



Measuring for Success

The role of assessment in achieving learning goals

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Use of assessment to monitor and attain learning goals in South Africa

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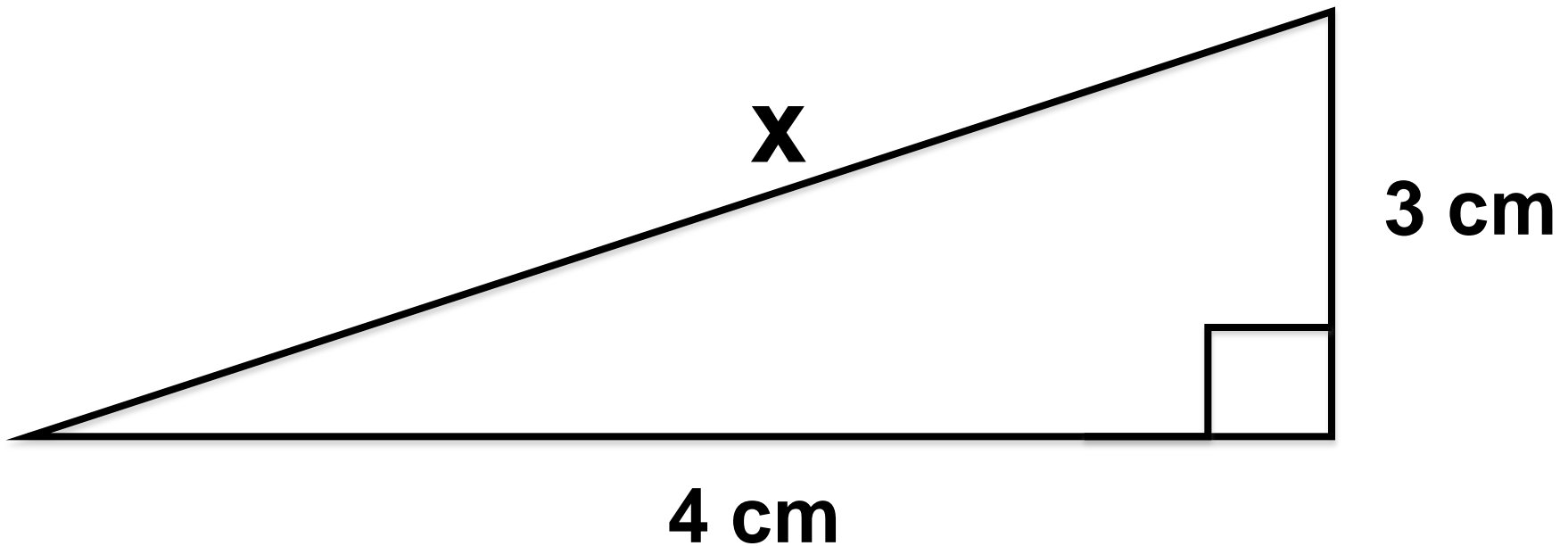
We empower people

History Question

- Where was the American Declaration of Independence Signed ?

Maths Question

3. Find x

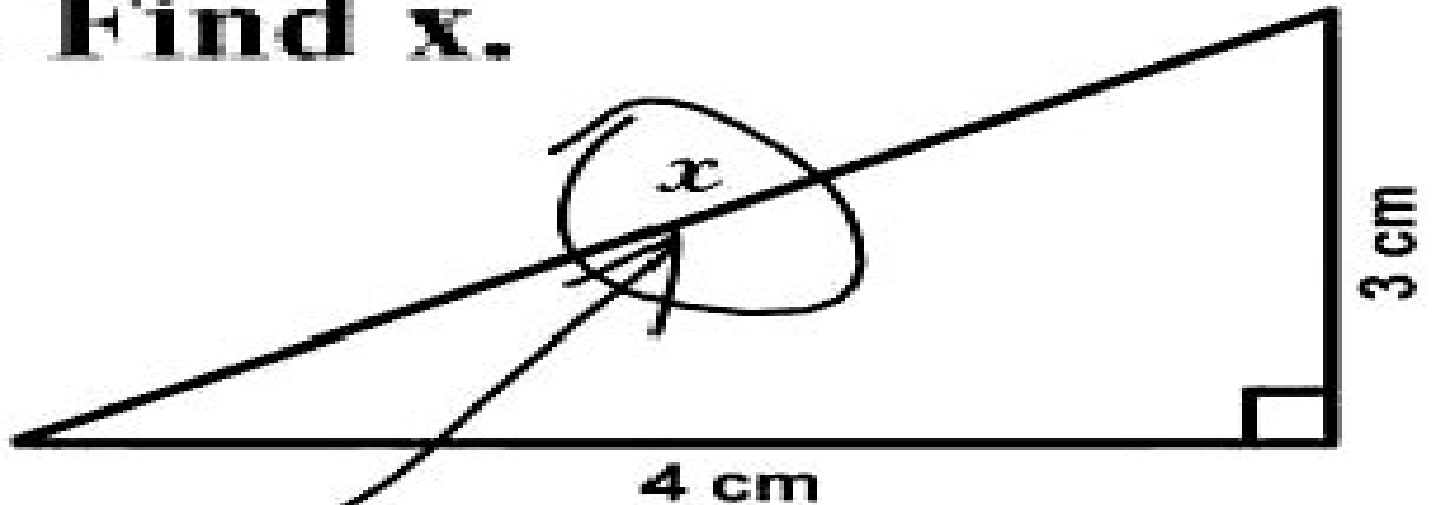


Maths Question

Expand $(a + b)^n$

Student Response

3. Find x .



Here it is

Student Response

4c) Expand

$$(a+b)^n$$

Very young Peter

$$= (a + b)^n$$

$$= (a + b)^n$$

$$= (a + b)^n$$

etc...

Outline of presentation

1. Background - developing learning outcomes

- Policy Context
- Systems and structures: development and monitoring

2. Learning Goals in South Africa

- Kinds of learning goals and assessments
- Reporting and communication of goals

3. Key lessons for policy makers / countries

- Development, reporting and communication
- Are learning goals being attained?
- Tensions between local versus national versus global goals
- Is assessment helping or hindering attainment of goals?

4. Way forward and Future challenges

Background to developing learning outcomes

Brief Description

- Long term consultation process
 - Began in 2004 - 2009 - 3rd term of new government
 - 12 Key outcomes
- Government wide policy framework
 - For monitoring and evaluation of goals and targets
- Spearheaded by office of the President
 - Dept. of Performance Monitoring & Evaluation - (2009)
 - National Development Plan 2030 - (2012)
- Delivery agreements (2009 - 2014)
 - Between Minister and President
- Systems for data collection and reporting
 - Annual National Assessments

12 Key National Outcomes

1. **BASIC EDUCATION: Quality basic education**
2. **HEALTH:** A long and healthy life for all South Africans
3. **SAFETY:** All people in South Africa are and feel safe
4. **EMPLOYMENT:** Decent employment through inclusive economic growth
5. **SKILLS:** Skilled and capable workforce to support an inclusive growth path
6. **ECONOMIC INFRASTRUCTURE:** An efficient, competitive and responsive economic infrastructure network
7. **RURAL DEVELOPMENT:** Vibrant, equitable, sustainable rural communities contributing towards food security for all
8. **INTEGRATED HUMAN SETTLEMENTS:** Sustainable human settlements and improved quality of household life
9. **LOCAL GOVERNMENT:** Responsive, accountable, effective and efficient Local Government system
10. **ENVIRONMENT:** Protect and enhance our environmental assets and natural resources
11. **INTERNAL AND EXTERNAL RELATIONS:** Create a better South Africa, a better Africa and a better world
12. **PUBLIC SERVICE:** An efficient, effective and development oriented public service and an empowered, fair and inclusive citizenship



