



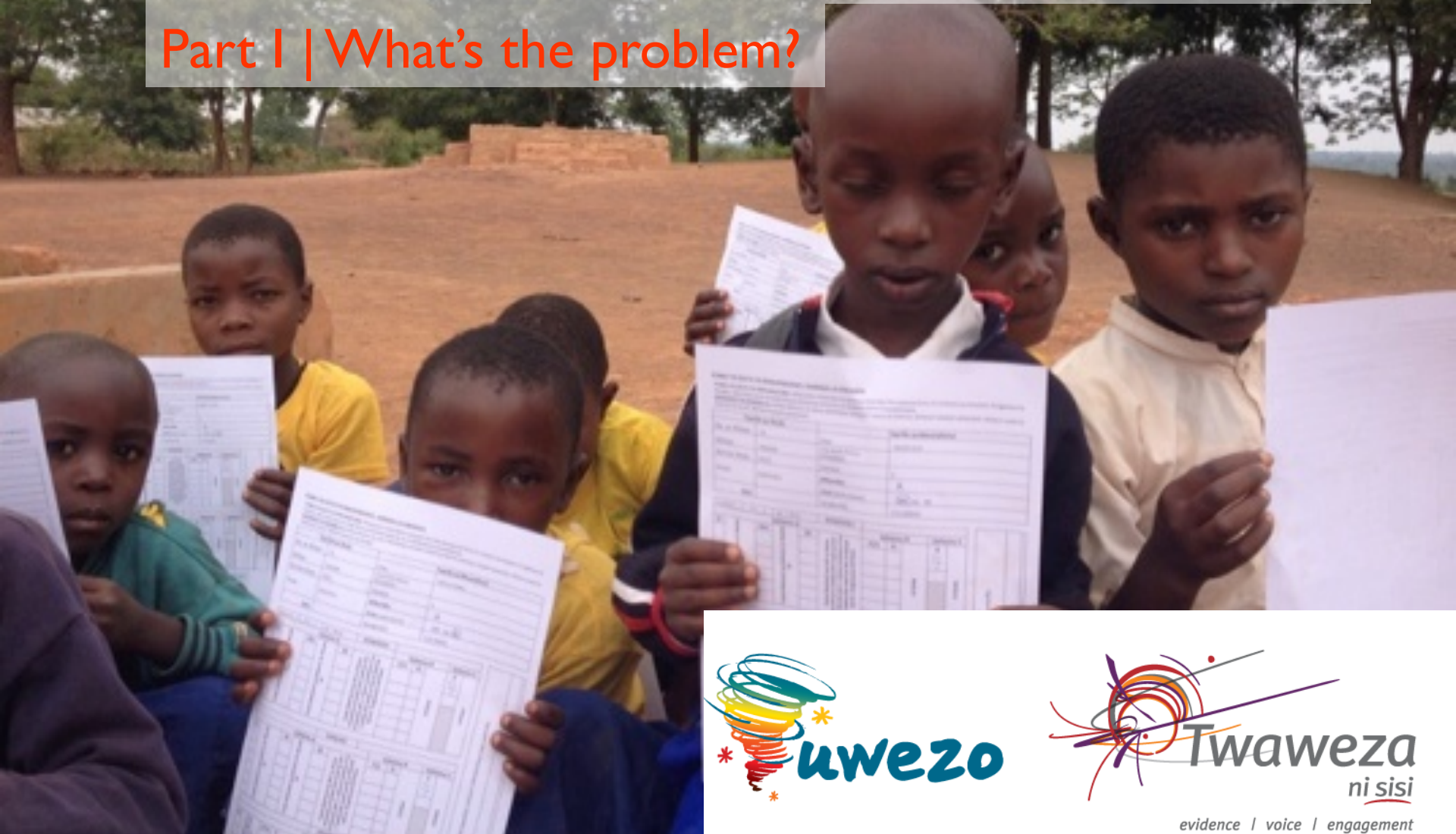
# KIUFUNZA:

