



Measuring regional progress toward early grade reading and mathematics targets in a national application of LQAS as part of the RAMP Initiative in Jordan

CIES 2017



Panel overview

- The RAMP initiative in Jordan – developing the tools to support reflective practice.

Allyson Wainer, Education and Youth Office Director, USAID/Jordan

- Conducting a national LQAS based assessment in Jordan: instruments, implementation, results and lessons learned.

Aarnout Brombacher, Senior Education Program Specialist, RTI International

- Institutionalizing LQAS based assessment and methodologies in the monitoring and quality assurance roles and responsibilities of ministry supervisors.

Hafs Abu Mallouh, Director: Professional Policies Development, Supervision and Management Directorate, Ministry of Education, Jordan



The RAMP initiative in Jordan – developing the tools to support reflective practice.

Allyson Wainer

Education and Youth Office Director, USAID/Jordan



The 2012 & 2014 National Literacy and Numeracy Surveys clearly demonstrated that the majority of Jordanian children in the early grades are not reading with comprehension or doing mathematics with understanding (application and reasoning).

Reading

18%

Mathematics

13%

Early Grade Reading and Mathematics Initiative (RAMP)

- The main goal of RAMP is to support the efforts of the MoE in instituting reading and mathematics teaching and learning methodologies, policy and practices within schools, communities and government entities that focus on improving learning outcomes for reading in Arabic and mathematics in grades K2-G3 for all public schools in Jordan.

Early Grade Reading and Mathematics Initiative (RAMP)

- RAMP objectives include:
 - Improving early grade reading and mathematics learning materials
 - Better preparing teachers and administrators to provide effective reading and mathematics instruction through in-service, induction and pre-service training, mentoring and supervision
 - Engaging communities for participation in the education of all children and holding schools accountable for results
 - Supporting the Government of Jordan's efforts to institutionalize early grade reading and math policies, standards and assessments

- The 5-year goal of RAMP is that by 2019:

55%

of early grade students in Jordanian public schools will be reading with comprehension and doing mathematics with understanding

Are we achieving what we hope to achieve?

- Coaching data (46,000 reports for 8,000 teachers in the first two semesters)
 - Provides information on implementation fidelity
 - Allows for programme modification

But implementation fidelity does not necessarily ensure that we are achieving the outcomes that we want!

Are we achieving what we hope to achieve?

- National EGRA/EGMA based surveys are planned for 2017 and 2019 and will provide
 - Rich detailed data
 - High confidence levels among stakeholders

But

- Not fine grained enough (which Field Directorates are achieving the targets and which are not)
- Does not enable us to be respond very quickly with targeted responses

So...

LQAS

LQAS (Lot Quality Assurance Sampling)

Because it is too costly and time-consuming for manufacturers to inspect the quality of *every single product* they produce, they use LQAS to **quality control** their products.

1. They randomly chose a small and set number of items from within each lot of production to determine whether the lot meets the minimum **quality standard**.
2. If enough of the chosen items meet the quality standard, then the manufacturer is satisfied that the whole lot meets the quality standard.
3. If an insufficient number of items meet the minimum quality standard than the entire lot of production is rejected.

LQAS in education

- Using the LQAS methodology in the education sector allows Districts and Regions to quality control teaching and learning.
- LQAS is a classification tool.
- District officials can classify schools as “meeting” or “not meeting” minimum performance standards.
- Similarly, regional officials can classify districts as “meeting” or “not meeting” minimum performance standards.

Advantages of LQAS for local program management

- Can be used at a local level with modest amounts of supervision – (sustainability)
- Identifies where the successes and challenges are located
- Produces information that can quickly be available for interpretation and use by local managers
- Simple tabulation that can be done with paper/pencil and doesn't require computer analyses for local results
- Data can be used for national reporting as well as for local management

- The RAMP initiative is employing the LQAS methodology as an efficient and cost effective mechanism for regular monitoring and evaluation by both national and regional education structures.
- By incorporating the methodologies into the Ministry of Education's (MoE) existing monitoring and evaluation activities, the MoE is strengthening its capacity to respond quickly to needs that are identified on a local level. This, in turn, allows the MoE to deploy its limited resources most strategically in areas that have been identified as being in greatest need.



Conducting a national LQAS based assessment in Jordan: instruments, implementation, results and lessons learned

