
Assessment and education quality in Africa: Current trends and Future challenges

READ Regional Workshop
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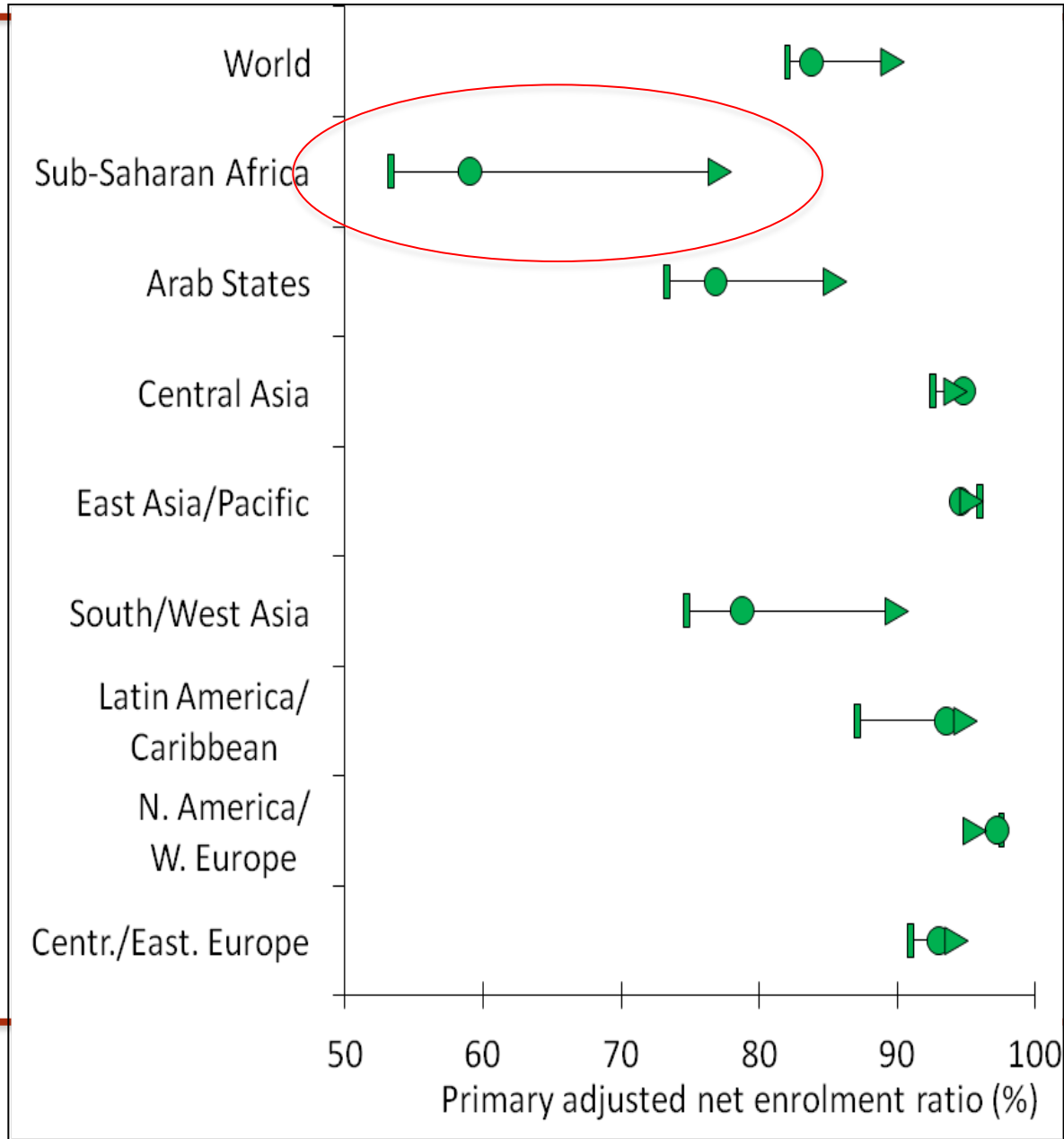
Overview

- Contextualising education quality
- Review - Assessment trends and practices
 - Classroom
 - Large-scale surveys
 - Examinations
- Future challenges
- Conclusion

Education Quality

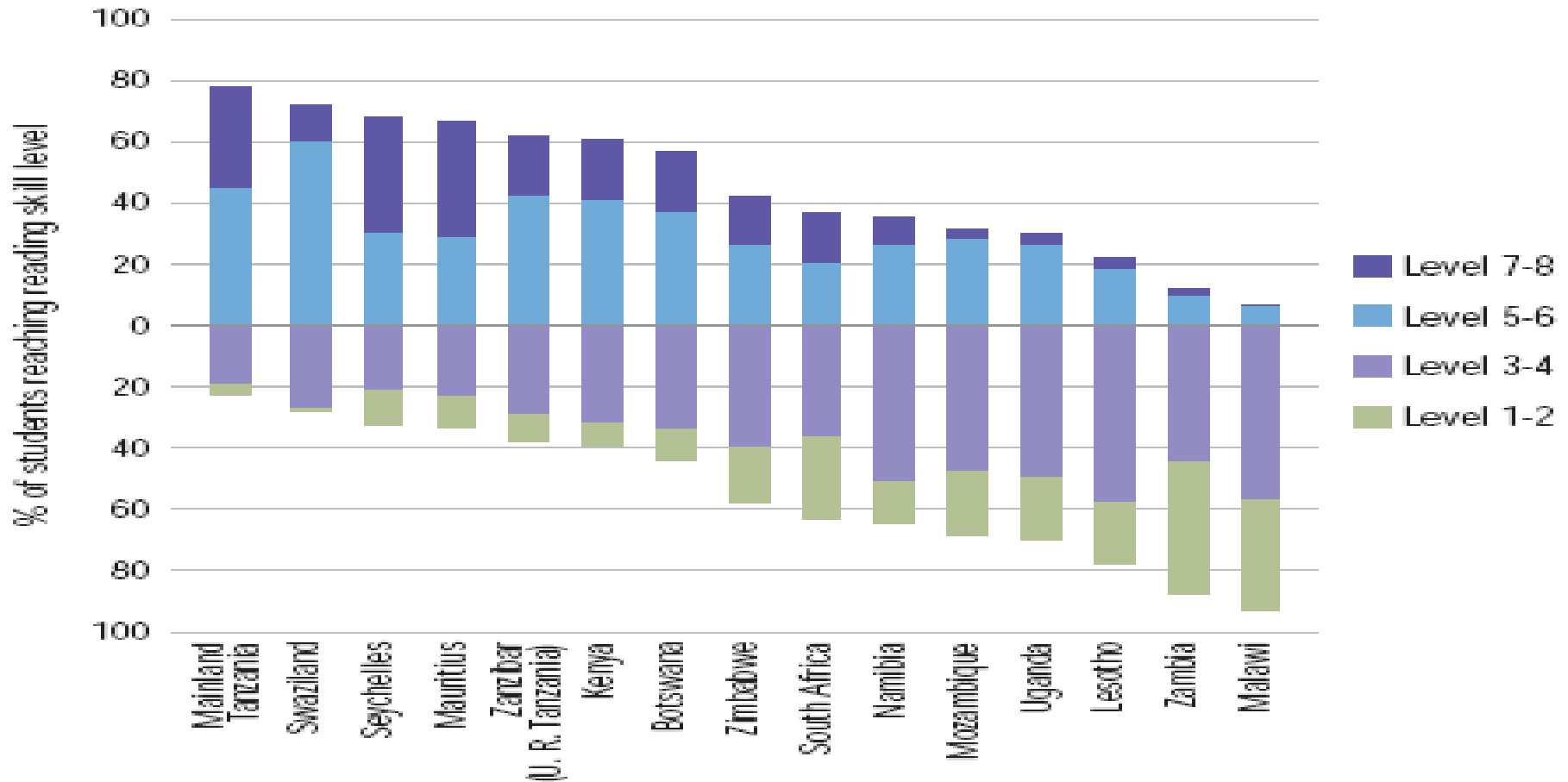
- Quality is at the heart of teaching and learning - impacts enrolment, attendance, retention, and completion
- Multiple and contested meanings
- Two faces of quality - learning to achieve (cognitive development) and learning to live (values, attitudes, citizenship)
- Current focus on cognitive learning outcomes - to the detriment of non-cognitive outcomes?

Increase in Access



Insufficient attention to quality

Percentage of grade 6 students reaching SACMEQ skill levels for reading, 2007



Source: See Figure 1.37 in the 2011 EFA Global Monitoring Report.