Key Documents



Policy Framework for the Government-wide Monitoring and Evaluation System

ACTION PLAN TO 2014
Towards the Realisation of Schooling 2025

Full Version

October 2011

basic education
Department: Basic Education
REPUBLIC OF SOUTH AFRICA

DELIVERY AGREEMENT
For Outcome 1: Improved quality of basic education

basic education
Department: Basic Education
REPUBLIC OF SOUTH AFRICA

NATIONAL DEVELOPMENT PLAN 2030

Our future - make it work

REBUILD OUR FUTURE

national planning commission

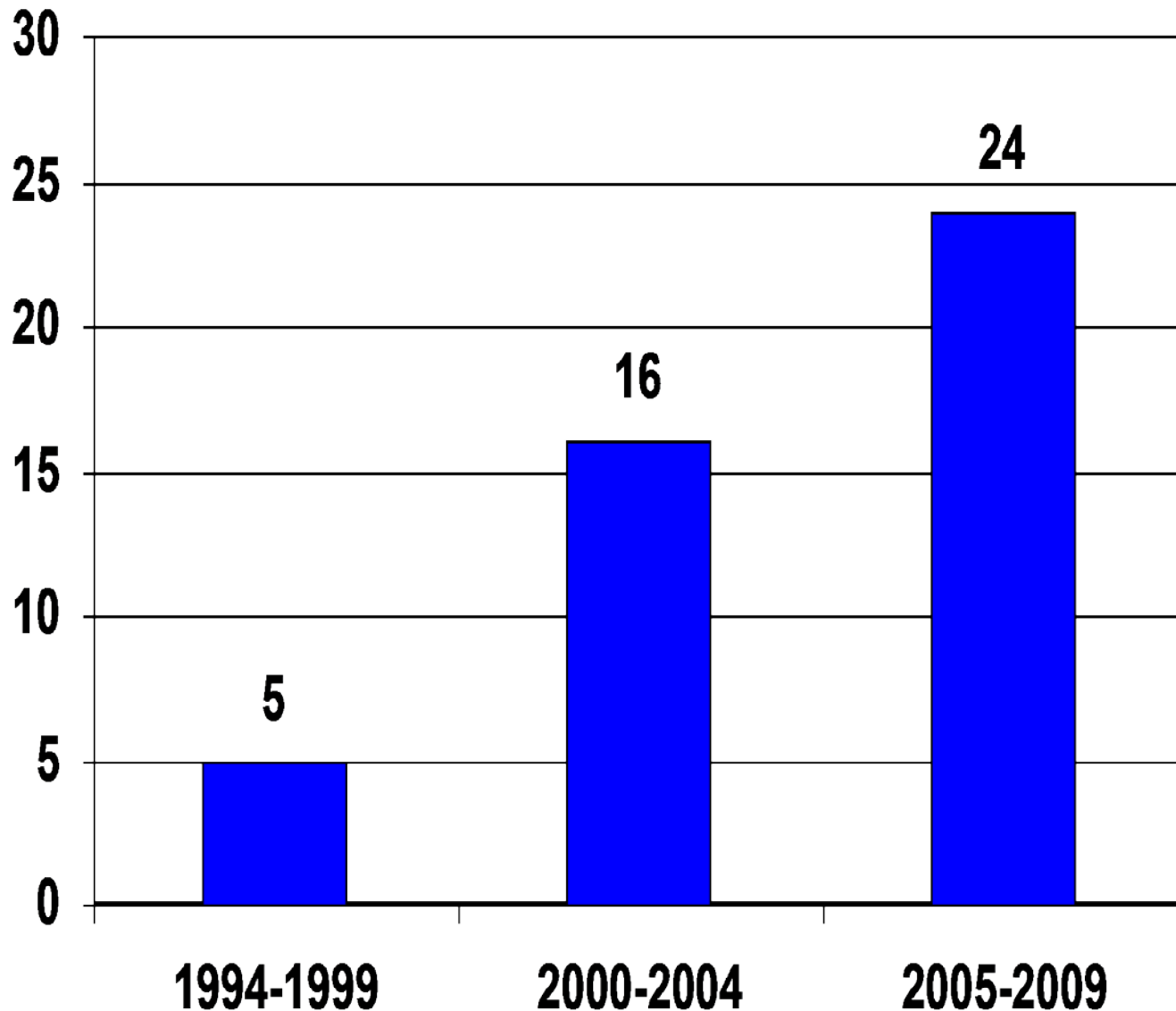
Learning Goals in South Africa

- Overview of learning goals
- Overview of assessments
- How goals and indicator specified?

Developments in Education Sector

- Well established and strong examination system
 - Over 120 years experience
- Improvement in capacity to implement NAS
 - Within Ministry
 - External agencies
- DRAMATIC increase in National Assessment Surveys
- Increase in Participation in Regional and International Surveys
- Key Policy review and revisions

Large Scale Assessments in SA 1994 - 2014



**Annual
National
Assessments**

**6 million
students**

**Grades
1, 2, 3, 4, 5, 6
9**

**2015 –
Grades 7 & 8**

2010 – 2014

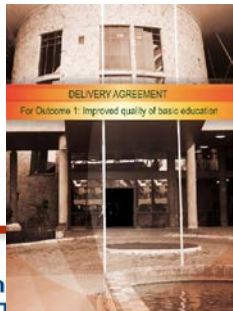
Overview of Learning Outcomes

- Link to specific goals and targets
- Listed in the Minister's Delivery Agreement
 - 4 Key outputs
 - 27 indicators
- 12 Indicators related to learning outcomes