Motivating teachers to improve early grade learning



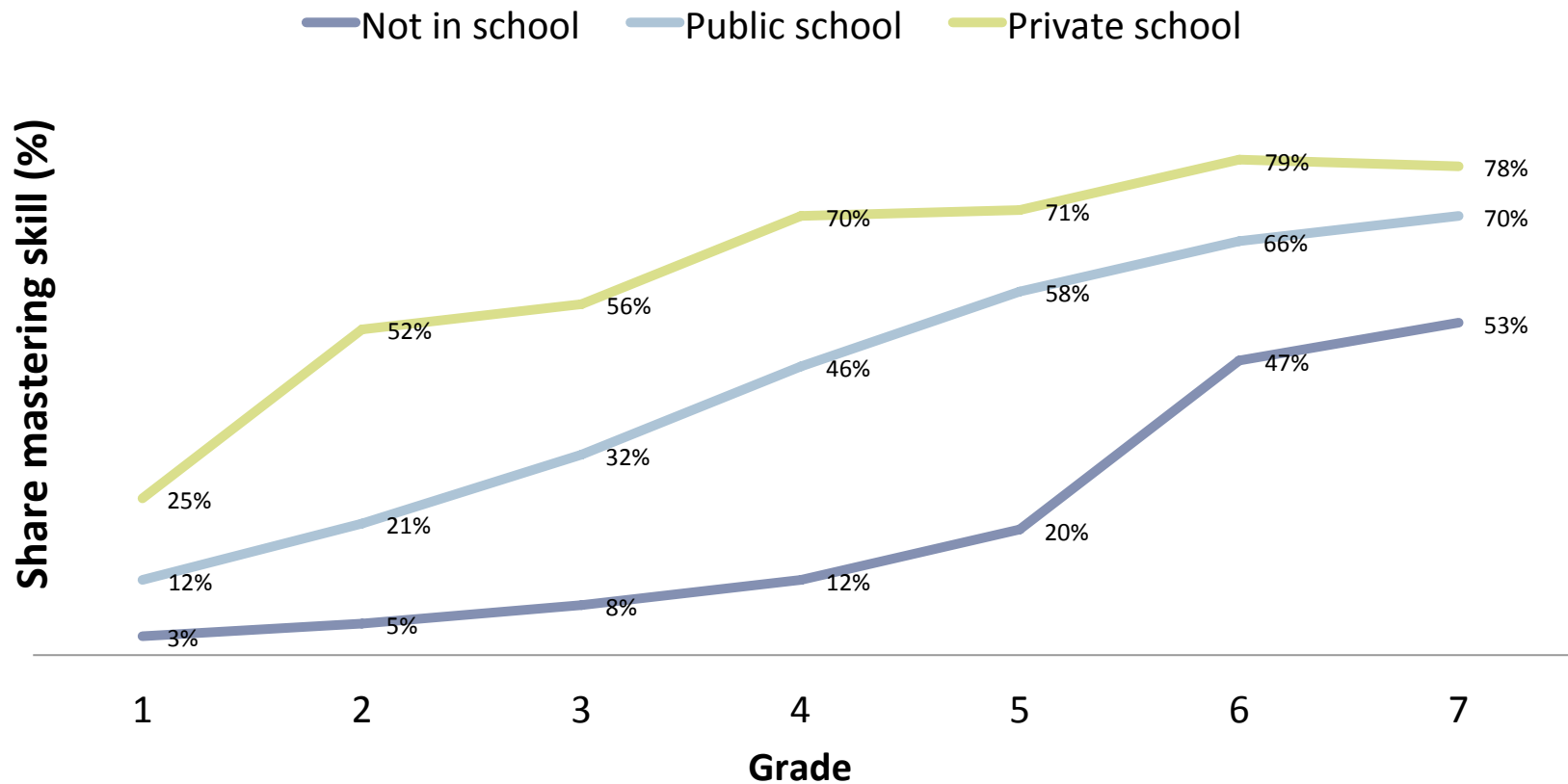
# Cash on Delivery: Motivating teachers to improve early grade learning

