Gender equality in learning outcomes in Africa: Evidence from SACMEQ and IIEP research studies

Teaching and Learning for Development
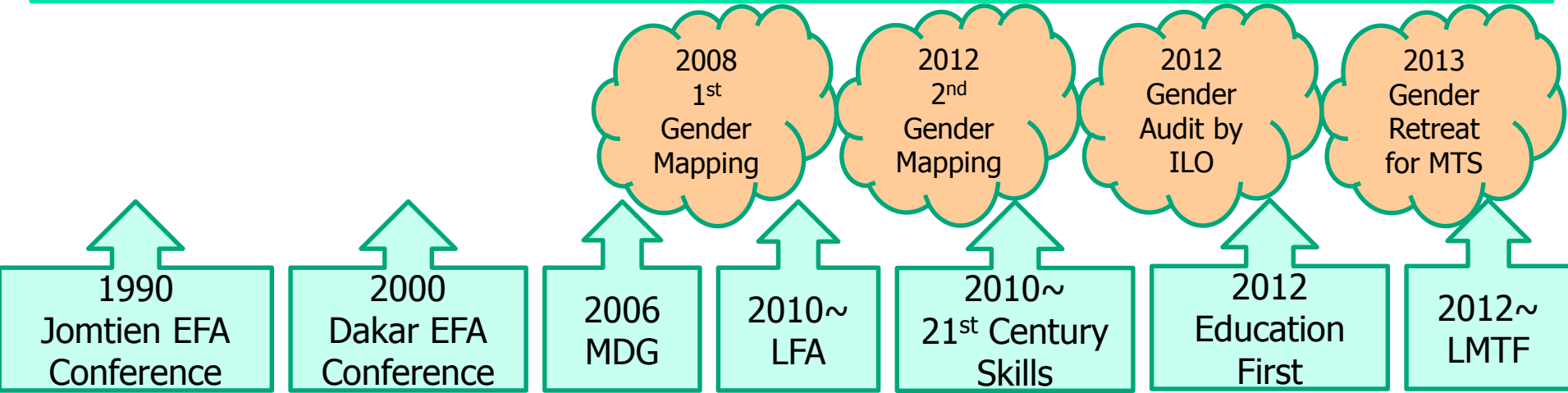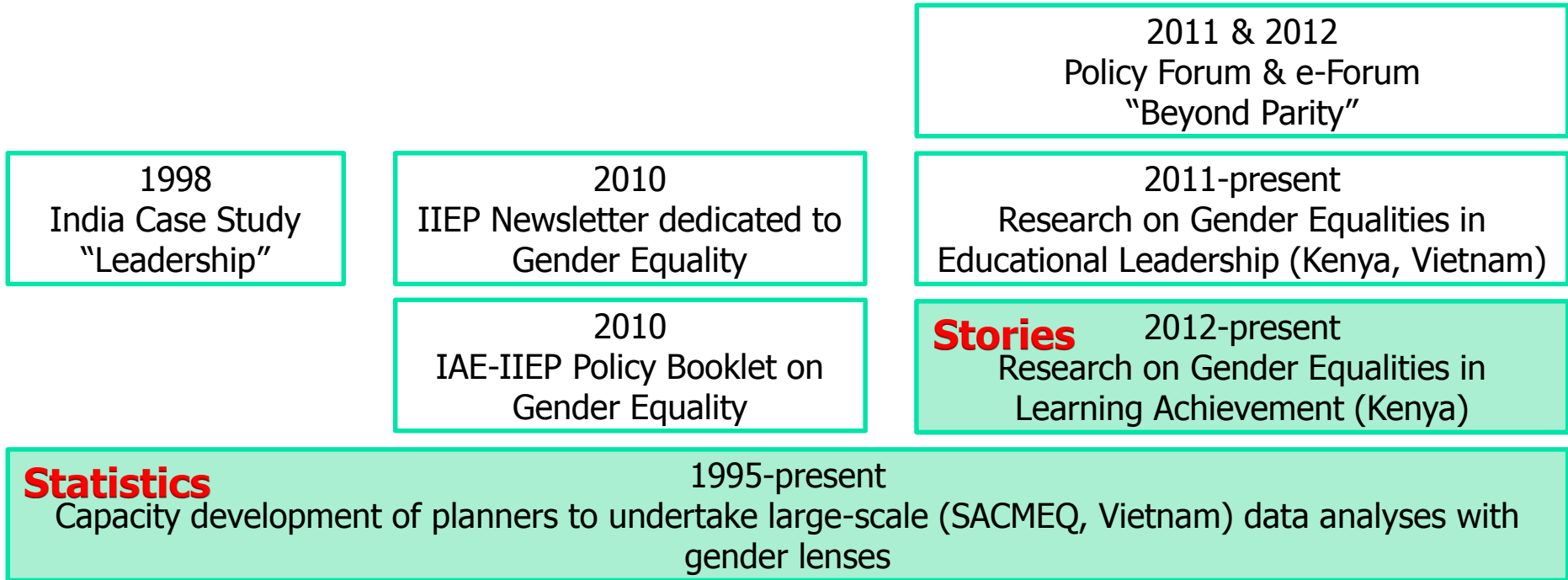
3 February 2014, Oslo, Norway

