufficient content of Arts subjects like History.	
		(e)	The Program is very good and helps students to learn while teachers get more time to receive more training on computers and learn RACHEL as reference to their lessons.	

SCHOOL	TCHR'S (T) N	RESP S N	TEACHER'S RESPONSE	CLUSTER CODE
Florian	**T.1**	(d)	If it used Tanzania syllabus.	
		(e)	Overall, it is a good because it assists students to adapt to changes, especially in the world or century of science and technology.	
			Furthermore, subjects that are currently not included in this Program be mainstreamed so that success in its applications is reflected in all subjects.	
	T.2	(d)	If it contained topics used in the Tanzania syllabus.	
			If topics were sequenced according to the education system of Tanzania.	
			If it included some of the textbooks and supplementary books that contain content of secondary education.	
			If it used 'content and questions' approach for the secondary education subjects.	
		(e)	I think it is a good system that enables students in rural areas (villages) to learn more and improve their academic performance.	
			Also, I think it helps lessen to a certain extent, the teacher's responsibility of teaching everything.	
			It is a good system to enhance cooperation among the teacher and students together with world community at large.	
			However, it should be improved further.	
	T.3	(d)	If it contained topics used in the Tanzania syllabus.	
		(e)	It is a good system that helps very much students to learn especially those who are in the rural area (village).	
			It is a good system that helps very much students to become up-to-date and learn current issues.	
Slahhamo	**T.1**	(d)	RACHEL could be more useful if more adequate education and training about it could be provided to different people.	
			Also, if this service would be improved further in all aspects.	
			Furthermore, if sensitization of people such as teachers, students and others could cover various areas.	
		(e)	On my opinion, the Program helps very much in ICT academic development, especially in rural areas (villages).	
			The Program should continue to improve the infrastructure.	
			The Program should improve further employment/hire of those who graduate from the Program training courses.	

SCHOOL	TCHR'S (T) N	RESP S N	TEACHER'S RESPONSE	CLUSTER CODE
Slahhamo	**T.2**	(d)	If there were enough computers for every student while in classroom.	
			If there were a Multi-media projector to enable every teacher who teaches to show the lesson even if the computers are few.	
			RACHEL could be more useful if students would be encouraged to use it whenever they are studying as they will be motivated.	
			RACHEL could be more useful if the network enables the internet to connect easily.	
		(e)	I advise that trainers should have more competency in order for them to enable students love studying ICT.	
			I advise that the Program provide Multi-media projectors to alleviate ICT teaching tasks where computers and other teaching-learning resources are scarce.	
Welwel	**T.1**	(d)	If it could be improved and open faster than as is the case now whereby to access is a hustle.	
			If availability of internet could be coupled with RACHEL to enhance beneficiaries' benefits.	
			If some subjects e.g. *Agriculture* and *Kiswahili* and other content topics were included RACHEL.	
		(e)	Overall, the service of the Program is good and the beneficiaries are being educated more easily through RACHEL and online library.	
			The Program has cut down beneficiaries' expenses on stationery.	
			There should be permanent internet connectivity.	
			Beneficiaries to be guided on how to interact with *Open Office (Linux).*	
	T.2	(d)	If it was improved further because it helps us very much.	
			If more topics/subjects e.g. *Kiswahili* and *Civics* were added according to the syllabus.	
		(e)	The Program is very good and has helped us very much.	
			We urge that it should not end there—it could supply more computers.	
			We congratulate Madam Janice Lathen and urge her to continue and increase her warm hearted contributions.	