## Part I | What's the problem?



# *Too little learning is happening in early grades*

## Math: Grade 2 multiplication (Uwezo, 2013) Examples: 7x4, 11x2

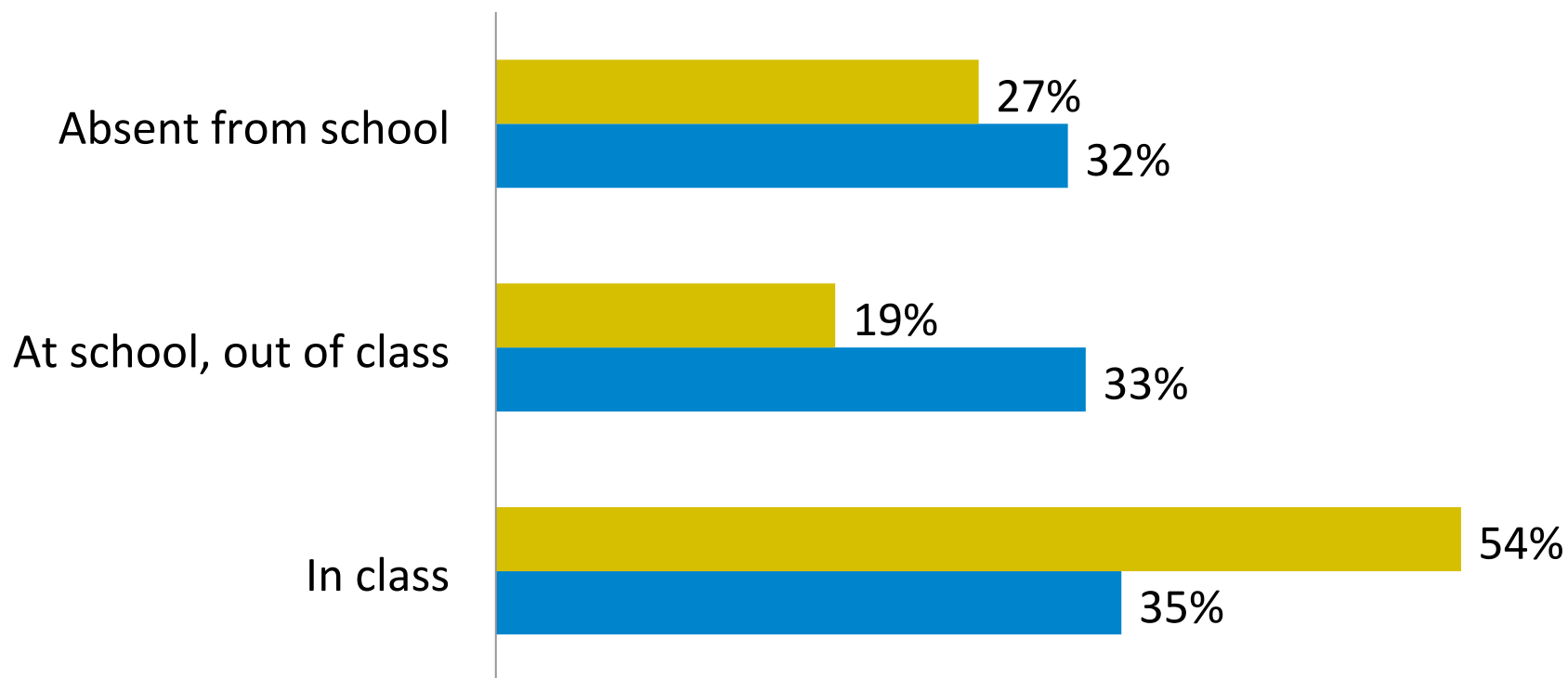


# *Teacher motivation is low*

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## Where is my teacher?

