

Early Grade Reading (EGR) Project

Benchmarks for Early Grade Reading Skills in West Bank

Matthew Jukes and Dina Husary

Background

The Ministry of Education and Higher Education (MOEHE) conducted the first EGRA assessment in the West Bank in March 2014 among a nationally representative sample of Grade 2 students, followed by a benchmarking exercise in September 2014. In 2018, the Early Grade Reading (EGR) project conducted a project baseline using an adapted EGRA¹ and MELQO^{2,3}. Following this assessment, the MOEHE expressed interest in revising the 2014 provisional Grade 2 benchmarks and developing Grade 1 benchmarks. EGR conducted a technical benchmarking workshop in November 2018.

Basic Results from EGR Baseline

The purpose of the project baseline was to provide understanding of the pre-literacy, reading, and writing abilities for Grade K-2 students in Modern Standard Arabic, produce general information and propose baselines against which project results could be measured. In addition, the MOEHE desired additional outcomes:

- To inform policy decisions and planning by the MOEHE for improved reading instruction and student learning outcomes.
- To strengthen the capacities and deepen the knowledge base of MOEHE staff to implement early grade reading assessments for grades K-2.

It is important to note that EGR conducted the assessment in 80 West Bank public schools. The project did not assess schools in the remaining Palestinian Territories.

Table 1: EGR baseline results

Grade Level Indicators	KG	G1	G2
Percentage of KG students who correctly identify initial letter sounds	17%		
Percentage of students who can write letters	23%		
Percentage of KG students who understand print concepts	28%		
Percentage of students reading fluently (30 cwpm ³)	3%	33%	
Percentage of student comprehending what they read (80% correct responses)	11%	38%	
Percentage of students reading fluently with comprehension	2%	22%	
Percentage of students able to express thoughts in writing by writing out what they do in the morning.	3%	13%	

¹ EGRA: Early Grade Reading Assessment

² MELQO: Measuring Early Learning Quality and Outcomes

³ cwpm: correct word per minute

Benchmarking Process and Results

A workshop was held to discuss the benchmarking process and results (see Annex A for detailed agenda) It consisted of:

1. A general introduction to concepts of benchmarks, goals, metrics
2. Learning to read: foundational components
3. Results of the EGR baseline assessment 2018
4. Benchmarking analysis methods and results
5. Practical session analyzing benchmarks using SPSS

The approach focused on benchmarking oral reading fluency, measured by the number of words in a passage read correctly in one minute. The aim was to assess progress in overall reading proficiency, defined as ‘reading fluently with comprehension.’ Reading fluency is an important component of overall reading proficiency and is highly related to comprehension.

EGR presented three methods for setting fluency benchmarks. All the methods estimate the level of reading fluency associated with comprehension. Two of the methods focus on the fluency of students who read with at least 80% comprehension. One of the two methods uses the mean fluency of this group of students; the other method uses the median fluency. A third method used statistical modelling (a logistic regression equation) to estimate the level of fluency associated with 80% comprehension. The table below summarizes the results of the three methods for both Grades 1 and 2.

Table 2: Benchmarks analysis summary

Method	Benchmark (cwpm)	Sensitivity	Specificity	Correct Classification
Grade 1				
Mean	20.2	42%	94%	90%
Median	17.9	50%	92%	89%
Logistic	26.0	16%	98%	92%
Grade 2				
Mean	35.1	39%	89%	72%
Median	33.5	44%	87%	73%
Logistic	31.0	45%	87%	73%

Benchmarks are a means to classify students who are ‘reading with comprehension’. Three statistics relating to this classification were calculated in order to assess the validity of the benchmarks. Sensitivity is the proportion of students who can read with comprehension and are correctly classified as being above the benchmark. Specificity is the proportion of students who cannot read with comprehension and are correctly classified as below the benchmark. Correct classification is a combination of sensitivity and specificity.

The results for Grade 1 in Table 2, show that the three methods had an overall correct classification rate of around 90%. However, the logistic regression method had a low sensitivity of 16%. Because this method produced a higher benchmark (26 cwpm) than the other two methods, most students who can read with comprehension were incorrectly classified as below the benchmark. Participants in the workshop concluded that this benchmark was too high and selected a Grade 1 benchmark of 20 cwpm, more closely in line with the other two methods.

For Grade 2, the three methods produced similar estimates with comparable levels of sensitivity and specificity. Participants in the workshop selected a benchmarking value of 33 cwpm, roughly in the midpoint of the three estimates.

Figure 1 shows the estimates (blue diamond) and confidence intervals for the three methods in Grade 1 and 2. The red line indicates the benchmark level chosen in the workshop. The figure shows that the final benchmarks shown fall within an acceptable range for the three methods.