Annex 6.0 | Retention of Trainers as at 31 August, 2013

Name of Sec. School	Name of Trainer	Trainer's Duration at School					Present at Post	Left Post	Comments/Remarks
		2009	2010	2011	2012	2013			
Banjika	-	-	-	-	-	-	-	-	No trainer was posted to the school.
	-	-	-	-	-	-	-	-	
Baray	**Dennis Mayo**	-	-	-	1	-	-	1	The trainer was posted to school, completed his three month Powering Potential commitment and was asked by the school to continue training which he did. School did not pay him so he left after a few weeks.
	Heradeus Julius	-	-	-	1	-	-	1	The trainer was posted to school, completed his three month Powering Potential commitment and was asked to continue training which he did. He stayed until June 2013 and left because school delayed payment.
Endallah	**Karmeli Marco**	-	-	-	1	-	1	-	The trainer is still working/training at the school.
	Tsekeway Bura	-	-	-	1	-	-	1	The trainer was posted to school and completed his three month Powering Potential commitment.
Florian	**Samson Goodluck**	-	-	1	-	-	-	1	The trainer was posted to school, completed his three month Powering Potential commitment and was asked to continue training which he did. He left in August 2012 to go to college.
	Theresia Christopher	-	-	1	-	-	-	1	The trainer was posted to school, completed her three month Powering Potential commitment and was asked to continue training which she did. She left in June 2012 to pursue a different training course.
Slahhamo	**Anna Samuel**	-	-	-	1	-	-	1	The trainer was posted to school and completed her three month Powering Potential commitment.
	Theobald Julius	-	-	-	1	-	-	1	The trainer was posted to school, completed his three month Powering Potential commitment and was asked to continue training which he did. He then left the school in May 2013 because the school hired another trainer.
Welwel	**Happy Mashinga**	-	-	-	1	-	-	1	The trainer was posted to school and completed her three month Powering Potential commitment. She is employed by PPP as Office Assistant.
	Severine Herman	-	-	-	1	-	1	-	The trainer is still working/training at the school.
Total							**2**	**8**	**By 31 August 2013, of the ten (10) trainers hired under the Program between 2011 and 2012, eight (8 or 80%) had already left the respective schools. Only 2 (20%) were still working accordingly.**
%							**20**	**80**	

Annex 7.0 | Train-up Sessions and Outputs Carried out in Six Program Secondary Schools: 2009-2013

Name of Sec. School	Type of Output	Train-up Sessions and Number of Outputs																						Total 2009-13	Phase Completed
		2009				2010					2011							2012				2013			
		Jun	Sep	Oct	Dec	Mar	Jun	Oct	Nov	Dec	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Nov	Dec	Jan	Feb		
Banjika	**Students**	36	36		36	26	45		31	45	23							78				355		**711**	Phase 2
	Hours	45	45		45	40	45		40	45	420													**725**	
Welwel	**Students**															7	10	11	10			*		**38**	Phase 2
	Hours															45	67	68	66					**246**	
Florian	**Students**															28	50	50	16			46		**190**	Phase 2
	Hours															84	145	145	41					**415**	
Baray	**Students**																			119				**119**	Phase 1
	Hours																			151				**151**	
Endala	**Students**																			150				**150**	Phase 1
	Hours																			183				**183**	
Slahamo	**Students**																			154				**154**	Phase 1
	Hours																			52				**52**	
Total	**Students**																							**1,362**	
	Hours																							**1,772**	