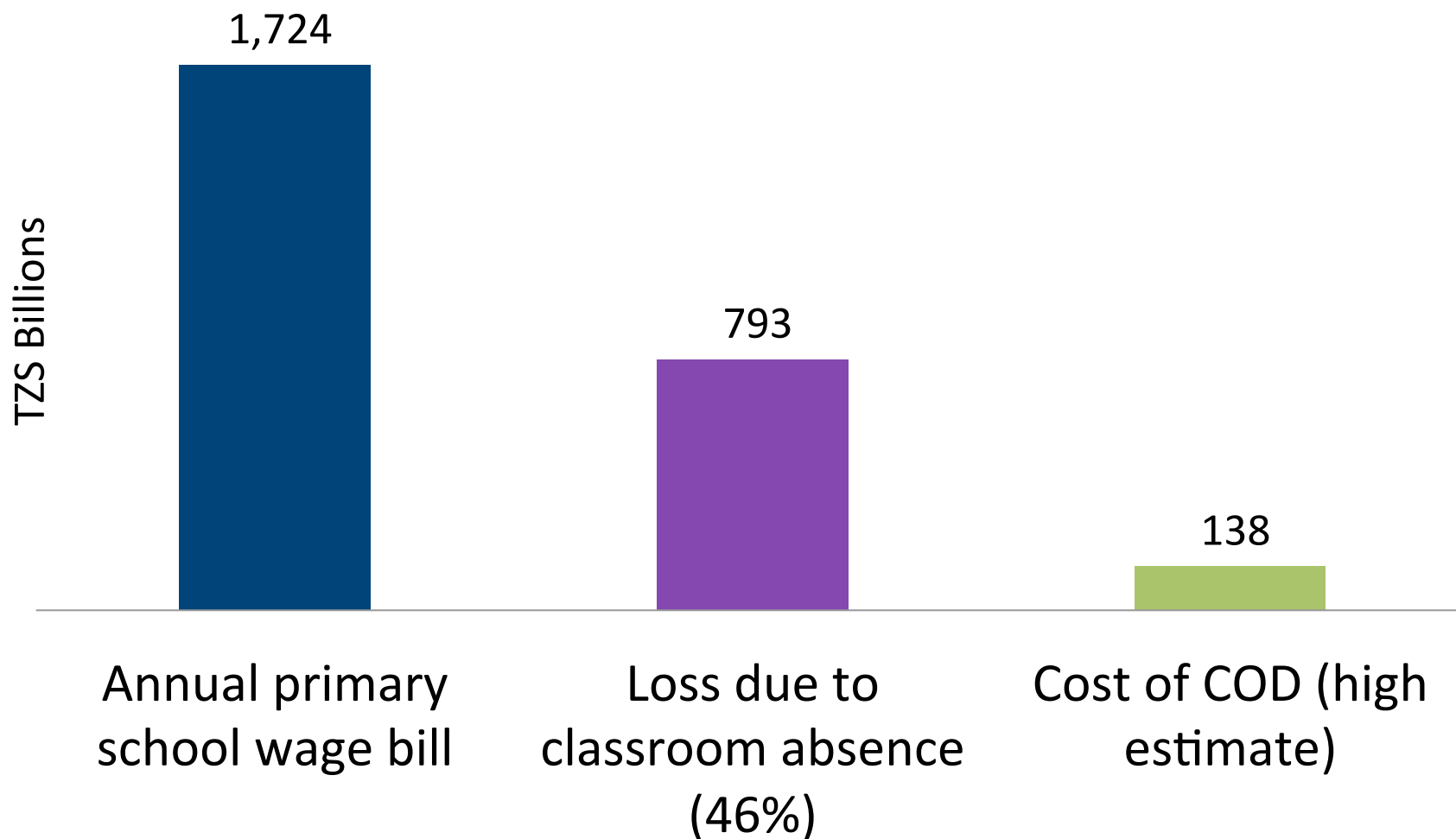
■ 2016 ■ 2015



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▶ (Data from KiuFunza surprise visits, *2016*)

# *Cost: Teaching, Absence and Motivation*



► **Sources:** BEST data; KiuFunza surveys and implementation data.

# *Triple Challenge in Education*

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## **Government faces the triple challenge of:**

Improving learning in schools

Learning is too slow

Spending the education budget more effectively

Growing school populations and budget requirements

Ensuring teachers are motivated

They are the key actors

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# Cash on Delivery: Motivating teachers to improve early grade learning