Indicator number	Indicator title	Sub-output in the Delivery Agreement
1.1	Percentage of Grade 3 learners performing at the required literacy level according to the country's Annual National Assessments.	1.1
1.2	Percentage of Grade 3 learners performing at the required numeracy level according to the country's Annual National Assessments.	
2.1	Percentage of Grade 6 learners performing at the required language level according to the country's Annual National Assessments.	
2.2	Percentage of Grade 6 learners performing at the required mathematics level according to the country's Annual National Assessments.	
3.1	Percentage of Grade 9 learners performing at the required language level according to the country's Annual National Assessments.	1.1
3.2	Percentage of Grade 9 learners performing at the required mathematics level according to the country's Annual National Assessments.	
4	Number of Grade 12 learners who become eligible for a Bachelors programme in the public national examinations.	1.1
5	Number of Grade 12 learners passing mathematics.	
6	Number of Grade 12 learners passing physical science.	
7	Average score obtained in Grade 6 in language in the SACMEQ assessment.	
8	Average score obtained in Grade 6 in mathematics in the SACMEQ assessment.	1.1
9	Average Grade 8 mathematics score obtained in TIMSS.	
10	Percentage of 7 to 15 year olds attending education institutions.	
11.1	The percentage of Grade 1 learners who have received formal Grade R.	3.1
11.2	The enrolment ratio of children aged 3 to 5. (This is an indicator of concern to DBE and DSD.)	
12.1	The percentage of children aged 9 at the start of the year who are in Grade 4 or above.	
12.2	The percentage of children aged 12 at the start of the year who are in Grade 7 or above.	
13.1	The percentage of youths who obtain a National Senior Certificate from a school.	
13.2	The percentage of youths who obtain any FET qualification. (This is an indicator of concern to DBE and DHET.)	
14	The number of qualified teachers aged 30 and below entering the public service as teachers for first time during the past year.	
15.1	The percentage of learners who are in classes with no more than 45 learners.	
15.2	The percentage of schools where allocated teaching posts are all filled.	
16.1	The average hours per year spent by teachers on professional development activities.	
16.2	The percentage of teachers who are able to attain minimum standards in anonymous and sample-based assessments of their subject knowledge.	1.1
17	The percentage of teachers absent from school on an average day.	
18	The percentage of learners who cover everything in the curriculum for their current year on the basis of sample-based evaluations of records kept by teachers and evidence of practical exercises done by learners.	4.1
19	The percentage of learners having access to the required textbooks and workbooks for the entire school year.	1.2
20	The percentage of learners in schools with a library or media centre fulfilling certain minimum standards.	1.2
21	The percentage of schools producing the minimum set of management documents at a required standard, for instance a school budget, a school development plan, an annual report, attendance rosters and learner mark schedules.	4.1
22	The percentage of schools where the School Governing Body meets minimum criteria in terms of effectiveness.	
23.1	The percentage of learners in schools that are funded at the minimum level.	4.1
23.2	The percentage of schools which have acquired the full set of financial management responsibilities on the basis of an assessment of their financial management capacity.	
24.1	The percentage of schools which comply with nationally determined minimum physical infrastructure standards.	4.1
24.2	The percentage of schools which comply with nationally determined optimum physical infrastructure standards.	
25	The percentage of children who enjoy a school lunch every school day.	
26	The percentage of schools with at least one educator who has received specialised training in the identification and support of special needs.	
27.1	The percentage of schools visited at least twice a year by district officials for monitoring and support purposes.	
27.2	The percentage of school principals rating the support services of districts as being satisfactory.	4.2

Minster's Delivery Agreement

- Output 1: Improve the quality of teaching and learning
- **Output 2: Undertake regular assessment to track progress**
 - Sub output 1: Establish a world class system of standardised national assessments
 - Sub output 2: Extract key lessons from ongoing participation in international assessments
- Output 3: Improve early childhood development
- **Output 4 Ensure a credible, outcomes-focused planning and accountability system**
 - Sub output 1: Strengthen school management and promote functional schools
 - Sub output 2: Strengthen the capacity of district offices



Delivery Agreement LO Indicators

Indicator

1.1 Percentage of Grade 3 learners performing at the required literacy level according to the Annual National Assessments.

1.2 Percentage of Grade 3 learners performing at the required numeracy level according to the Annual National Assessments.

2.1 Percentage of Grade 6 learners performing at the required language level according to the Annual National Assessments.

2.2 Percentage of Grade 6 learners performing at the required mathematics level according to the Annual National Assessments.

3.1 Percentage of Grade 9 learners performing at the required language level according to the Annual National Assessments.

3.2 Percentage of Grade 9 learners performing at the required mathematics level according to the Annual National Assessments.

Annual National Assessments

Grade 1 to 6 & 9

Delivery Agreement LO Indicators

Indicator

4 Number of Grade 12 learners who become eligible for a Bachelors programme in the public national examinations.

**Grade 12 – End of
Schooling -
Examinations**

5 Number of Grade 12 learners

6 Number of Grade 12 learners passing physical science.

7 Average score obtained in Grade 6 in language in the SACMEQ assessment.

**Regional Survey -
SACMEQ**

8 Average score obtained in Grade 8 in mathematics in the SACMEQ assessment.

9 Average Grade 8 mathematics
TIMSS.

**International Survey -
TIMSS**

Key Lessons

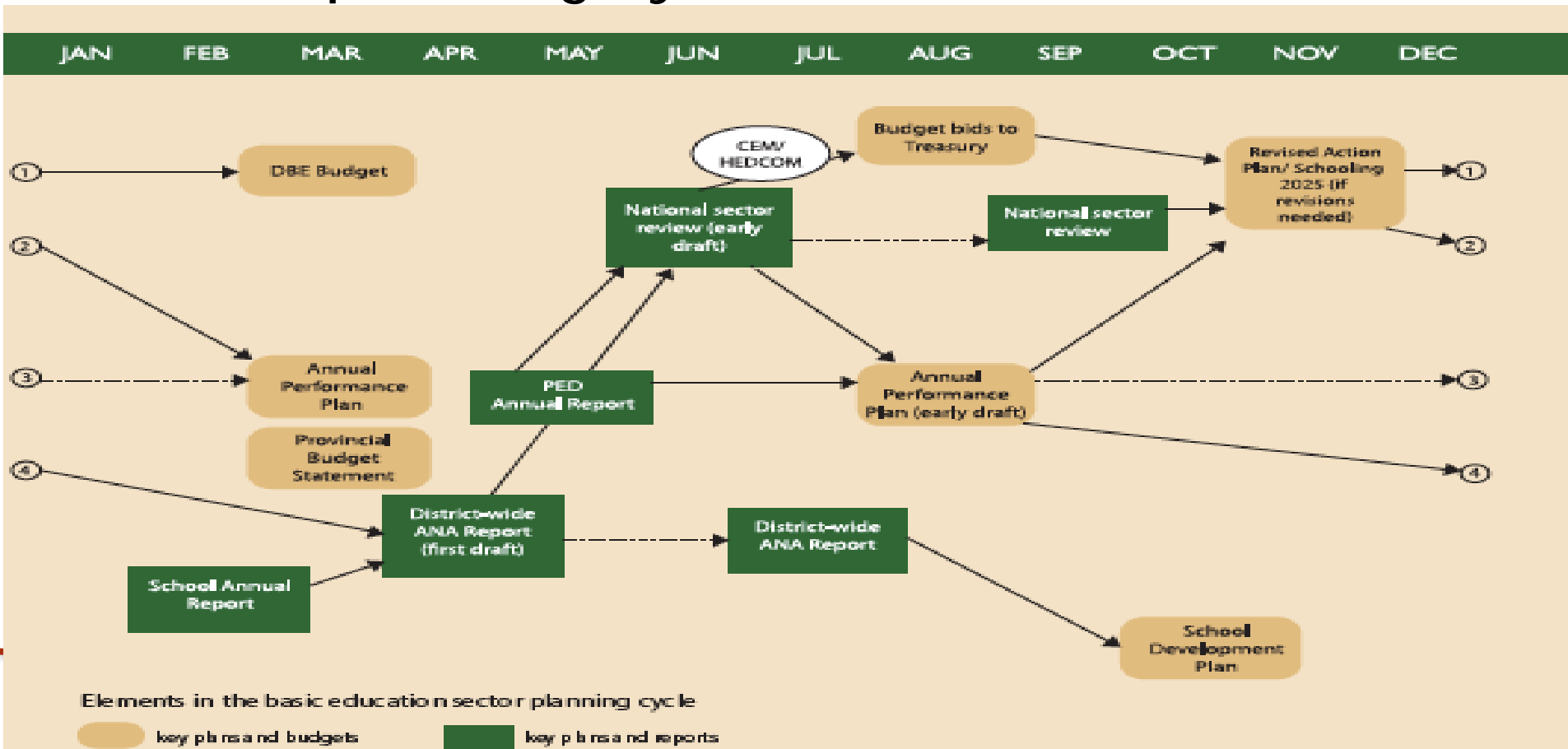
- Development of learning goals
- Obtaining evidence of learning
- Are learning goals being attained?
- Tensions between local, national & global goals
- Are assessment surveys helping or hindering attainment of goals?

