Powering Potential M&E

Rich Segal

SFF, Powering Potential, Nyaka, IBM Research

Powering Potential

Solar-powered computer labs for secondary schools in rural Tanzania.

- 20 Raspberry Pi computers.
- Local network with server.
- Offline educational content
 - Wikipedia
 - Textbooks
 - Books
 - Educational content

- Educational videos
- Health information
- Agriculture information



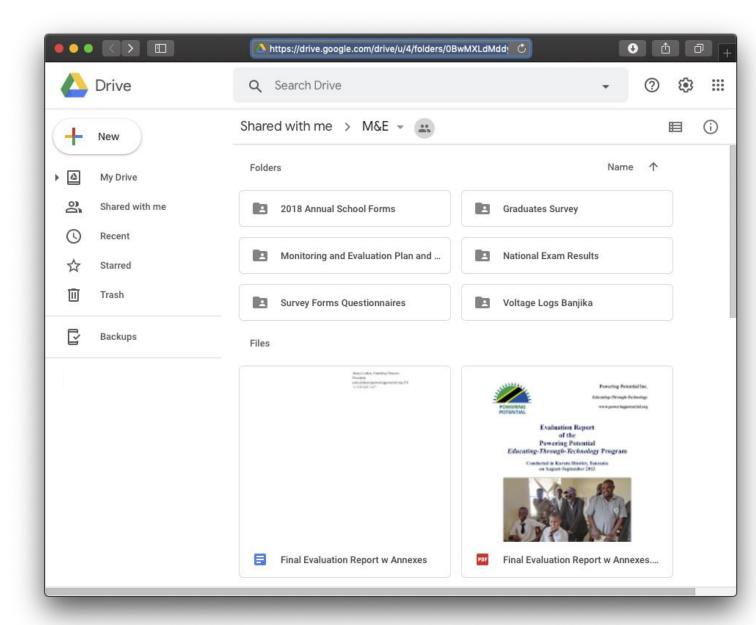


Powering Potential M&E

- Collecting data from day one.
- Basic M&E plan.
- Basic data collection plan.
- Data collected
 - Computers delivered.
 - Students and teachers served.
 - National Exam results.
 - Pre- and Post-installation surveys.
 - Graduate surveys.

Google Drive

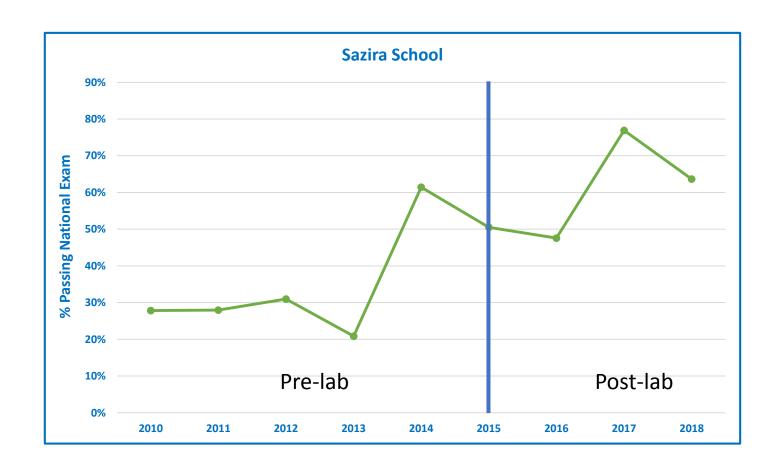
- Centralized data storage
- Easily shared
- Contents
 - M&E plan.
 - Data collection plan.
 - Survey forms.
 - Scanned survey responses.
 - Survey data in spreadsheets.
 - Exam results in spreadsheets.