## Part 2 | What can we do?



evidence | voice | engagement

## *Cash on Delivery addresses the three challenges*

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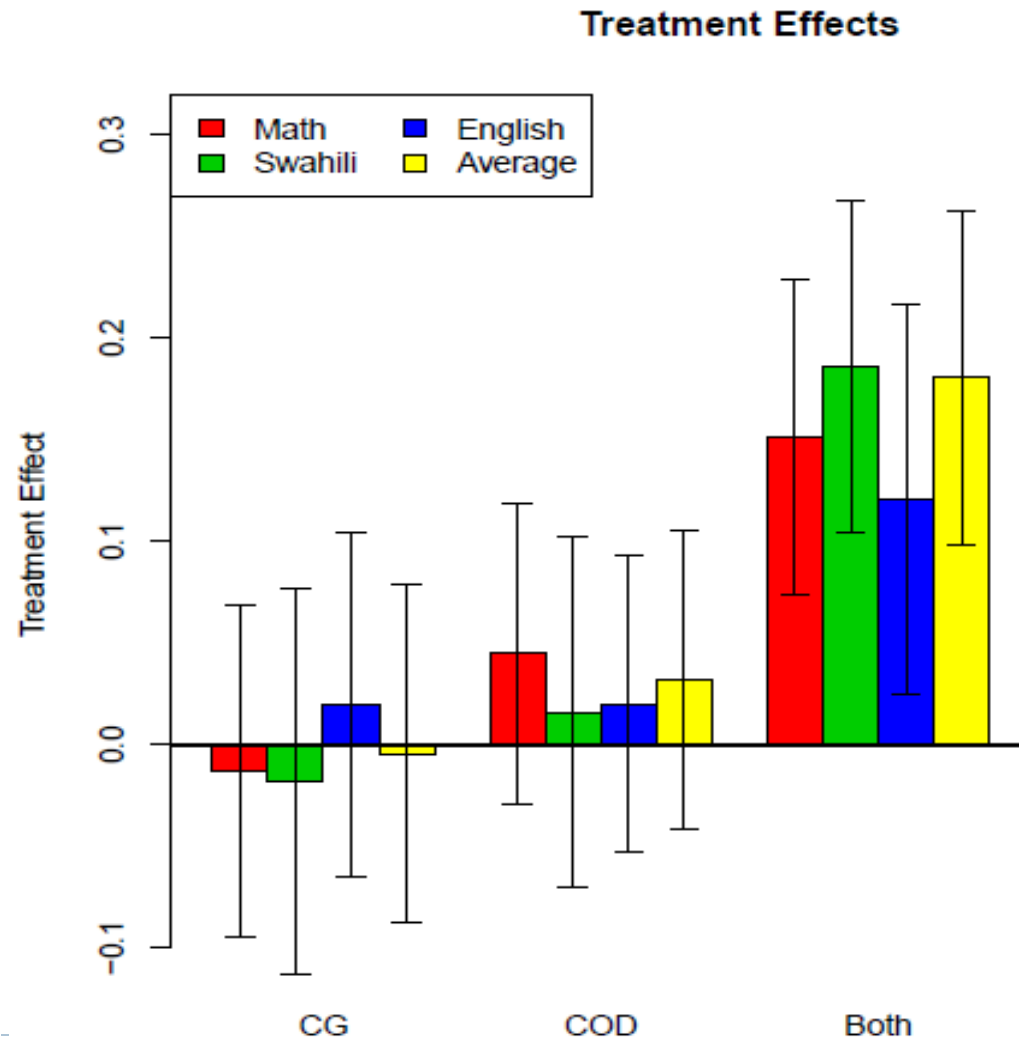
- ▶ Cash on Delivery (COD) is an incentive system that links teachers bonus payments to the skills learned by the children they teach.
- ▶ It communicates to all teachers that learning is valuable and that learning progress is rewarded.
- ▶ Cash on Delivery
  - Improves learning (impact evidence KiuFunza)
  - Reduces cost per passer
  - Is appreciated by teachers