Development of learning goals

- Requires time and strategic consultation
- Start with what you have - Catch 22 in beginning stages
 - Require reliable data to set realistic targets
 - No reliable data available
- No single agency responsible for data
 - No repository / database within Ministry
 - QUESTION - If you want data / results NOW from studies conducted a few years ago, Do you know where to get from?
 - NO? Unsure - You / System in trouble ???
- Accountability systems critical
 - To take responsibility
 - To ensure focus on goals
 - Unintended consequences - teaching to the test SA Context - good thing - for NOW

Planning

- Planning process accounts for the budgeting process, government reporting requirements, annual planning cycles, etc. -



Strategic focus of Goals

Goals focus on key stages of the schooling system

- Grade 3 - end of Foundation Phase -
- Grade 6 - end of Intermediate Phase (Primary)
- Grade 9 - End of Senior Phase (Junior Secondary)
- Grade 12 - end of Schooling

Clarity - Goals, targets & indicators

■ Goal 1

- Increase the number of learners in Grade 3 who, by the end of the year, have mastered the minimum language and numeracy competencies

■ Indicator

- Percentage of Grade 3 learners performing at the required literacy levels according to the Annual National Assessments

■ Target

- 2014 - 60%

Minimum NOT
specified

Consensus & Communication

Goals & targets specified in:

- Minister's delivery agreement
- Action Plan 2014
- National Development Plan
 - Specifies "the required competency levels be defined as 50 percent and above"
 - Ministry document - Percentage of ... learners performing at the required .. Levels

Ownership & Responsibility

- **National & Regional (SACMEQ) Assessments**
 - Ministry initiatives - managed and funded
 - Provincially - managed & reporting
 - Developed capacity within Ministry
 - Used in planning, reported to Parliament, etc
- **TIMSS & PIRLS - Prior to 2010**
 - Managed & funded - University & Research Council
 - No national or provincial ministry involvement
 - Besides press outcry, limited (OFFICIAL) uptake and response from Ministry
- **CURRENTLY**
 - Ministry funded,
 - Included as indicators and targets
- **CHALLENGE - Districts, schools & some provinces - See National assessments as another task to complete**

Long term targets

- Specified in Action Plan 2025
- Linked to Minister's delivery agreement

	<i>Indicator</i>	2009	2010	2011	2012	2013	2014	2019	2024
1.1	Percentage of Grade 3 learners performing at the required <i>literacy</i> level according to the country's Annual National Assessments.	48	50	53	55	58	60	75	90
1.2	Percentage of Grade 3 learners performing at the required <i>numeracy</i> level according to the country's Annual National Assessments.	43	50	53	55	58	60	75	90

Accountability

- Minister accountable to deliver on goals
- Currently -accountability mechanism for schools and teachers under discussion
 - Action Plan 2014 -
 - Unclear
 - Once-off incentives to ALL teachers in school demonstrating improvement
 - National Development Plan
 - Hold schools and school principals accountable for performance ?
 - Argues for testing of principals as well

Assessment surveys helping or hindering?

- Assessment Surveys - only useful if CONSENSUS and OWNERSHIP regarding:
 - Purpose
 - How results will be used
 - Key agency/unit for managing survey

- SA Experience
 - National Assessments
 - Regional & International Assessments

Clear Purpose of Assessments

- 1999 - 2010
 - To monitor attainment of key policy goals regarding Access, Quality, Equity, Efficiency

- 2010 - 2014
 - Expose teachers to better assessment practices.
 - Provide districts with information to target schools in need of assistance.
 - Encourage schools to celebrate outstanding performance.
 - Empower parents by providing them information about the education of their children.

National Assessments: **DUAL Purposes**

Dual Purpose

■ System

- Monitoring & Evaluation Purposes
- Focus on National and Province

■ Local

- Intervention Purposes
- Focus: Districts, Schools, Teachers, Learners & Parents

PROBLEM

■ **Single Assessment**

■ **No specification for monitoring and evaluation of system**

Use of Results

Purpose

National Level -
Monitor & evaluate performance of system (Implicitly stated)

Province & District
Identify schools in need and effect relevant interventions

School, Teacher

- Provide information on strengths & weaknesses
- Provide support to learners in need
- Inform parent on performance of their children

Reporting

Trends in performance - by province & districts

Clear

or affecting

Relevant

ance by

Intervention

Doable

ach teachers

report to each learner

Identify needs of each learner

Report by performance levels

Use of Results

Purpose

National Level -
Monitor & evaluate performance
of system (**Implicitly stated**)

Province & District

Identify schools in need of
support and effect relevant
interventions

School, Teacher & Parent

- Identify learner strengths & weaknesses
- Provide support to learners in need
- Inform parent -performance of their children

Challenges

Trend data must be comparable
**SA - all test items released and thus
new tests not comparable**

**Unclear why scores improving or
declining?**
**Annual administration - limited time
for interventions**

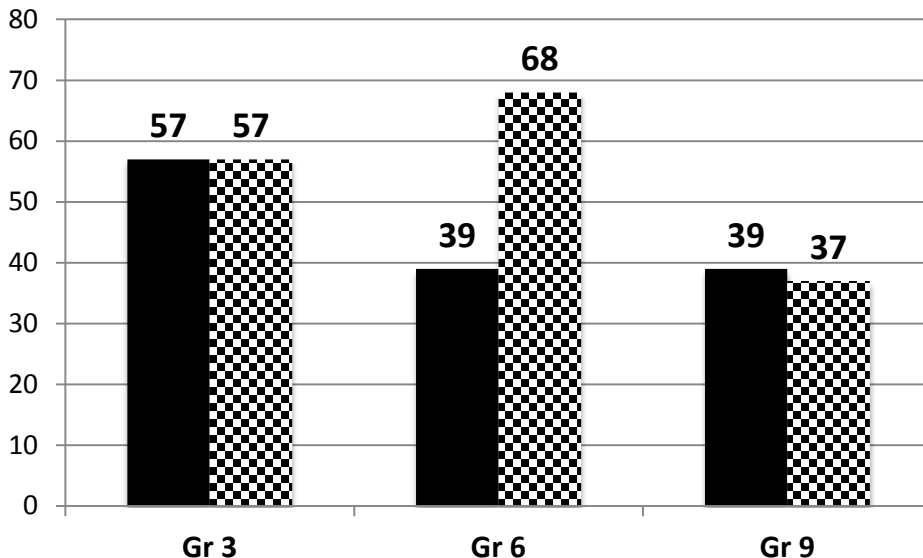
Annual data - good as data for new
students
**Results based on arbitrary cut-points
which provide limited information for
intervention**

Example - Comparing Trends

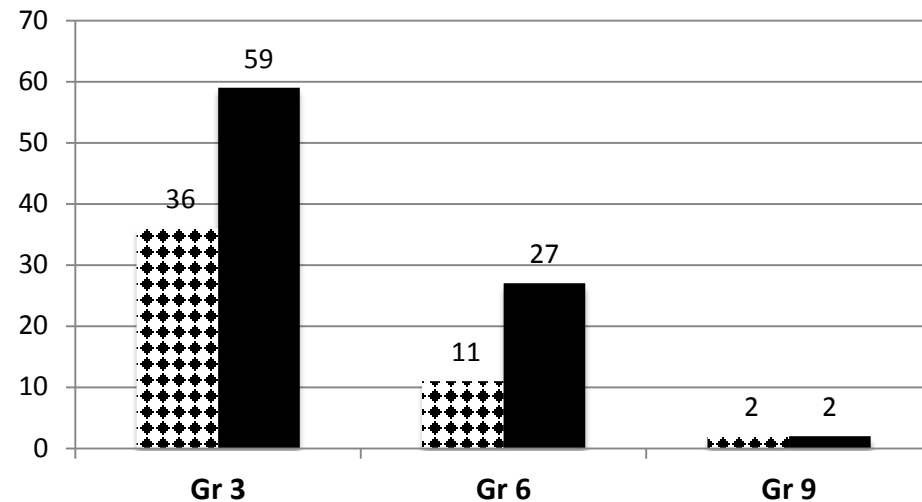
- How to explain these results?
 - Improvement / Decrease in performance?
 - Change in test difficulty?
- Implications for interventions?