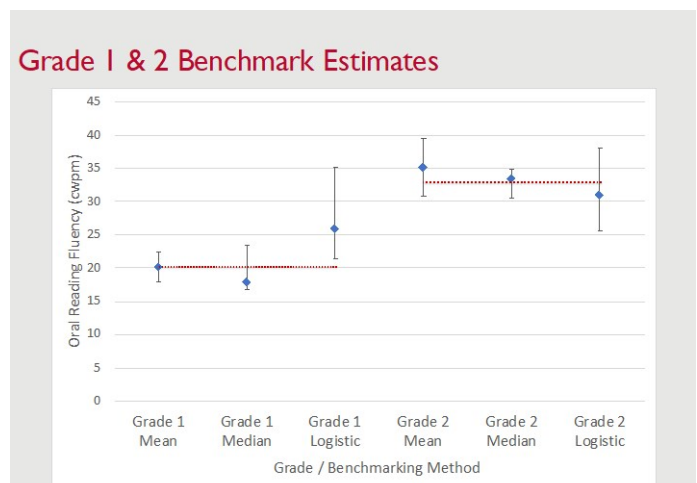


Figure 1: Benchmarks estimates for Grade 1 and 2

The fluency benchmarks recommended by the workshop participants were:

Grade 1 – 20 cwpm

Grade 2 – 33 cwpm

In the project baseline assessment, 13.8% of students reached the benchmark of 20 cwpm. A slightly higher rate of 25.2% of Grade 2 students reached the benchmark of 33 cwpm.

Recommendations and Policy Considerations

EGR recommends that the MOEHE consider using these benchmarks in the following ways:

- Communicate expectations about reading performance to ministry departments, directorates and schools.
- Set a target for the percentage of Grade 1 and 2 students achieving reading benchmarks in the next 5 years
- Provide numerical values to the reading and fluency goals of the Arabic language curriculum in Grades 1 and 2
- Coordinate action across Ministry departments to achieve the above targets for the percentages of students reaching benchmarks in coming years.
- Monitor and report national progress against the benchmarks



Conclusion

With the support of EGR, MOEHE decision-makers used rigorous analysis of data from the 2018 EGR baseline assessment to determine benchmarks for oral reading fluency. The percentage of students meeting these benchmarks will serve as an indicator of students achieving reading proficiency in grades 1 and 2. This enables the MOEHE to monitor progress in improving early grade reading outcomes, and thus continue to make informed decisions regarding strategies and interventions aimed at improving instruction.

About the Authors

Matthew Jukes, PhD, is a Fellow in education in RTI International's International Development Group.

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Annex A. Workshop Agenda

Day 1: November 13, 2018	
Time	Session
9:00	Arrival and registration
9:30	Opening remarks <i>Nancy Parks, EGR COP MOEHE Representative</i>
10:00	Introducing purpose benchmarks and EGRA <i>Presenter: Matthew Jukes</i>
11:15	EGR Baseline Results <i>Presenter: Dina Husary</i>
11:30	Break
11:45	Calculating Benchmarking Methods <i>Presenter: Matthew Jukes</i>
12:00	Presentation on analyzing benchmarks data for language fluency <i>Presenter: Matthew Jukes</i>
12:45	Discussion of new benchmarks and targets <i>Group discussion</i>
13:30	First Day Wrap Up
14:00	Lunch
Day 2: November 14, 2018	
8:30	Introducing Day 2
9:00	Calculating Benchmarking Methods <i>Presenter: Matthew Jukes</i>
9:45	Analysis of benchmarking data using SPSS <i>Presenter: Matthew Jukes</i>
10:30	Practical SPSS analysis session <i>Group supported by Matthew</i>
11:15	Break
11:30	Presentation of data on writing and preprimary reading <i>Presenter: Matthew Jukes</i>
12:30	Discussion of benchmarks in writing and pre-primary reading <i>Group discussion</i>
13:30	Wrap up
14:00	Lunch

Annex B. Benchmarking Workshop Participant List

Department	Name	Position
Assessment, Evaluation and Examination	Dr. Mohammad Awwad	General Director
Assessment, Evaluation and Examination	Dr. Mohammad Matar	Director
Assessment, Evaluation and Examination	Waheed Qattana	Manager
Assessment, Evaluation and Examination	Khaled Thiab	SM
Assessment, Evaluation and Examination	Omar Atwan	Examination Director
Assessment, Evaluation and Examination	Ala' Sajdia	Statistician
Assessment, Evaluation and Examination	Asma' Kameel	IT and Information Management
Assessment, Evaluation and Examination	Hanan Namrouti	Programmer
Educational Planning	Dr. Mamoun Jaber	General Director
Educational Planning	Dr. Ihad Shukri	Director
Educational Planning	Sameer Jabra	Statistician
Educational Planning	Omnyat Abdel Majed	Information Management Specialist
Educational Planning	Zeinab Musleh	Statistician
Curriculum Center	Abdel Hakim Abu Jamous	General Director
Curriculum Center	Raed Dwekat	Head of Arabic Language Unit
Supervision	Dr. Shahnaz Al Far	General Director
Supervision	Khitam Sukar	Head of Principals Training
Supervision	Ahed Ayash	EGR Focal Point
Supervision	Murad Abdel Ghani	Central Supervisor
Supervision	Wael Obayat	Supervisor
Supervision	Khalil Muahisen	Supervisor
Supervision	Mahmoud Nimer	Supervisor
Supervision	Mahasen Sehwil	Supervisor
General Education/ KG	Shaher Baker	General Education Manager
General Education/ KG	Mustafa Saifi	Special Education Manager
NIET	Ahmad Naser	Deputy General Director
NIET	Thaed Abu Khalil	Training Supervisor
Field Monitoring and follow up	Amal Jaghoub	Acting Head of School Administration
Field Monitoring and follow up	Adnan Al Fafous	School Follow up SM