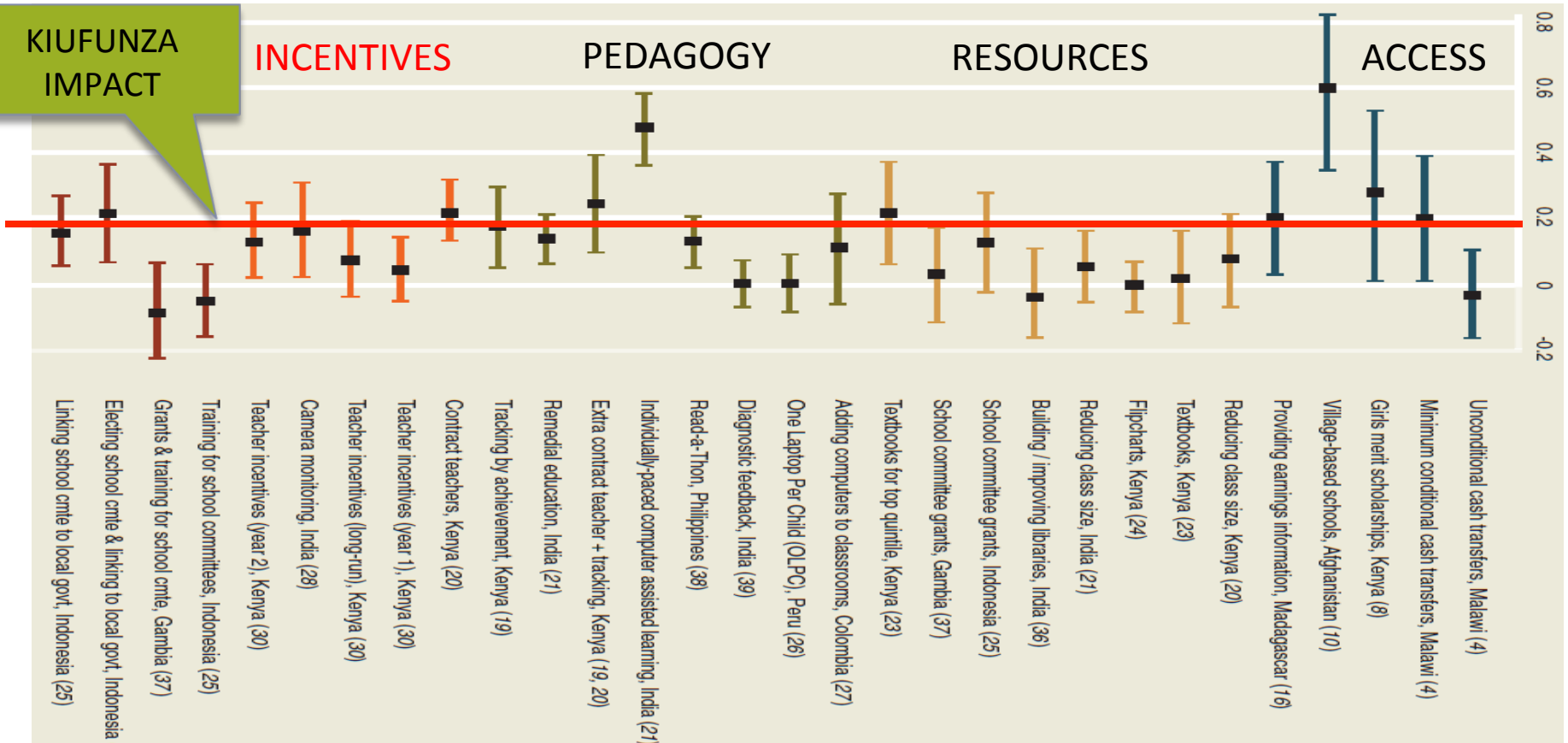


# Cash on Delivery improves learning outcomes






- ▶ Yes! The CG-COD combination treatment: 20% increase in the pass rates for both Kiswahili and Math
  - Incentives improve effectiveness of input financing



# The power of KiuFunza incentives



## Teacher incentives work in other countries

COUNTRY	KEY FEATURES	IMPACT (SD)	IMPACT compared with rural-urban test score difference
Tanzania (Experiment) 	140 COD schools	+0.18	21%
Brasil (Pernambuco) (Large scale) 	950 schools; prim & sec	+0.12	14%
Chile (Large scale) 	All 6,500 basic education schools	+0.16 to +0.25	19—30%
Kenya (Experiment) 	50 Schools, primary	+0.14	17%
India (Experiment) 	Group incentive Individual incentive 100 schools total	+0.16 +0.27	19% 32%