Assessment and Quality

- Increasing emphasis on assessment due to concern with declining quality
- Emphasis translates to focus on achievement scores, in “core subjects”
- The discourse of quality revolves around “testing”
 - In many countries - National assessment, TIMSS, PIRLS, SACMEQ, project evaluations, exams
- However, testing indicates areas in need of intervention but not what is required
- Assessment and testing does not equal quality
- You don't fatten the chicken by weighing it

Education Assessment in Africa

Conducted brief review

- Focused mainly on Kenya, Malawi, South Africa, Uganda, Zambia
- Also looked at Botswana, Ghana, Nigeria
- Identified key trends
 - Based on READ framework of Assessment Types

READ: Assessment Types/ Functions

Classroom assessment

- Provide 'real-time' information for improving teaching and learning

Large-scale assessment

- Provide system-level information on student learning levels and related factors

Examinations

- Provide standardized information for making decisions about student admission, promotion or graduation/certification

Classroom Assessment

Classroom Assessment

- Classroom assessment systems in almost all SSA countries are the **least developed component**
- Often manifest in different ways across most countries – used mainly:
 - in certification exams (SBA),
 - for promotion to next grade,
 - as continuous assessments, e.g. quarterly tests
 - for reporting to parents

Classroom assessment in SSA

- Growing recognition of the value classroom assessment (CA) for improving the teaching and learning process
- This has resulted in a significant increase in the number of countries developing policies and systems for conducting and using continuous assessment
- Malawi, Namibia, South Africa, Swaziland, Zambia

Classroom assessment in SSA - 2

- In Namibia, CA at the primary level was introduced as a direct result of the Ministry's Education For All policy with training and support targeted to teachers in both lower and upper primary phases.
- In Malawi, the Ministry of Education, Science and Technology obtained assistance from international and local organisations to develop a model for CA in primary schools as well as train teachers and other relevant schools staff in its effective implementation.

Implementing CA in SSA - 1

However, CA used still mainly for exam purposes rather than for improving learning

■ In a number of SSA countries, the final grade on the national examinations comprise of scores from CA exercises as well as the final examination paper.

- In South Africa - CA score comprise 25% of the final examination grade
- In Tanzania, the examination and continuous assessment score comprise 50% of the final grade.

Implementing CA in SSA - 2

- Kenya - use of CA exercise put on hold -
 - some teachers colluding with parents in allowing them to buy articles they were required to make and present for grading,
 - other teachers often submitted inflated or cooked up scores.
- Ghana, review WAEC
 - found significant differences between CA scores assigned by teachers and examinations scores of learners.
- Swaziland, CA introduced in 1993.
 - Ten years on teachers were still unable to develop their own tests,
 - Testing was still entirely paper-and-pencilled based - excluded assessment of psychomotor and affective domains.

Key Challenge:

- **Limited evidence on use of assessment for improving learning**
- Number of countries have attempted to address this issue -
 - yet to succeed beyond piloting, and
 - yet to go to scale -
 - e.g. Angola, Malawi, Mozambique, Swaziland, South Africa and Zambia.
- However, evidence that a growing number of countries are taking this aspect more seriously
- This is one area that we can predict extensive growth in the near future.

Assessment for Learning □ 5 key Stages

1. Share learning intentions and success criteria with learners;
2. Manage my classroom discussions & activities that provides evidence of learning;
3. Provide relevant feedback to learners to improve their learning;
4. Support learners to serve as learning resources:
 1. for each other (peer assessment);
 2. For their own learning (self assessment).
5. Improve teaching and assessment practices


Assessment for Learning application

- AfL approaches are more inclusive and take account of the different learning styles, background and needs of all learners within a classroom promoting equity.
- “in classrooms of the most effective teachers, students from disadvantaged backgrounds learn just as much as those from advantaged backgrounds, and those with behavioural difficulties learn as much as those without” (William, 2011, p. 9)

Challenge

- Requires highly qualified and trained teachers working in conducive learning and teaching environments.

Group Exercise

- Watch a video - 2 mins
 - In pairs - discuss views of the video - 2 mins
 - Share views with plenary - 2 mins 

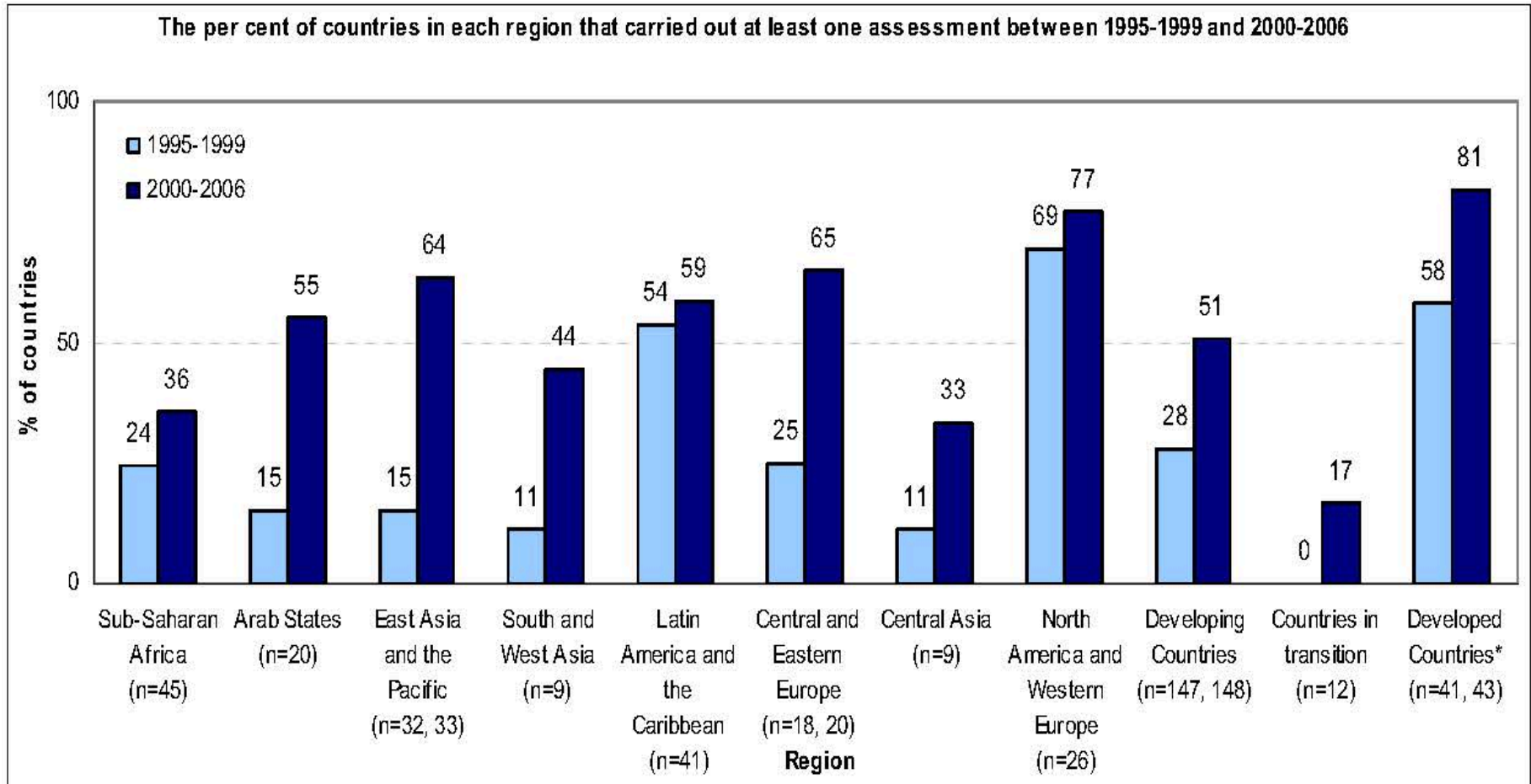
 - Explain - what to focus on in the video - 1 min
 - Watch video again 2 mins
 - Now share views with plenary - 2 mins
- Focus on - who teacher asks questions to
 - Focus on - students who are not asked questions

Large scale Assessment Surveys

LSAS in SSA

- Since the world EFA conferences in Jomtien (1990) and Dakar (2000) there has been a significant increase in the number of SSA countries that have implemented LSAS
- Phenomenon not limited in SSA but across most developing nations

Increase in LSAS internationally



Assessment in SSA

- In SSA,, most countries have participated in regional studies facilitated by UNESCO/UNICEF including the MLA, SACMEQ and PASEC.
- To date 47 countries have participated in MLA I and II studies, 15 in SACMEQ studies and 12 in PASEC studies
- A growing number of countries, however, have began conducting their own national assessment studies including Botswana, Eritrea, South Africa, Uganda and Zambia

LSAS - Key Trends - 1

- In many countries, large scale assessment surveys are established or beginning to becoming more common.
- LSAS include the following:
 - National assessment, TIMSS, PIRS, SACMEQ, PASEC
- Increasing number of countries have developed significant capacity over time
- Small but growing number - in high level expertise, e.g. IRT
- Improvement in reporting - focus still at policy level

Key trends - 2 cont

- Specific mention should be made about:
 - household surveys - UWEZO in East Africa,
 - Potential to reach high number of out of school learners
 - Census based surveys conducted in South Africa
 - since 2010, every learner approximately 6 million assessed in Grade 1 to 6 & 9 Maths and Language
 - Focus on accountability and interventions at individual learner level