Percentage students obtaining 50%

■ Lan 2012 ▣ Lan 2013



◆ Math 2012 ■ Math 2013

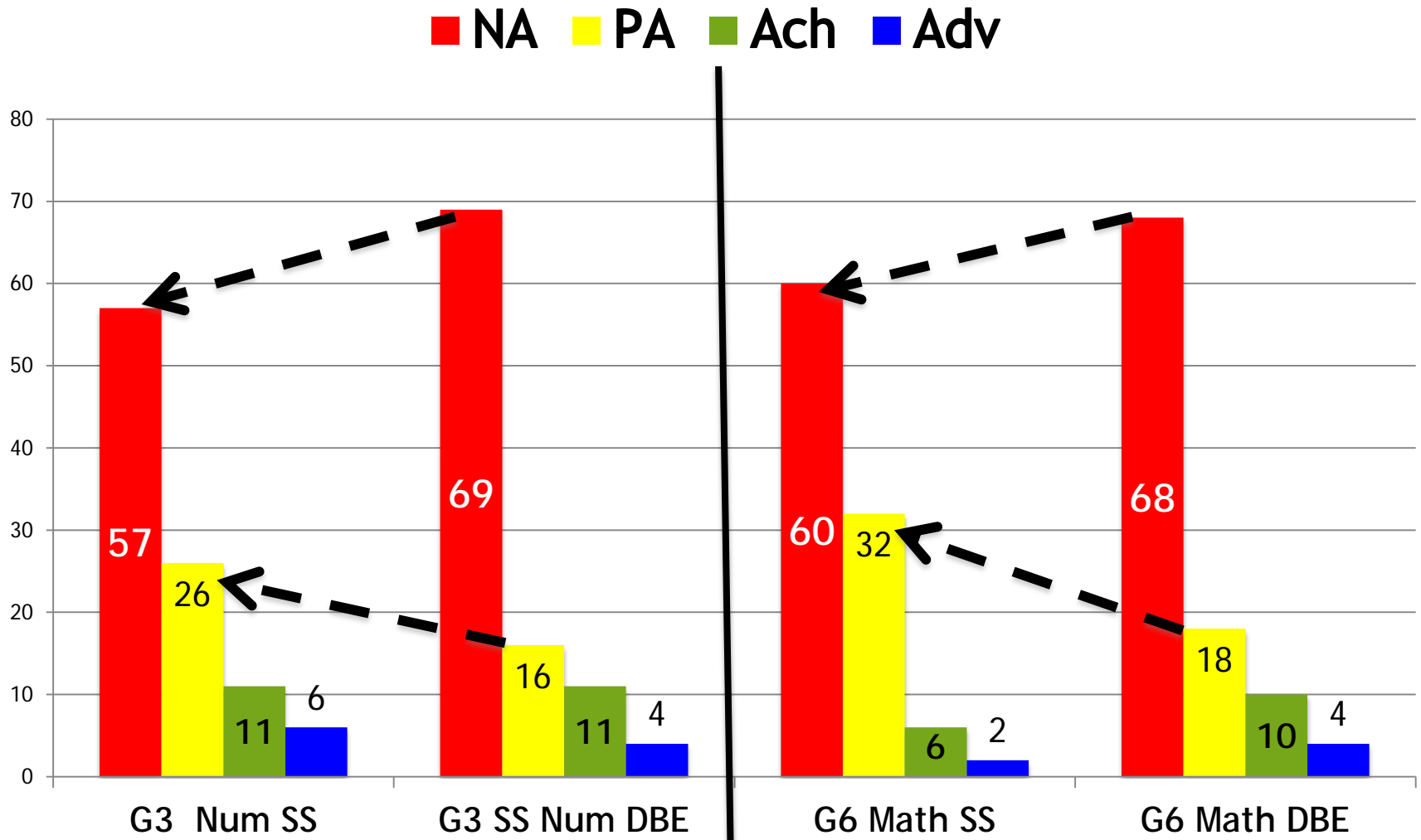


EXAMPLE ANA reporting - Challenge

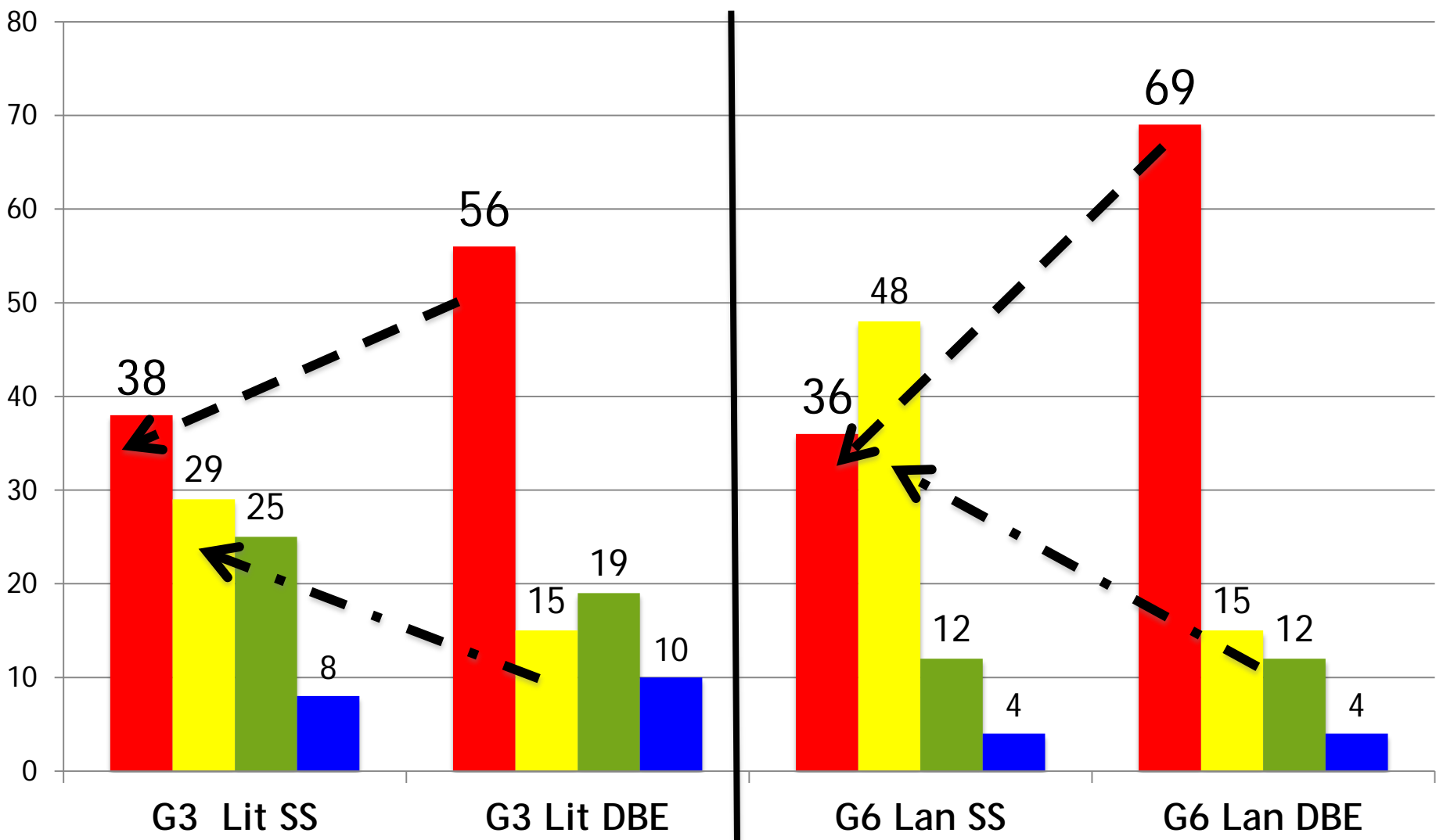
- Scores reported by four levels of achievement to provide more information to teacher on which learners need support
- No empirical basis of selecting these cut-scores
 - why 35% and not 30% or 25%
 - Why 50% and not 60%?