# Cash on Delivery: Motivating teachers to improve early grade learning

## Part 3 | Why is it worth doing?



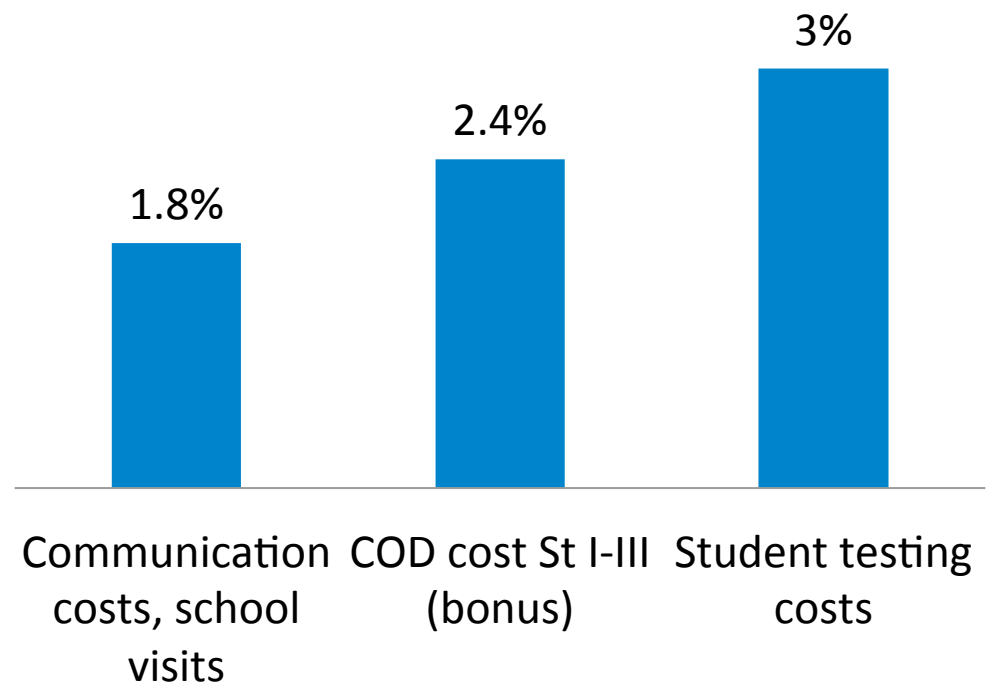


## Value for money

- ▶ Large skill impact (pass rates +20%)
- ▶ Cost low relative to existing budget
- ▶ Excludes CG (now sent directly)
- ▶ Government intervention:
  - School visits cheaper
  - Testing data NECTA

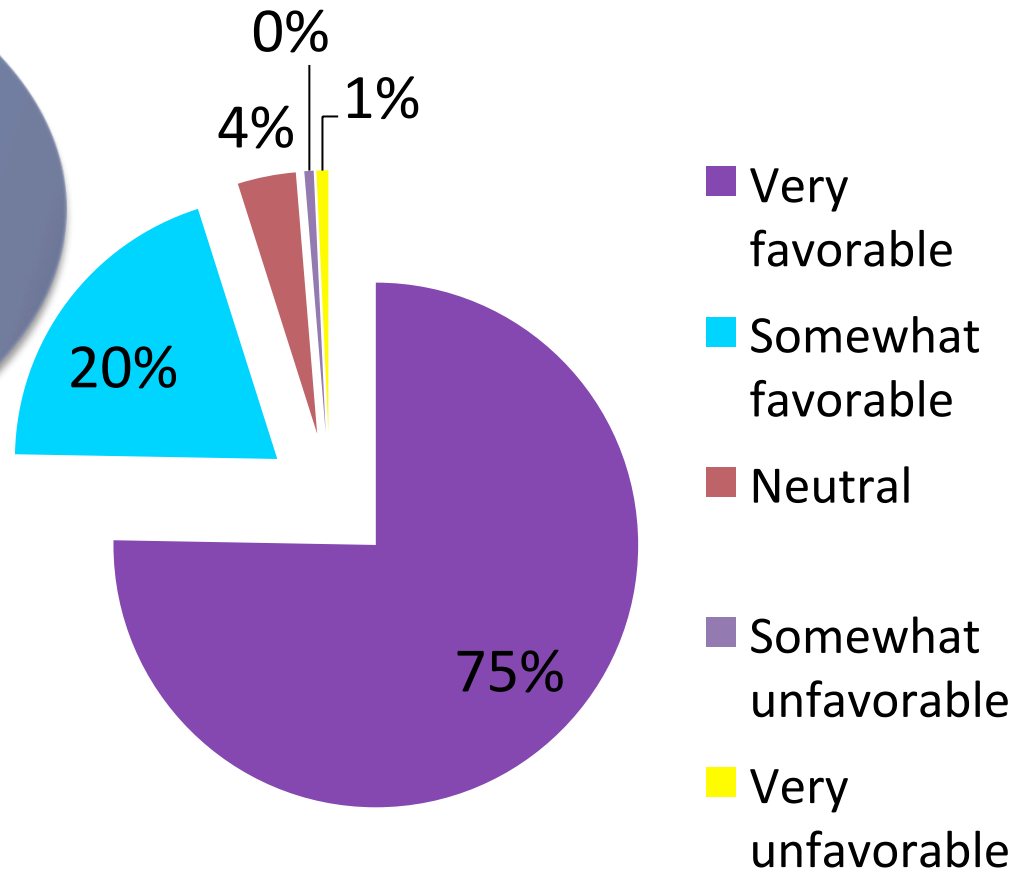
### KiuFunza 2013-14 intervention costs

■ % of Business as Usual Budget



## Teachers like incentive pay

“What is your opinion about paying teachers a bonus based on student performance improvement?”