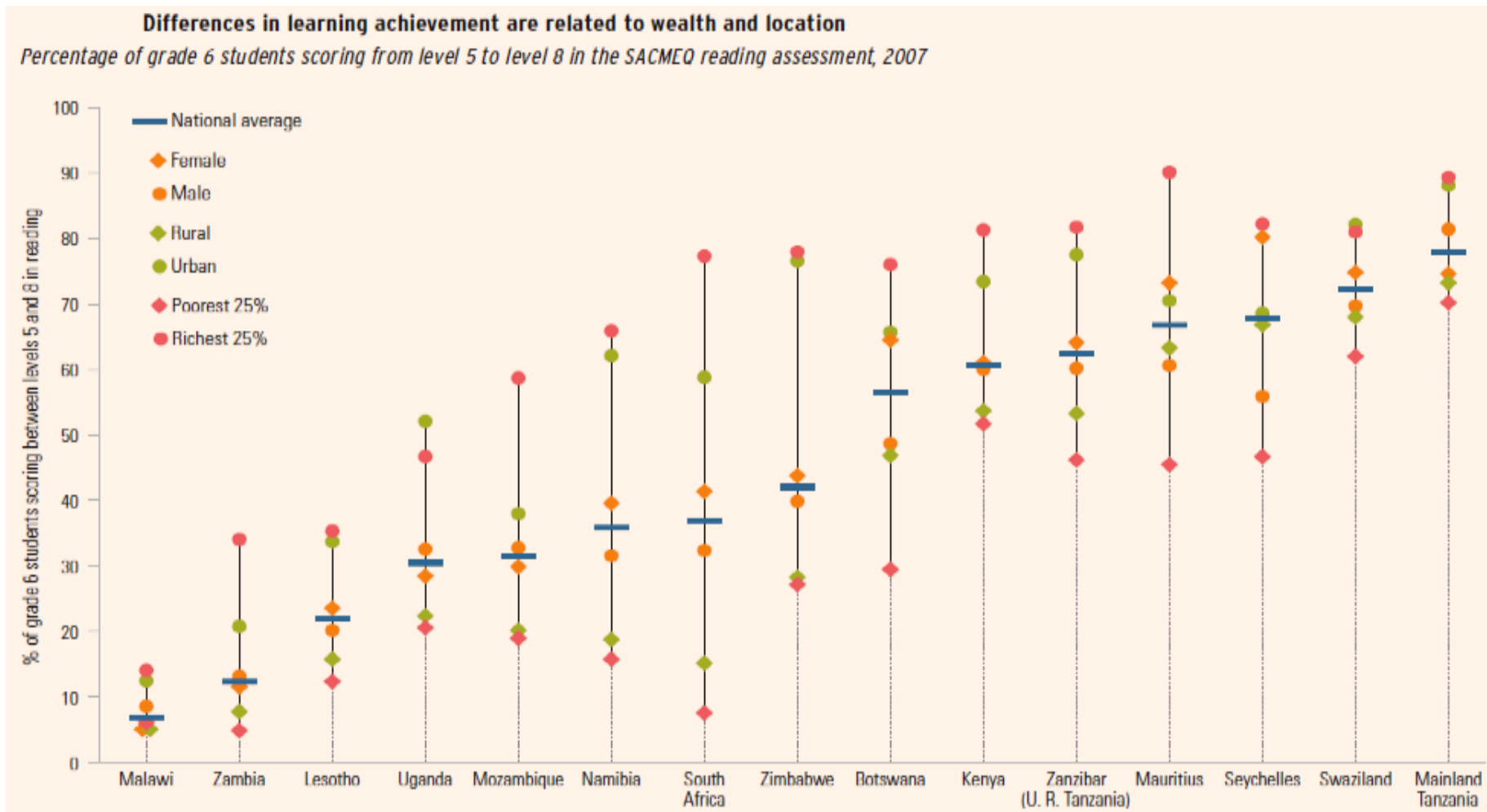
Improved Reporting - by subgroup

TIMSS Maths 2003 – South Africa

	Boys	Girls
National	262 (6.2)	264 (6.4)

School Type	Boys	Girls
Ex-DET	226 (3.2)	228 (3.4)
Ex-HoA	464 (24.3)	472 (19.0)

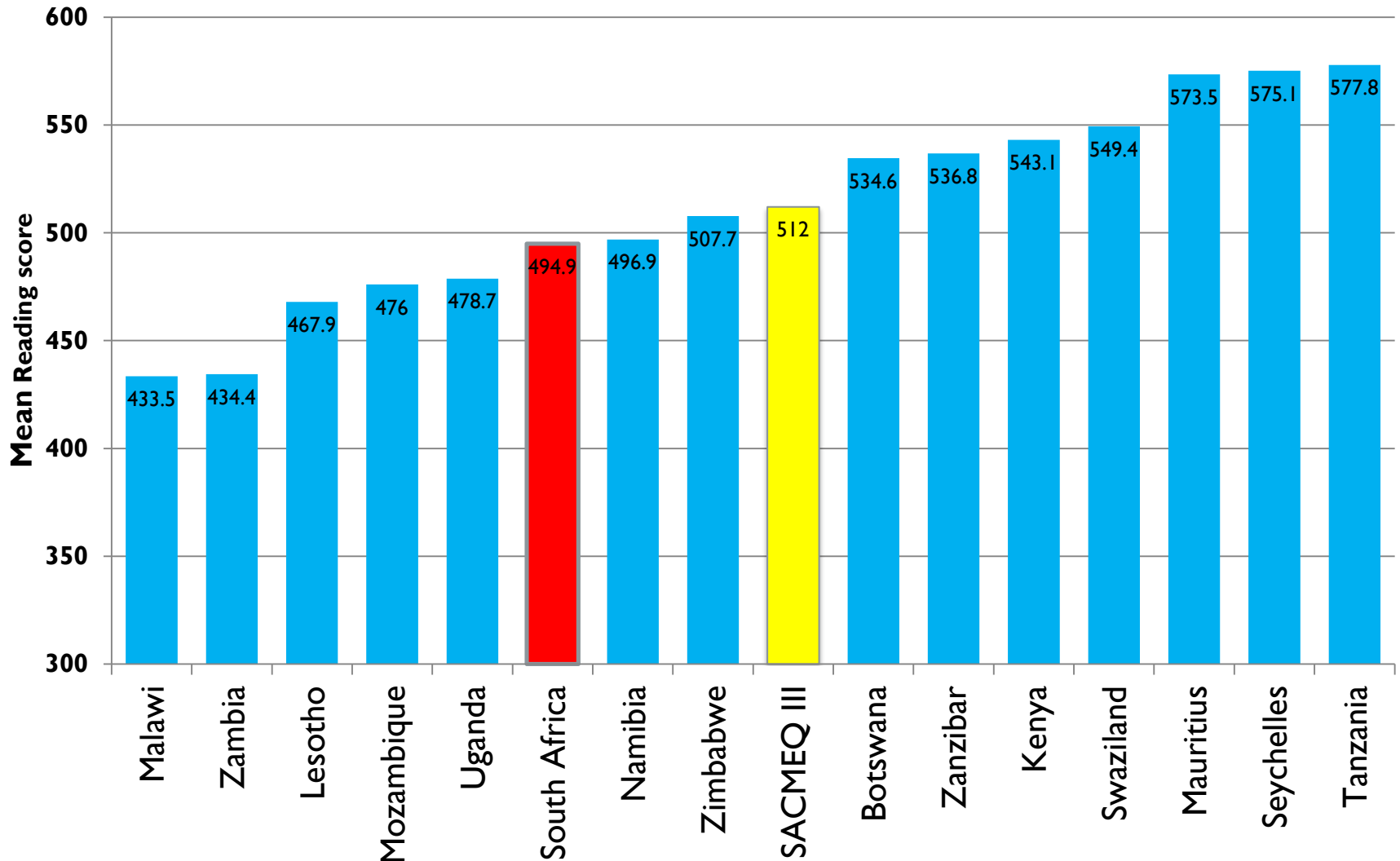
Reporting differences by wealth, location, gender,