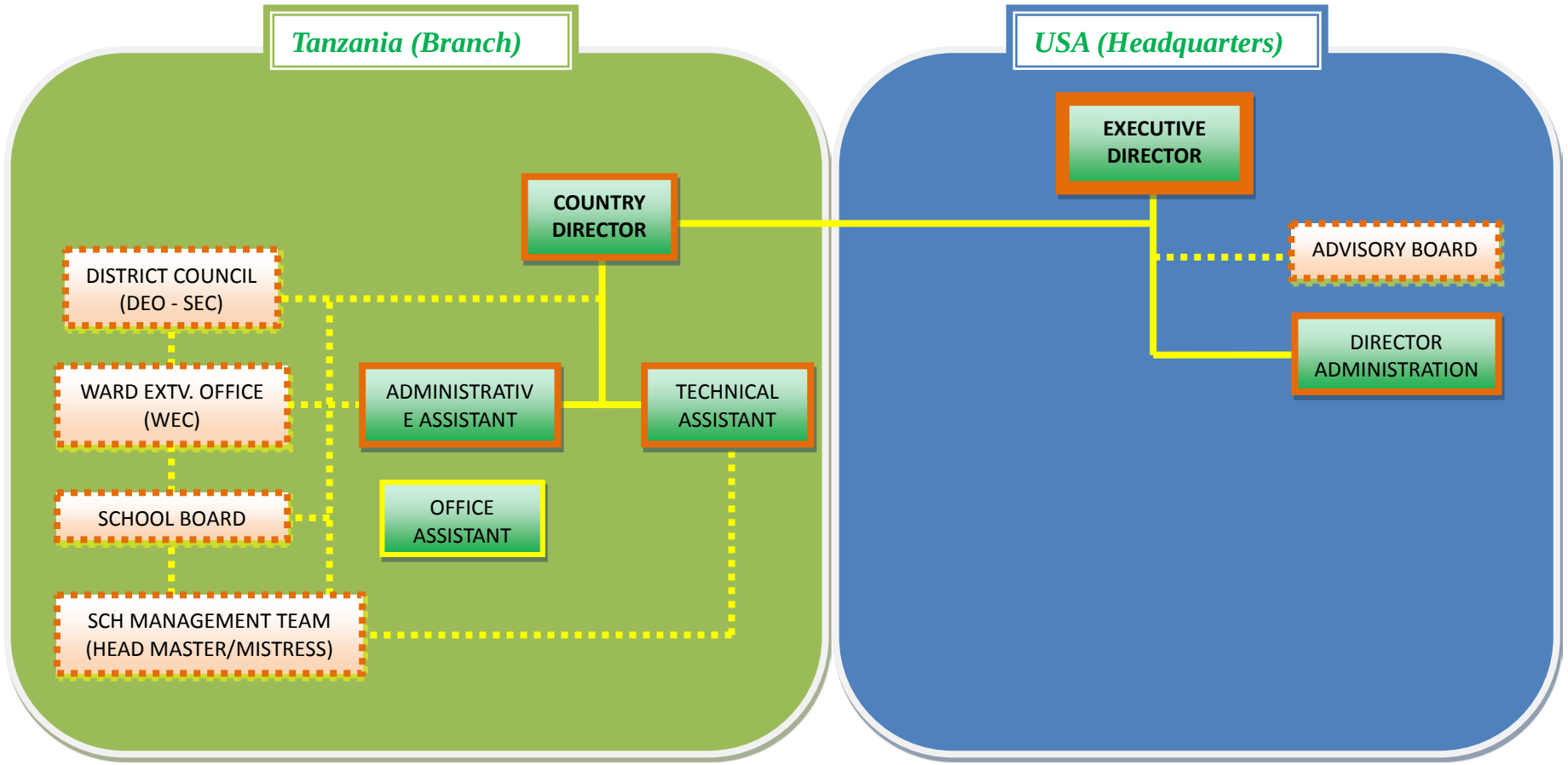
* unavailable

Annex 8.0 | Analysis of Responses of School Heads (HM-1): Questions 3.2 - 3.7

QSTN	ITEM DESCRIPTION	NAME OF SECONDARY SCHOOL						TOTAL	%
		BANJIKA	BARAY	ENDALLAH	FLORIAN	SLAHHAMO	WELWEL		
3.2	> 5 years	1	1	1	0	1	0	**4**	**67**
	1-5 years	0	0	0	1	0	1	**2**	**33**
	< 1 year	0	0	0	0	0	0	**0**	**0**
Total								**6**	**100**
3.3(a)	Civics	1	0	0	0	0	0	**1**	**7**
	History	1	1	0	1	1	0	**4**	**29**
	Geography	0	1	0	1	1	1	**4**	**29**
3.3(d)	Computer	0	0	0	0	0	0	**0**	**0**
3.3(e)	B. Maths	0	0	0	0	0	0	**0**	**0**
3.3(f)	Physics	0	0	0	0	0	0	**0**	**0**
3.3(g)	A/c, BK & Com	0	0	0	0	0	0	**0**	**0**
3.3(h)	Kiswahili	0	0	0	1	0	0	**1**	**7**
3.3(i)	English	1	0	0	0	0	0	**1**	**7**
3.3(j)	Biology	0	0	0	0	0	1	**1**	**7**
3.3(k)	Chemistry	0	0	1	0	0	0	**1**	**7**
3.3(l)	Agriculture	0	0	1	0	0	0	**1**	**7**
3.3(m)	Genl. Studies	0	0	0	0	0	0	**0**	**0**
Total								**14**	**100**
3.4	'Yes'	0	1	0	0	0	1	**2**	
	'No'	1	0	1	1	1	0	**4**	
3.4(a)	College-based	0	0	0	0	0	1	**1**	**50**
3.4(b)	Tailor-made	0	1	0	0	0	0	**1**	**50**
Total								**2**	**100**