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

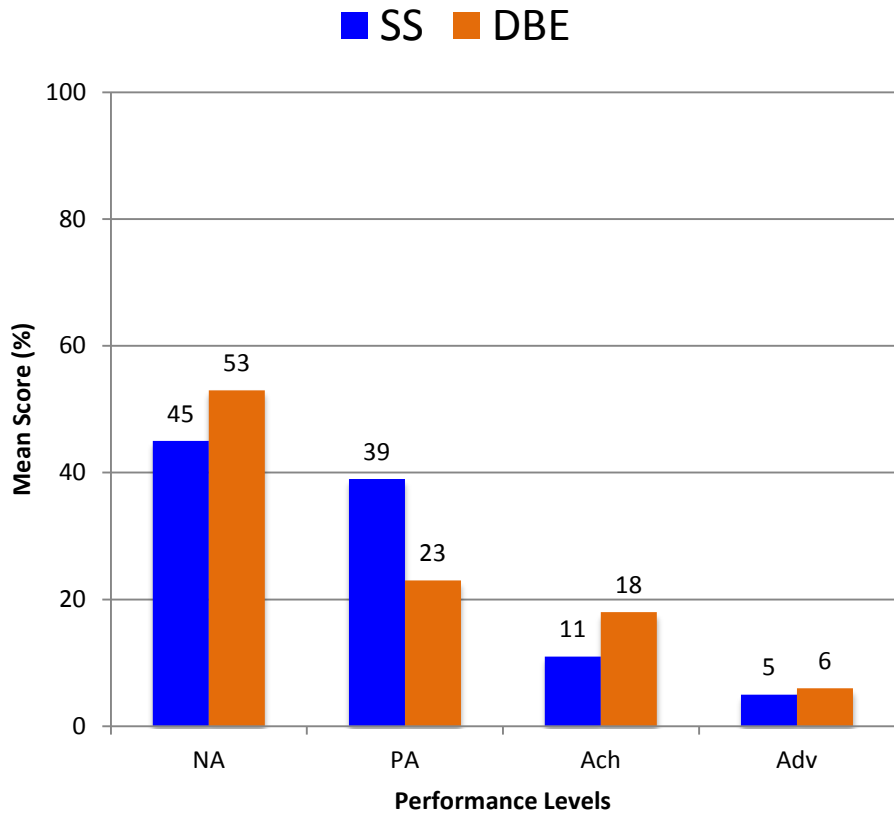
DBE Reporting vs SS - Maths



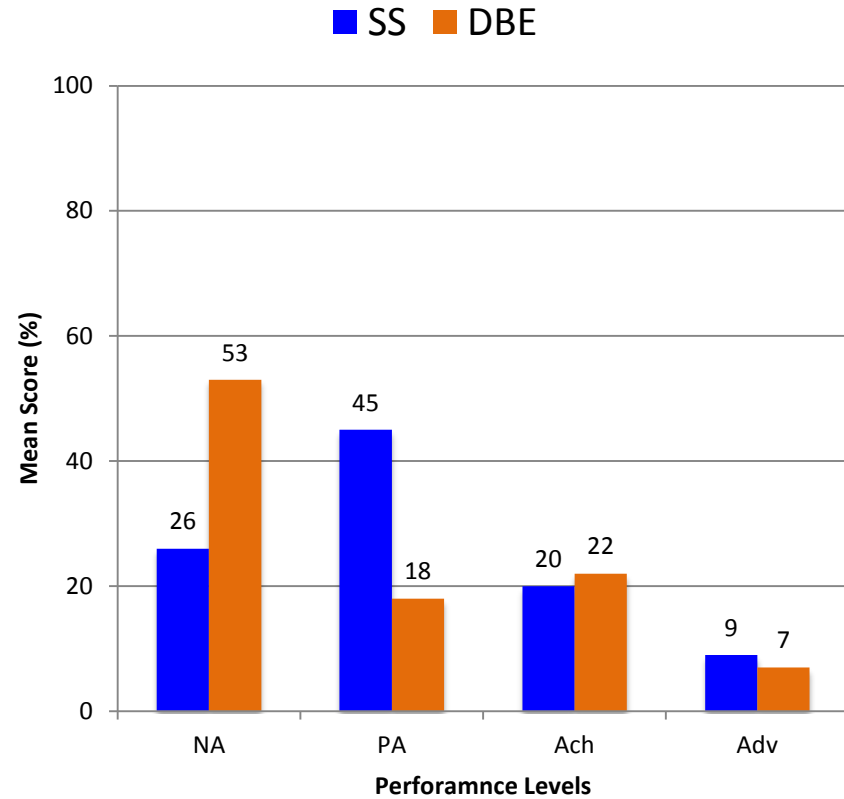
DBE Reporting vs SS - Languages



Similar inaccuracies by province & district



Grade 6 Language



Grade 6 Mathematics

District Performance - Grade 3

- Incorrect identification of learner performance levels - Significant implications for interventions - cost, time, planning, etc,

Grade 3 Subject	District No.	% of learners in each achievement category				Sum: Ach + Out
		NA	PA	Ach	Out	
Literacy	A	42	20	31	7	38
	B	25	23	28	24	52
	C	57	25	12	6	18
Numeracy	A	50	30	10	10	20
	B	31	28	26	15	41
	C	64	33	2	1	3

