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Results of EGRA design workshop

(including field test)

Sponsored by EdData II Project
Aga Khan Foundation EMACK II Project
Delivered Mombasa , 23-27 April 2007



- During 23-27 April various experts and stakeholders met to design approaches to measure and improve reading in early standards in Kenya
- Meeting was held at Mombasa
- Stakeholders included Ministry of Education, KIE, KESI, KNEC, AKF (EMACK II, MRC), CRS, EADEC and university scholars
- First day was spent on review of the literature, international, and Kenyan experience, attention was drawn to the power of measurement and the impact of a control loop of measurement ↔ training, supervision
- Second day was spent on design of a draft instrument for measurement
- After some critique and role playing and training (as developed and watched role playing), deployed to Concordia Primary School to pilot test
- (Note, RTI and MRC had done small test under leadership Peter Mwaura in late 2006.)



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Draft instrument

- A few background questions
- Time-limited (1 min) letter recognition
- Time-limited (1 min) word recognition
- Oral reading passage fluency, time-limited (1 min)
- Factual (mostly non-inferential) passage comprehension, not time-limited
- Phoneme segmentation, time-limited (1 min)



Draft instrument (continued)

- On 25 April 2007 participants seminar EGRA visited Concordia Primary School, peri-urban, in a low-income community outside Mombasa town
 - E.g., 180 children in one class in Std 1
- Though on vacation, approximately 100 pupils had come to the school (had asked 60)
- Deputy head-teacher, and 3 teachers as well, all female
- Note selection of pupils was not scientifically randomised (100 present was not random, choice out of those not necessarily random)
- Note that it is a bit early in year, thus Std 2 results are really close to end-of-year Std 1, and Std 3 results really more like end-of-year Std 2... (Had had 1st term)



Draft instrument (continued)

- Pupils tested in either Kiswahili or English (not both languages for any given pupil)
- Approximately equal numbers of girls, boys, Std 2, 3, and English, Kiswahili tested
- Test administrators were highly experienced (in general terms) but new to the instrument (piloting the instrument), trained the day before
- Test conditions were difficult (rainy, muddy, etc.), distraction due to movement, not having pre-selected pupils, etc.
- After the exercise, ALL pupils were provided with snack and pencil and eraser as a gift



Some results ...

- (Results in one single school of course not conclusive but note other research yields similar results, refer to other research as well!)
- Setting the bar low (45 cwpm of connected text reading, answering ≥ 3 out of 5 questions):
 - 7% of Std 2 “could read”
 - 9% of Std 3 “could read”
- Findings in other schools in late 2006 were a bit more encouraging (using same definition)
 - 31% of end-of-year standards 2s “could read”



Letter fluency (correct letters /minute)

	Standard 1	Standard 2
E	31	37
K	32	34
Both	31	36

Word fluency

	Standard 1	Standard 2
E	10	21
K	14	22
Both	12	21



Connected text fluency

	Standard 2	Standard 3
E	26	29
K	10	22
Both	19	26

- This is just one school, and only to show the workshops participants the sorts of analyses possible. For comparison:
 - Peruvian kids tested by Crouch in 2005: 29 wpm at end of Std 2 (not cwpm but just wpm, kids in bottom 40% SES)
 - Possible developing country “goal” for end-of-Std 2: 60 cwpm
 - Developed countries often achieve 60 cwpm at end of Std 1
 - MRC-RTI test late 2006, after removing “good” schools, 31 and 28 in Eng, Kiswahili, respectively, end of Std 2 (compare to Std 3 above)
- Note: standard errors relatively high because of small sample size, thus diff 19 to 26 not stat significant... But with sample sizes of 100 or so children per group, differences of just 3 would be significant

Matthew Jukes from Harvard Kenyan students in Swahili and English on various types of reading tests, and the results are quite revealing and worth of dissemination. Std 1s and Std 2s read at 24-25 words per minute on average, a speed that is too low for consistent comprehension. Predictably, they only got about 1.5 out of 5 questions correct in Swahili, and 0.6 question correct in English.



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- Note only pilot test, and new (though capable!) assessors (!)... Even so...
- Important correlations confirmed
 - Letter and single words: 0.76
 - Single words and connected text: 0.77
 - Single letters and connected text: 0.68
 - Phoneme task too underperformed and thus unreliable: correlations were low with other tasks (0.35 max)
 - Correls within standards are higher: Std 3, words-connected text: 0.91
- In MRC-RTI test in 2006, other interesting correlations
 - Testing same kids in both languages, correlation of fluency in English and Kiswahili was 0.80
 - Also, school-to-school differences important
 - Thus, instruction matters



correl within std 3
words to passage



MRC RTI simple
initial test



- Reading can be measured in early standards
- While need larger samples to come to conclusions, reading levels of approx 30 cwpm are low compared to standards
- Early standards are key
- While Kenya does well compared to rest of Africa, social drive is to do even better
- We can see big differences between classes, also between schools and also between standards
- Thus:
 - Instruction matters a lot
 - Progress is possible, but can be faster
- Next tasks
 - Continue agreeing on measurement
 - Importantly: begin to agree on pilot interventions to be tried to improve instruction, supervision of instruction
 - Then re-measure over time to see improvement



Some notes on issues to flag (parenthetical comments)

- Refine approach to school
 - More time with children?, a fixed protocol
 - More training for assessors
- Discuss: graduated passages or same passage?
 - Standard-specific levels would require more standardisation within standards
 - Tendency for the test to become higher stakes?
 - One common, one calibrated?
 - Calibrate in the middle
 - It defines a MINIMUM standard or benchmark
 - Research it over time, refine it
- Sounds automatised later, so no need to test phonemic issues later....
It is meant to be predictive.
- Meaning / sounds issues in syllabus, practice
- Issue of p/t ratio... 180 pupils... Kenya std practice is closer to 50...
 - Sample schools closer to average... random-sample, larger sample



Discussed broad variety of interventions, prioritised

- Thus, the implications of the research as well as similar research were discussed
- Given low state of reading, basic recommendation is to focus on “big five”
 - Phonological awareness
 - Phonics
 - Vocabulary
 - Fluency
 - Comprehension
- Extended discussion followed on what these mean, what are some possible interventions in these areas
- This provided fairly full background



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Discussed broad variety of interventions, prioritised

- Friday, the many interventions were:
 - First, organised into coherent whole
 - Second, prioritised
- And, what a possible “project profile” might be suitable, so that the approach could be “projectised”
 - Assumption is that none of this should just be made policy without further research to see whether they improve things



Other materials, issues

- All key bibliography needed to further explore the issues was provided in CDs or flash drives to all participants who desired it
 - This should then be made available to their respective institutions
- USAID has funded EdData II to carry on: TA, collaboration
 - Also 1-week course on surveys and statistics tied to measurement in reading