QSTN	ITEM DESCRIPTION	NAME OF SECONDARY SCHOOL						TOTAL	%
		BANJIKA	BARAY	ENDALLAH	FLORIAN	SLAHHAMO	WELWEL		
3.5	> 1 year	0	0	0	0	0	1	**1**	**50**
	= 1 year	0	0	0	0	0	0	**0**	**0**
	< 1 year	0	1	0	0	0	0	**1**	**50**
Total								**2**	**100**
3.6	'Yes'	0	1	1	1	1	1	**5**	
	'No'	1	0	0	0	0	0	**1**	
3.6(a)	College-based	0	0	0	0	0	1	**1**	**20**
3.6(b)	Tailor-made	0	1	1	1	1	0	**4**	**80**
Total								**5**	**100**
3.7(a)	Teachers trained to use RACHEL	4	3	3	10	0	25	**45**	**51**
3.7(b)	Teachers using RACHEL	4	3	6	4	1	25	**43**	**49**
Total								**88**	**100**

Annex 9.0 | Proposed Organizational Structure of Powering Potential



Annex 10.0 | Tanzania National Budget Process*

I. Four Key Stages of the National Budget Process

(1) During the early part of the **budget formulation phase (December-January)**, the President's Office Planning Commission (POPC) and the Ministry of Finance (MoF) jointly issue the Annual Plan and budget guidelines for the Ministries, Departments and Agencies (MDAs, RSs and LGAs). **The POPC ensures that the guidelines incorporate the priorities outlined in the *Tanzania Five-Year Development Plan* (FYDP)**.

(2) Following the receipt of the guidelines, MDAs, RSs and LGAs prepare the Annual Plans along with the Annual Budgets.

(3) The MoF and POPC scrutinize the budget together with the Annual Plans; and submit the consolidated budget for the Government approval; and subsequently to the Parliamentary Sectoral Committees (PSCs) for scrutiny.

(4) The final step prior to implementation is to seek Parliamentary approval of the Plan and Budget.

II. Annual Planning Timeframe

***Annual Planning Timeframe* Activity**	**Timeframe**	**Responsible**
1. Issuance of the annual plan and budget preparation guidelines for the One Year Development Plan	**January**	POPC/MoF
Quarterly M&E report	***January***	MDAs/RSs/LGAs
2. Annual Sector Performance Review	**February**	Each Sector
3. Preparation of plans	**Before March**	MDAs/RSs/LGAs
4. Plans approved by relevant committees after appraisal process within the relevant institutions/organisations	**Before March**	MDAs/RSs/LGAs
5. Programmes and Programs are reviewed by the Budget Scrutinization Committee (BSC)	**April**	MoF
Quarterly M&E report	***April***	*MDAs/RSs/LGAs*
6. Cabinet to exercise their scrutiny and approval functions	**May**	IMTC
7. Consultation and agreement on activities to be incorporated in the plans	**January-June**	POPC/MoF
June: Passing of the Budget and start of the next Fiscal Year		
8. Issuance of the Action Plans	**July**	MDAs/RSs/LGAs
9. Verification of whether the Action Plans are in line with FYDP	**July-August**	POPC
Semi-annual M&E report	***December***	*MDAs/RSs/LGAs/ POPC*
10. Annual Implementation Report	**May**	MDAs/RSs/LGAs/POPC