Aarnout Brombacher, Senior Education Program
Specialist, RTI International



LQAS activity in Jordan

- Instrument development
 - Co-validity study

Co-validity study

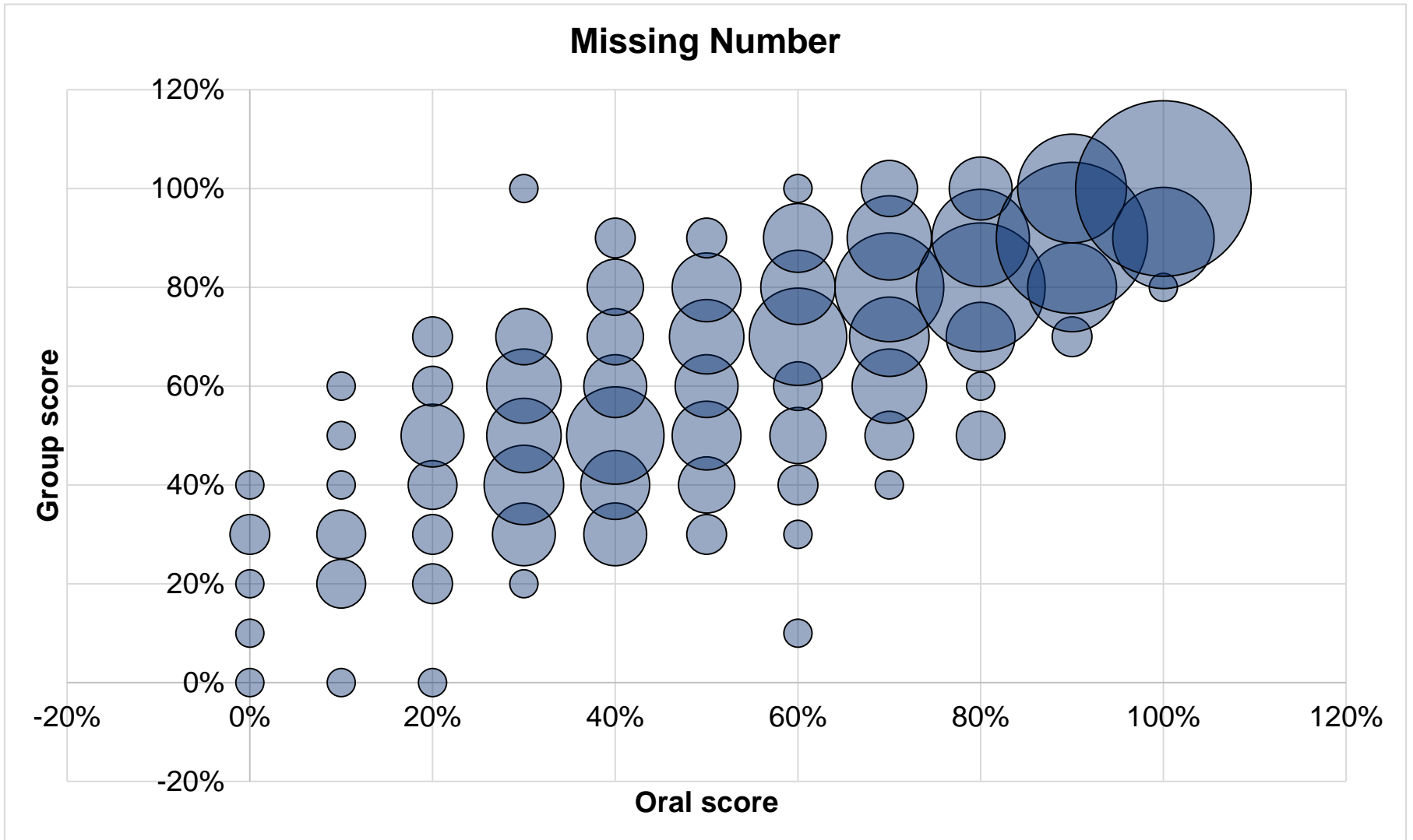
- Group Administered Reading Assessment
- Group Administered Mathematics Assessment

Descriptive Statistics		n	total
EGRA and Group Administered Reading Assessment	Grade 2	189	380
	Grade 3	191	
EGMA and Group Administered Mathematics Assessment	Grade 2	190	377
	Grade 3	187	

Co-validity study results – Mathematics

Mathematics (n = 377)		EGMA		Group	
		Mean Score	% Zero Scores	Mean Score	% Zero Scores
Quantity Comparison	Estimate	81.27%	0.27%	85.33%	0.27%
	95% C.I.	(78.9, 83.65)	(-0.26, 0.79)	(83.59, 87.07)	(-0.26, 0.79)
Addition L1	Estimate	62.45%	2.12%	55.49%	0.53%
	95% C.I.	(60.1, 64.81)	(0.66, 3.58)	(53.34, 57.64)	(-0.21, 1.27)
Subtraction L1	Estimate	46.63%	4.77%	44.62%	1.06%
	95% C.I.	(44.55, 48.71)	(2.61, 6.94)	(42.69, 46.54)	(0.02, 2.1)
Addition and Subtraction L2	Estimate	42.90%	6.50%	50.84%	2.71%
	95% C.I.	(40.07, 45.73)	(3.98, 9.03)	(48.36, 53.32)	(1.05, 4.37)
Missing Number	Estimate	64.30%	1.59%	71.75%	0.80%
	95% C.I.	(61.56, 67.03)	(0.32, 2.86)	(69.37, 74.13)	(-0.11, 1.7)
Word Problems	Estimate	72.63%	1.86%	78.16%	1.06%
	95% C.I.	(70.05, 75.22)	(0.49, 3.23)	(75.91, 80.41)	(0.02, 2.1)

Co-validity study – Mathematics



Co-validity study – Reading round 1

Reading (n = 380)		EGRA		Group	
		Mean Score	% Zero Scores	Mean Score	% Zero Scores
Letter Sounds	Estimate	43.64%	7.11%	97.13%	0.26%
	95% C.I.	(41.22, 46.07)	(4.51, 9.7)	(96.24, 98.02)	(-0.25, 0.78)
Syllable Sounds	Estimate	29.06%	6.84%	94.66%	0.26%
	95% C.I.	(27.29, 30.82)	(4.29, 9.39)	(93.35, 95.97)	(-0.25, 0.78)
Invented Words	Estimate	20.44%	22.37%	97.05%	0.00%
	95% C.I.	(18.61, 22.26)	(18.16, 26.58)	(95.88, 98.22)	(0, 0)
Reading Comprehension	Estimate	35.16%	29.47%	69.63%	6.58%
	95% C.I.	(31.85, 38.47)	(24.87, 34.08)	(66.26, 73)	(4.08, 9.08)

Co-validity study – Reading round 2

Reading (n = 399)		EGRA		Group	
		Mean Score	% Zero Scores	Mean Score	% Zero Scores
Letter Sounds	Estimate	42.62%	6.77%	93.41%	0.00%
	95% C.I.	(40.28, 44.96)	(4.29, 9.24)	(92.13, 94.69)	(0.00, 0.00)
Syllable Sounds	Estimate	27.42%	6.02%	66.44%	0.00%
	95% C.I.	(25.54, 29.30)	(3.67, 8.36)	(63.94, 68.95)	(0.00, 0.00)
Invented Words	Estimate	18.92%	22.56%	85.54%	0.25%
	95% C.I.	(17.23, 20.61)	(18.44, 26.68)	(83.61, 87.46)	(-0.24, 0.74)
Reading Comprehension	Estimate	25.01%	44.61%	63.11%	9.77%
	95% C.I.	(22.03, 18.00)	(39.71, 49.51)	(59.61, 66.61)	(6.85, 12.70)