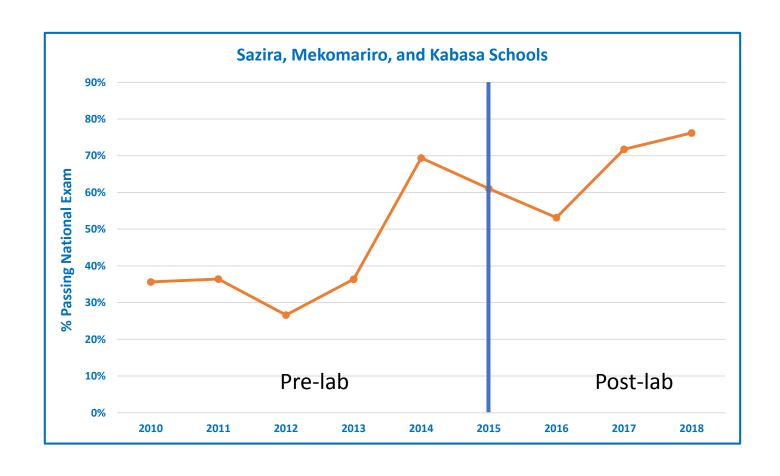
Sazira National Exam Scores

		No o	computer lab				C	omputer Lab	
	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total Students who had a "clean" exam	97	118	142	163	70	97	164	52	154
Passed and qualify for Form V	3	5	2	7	12	12	17	16	34
% Passed and qualify for Form V	3%	4%	1%	4%	17%	12%	10%	31%	22%
Passed	27	33	44	34	43	49	78	40	98
% Passed	28%	28%	31%	21%	61%	51%	48%	77%	64%
Div I	1	0	0	0	0	0	0	0	1
Div II	0		J		4	4		U	g
Div III	2	Avei	rage % P	assed	8	8	Avera	ge % Pas	sed 24
Div IV	24	/ 		assea	31	37	710010	•	64
Div 0	68		37%		22	41		63%	53
Total	95		155	191	65	90	101	V-	151
Registered	97	118	142	163	70	97	164	52	154
Absent	2	117	9	11	3	2	7	0	3
Sat	95	1	133	152	67	95	157	52	151
Withheld	0	0	11	15	2	5	0	0	0
	40 candidates								
		r more 40 o	r more 40 d	r more 40	or more 40	or more 4	0 or more 40	or more 40	Or more
Center position in region	125	142	78	156	67	94	103	47	97
Total centers in region	147	155	154	162	101	159	148	140	157
% position	15%	8%	49%	4%	34%	41%	30%	66%	38%
Center position in nation	2564	2534	2058	3035	1586	2415	2641	1285	2329
Total centers in nation	3196	3108	3396	3256	2322	3452	3280	3039	3488
% position	20%	18%	39%	7%	32%	30%	19%	58%	33%

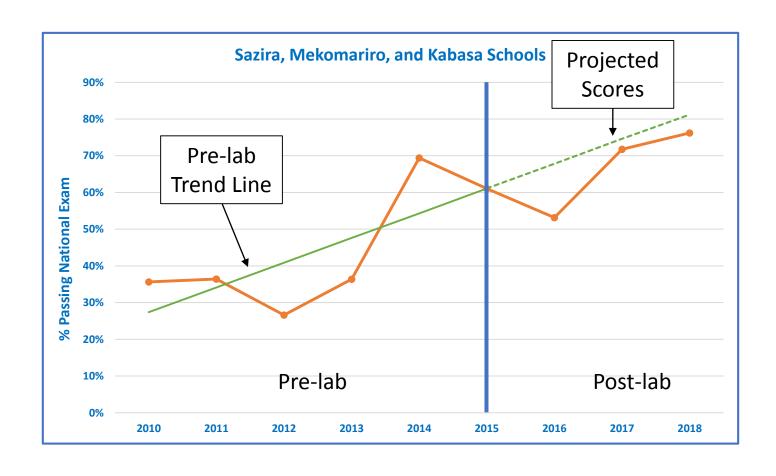
Did Sazira scores improve?



Did scores at all 3 schools improve?