*As per the *Tanzania Five-Year Development Plan (FYDP) 2011/12-2015/16*

Annex 11.0 | Annex 6: SEDP II Performance Indicators – Baseline Data, 2009*

C/N	AREAS		RATIOS
1	PTR	Lower Secondary	1.38
		Upper Secondary	1.30
2	Student Tutor Ration	(TTC diploma)	NA
3	GER	Lower Secondary Upper Secondary	43.6 4.4
4	NER	Lower Secondary Upper Secondary	29.1 1.5
5	Completion Rates	Lower Secondary Upper Secondary	NA
6	Transition Rates	Std VII – Form I Form IV – V	51.6 2.6
7	Dropout Rate	Lower Secondary Upper Secondary	4.1 NA
8	Repetition Rates		NA
9	Form I Enrolments:	Government Non Government	524 784 (2009)G
10	Promotion Rate:	Lower Secondary Upper Secondary	NA NA
11	Book Pupil Ratio:	Lower Secondary Upper Secondary	UNKNOWN
12	Classroom -Pupil Ratio:	Lower Secondary, Upper secondary	1:40:1-30
13	Classroom size:	Lower Secondary, Upper Secondary	64.8M^2
14	Teaching Load:	Lower Secondary, Upper Secondary	6PD 30 PW
15	Student Contact hours per week secondary:	Lower Secondary, Upper Secondary	
16	Pass Rates	Lower Secondary, Upper Secondary	83.3 94.4
17.	Net Intake rate (NIR)	Lower Secondary, Upper Secondary	NA
18	Apparent (Gross) intake rate	Lower, Upper	NA
19	Shortage of Desks	Lower, Upper	NA
20	Shortage of Staff Houses		300
21	Shortage latrines	Lower, upper	NA
22	Shortage of rapid water supply	Lower Upper	NA
23	Budgetary Allocations by percentages	Primary	75.1
		Secondary	2008
		Teacher Education	2.7
		Higher Education	21.6
		Preschool	0.0
		Other	0.0
		Ed Sector	18.3

*NOTE: As per *Secondary Education Development Programme II: (July 2010 – June 2015), Ministry of Education and Vocational Education, Dar-es-Salaam, June 2010.*

Annex 12.0 | Proposed M&E Outcome Indicators* for Powering Potential Program (PPP)

Result Chain Level	Indicators	Baseline (e.g., July 2006)	Target (e.g., June 2013)
Impacts *(long-term effects partly or whole attributable to PPP)*			
O-I Assumptions			
Outcomes *(Effects on the Program target/beneficiary groups directly attributable to PPP)*			
O1-02 Assumptions			
Outputs (O1) *(infrastructure acquired through PPP support)*			

*NOTE: *Based on the Existing Documents.*

Annex 13.0 | Proposed List of Main Outcomes Indicators* for Future Powering Potential Program (PPP)

Program Outcome Indicators	
(i)	*Number of PPP Five-Month Training Course graduates*
(ii)	*Number of employed teachers passed PPP In-service training course*
(iii)	*Number of teachers teaching PPP RACHEL content*
(iv)	*Number of direct PPP beneficiaries (total number of males and females)*
(v)	*Percentage of students who are satisfied with the quality of knowledge and skills provided by PPP*
Intermediate Outcome Indicators	
(i)	*Number of courses supported by PPP*
(ii)	*Number of students enrolled in programmes supported by PPP*
(iii)	*Number of student workstations in classrooms supported by PPP*

*NOTE: *Based on the Existing Documents.*

Annex 14.0 | Proposed Expanded Results Framework of Powering Potential Program

PPP Results Monitoring and Evaluation (M&E)										
Program Purpose: *The Program will enhance education and stimulate imaginations of students in Tanzania while respecting and incorporating values of local culture*										
Program Outcome Indicator: *Number of each year's PPP supported graduates who obtain employment in jobs for which their qualifications are relevant*										
Program Development Objective: *To increase the quantity and quality of secondary education graduates through an improved learning environment, with special emphasis on science and technology*										
Development Outcomes / Intermediate Outcomes	**Results Indicators**	**Baseline**	**Indicator Values**							**Data Source**
		2006	2007	2008	2009	2010	2011	2012	2013	
Development Outcome 1: *More and better quality science and technology graduates are prepared*										
1.1. Increased access to PPP supported programs	*(i) Number of students enrolled in PPP supported programs*	*0*	*0*	*0*	*23*	*100*	*300*	*500*	*2,500*	*Karatu District Council*
	(ii) Number of graduates from PPP supported programs	*0*	*0*	*0*	*20*	*95*	*295*	*495*	*2,490*	*Karatu District Council*

*NOTE: *Based on the Existing Documents.*

Annex 15.0 | Proposed Framework for Identification and Developing Data Collection Forms for Powering Potential Program*

Agreed Results Indicators	Indicator Definition	Definition of Key Data Elements	Data Source	Reference to Questionnaire Item / Element of Data Collection Form
Number of students enrolled in PPP supported courses	*Number of students formally registered in PPP supported courses and still active in the program by the end of the respective academic year/term*	(i) *"Number of students means ..."* (ii) *"……."*	*Official registration records of institutions managing education and training*	*Refer to the quantitative data collection tool for PPP implementing partners*

*NOTE: *Based on the Existing Documents.*

NOTES