- ***75% have a very favorable opinion, 20% somewhat favorable***

# *Performance incentives are not new in Tanzania*

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- ▶ School Incentive Grant (SIG) in 2014
  - Based on learning improvements
  - SIG bonus paid to school
  - Only small number of schools can win
- ▶ KiuFunza's design
  - a) all teachers can earn, more students benefit
  - b) the bonus is paid to teachers directly
  - c) the bonus represents a significant value (e.g., 1 month salary)
  - d) the incentive is communicated clearly



# Cash on Delivery: Motivating teachers to improve early grade learning

## Part 4 | How do we do it?



evidence | voice | engagement



## ***Must-haves to start a Cash on Delivery scale pilot***

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- ▶ Ministerial **commitment** and a **COD fund** to pay the incentives
- ▶ Agreement on incentive **design** and performance measure
- ▶ Clear and engaging **communication** to teachers
  - at the start of the year to ensure the incentive offer is known and understood
  - after the payments are sent to provide feedback
- ▶ Access to teacher and test **data**
- ▶ Efficient structure to manage incentive implementation



# *Execution: How to implement Cash on Delivery?*

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1. Start of school year
  - Quality communication: incentive offer, FAQ flyer
  - Organize COD teacher database: teacher assignment and bank account data
2. End of school year
  - Student test data and audits
  - Create pay sheets
  - Pay bonuses



# *Key Cash on Delivery design decisions (1)*

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- ▶ **‘What’**: the target indicator that is measured and paid for
  - ▶ **Value added learning**: the difference between what a student can do before and after a year of schooling
    - Measure: increase in pass rate
    - Risk: weak students excluded to boost pass rate
    - Solution: combined score-flow measure (penalizes exclusion)
      - Brazil uses this as key education indicator and target at all levels (IDEB)
  - ▶ **Equity of opportunity**: pay for progress towards **school specific** target
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## *Key Cash on Delivery design decisions (2)*

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- ▶ **‘Who’:** whose performance is measured, individual teachers or groups of teachers?
- ▶ National exam data: **performance of teams**
  - Standard IV national assessment: measures performance of teachers in Standard I-IV
  - PSLE: measures performance of teachers in Standard V-VII
- ▶ **Standards:**
  - Early grades only: I-IV





## *Key Cash on Delivery design decisions (3)*

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- ▶ **Size** of expected bonus
  - Not too small
  - Cost example: if max bonus is one month of basic salary then we need a COD fund of 8% (1/12) of annual personnel expense in incentivized grades (I-IV)
- ▶ **Schools**: all schools or a sub-set of schools
  - e.g. lowest ranked schools; or rural schools
  - Equity
  - Focus puts budget at acceptable level



# *Equity: Cash on Delivery can reduce learning inequality*

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- ▶ **Equity** of opportunity: pay for progress towards **school specific** target
  - Targets are based on past school performance
  - A poorly performing school gets a target just above past performance
  - Minister decides how ambitious target is each year
- ▶ **Focus** on most disadvantaged schools
  - Will reduce learning gap with high performers
  - Help to attract teachers to these schools
  - Can reduce budget requirement



# Summary

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- ▶ Too little learning is happening in early grades, partly because,
  - ▶ Teacher motivation is low
  - ▶ Cash-on-Delivery improves teacher motivation
  - ▶ Cash-on-Delivery improves learning outcomes
  - ▶ Performance incentives are not new in Tanzania
  - ▶ Teachers like performance-based pay
  - ▶ Cash-on-Delivery concept is ready for Government to pilot it
  - ▶ A teacher incentive policy is a big investment; we should try it and test impact before full adoption
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## *KiuFunza team*

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### ▶ Tanzania team

- Twaweza
- COSTECH
- TAMISEMI
- District Implementing Partners
- District Offices
- EDI (Bukoba, implementation management)

### ▶ Global team

- Principal Investigators
    - Isaac Mbiti, University of Virginia
    - Karthik Muralidharan, UC San Diego
  - Innovations for Poverty Action (survey management)
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*Ahsanteni sana*