

# KiuFunza

Improving Early Grade  
Learning Outcomes

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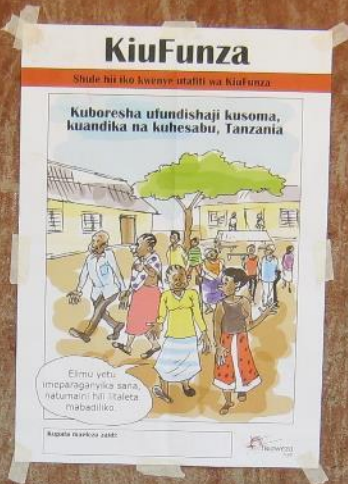


# Outline

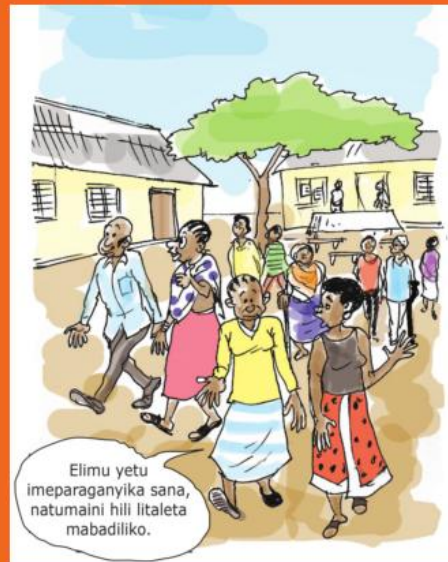
- What is KiuFunza?
- How to assess performance?
- Test and Results Integrity
- Payment of Incentives
- KiuFunza 2014
- Take Aways



# What is KiuFunza?



## KiuFunza Ruzuku



Kesho...



## KiuFunza Motisha



# KiuFunza

- A portmanteau of two Kiswahili words
  - **Kiu** which means *thirst*
  - **Kujifunza** which means *to learn*
- Together KiuFunza means *thirst to learn*

# Intervention Design



- Capitation Grant
  - TZS 10,000 (€4.4) per student
  - Normal policy rules on spending, accountability apply
- Cash on Delivery
  - Grades 1, 2 and 3
  - Test subjects: Kiswahili, English, Mathematics
  - TZS 5,000 (€2.2) per test passed is paid to responsible teacher; TZS 1,000 (€0.44) per test passed is paid to Head Teacher
- Combination arm

# Why are we doing this?

- Poor Student Performance
- Low teacher salaries (TZS 575,000 (€254/month), pre-tax, inclusive of allowances
- Low teacher motivation
- Average CG from gov't = TZS 4,726 (€2)





**Kiswahili**  
Kwa Shule za Msingi  
Darasa la **3**

MAKABURUMBA  
WE NI BILALI YA DERIKALI YA TANZANIA

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# How to assess performance?





# KiuFunza Tests

- Appropriate and legitimate
  - Based on the Uwezo test, but with more grade-specific variation
  - According to Tanzanian syllabus
  - Test made by university academics who are renowned for curricular and test development



KIUFUNZA ENDLINE SURVEY 2013

TEST BOOKLET

DARASA LA TATU



STORY

One day Kibera was going to the market. He went to sell hats. The sun was shining and it was very hot. He sat under the tree to rest. After a few minutes, he fell asleep.

The monkeys were on the tree. When Kibera was asleep, they took his hats. He wakes up and asks, "Where are my hats"? no body answered him

**Comprehension**

1. Who went to the market?
2. Why did Kibera sit under the tree?
3. Why did Kibera loose his hats ?

A child should read the story and answer atleast 2 questions correctly.