LQAS activity in Jordan

- Instrument development
 - Co-validity study
 - Reading: Oral reading and comprehension tasks
 - Oral reading (1 min) – ORF
 - Silent reading (1 min)
 - Reading comprehension (5 items)
 - Mathematics: Group Administered Assessment
- Sampling

LQAS Table: Decision Rules for Sample Sizes for Minimum Performance Standards of 10% to 95%

LQAS Table: Decision Rules for Sample Sizes of 12-30 and Coverage Benchmarks or Average Coverage of 10% to 95%																		
Sample Sizes	Coverage Benchmark or Average Coverage																	
	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%
12	N/A	N/A	1	1	2	2	3	4	5	5	6	7	7	8	8	9	10	11
13	N/A	N/A	1	1	2	3	3	4	5	6	6	7	8	8	9	10	11	11
14	N/A	N/A	1	1	2	3	4	4	5	6	7	8	8	9	10	11	11	12
15	N/A	N/A	1	2	2	3	4	5	6	6	7	8	9	10	10	11	12	13
16	N/A	N/A	1	2	2	3	4	5	6	7	8	9	9	10	11	12	13	14
17	N/A	N/A	1	2	2	3	4	5	6	7	8	9	10	11	12	13	14	15
18	N/A	N/A	1	2	2	3	5	6	7	8	9	10	11	11	12	13	14	16
19	N/A	N/A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
20	N/A	N/A	1	2	3	4	5	6	7	8	9	11	12	13	14	15	16	17
21	N/A	N/A	1	2	3	4	5	6	8	9	10	11	12	13	14	16	17	18
22	N/A	N/A	1	2	3	4	5	7	8	9	10	12	13	14	15	16	18	19
23	N/A	N/A	1	2	3	4	6	7	8	10	11	12	13	14	16	17	18	20
24	N/A	N/A	1	2	3	4	6	7	9	10	11	13	14	15	16	18	19	21
25	N/A	1	2	2	4	5	6	8	9	10	12	13	14	16	17	18	20	21
26	N/A	1	2	3	4	5	6	8	9	11	12	14	15	16	18	19	21	22
27	N/A	1	2	3	4	5	7	8	10	11	13	14	15	17	18	20	21	23
28	N/A	1	2	3	4	5	7	8	10	12	13	15	16	18	19	21	22	24
29	N/A	1	2	3	4	5	7	9	10	12	13	15	17	18	20	21	23	25
30	N/A	1	2	3	4	5	7	9	11	12	14	16	17	19	20	22	24	26

For all coverage benchmarks (except where noted) LQAS is at least 92% sensitive and specific

N/A = Not Applicable -- Indicates that LQAS should not be used since coverage is too low for LQAS to detect.

Alpha and Beta Errors are > 10%

Alpha and Beta Errors are > 15%

LQAS activity in Jordan

- Instrument development
 - Co-validity study
 - Reading: Oral reading and comprehension tasks
 - Mathematics: Group Administered Assessment
- Sampling
- Training of trainers
- Training of assessors (Supervisors)
- Assessment

LQAS activity in Jordan

- Instrument development
 - Co-validity study
 - Reading: Oral reading and comprehension tasks
 - Mathematics: Group Administered Assessment
- Sampling
- Training of trainers
- Training of assessors (Supervisors)
- Assessment

Descriptive statistics

- 19 schools per field directorate
- 19 students per school

Schools	734				
Students	Grade 2	Grade 3	Male	Female	Total
	6,730	7,151	6,188	7,693	13,881

- 99 MoE Supervisors conducted the assessments (two to seven schools each)
- 14 RAMP Coaches supplemented the Supervisors in 22 of the 42 Field Directorates and between them conducted assessments in 201 schools.

LQAS activity in Jordan

- Instrument development
 - Co-validity study
 - Reading: Oral reading and comprehension tasks
 - Mathematics: Group Administered Assessment
- Sampling
- Training of trainers
- Training of assessors (Supervisors)
- Assessment
- Analysis

Results - Mathematics

Field directorates:

- 3** Insufficient data to classify
- 32** Not meeting performance criteria
- 7** Meeting the 55% performance criteria

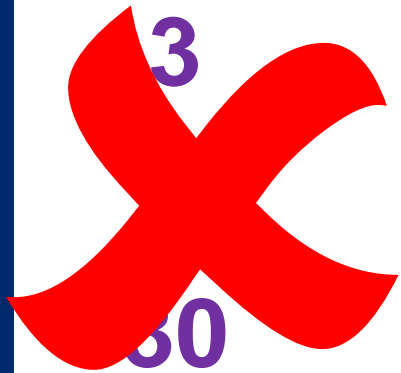
Results – Reading

Field directorates:

- 3** Insufficient data to classify
- 9** Not meeting the performance criteria
- 30** Meeting the 55% performance criteria

Results – Reading

Field directorates:



Insufficient data to classify

Not meeting the performance criteria

Meeting the 55% performance criteria

- Unreliable administration of the assessment due to a range of factors:
 - Training?
 - “Cultural” – performance vs. diagnostic expectations
 - Task limitation

Results – Reading Version - recalibrated

Field directorates:

- 3** Insufficient data to classify
- 34** Not meeting the performance criteria
- 5** Meeting the 55% performance criteria