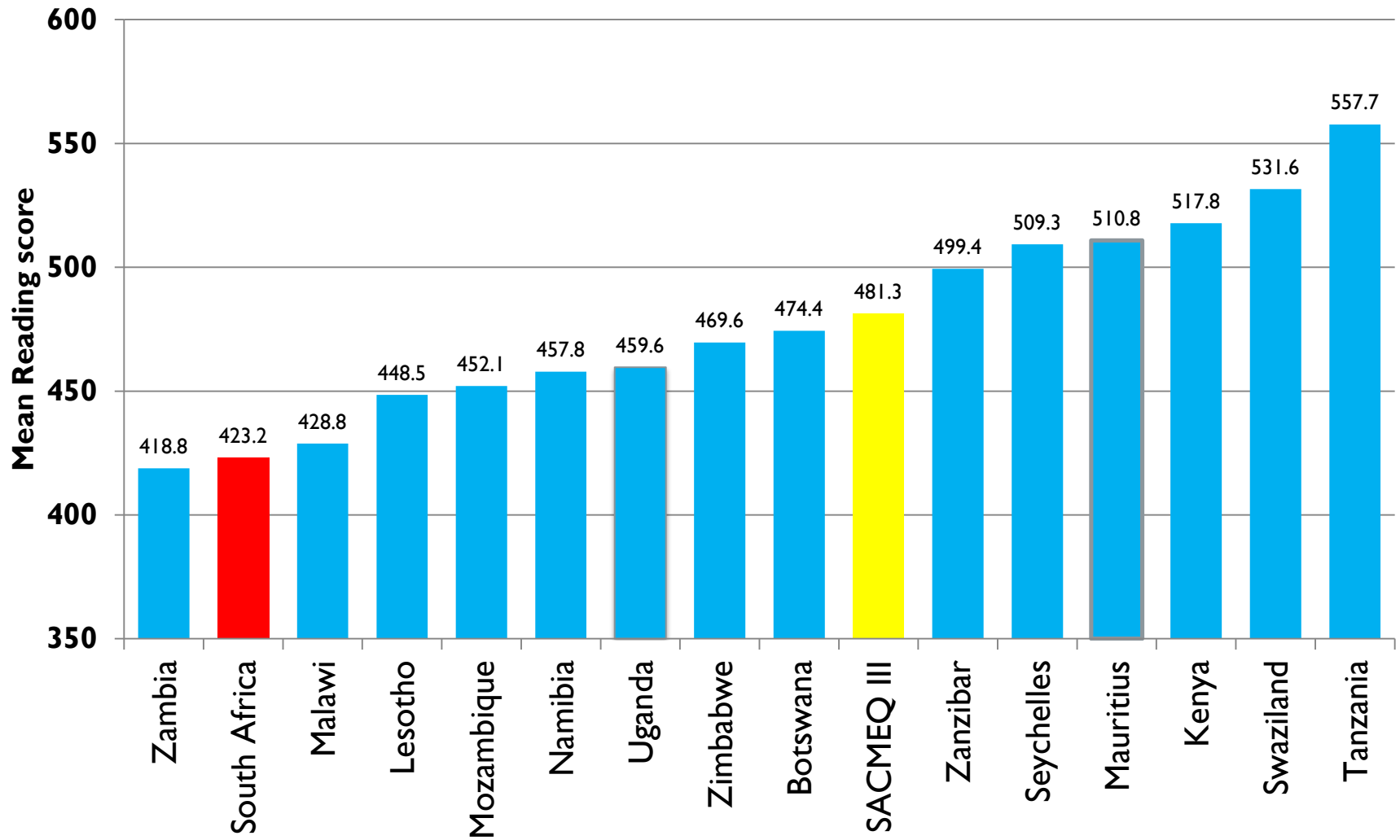
Note: SACMEQ uses eight levels to rank grade 6 reading skills. Level 1 students are classified as having only pre-reading skills. Level 5 students are classified as having interpretive reading skills and level 8 students are assessed as having obtained critical reading skills.

Source: Hungi et al. (2010).

Mean Reading scores (SACMEQ 3)



Reading by poorest 25% (SACMEQ 3)



Reporting - Standard setting process

- Based on national assessment scores
 - Used same category as DBE - NA, PA, Ac & Ad
 - Compared results of SS process to those specified in the curriculum documents
-

Performance Level Descriptors

Acieved

The learner is able to :

recognise

- numbers and their relationships, and to count, estimate, calculate and check with competence and confidence in solving problems.

- patterns and relationships, as well as to solve problems using algebraic language and skills

- characteristics and relationships between two-dimensional shapes and three-dimensional objects in a variety of orientations and

Partially Achieved

The learner is able to :

represent

- numbers and their relationships, and to count, estimate, calculate and check with competence and confidence in solving problems

- patterns and relationships, as well as to solve problems using algebraic language and skills.

- characteristics and relationships between two-dimensional shapes and three-dimensional objects in a variety of orientations and positions.

Advance

The learner is able to :

describe

- numbers and their relationships, and to count, estimate, calculate and check with competence and confidence in solving problems

- patterns and relationships, as well as to solve problems using algebraic language and skills.

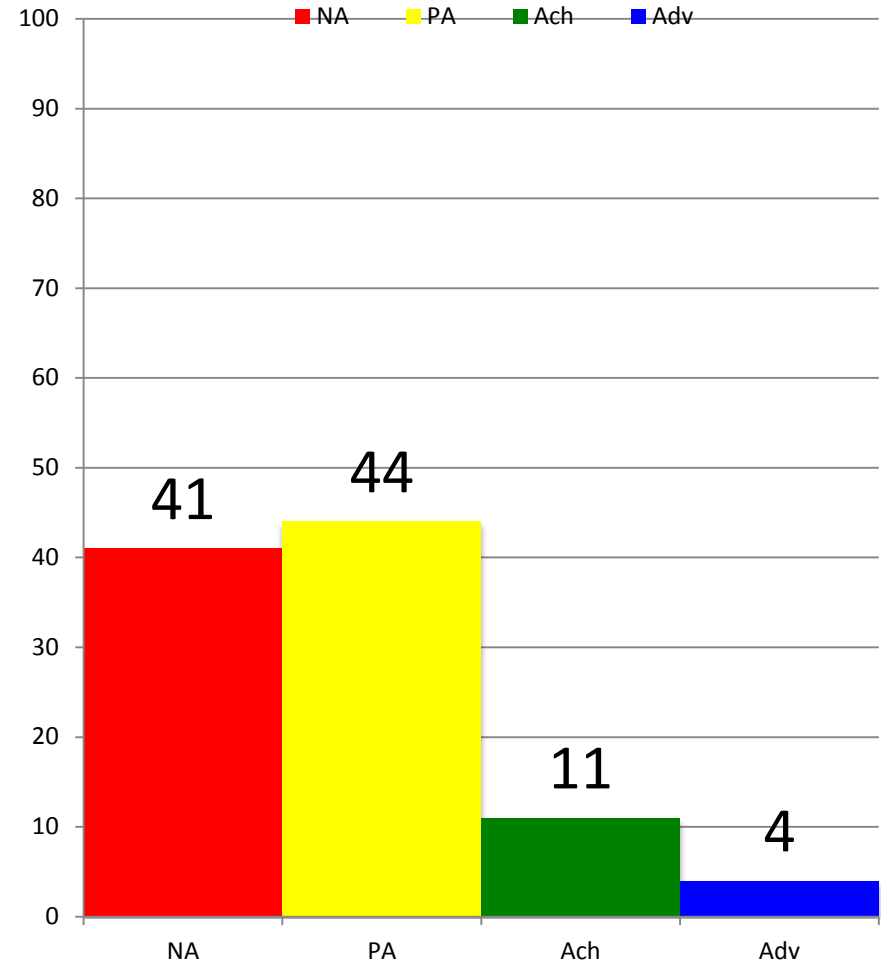
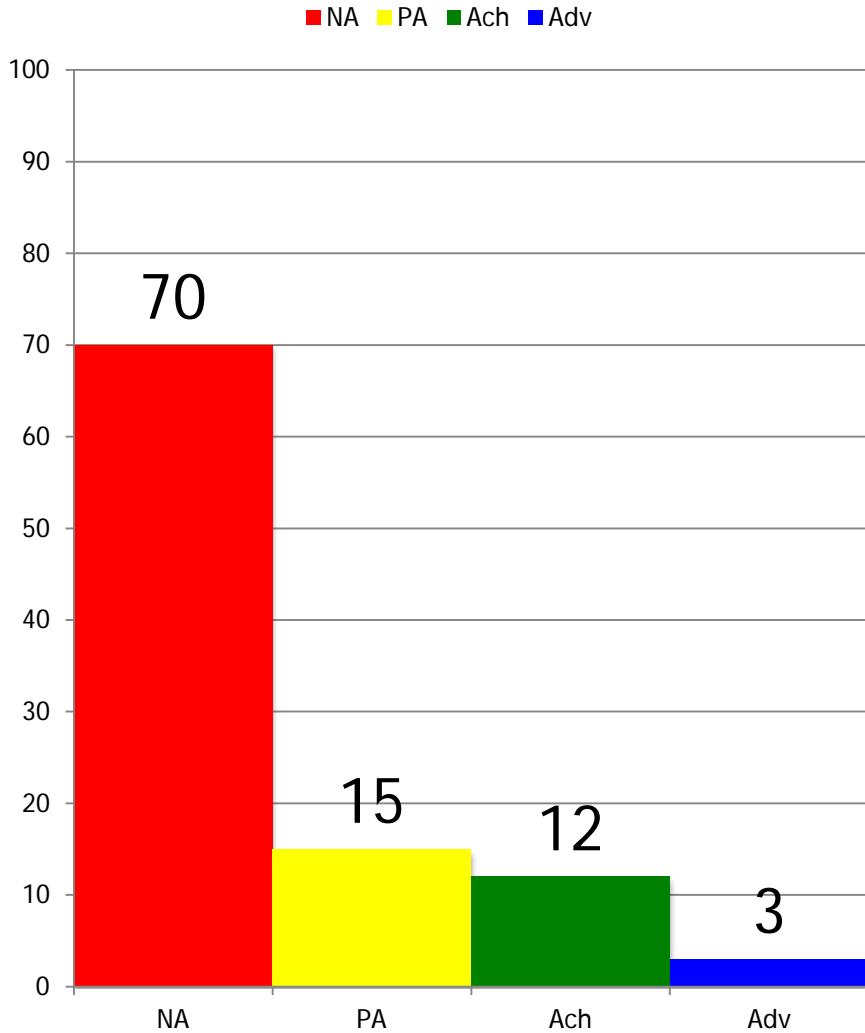
- characteristics and relationships between two-dimensional shapes and three-dimensional objects in a variety of orientations and positions.