## HISABATI seti - 1

### KUJUMLISHA

$$\begin{array}{r} 67 \\ + 34 \\ \hline \hline \end{array}$$

$$\begin{array}{r} 54 \\ + 34 \\ \hline \hline \end{array}$$

$$\begin{array}{r} 303 \\ + 259 \\ \hline \hline \end{array}$$

$$\begin{array}{r} 261 \\ + 130 \\ \hline \hline \end{array}$$

$$\begin{array}{r} 367 \\ + 616 \\ \hline \hline \end{array}$$

$$\begin{array}{r} 314 \\ + 269 \\ \hline \hline \end{array}$$

Mtoto afanye zote angalau 4 ziwe sahihi

### KUTOA

$$\begin{array}{r} 69 \\ - 25 \\ \hline \hline \end{array}$$

$$\begin{array}{r} 454 \\ - 134 \\ \hline \hline \end{array}$$

$$\begin{array}{r} 782 \\ - 233 \\ \hline \hline \end{array}$$

$$\begin{array}{r} 65 \\ - 38 \\ \hline \hline \end{array}$$

$$\begin{array}{r} 729 \\ - 254 \\ \hline \hline \end{array}$$

$$\begin{array}{r} 854 \\ - 270 \\ \hline \hline \end{array}$$

Mtoto afanye zote angalau 4 ziwe sahihi

## HISABATI seti - 1

### KUZIDISHA

$11 \times 9 = \square$

$8 \times 12 = \square$

$7 \times 10 = \square$

$9 \times 8 = \square$

$10 \times 10 = \square$

$7 \times 11 = \square$

Mtoto afanye zote angalau 4 ziwe sahihi

### KUGAWANYA

$42 \div 3 = \square$

$92 \div 4 = \square$

$150 \div 3 = \square$

$300 \div 12 = \square$

$185 \div 5 = \square$

$378 \div 21 = \square$

Mtoto afanye zote angalau 4 ziwe sahihi



# Test and Results Integrity

# Test Integrity

- Test developers had no information about treatment schools
- Test developers did not test any students
- 10 sets of tests per grade across subjects
- Shipped in two installments (Sets 1-5 first and then 6-10 second)
- All tests retained in Twaweza offices

# Test Integrity

- Test set randomly assigned to student
- We created a *Random Numbers Table*
- Test set to be administered to student was determined using the *Random Numbers Table*
- First letter of student's last name and
- Second digit of the day, selected test set
- The tests were also conducted one-on-one and with independent implementers not the teachers



KiuFunza Random Numbers Table

		LAST DIGIT OF DAY OF MONTH									
		Moja	Mbili	Tatu	Nne	Tano	Sita	Saba	Nane	Tisa	Sifuri
FIRST LETTER OF STUDENT'S LAST NAME	A	5	5	3	3	1	1	5	2	1	3
	B	1	5	1	3	1	2	5	3	4	2
	C	1	1	4	4	3	3	2	1	3	5
	D	4	3	1	1	4	2	2	4	5	3
	E	5	5	5	1	2	4	1	5	3	5
	F	2	5	4	5	5	4	2	2	1	1
	G	4	4	5	2	4	3	1	2	5	4
	H	3	5	3	3	3	5	2	3	4	1
	I	3	3	2	4	2	4	3	1	2	2
	J	2	2	5	2	1	3	4	3	2	3
	K	4	4	2	2	4	5	2	3	5	3
	L	3	4	2	1	5	2	2	5	3	5
	M	3	3	3	2	2	5	3	5	2	5
	N	5	1	5	4	3	1	3	5	4	1
	O	3	4	5	1	5	4	2	1	1	4
	P	4	3	1	3	3	2	1	5	2	1
	Q	3	4	1	2	5	4	2	4	5	1
	R	4	2	4	4	5	3	1	1	3	1
	S	1	3	3	4	3	2	1	4	2	3
	T	3	5	1	2	5	3	3	5	3	3
	U	4	1	1	5	5	1	4	4	3	4
	V	3	2	2	1	4	4	4	1	3	2
	W	3	1	1	5	5	5	4	2	3	2
	X	2	3	2	2	2	3	5	4	1	5
	Y	1	3	2	4	5	3	4	3	2	1
	Z	5	3	2	4	4	3	4	2	1	4

# Results Integrity

- Analyze results to identify manipulation at the:
  - Tester level
  - Teacher level
  - Coordinator level
- Analysis identified manipulation in two schools in one district at the coordinator level
- We proposed a theory for manipulation and realized identifying manipulation at the tester level is impossible
- Teacher level manipulation is also virtually impossible given the amount of test sets and randomization of test sets to students

nl mo ma  
no nu  
pe po pu  
rl ro ru

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
	34	35	36	37	38	39	40		
	44	45	46	47	48	49	50		
		55	56	57	58	59	60		
		65	66	67	68	69	70		
			75						
			85						



Teacher

Student

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
	34	35	36	37	38	39	40		
	44	45	46	47	48	49	50		
		55	56	57	58	59	60		
		65	66	67	68	69	70		
			75						
			85						

Handwritten notes on a piece of paper.



# Payment of Incentives

- Choice between:
  - Bank account (teacher liabilities)
  - Mobile money account (innovative, but not without its problems)
- Irregularities in payment information delayed payment
- Two teachers deceased before payment was arranged
  - Next of kin issues
- Third party payments not allowed



# Teacher Sentiments

- Blamed any dismal results on student anxiety and fear
  - Students are not used to the one-on-one testing style
- Blamed any dismal results on many exogenous factors
  - Rain, testing after end-of-year tests were conducted
- Want teachers themselves to test the students
- Overall positive feedback and feel the tests were transparent and fair

# Take Aways

- KiuFunza is an intervention aimed at improving learning outcomes in early-grade education in Tanzania designed as an RCT
- Aim is to demonstrate how current government policy can be implemented effectively and
- Identify whether paying teachers for the performance of their students has impact on learning outcomes
- Measuring and rewarding performance has practical constraints that can be non-trivial

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**Questions and Discussion**  
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