LQAS Assessment: November/December 2016

In order to produce school reports, another round of LQAS based reading and mathematics assessments were conducted in November/December 2016 in:

- 830 schools

with

- \approx 16,000 students

School Reports



أقرأ الكتاب وأفهم الحساب

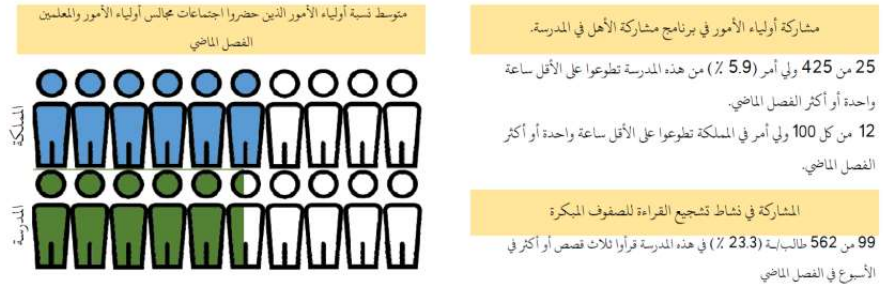
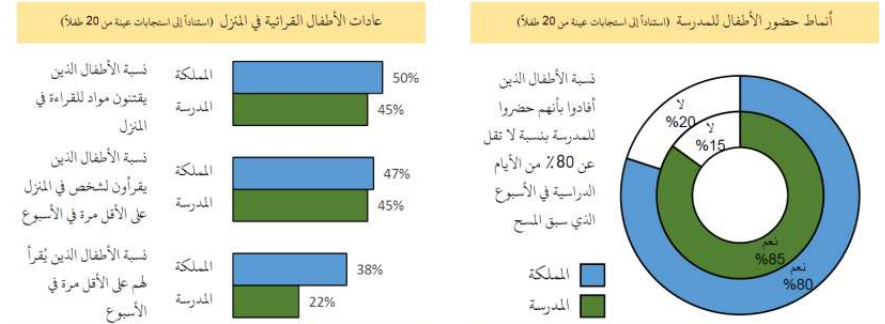
مبادرة القراءة والحساب للصفوف المبكرة

عكا الأساسية المختلطة (لواء قصبه عمان, العاصمة)



نظرة عامة:

إن أهمية تعليم القراءة والحساب هو أمر لا يُمكن الاستهانة به؛ إذ يلجأ الأطفال للقراءة بهدف التعلّم ويستخدمون الحساب للمشاركة الفاعلة في الاقتصاد المعرفي. مبادرة القراءة والحساب للصفوف المبكرة هي مبادرة لوزارة التربية والتعليم، ومدتها خمس سنوات، تهدف إلى تحسين أداء الأطفال في الصفوف المبكرة في هذين الموضوعين الأساسيين. وبما أن أولياء الأمور يلعبون دوراً أساسياً في تعلّم أبنائهم، تم تطوير هذا التقرير ليزود أولياء الأمور والمدارس والمجتمعات المحلية بمورد لتمكينهم من التأمل في أداء الأطفال في مدارسهم، ينبغي استخدام هذا التقرير كأساس للنقاش بين المعلمين وأولياء الأمور. قمت اقتراحات للمدارس وأولياء الأمور والمجتمعات المحلية حول كيفية تقديم دعم لأداء أفضل في القراءة والحساب تجمونها على الرابط الإلكتروني التالي: www.rampjo.org



المشاركة في نشاط تشجيع القراءة للصفوف المبكرة
99 من 562 طالبة (23.3%) في هذه المدرسة قرأوا ثلاث قصص أو أكثر في الأسبوع في الفصل الماضي

School Reports



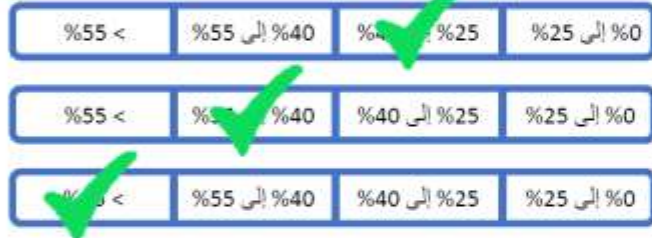
أقرأ الكتاب وأفهم الحساب

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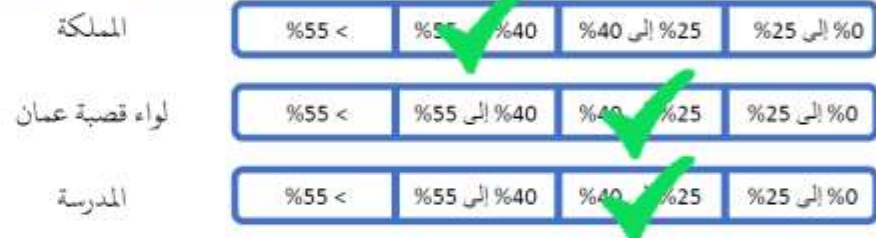


نظرة عامة:

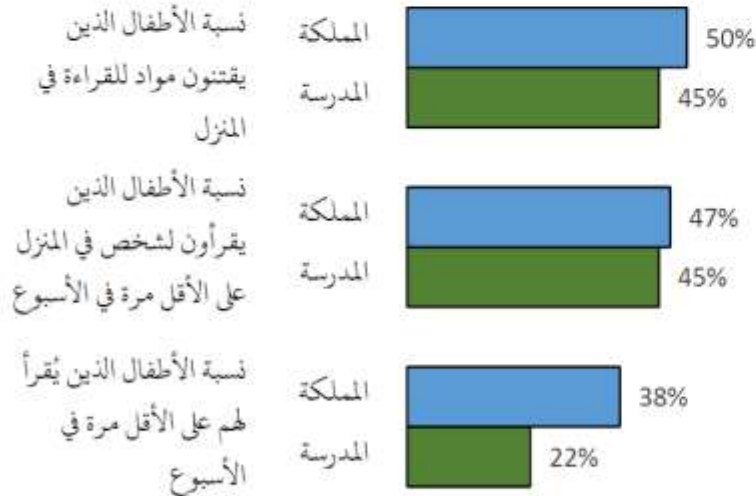
نسبة الأطفال الذين حققوا المؤشر المعياري الوطني في الحساب