Summary

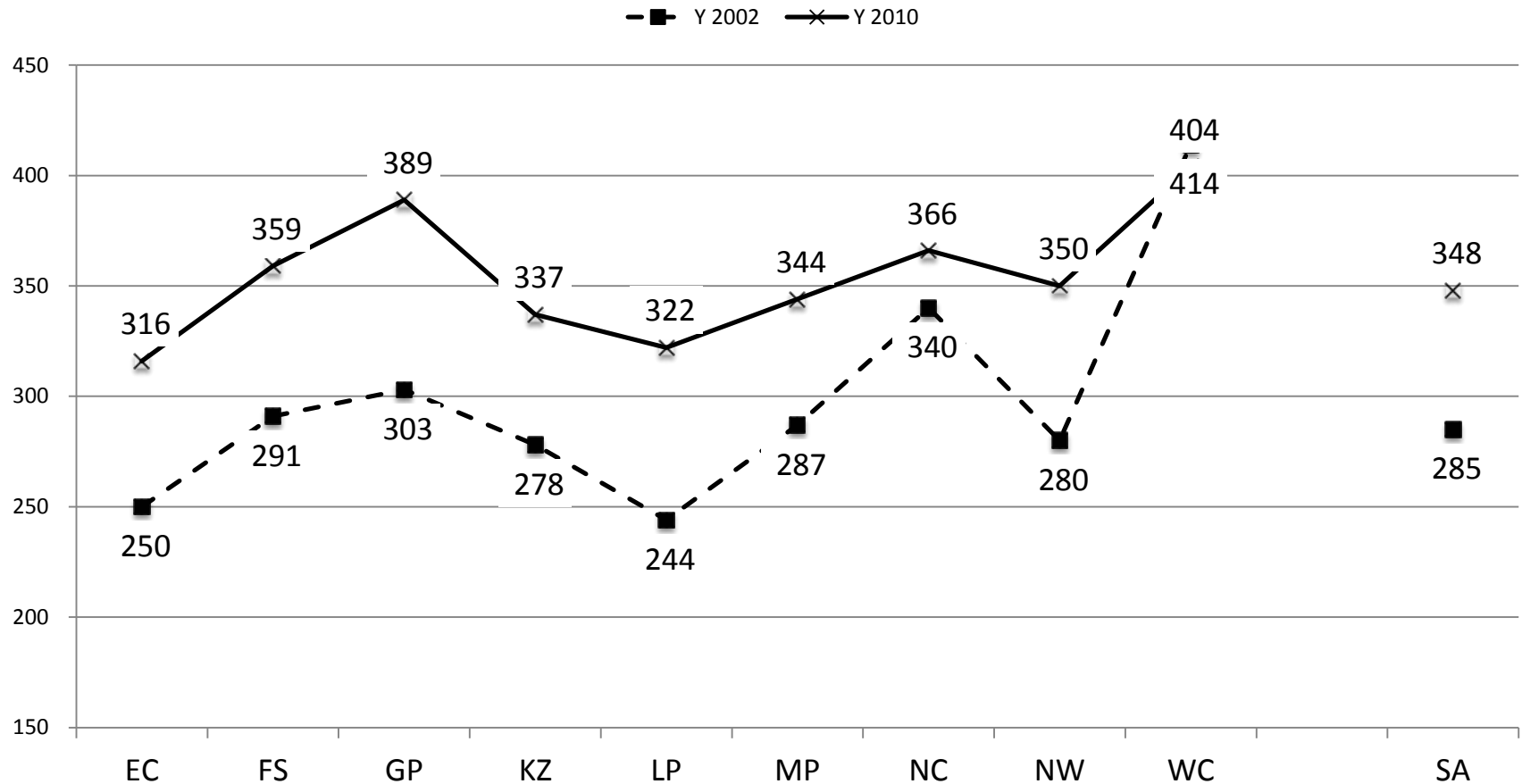
- ANA scores inaccurately reported
 - DBE levels over-estimate % learners at NA level (lowest level)
 - DBE reporting under-estimate % learners at PA level
 - No clear trend (or problems) noted at the highest levels.
- IMPLICATIONS - Negative impact on interventions
 - incorrectly identifying schools and learners for intervention
 - Greater costs to funds and HR

TENSIONS - local, national & global results

- International survey results mainly impact on policy makers - rarely teachers and public besides the period when results are published
- Creates confusion in relation to National Ass
 - Different scales,
 - Different time frames
 - Different instruments
 - Different results
- Grade 9 TIMSS results vs ANA results