DBE reporting scae

Scores reported by four levels of achievement
No empirical basis of selecting these cut-scores
That is why 35% and not 30% or 25%
Why 50% and not 60%?

Not Achieved	Partially Achieved	Achieved	Outstanding
0-34%	36-49%	51-69%	71-100%

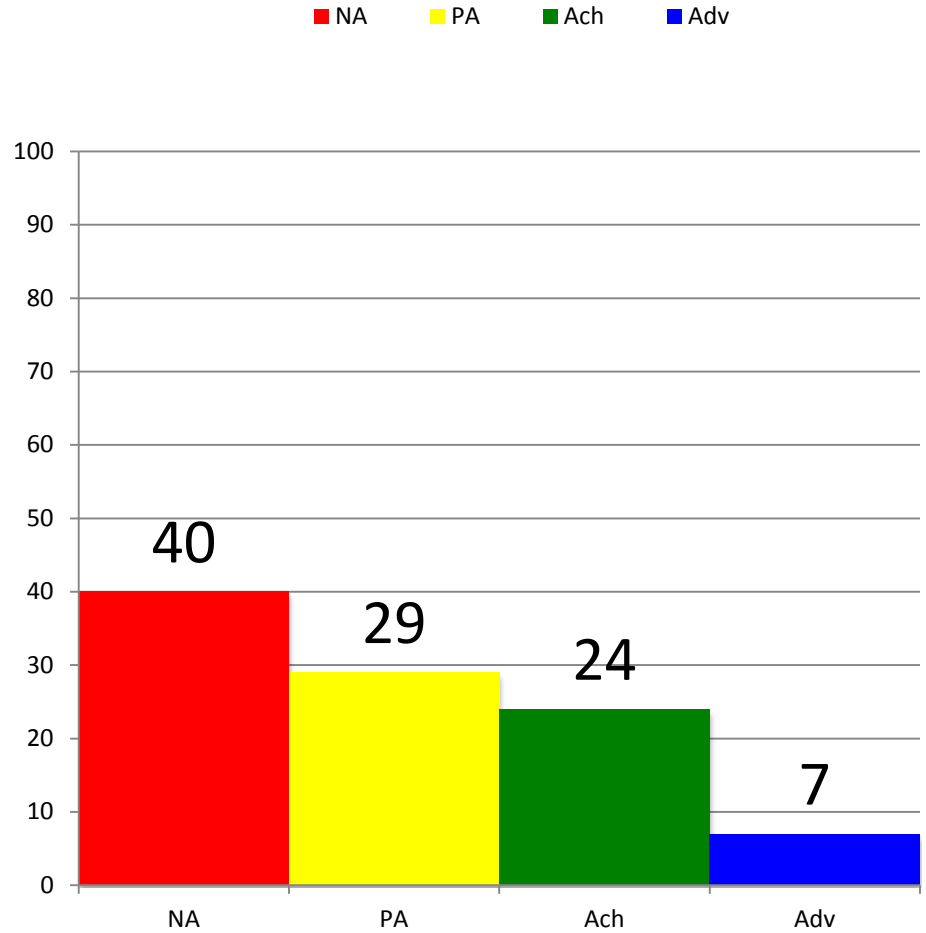
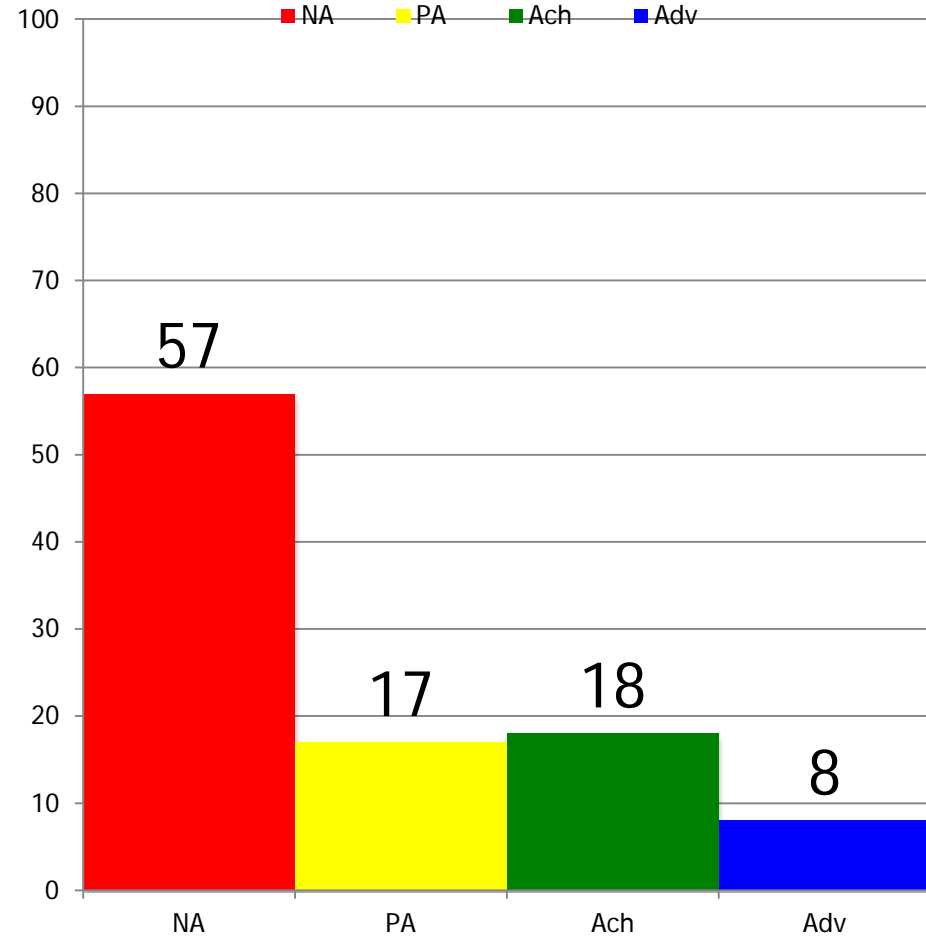
DBE vs SS scale - Gr 6 Language