نسبة الأطفال الذين حققوا المؤشر المعياري الوطني في القراءة



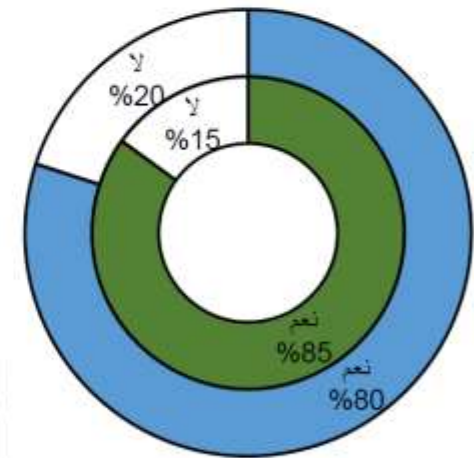
عادات الأطفال القرائية في المنزل (استناداً إلى استجابات عينة من 20 طفلاً)



أنماط حضور الأطفال للمدرسة (استناداً إلى استجابات عينة من 20 طفلاً)

نسبة الأطفال الذين أفادوا بأنهم حضروا للمدرسة بنسبة لا تقل عن 80% من الأيام الدراسية في الأسبوع الذي سبق المسح

المملكة
المدرسة



School Reports



أقرأ الكتاب وأفهم الحساب

مبادرة القراءة والحساب للصفوف المبكرة

عكا الأساسية المختلطة (لواء قصبه عمان, العاصمة)



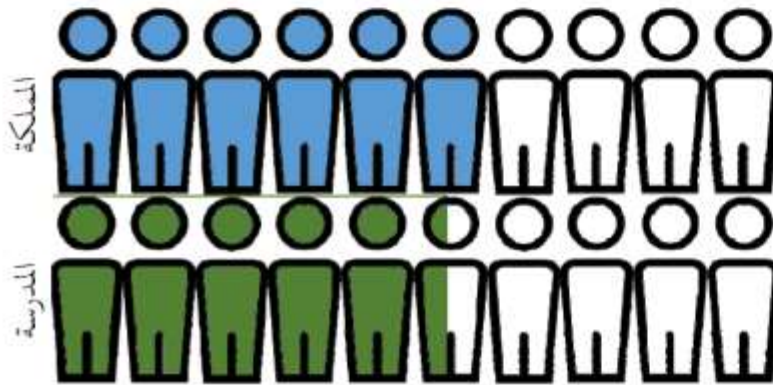
نظرة عامة:

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نسبة الأطفال الذين حققوا المؤشر المعياري الوطني في الحساب				نسبة الأطفال الذين حققوا المؤشر المعياري الوطني في القراءة			
0% إلى 25%	25% إلى 40%	40% إلى 55%	< 55%	0% إلى 25%	25% إلى 40%	40% إلى 55%	< 55%
0% إلى 25%	25% إلى 40%	40% إلى 55%	< 55%	0% إلى 25%	25% إلى 40%	40% إلى 55%	< 55%
0% إلى 25%	25% إلى 40%	40% إلى 55%	< 55%	0% إلى 25%	25% إلى 40%	40% إلى 55%	< 55%

متوسط نسبة أولياء الأمور الذين حضروا اجتماعات مجالس أولياء الأمور والمعلمين

الفصل الماضي



مشاركة أولياء الأمور في برنامج مشاركة الأهل في المدرسة.

25 من 425 ولي أمر (5.9%) من هذه المدرسة تطوعوا على الأقل ساعة واحدة أو أكثر الفصل الماضي.

12 من كل 100 ولي أمر في المملكة تطوعوا على الأقل ساعة واحدة أو أكثر الفصل الماضي.

المشاركة في نشاط تشجيع القراءة للصفوف المبكرة

99 من 562 طالب/ة (23.3%) في هذه المدرسة قرأوا ثلاث قصص أو أكثر في

الأسبوع في الفصل الماضي

LQAS Assessment: Dec. 2016 School Level Results

Category 4:

≥ 55% of students achieve the benchmark

Category 3:

40 to 55% of students achieve the benchmark

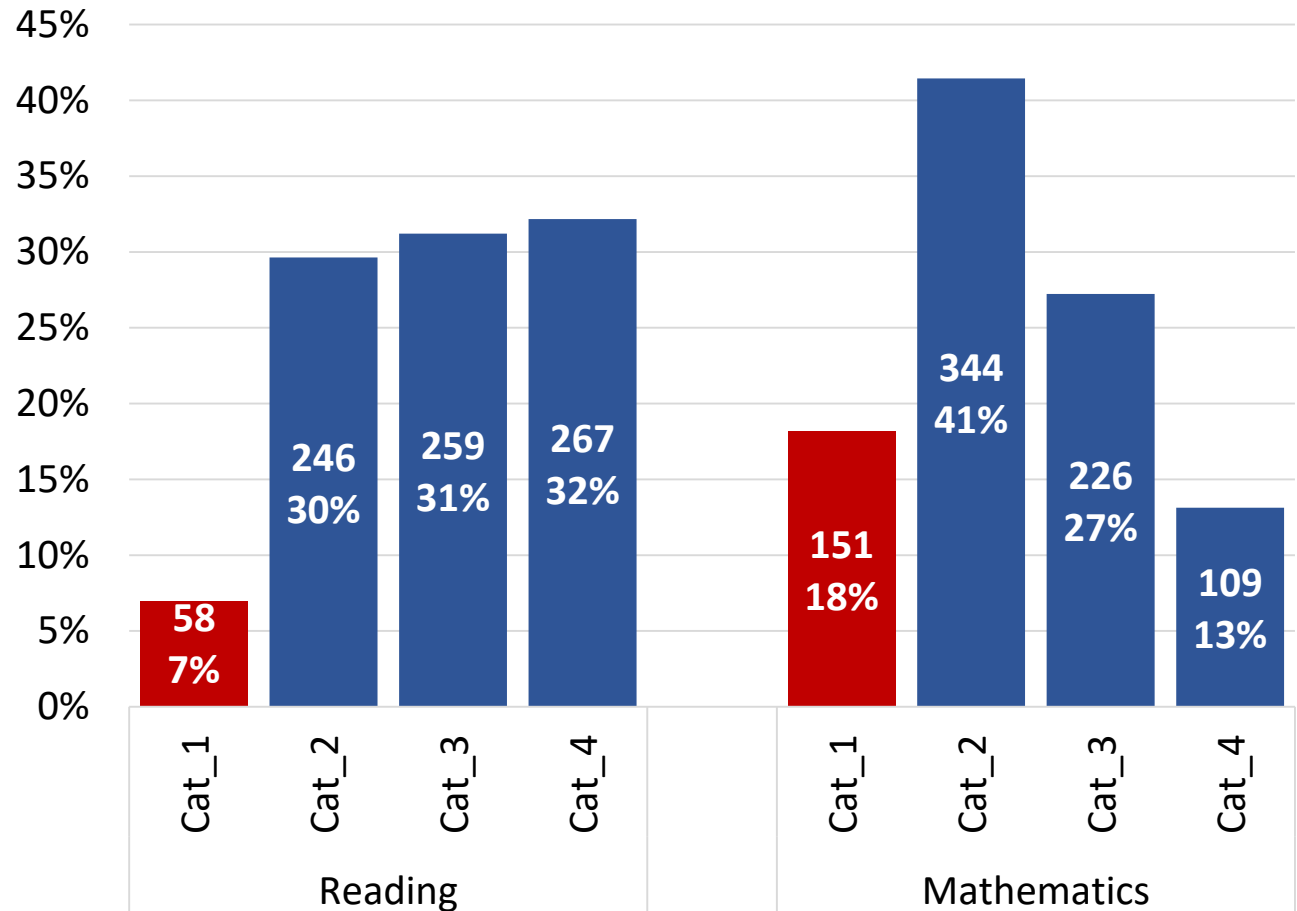
Category 2:

25 to 40% of students achieve the benchmark

Category 1:

< 25% of students achieve the benchmark

Schools by performance category



LQAS Assessment: Dec. 2016 Field Directorate Level Results

Category 4:

≥ 55% of students achieve the benchmark

Category 3:

40 to 55% of students achieve the benchmark

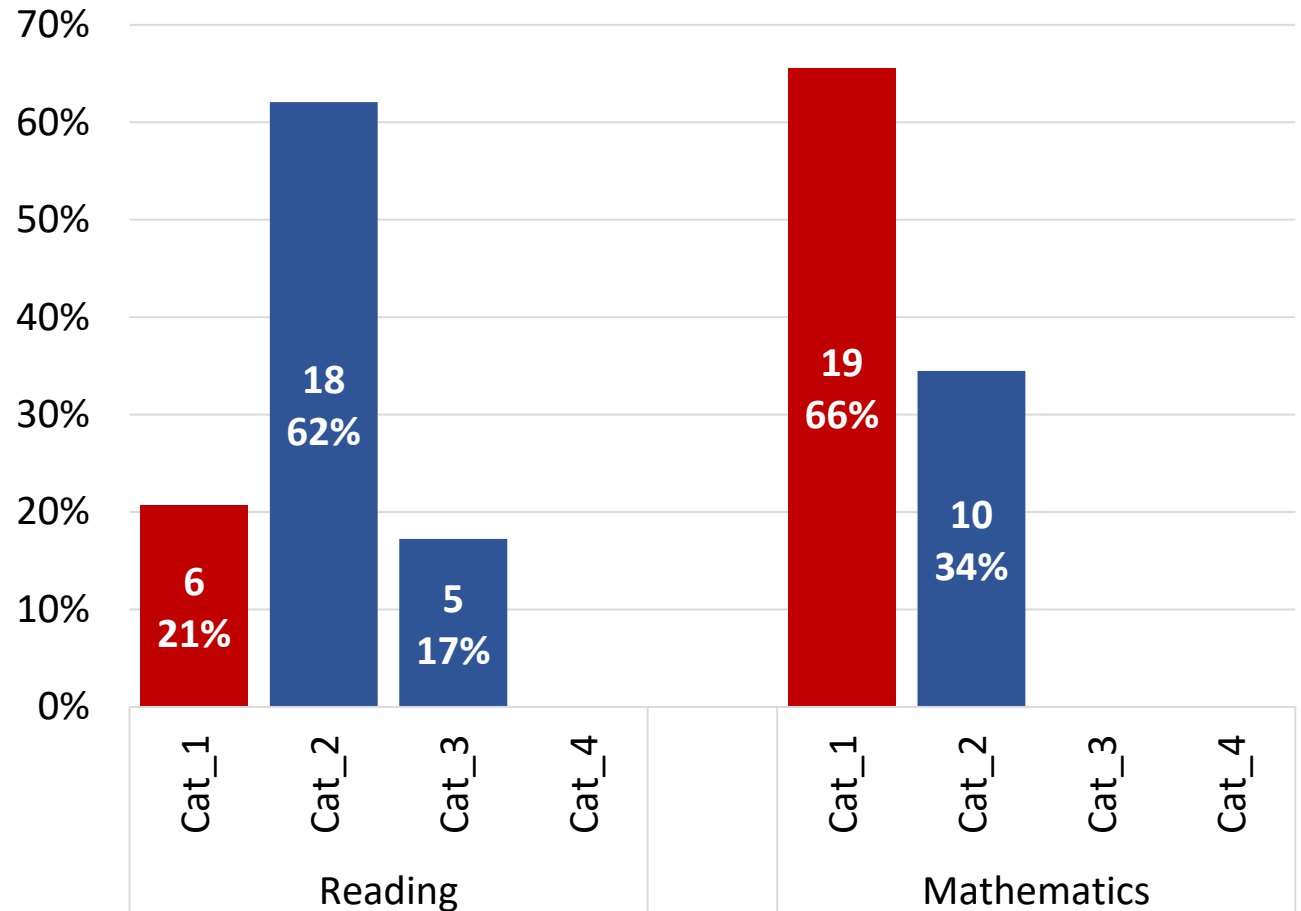
Category 2:

25 to 40% of students achieve the benchmark

Category 1:

< 25% of students achieve the benchmark

Field Directorates by performance category

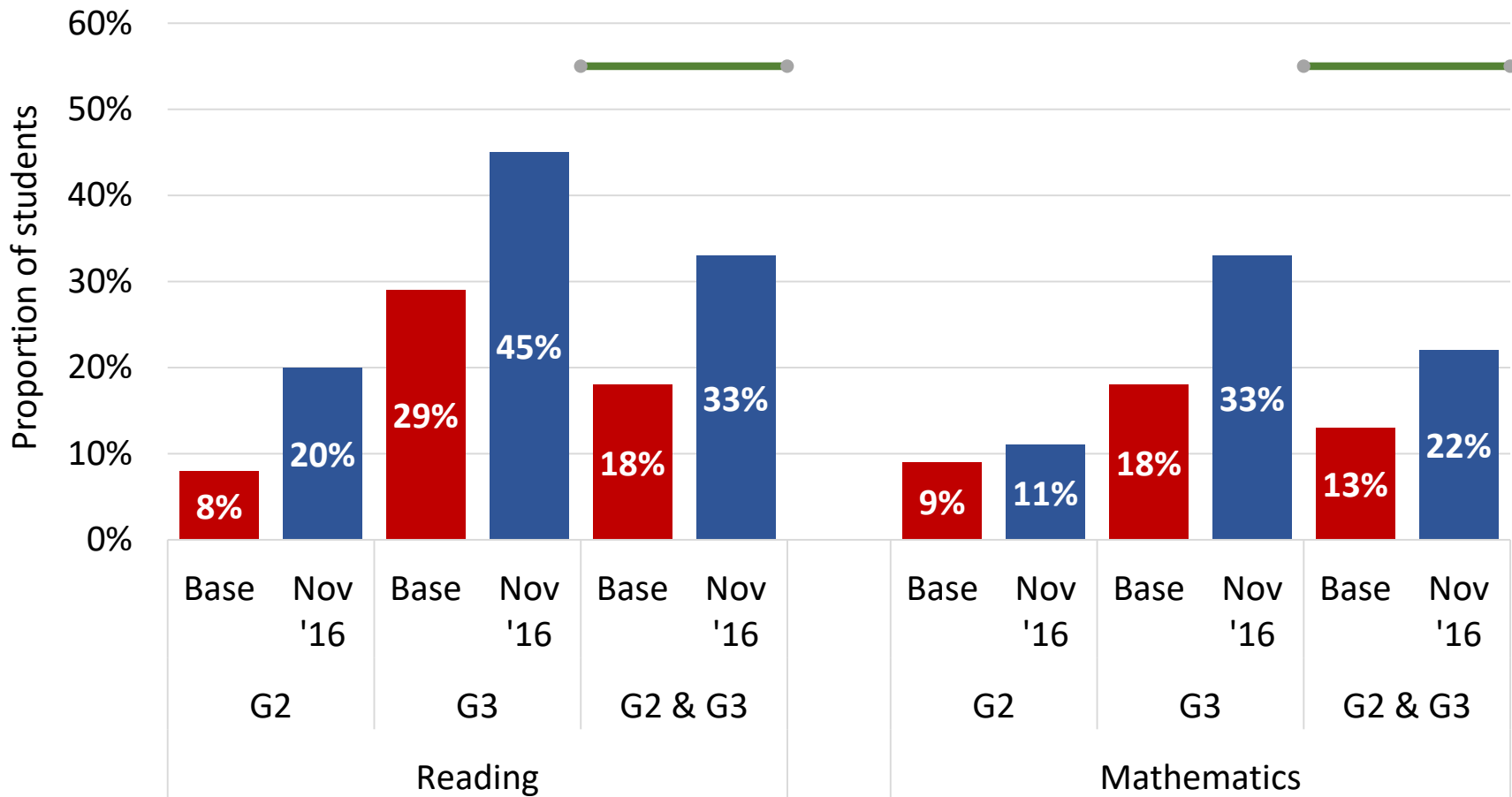


LQAS Assessment: 2016 Governorate Level Results

Governorate	Cohort	Reading classification	Mathematics classification
Irbid اربد	2	Cat_2	Cat_1
Zarqa الزرقاء	1	Cat_2	Cat_1
Tafleh الطفيلة	2	Cat_2	Cat_1
Amman العاصمة	2	Cat_2	Cat_1
Aqaba العقبة	2	Cat_2	Cat_1
Karak الكرك	1	Cat_2	Cat_1
Jerash جرش	1	Cat_3	Cat_2
Ajloun عجلون	1	Cat_3	Cat_2

Reading: indicator values

Progress toward indicator targets





Institutionalizing LQAS based assessment and methodologies in the monitoring and quality assurance roles and responsibilities of ministry supervisors.