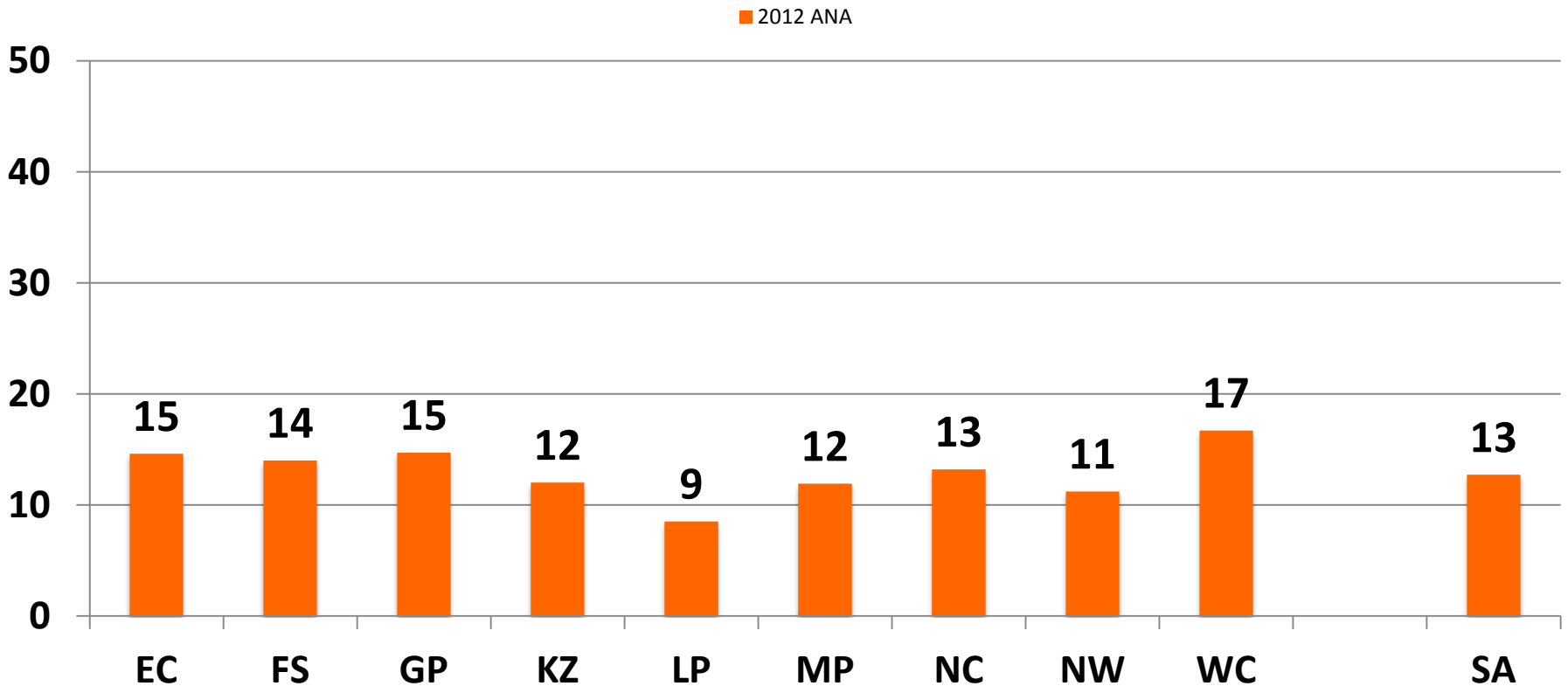
EXAMPLE Grade 9 TIMSS vs ANA results

- TIMSS 2011 Grade 9 Maths results
 - Overall - 63 point improvement



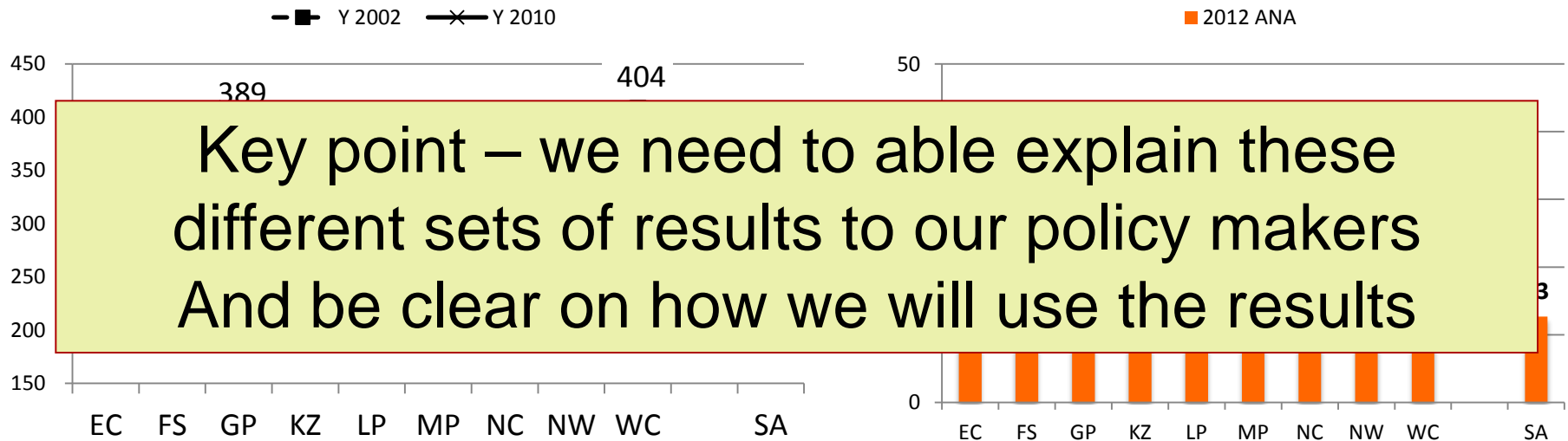
Grade 9 2012 ANA results

- National Average – 13%
- Provincial averages 9 to 17%



Grade 9 TIMSS vs ANA results

- Question - how is it that we show improvement in international surveys but find EXTREMELY low performance in our National Survey ?
- What do these two sets of results tell us? What does this mean for interventions?
- Which set of results do policy makers use?



Obtaining evidence of learning - Key issues

- Require long term, integrated strategy
 - National, regional and international data
- Realistic time frames to collect data
 - Annually or Regular Cycles?
 - Census or Sample ?
- Capacity to use assessment evidence
 - District officials?
 - Teachers
 - School leadership - Principal & Deputy, HoD
- Assessments to measure change
 - No interventions - No use to measure again

Are learning goals being attained?

- Difficult to tell at the moment
 - No valid data to monitor trends (i.e. data not comparable)
 - Indicator unclear - “**required level**” ??
 - Results NOT reported using valid sound standard setting measures
- **NB** - mechanism to monitor & evaluate Assessment System

Summary Key Lessons - revise??

- Government wide framework and support
- Integrated national framework
- Clear goals and targets
 - Long and Short term
 - Different levels of the system
- Specific accountability systems
 - Key persons held accountability
- Regular, valid & reliable evidence
- Effective systems for reporting, dissemination and use of evidence

Way forward and Future Challenges

Way forward - Improve system

- International Advisory Committee established
 - Review assessment system to establish an integrated & effective assessment system
- Improving capacity at province and district levels to enhance use of assessment data
- National Reporting Framework
 - Standard setting process
- Implement effective accountability system

Way forward - Teachers

- Trainees Teachers -
 - Comprehensive 3 year programme on
 1. testing AND
 2. classroom assessment;
 - FOCUS use of assessment evidence & provision of feedback to improve learning and teaching
- In-service -
 - Similar programmes but Large scale (District wide)

Future challenges

- Improving administration, data management and reporting of ANA
- Training district and provincial officials
- Scaling up in-service programme
- Extending pre-service programme to all teacher training institutes
- Implementing effective accountability mechanisms at lower levels of system

Conclusion

Significant progress made over the last 15 years in improving the assessment system in South African education sector.

However, we still have a long way to go before we have an integrated, and effective assessment system for use in improving learning and teaching practices in all schools.

Questions

Comments

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Consultative Process – by Office of President

Development of high level outcomes, outputs, activities and metrics

Ruling Party election
Manifesto: 5 priority areas

MTSF: 10 strategic priorities

12 strategic outcomes
(based on consultation process)

Performance Agreements with Minister(s)

- Based on outcomes
- High level outputs, indicators, targets and activities per outcome
- Request to work together in Implementation Forum to produce a Delivery Agreement per outcome

Step 1

Step 2

Develop and implement detailed inputs, outputs, activities, metrics and roles and responsibilities

Establish Implementation Forum

Negotiate detailed inputs, activities, metrics, roles & responsibilities

Delivery Agreements between stakeholders

Step 3

Coordinate implementation

Monitor and evaluate

Step 4

Feed back loop to annual revisions of Delivery Agreements

Education Policy & Assessment: 1994-2014

Period	Minister	Transformation focus	Key assessment related policies
1994 – 1999	S. Bengu	Development of policy and regulatory framework	1995 - South African Qualifications Authority bill 1997 - National Curriculum Statement 1998 - Assessment Policy
1999 - 2004	K. Asmal	Policy implementation; Development of systems for delivery	2000 – Report Min Review Comm Curri 2005 2002 - Revised National Curriculum Statements
2004 – 2009	N. G. Pandor	Improving of quality Understanding impact	2005 – National protocol for Ass in schools 2007 – National policy on Ass for schools 2008 – Foundations of Learning Campaign
2009 - 2014	A. Motshekga (Minister of Basic Education)	Improvement of quality, introduction of accountability systems	2009 - Education split– Basic & Higher 2009 – Min Task Team Report Review of NCS 2010 – Action plan to 2014 – draft 2011 –Curriculum and Policy Statements 2012 – National protocol for Ass : Grades R - 12 2012 –Action plan to 2014 – Final
2014 - 2019	??	Enhance Accountability	Revised Assessment Policy – Long term National Assessment Plan Reporting Framework

Large Scale Assessment Surveys: 1994-2014

Term	Policy Focus	National Assessment Surveys
1994 - 1999	frameworks & documents	1995 TIMSS 1999- MLA 1999 - TIMSS
2000 - 2004	implementation, systems development & delivery	2001 - Grade 3 NA 2001 SACMEQ 2002 TIMSS 2002 - Grade 9 NA - HSRC 2002 - 2005 - CTA Grade 9 2004 Grade 6 NA
2005 - 2009	Improving quality and understanding impact	2006 - PIRLS 2007 SACMEQ 2008 - FLC
2010 - 2014	Improving quality - accountability systems	2010 - ANA 2010 TIMSS, PIRLS 2011 - ANA 2011 - SACMEQ 2012 - ANA 2013 - ANA

**Provincial
Assessment
Surveys**

Conclusion

South Africa needs to develop and strengthen collaboration with other education systems in the English-speaking world and the BRIC countries (Brazil, Russia, India and China) to ensure that students from the South African education system are equipped to be admitted into those systems.

International collaboration in education will help South Africa to successfully tackle its education challenges. Stronger educational links with these countries will also help students to become increasingly broadminded in terms of how they look at both South Africa and the wider world.