 DBE Scale

Standard Setting Process

DBE vs SS scale - Gr 3 Language

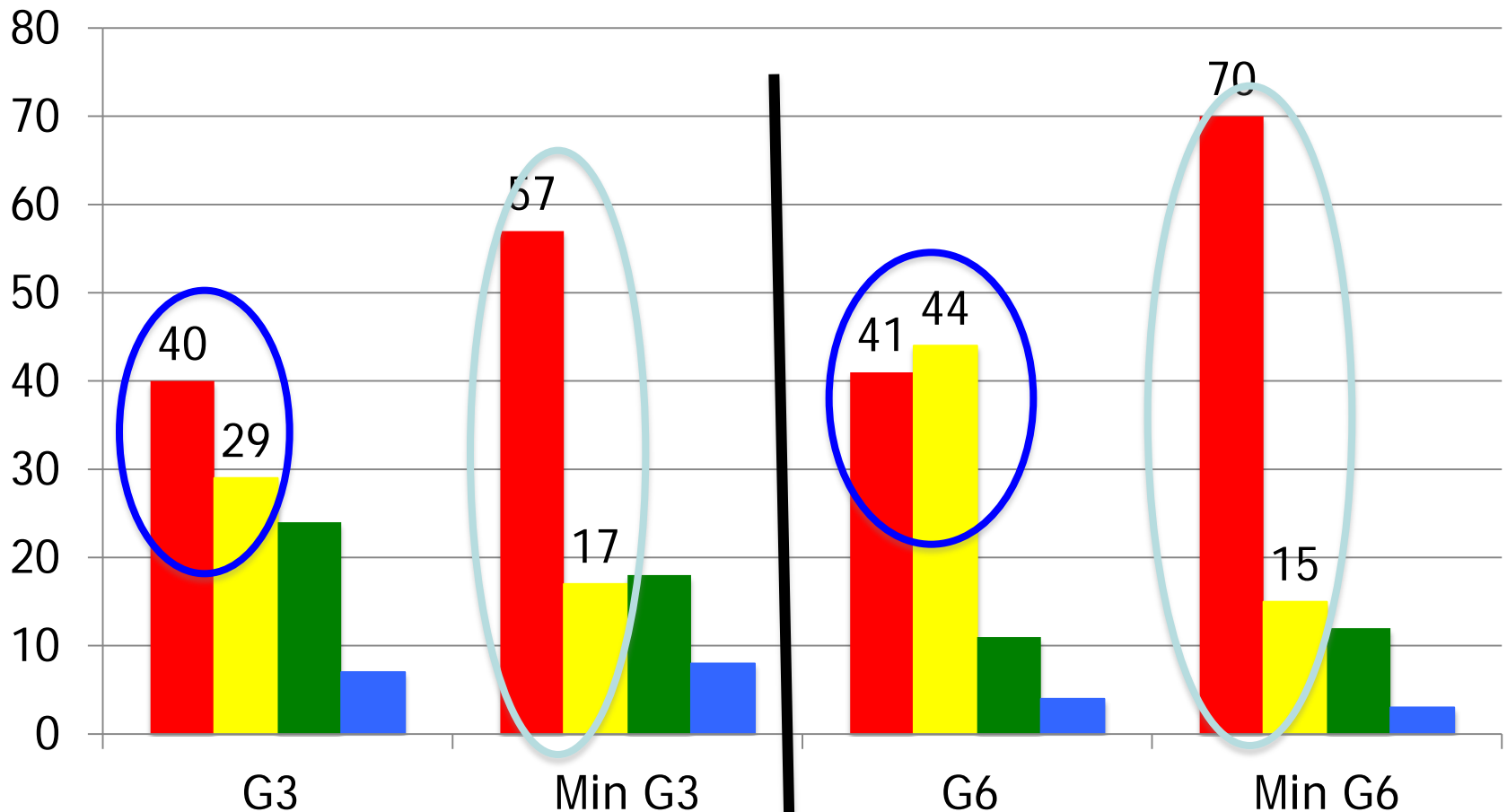


DBE Scale

Standard Setting Scale

Standard setting vs arbitrary cut-scores

■ Below Basic ■ Basic ■ Proficient ■ Advance



Key Challenge

- Greater and more effective use of data for
 - Policy decisions
 - Improving learning and teaching practices
- Core Problem

DATA RICH and INFORMATION POOR

Demonstration

Reporting Tool for Teachers

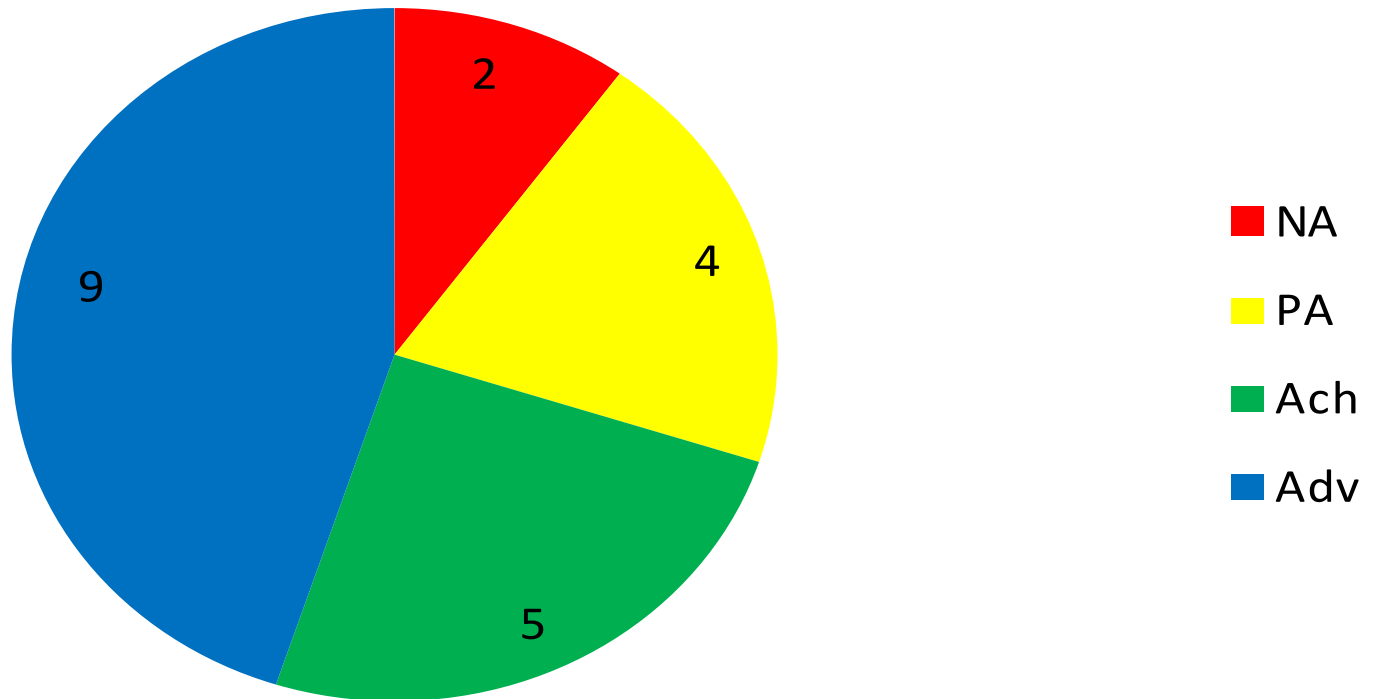
Excel sheet to enter scores

XYZ PRIMARY SCHOOL																							Total Students		
ANNUAL NATIONAL ASSESSMENTS 2011/2010											LITERACY					CURRENT GRADE OF									
LEARNER: 7											TEST GRADE: 6														
MARK ALLOCATION PER QUESTION		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	50			
QUESTIONS	GRADE	1	5	6	7	8	9	10	11	12.1	12.2	12.3	13	14	15.1	15.2	15.3	16.1	16.2	17.1	17.2	24	Percent		
SURNA MES																									
1	Learner 1	7T	1	1	1	1	1	0	1	1	0	0	0	6	3	1	1	1	1	1	0	0	1	34	68
2	Learner 2	7T	1	1	1	1	1	1	0	1	0	0	0	6	4	1	1	1	1	1	1	0	1	37	74
3	Learner 3	7T	1	1	1	1	1	0	0	1	1	1	0	6	3	1	1	1	1	1	1	1	0	38	76
4	Learner 4	7T	1	1	1	1	1	1	0	1	1	0	0	6	3	1	1	1	1	1	1	1	1	41	82
5	Learner 5	7T	1	1	1	1	1	0	0	1	0	0	0	6	4	1	1	1	1	1	0	0	0	32	64
6	Learner 6	7T	1	1	1	1	1	0	1	0	1	1	0	6	3	1	1	1	1	1	1	0	1	37	74
7	Learner 7	7T	1	1	1	1	1	0	0	1	1	1	0	6	4	1	1	1	1	1	1	0	0	36	72
8	Learner 8	7T	0	0	0	1	0	0	0	0	0	0	0	6	4	1	1	1	0	1	0	1	0	26	52
9	Learner 9	7T	1	1	1	1	1	1	1	1	0	0	0	3	4	1	1	1	1	1	0	0	1	34	68
10	Learner 10	7T	1	1	1	1	1	0	0	0	0	0	0	6	3	0	1	0	1	1	0	1	1	33	66