Did scores at all 3 schools improve?



2017 Graduate Survey

	A	В	С	D	Е	F	G	Н
1	First Name	Last Name	Form Four School	What year did you graduate from Secondary School?	Did you use PP computers at secondary school?	Do you have a job?	Do you use a computer in your job?	Did computer skills help you to find a job?
2	TOTALS of YES	144			133	31	2	79
3	Percentage of YES				95.0%	39.2%	20.1	56.8%
4	-	ر خونشا	Baray	2015	Yes	No	No	Yes
5			Baray	2015	Yes	No	No	Yes
6		-	Baray	2015	Yes		No	Yes
7		-	Wel wel	2014	Yes		No	Yes
8		li i	Wel wel	2012	Yes	Yes	No	Yes
9		-	banjika	2014	No		No	Yes
10		-	Banjika	2010	Yes	Yes	Yes	Yes
11		<u> </u>	Banjika	2012	yes	no	no	no
12		Maria	Sazira	2016	Yes	no	no	no
13		-	Sazira	2016	Yes	No	No	No

Inputs	Activities	Outputs	Outcomes	Impact

Inputs	Activities	Outputs	Outcomes	Impact
• Donations				
Africa Staff				
Tech team				
Computer equipment				
Solar equipment				
• Students				
• Teachers				
Head masters				
• District representatives				

Inputs	Activities	Outputs	Outcomes	Impact
• Donations	 School provides classroom 			
Africa Staff	 District provides 			
Tech team	computer teacher			
Computer equipment	 Install solar 			
Solar equipment	 Install computers 			
• Students	 Install servers 			
• Teachers	Train teachers			
Head masters	Update content			
 District representatives 	Ongoing support			

Inputs	Activities	Outputs	Outcomes	Impact
• Donations	 School provides classroom 	Funds raised		
Africa Staff	District provides	Labs installed		
Tech team	computer teacher	 Computers installed 		
Computer equipment	 Install solar 	Students served		
Solar equipment	 Install computers 	Teachers served		
• Students	 Install servers 	Teachers trained		
• Teachers	Train teachers	 Lab usage hours 		
Head masters	Update content	 Students enrolled in ICT classes 		
 District representatives 	 Ongoing support 	• Site visits		
		Support calls		
		Days with solar		
		Days without solar		

Inputs	Activities	Outputs	Outcomes	Impact
 Donations Africa Staff Tech team Computer equipment Solar equipment 	 School provides classroom District provides computer teacher Install solar Install computers 	 Funds raised Labs installed Computers installed Students served Teachers served 	 Students pass national ICT exam. Students improve scores on Form IV national exam. Students get jobs using computers 	
StudentsTeachers	Install serversTrain teachers	Teachers trainedLab usage hours		
Head mastersDistrict representatives	 Update content Ongoing support	 Students enrolled in ICT classes Site visits 		
		Support callsDays with solarDays without solar		

Inputs	Activities	Outputs	Outcomes	Impact
DonationsAfrica Staff	 School provides classroom 	Funds raisedLabs installed	 Students pass national ICT exam. 	Students have better economic prospects often graduation
Tech team	 District provides computer teacher 	 Computers installed 	 Students improve scores on Form IV 	after graduation
Computer equipment	Install solar	Students served	national exam.Students get jobs	
Solar equipment	Install computers	Teachers served	using computers	
StudentsTeachers	Install serversTrain teachers	Teachers trainedLab usage hours		
Head masters	Update content	 Students enrolled in ICT classes 		
 District representatives 	 Ongoing support 	• Site visits		
		Support calls		
		Days with solarDays without solar		

Observations and Suggestions

- Overall data collection is excellent.
- Could benefit from a more detailed M&E plan.
- Recommend tracking ongoing support and site visits.
- Recommend using technology to better track computer usage.
- Create your own assessment rather than National Exams?
- Need better, automated evaluation tools to track key outcome indicators.