Hafs Abu Mallouh, Director: Professional Policies Development, Supervision and Management Directorate, Ministry of Education, Jordan



Do we need more monitoring and evaluation tools and more quality assurance in the educational context in Jordan?

The educational context of Jordan

- Reform of the education for the knowledge economy.
- The school-based development approach.
- The transition to the results-based management
- Decentralization and giving the field more authority and power.
- Transition from inspection to monitoring and coaching
- Syrian refugee situation and its impact on education
- Implementation of a large number of programs and initiatives

- With increased global interest in the education sector monitoring and evaluation has become a trend
- Within the Jordanian context described earlier there is an increased need for an effective, smooth and simple system of monitoring and quality assurance

Traditional approaches

Focus on inputs and activities more than results and outputs.

Expensive

Always need long discussions about the tools, samples and designs studies.

Need to build specialized capacity in monitoring and evaluation

Need a long time to complete and benefit from the results.

The credibility of the results are often the subject of debate

What does LQAS mean to the Ministry of Education?

- The LQAS based assessment has proved its efficiency in the classification of Directorates and this enables the Ministry to make decisions and direct support to the Directorates on the basis of identified needs.

Important features of LQAS for the Ministry

Simplicity, convenience and savings.

Easy to derive the benefits and lessons.

Easy to modify the tools for the goals of the needed surveys

Enables the classification of Directorates and schools, according to the performance levels on the desired goals

Ease of getting the big picture of the progress and results, not only the implementation of activities

Enables the monitoring of quality control and the speed of response and directing it

Important features of LQAS for the Ministry

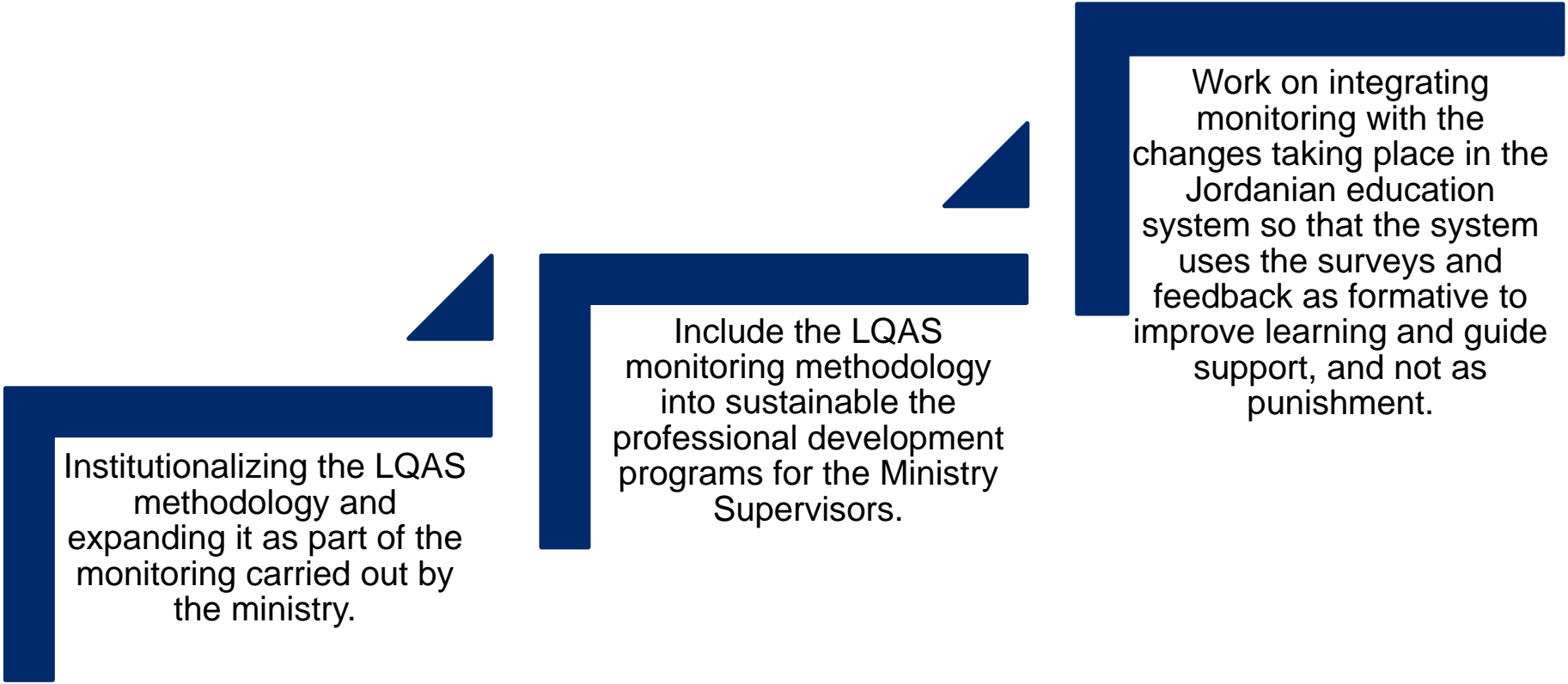
Helps to focus Ministry efforts on the developmental procedures and solutions and stops the wasting of time and effort on monitoring and evaluation and then stop operations.

Reduced period of time and the need for supervision

It can be used at different multiple levels of the organization

It does not need complex calculations and specialists in the analysis to get to the results and impressions of the information that can be easily achieved

The next steps



Institutionalizing the LQAS methodology and expanding it as part of the monitoring carried out by the ministry.

Include the LQAS monitoring methodology into sustainable the professional development programs for the Ministry Supervisors.

Work on integrating monitoring with the changes taking place in the Jordanian education system so that the system uses the surveys and feedback as formative to improve learning and guide support, and not as punishment.