Program automatically generates the following information

Performance of MY Class

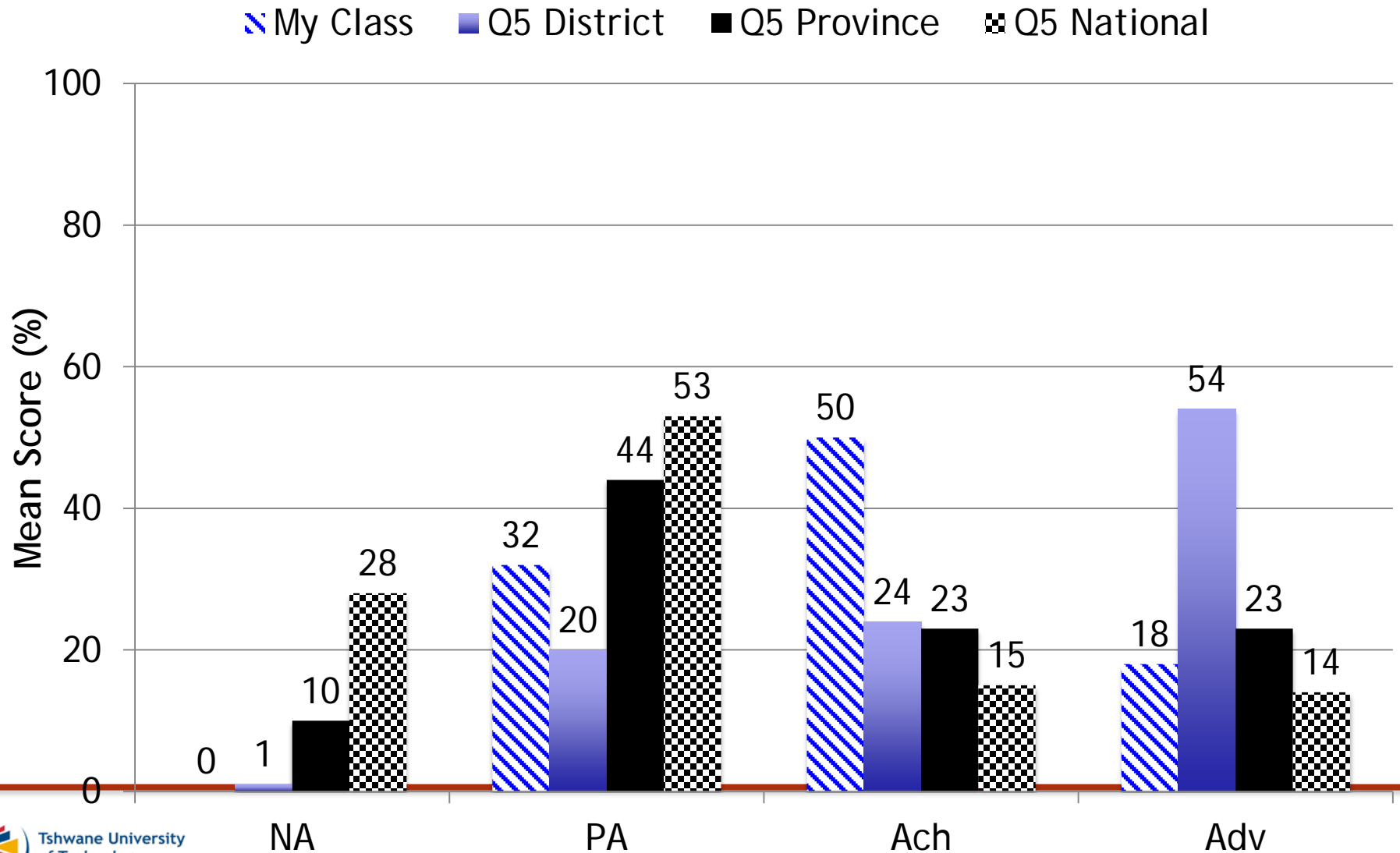
Learners functioning at the different performance levels



Comparisons: Class v District v Prov v National

% learners functioning at the different performance levels:				
	Not Achieved	Partially Achieved	Achieved	Advanced
	NA	PA	Ach	Adv
My Class (Number)	2	4	5	9
My Class (%)	10	20	25	45
Q5 District	1	20	24	54
Q5 Province	10	44	23	23
Q5 National	28	53	15	14
National	61	31	6	3

My class v district, province, national



Learners by performance category

NA	PA	Ach	Out
S13 N13	S1 N1	S5 N5	S2 N2
S16 N16	S8 N8	S10 N10	S3 N3
	S11 N11	S14 N14	S4 N4
	S18 N18	S17 N1	S6 N6
		S20 N20	S7 N7
			S9 N9
			S12 N12
			S15 N15
			S19 N19

Next steps for intervention: NA

Question	Skills/competencies assessed Testing whether the learner is able to...	Reference (WB or WS)
1.1	Choose the correct multiple of ten.	WB 2 - 5, 30
1.2	Choose the correct prime number.	WS A
1.3	Choose the correct decimal.	WB 94, 95, 170 - 173
2.	Count forwards using decimals (to 3 decimal places)	WB 67, 68, 89
3.	Rewriting a number from words to symbols.	WB 7,8, 54, 102 & 103
4.1	Find the correct number value (in units).	6, 55-57, 104 & 105
4.2	Find the correct number value in (thousands).	

Next steps for intervention: PA

SKIP

Question	Skills/competencies assessed Testing whether the learner is able to...	Reference (WB or WS)
3.2	Single digit fractions	WB 23
5.	Find factors of a composite number	WS P
5.1	Rounding off to the nearest 100.	79, 106 - 108
6.	Number lines	WS P
7.1	Graphs and shapes	79, 106 - 108

Examinations

Exams: Trends

- Examinations systems:
 - Are **most developed** component across all countries
 - have shown marked improvement over the last decade.
- However, there are still a number of challenges to improve systems and structures to:
 - ensure fairness in the test development and grading processes,
 - promote easy access for enrolling and taking examinations,
 - minimise cheating and other forms of malpractice, and
 - improve systems for reporting and dissemination of examinations results.

Internal Examinations

Most teachers limited capacity and skills for:

- Developing high quality instruments that are fair to all learners,
 - Grading tasks as well as analysing and reporting results to highlight learner errors and weaknesses and facilitate improvement in learning.
- Unreliable or invalid instruments provide inaccurate information -
- learners who may need additional assistance may be overlooked
 - Worse still, learners who qualify to progress into the next grade may be held back

External examinations

SKIP

- Conducted by bodies outside the school
- Range of agencies responsible for external exams
 - Ministry - e.g. Examinations Departments in SA
 - National agencies - e.g. examinations councils in Uganda, Kenya,
 - Regional Agency West African Exams Council
 - International agency - e.g Cambridge Exams Synd

Exam Systems

SKIP

- In all countries where exams exist, they have an end-of-schooling exam
- In many countries, especially those in Anglophone Africa, national examinations are also conducted at the end of primary schooling and/or end of lower secondary - e.g. Kenya, Uganda, Zambia

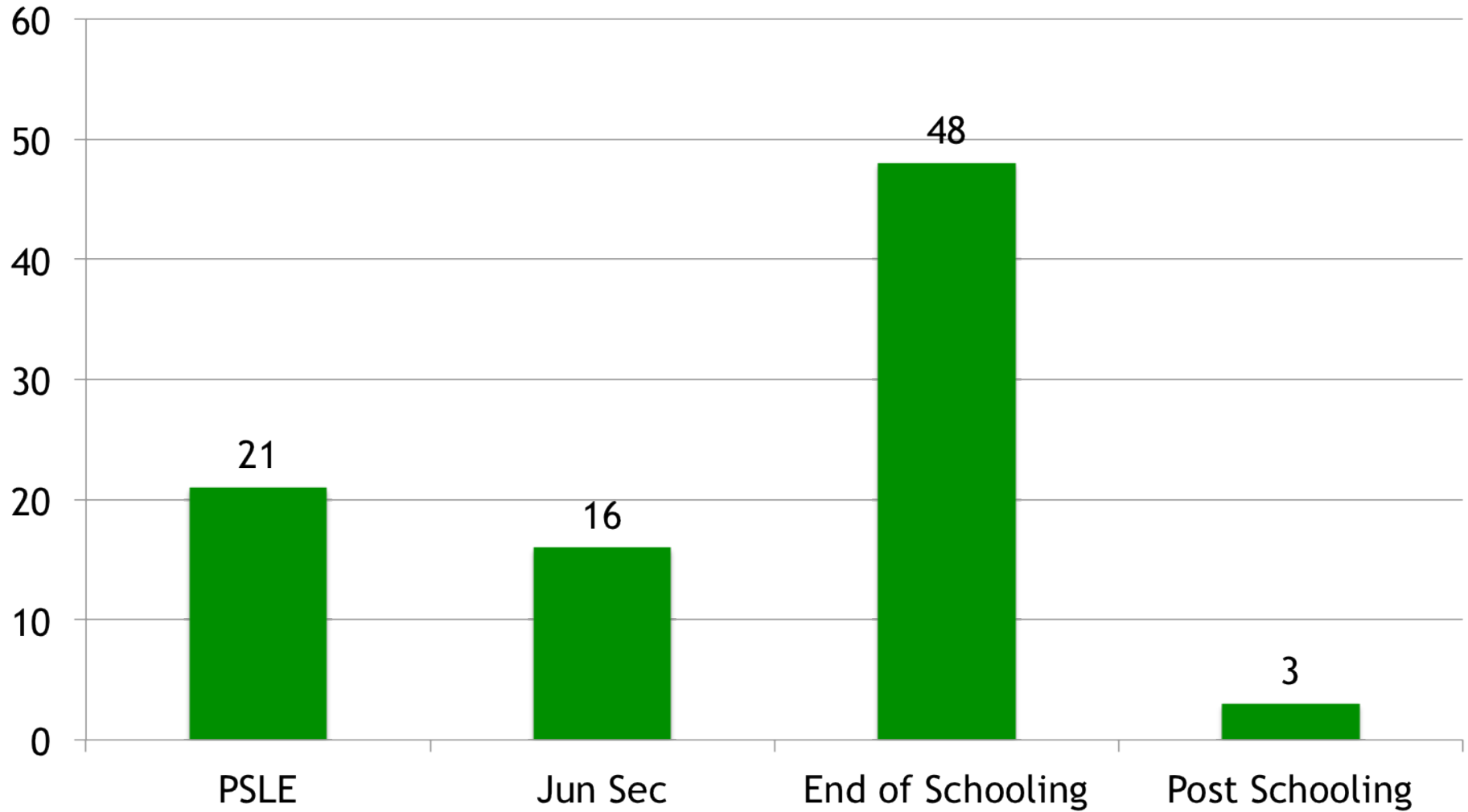
Examinations in Africa

SKIP

Primary school leaving examination	Junior Secondary Examinations	Senior Secondary/Univ Entrance Examinations	Post Secondary/ University Examinations
Botswana; Burkina Faso Chad; Comoros; Congo (DRC); Eritrea, Ethiopia; Kenya; Mali; Mauritius; Mozambique; Niger; Nigeria; Rwanda; Senegal; Sierra Leon; Swaziland; Tanzania; Uganda; Zambia; Zimbabwe	Botswana; Burkina Faso; Chad; Comoros; Ethiopia; The Gambia; Ghana; Nigeria; Rwanda; Senegal; Sierra Leon; Swaziland; Tanzania; Uganda; Zambia; Zimbabwe	Angola; Benin; Botswana; Burkina Faso; Chad Comoros; Congo (DRC); Eritrea; Ethiopia; The Gambia; Ghana; Kenya; Lesotho, Mali; Malawi; Mauritius; Mozambique; Niger; Nigeria; Rwanda; Senegal; Sierra Leon; South Africa; Swaziland; Tanzania; Uganda; Zambia; Zimbabwe	Mauritius; South Africa; Tanzania; Zimbabwe



Exams in SSA



Overview of Exam System - Uganda

Education Level	Grade Level	Assessment Activity	SKIP
Pre primary		Classroom assessment	
Primary	P7	Primary Leaving Examinations (PLE)	
Lower Secondary	S2	Uganda Certification of Education (UCE)	
Upper secondary	Year 13	Uganda Advanced Certification of Education (UACE)	
Technical school	After P7	Diploma	
Colleges & Technical Institutes	After Year 11	Diploma	
University	After Year 13	Degree	

Kanjeo & Acana, 2010

Examination malpractice in Nigeria

Number of school suspended

Zone	No of Schools
North-Central	54
North-East	8
North-West	12
South-East	48
South-South	116
South-West	86
TOTAL	324

Source: Week End Times, 17th & 18th February, 2007, p. 4; Quoted by Olatunbosun, 2009

Note cheating in other countries as well

- In South Africa - ministry officials were arrested in 2009 for examinations malpractice and charged with violating the Promotion of Access to Information Act
- In the UK, the BBC noted that the Office of Qualifications and Examinations Regulations reported a 6% increase in examination cheating (2010)
- In China - cracked down on criminal rings selling high-tech devices that student can use of cheating in the National College Entrance Examinations (2011)
- In Atlanta (USA), about 180 Public Schools employees, including teachers were implicated in a cheating scandal in the district's 100 schools (2011)

Example of bias item

SKIP

Oscar bought a new sweater that cost two hundred shillings . He paid for the sweater with a credit card with a simple interest rate of 1.7 percent per month and a fee of ten shillings for late payments. If Oscar's first payment of 50 shillings was late, what would be the balance on his next monthly statement?

Contains construct-irrelevant concepts –

- late charges and interest
- Credit card – problem for learners who might have grown up in a context where cash is the only negotiable currency.

Exams: General Challenges

- Limited use is made of examinations results for assisting learners and teachers improve learning and teaching practices - (exception - Kenya)
- Not uncommon for schools to hold back learners who are unlikely to succeed in the exams to increase percentage pass rates - Most of these children come from poor and marginalised backgrounds

Exams: Impact on Equity

SKIP

1. end of schooling examinations are a significant factor in determining the life chances of learners
2. in education systems where examinations are administered at the end of primary and/or lower secondary schooling, chances of learners entering into the higher grade levels are determined by performance on the examination.
3. the predominant emphasis on cognitive outcomes in national examination systems has resulted in deemphasising the development of key non-cognitive aspects such as life skills, attitudes and practical skills in schools.

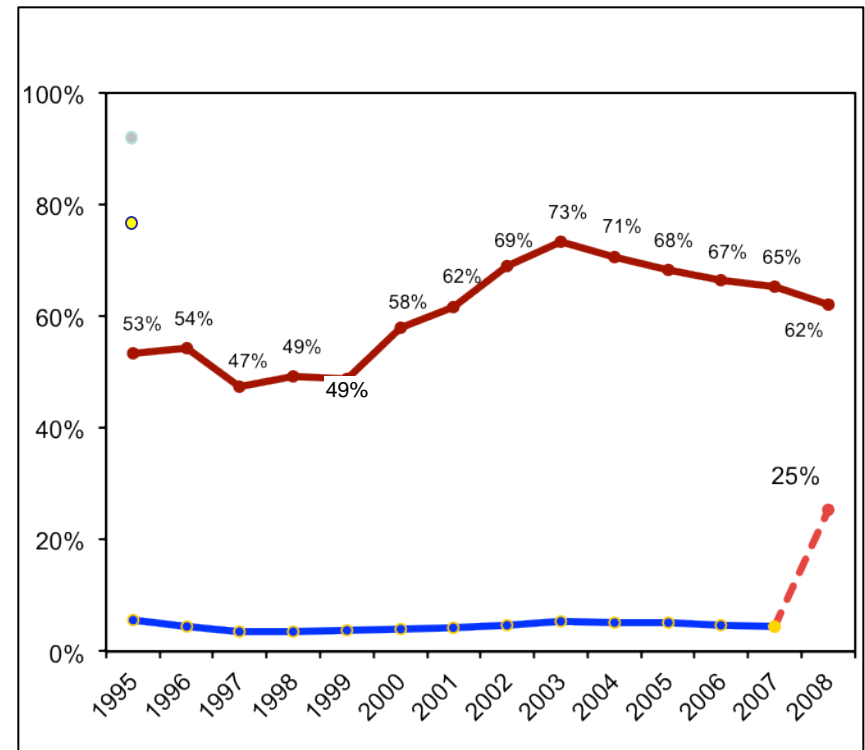
Exams: Matric Results in SA

SKIP

- Of the 564,000 learners who wrote the National Senior Certificate exam in 2007, **only 62% passed overall**
- Approximately 25% of learners graduated with a Mathematics pass in 2008
 - The Mathematics subject had been revised substantially in 2008
 - During 2007, only 4.5% of students graduated with a pass in the previous Math Higher Grade exam

Pass Rate as % of All Learners Who Wrote Matric Exam

Senior Cert. Passes Mathematics Passes (new exam)



Exercise: Review of Grade 12 Exam results

The table below provides the Grade 12 Examination results for your country. Identify the practical and policy implications for your country

SUBJECT	NUMBER OF CANDIDATES		% MEAN PERFORMANCE	
	FEMALE	MALE	FEMALE	MALE
Mathematics	84,013	97,967	13.42%	18.67%
Biology	49,757	59,718	30.23%	33.6%
Physics	11,276	28,516	29.48%	32.74%
Chemistry	50,442	64,883	27.72%	31.76%
Physical Science	32,294	30,847	18.27%	21.23%

Kenya - Performance in 2000 KCSE Mathematics and Science Examinations By Gender

SUBJECT	NUMBER SAT		% MEAN PERFORMANCE	
	FEMALE	MALE	FEMALE	MALE
Mathematics	84,013	97,967	13.42%	18.67%
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Physical Science	32,294	30,847	18.27%	21.23%

Results spurred a national debate & culminated in two government policy decisions:-

The Government lowered the university entry cut off points by **one (1)** for girls

The government: (i) ordered research to investigate the causes of this scenario and (ii) recommended intervention strategies to improve enrollment and performance of girls in Science and Mathematics

Conclusion - Policy issues to consider

- Classroom Assessment & Equity: Epistemic exclusion
 - Implement AfL in the classroom - UK, NZ, Aus,
 - Teacher Prof Dev: In-service AND Pre-set - SA, Ire, NZ
- Exams and equity: limiting progression
 - Eliminate exam + certificate fees - SA,
 - Holiday programs for poor and marginalized learners
- Assessment surveys:
 - Professional development for policy makers to effectively interpret and use information in decision making process

Conclusion

- Quality remains a key but elusive goal in education
- Assessment testing is important in improving quality but a means to an end, not an end in itself
- Focus on supporting teachers to improve assessment practices in the classroom
- Need - **Assessment focussed policy**

Questions?
Comments ?
Suggestions ?

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