Mioko Saito

IIEP Programmes on Gender Equality

2011 & 2012
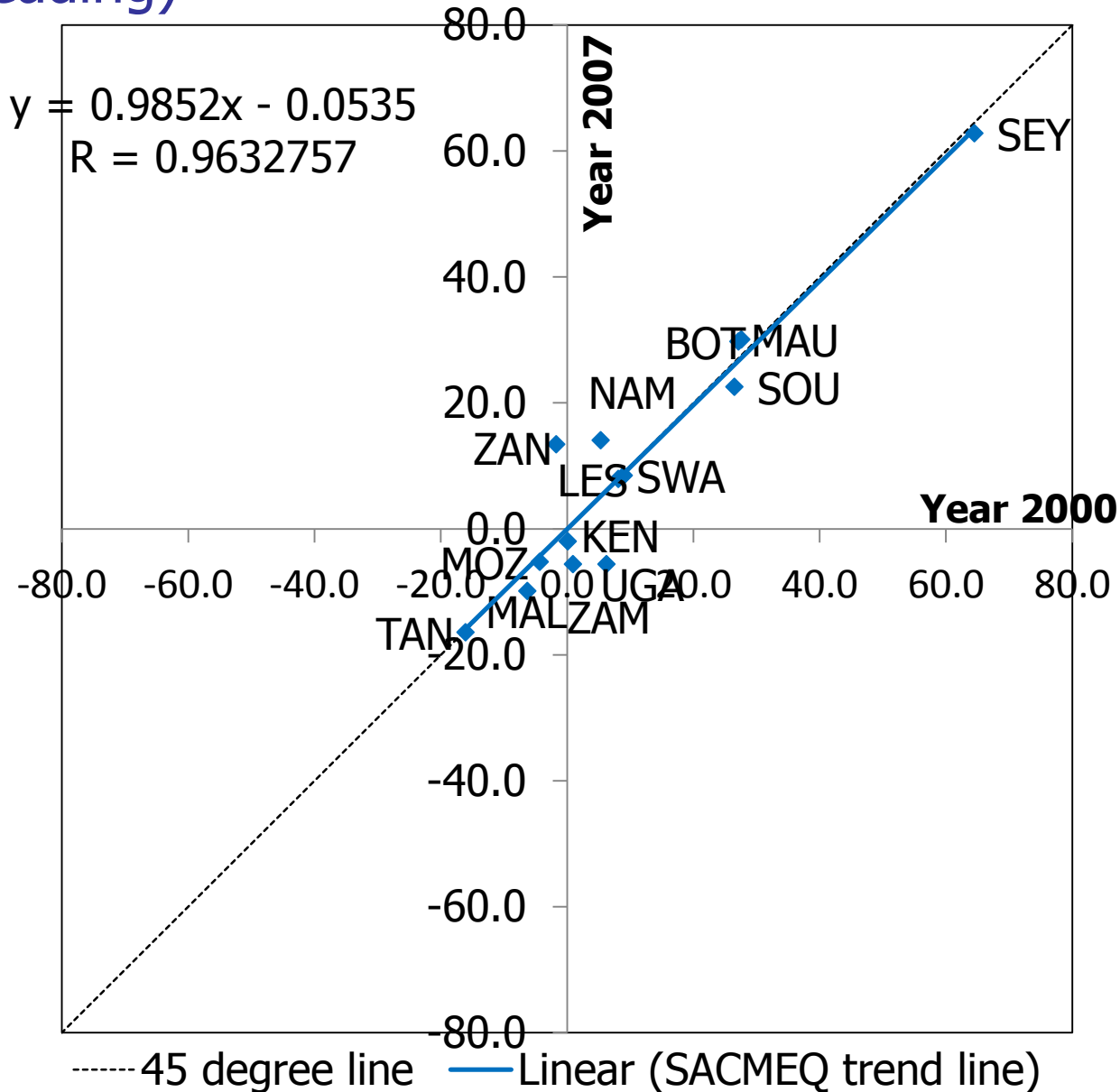Policy Forum & e-Forum
"Beyond Parity"

1998
India Case Study
"Leadership"

2010
IIEP Newsletter dedicated to
Gender Equality

2011-present
Research on Gender Equalities in
Educational Leadership (Kenya, Vietnam)

2010
IAE-IIEP Policy Booklet on
Gender Equality

Stories **2012-present**
Research on Gender Equalities in
Learning Achievement (Kenya)

Statistics **1995-present**
Capacity development of planners to undertake large-scale (SACMEQ, Vietnam) data analyses with
gender lenses

2008
1st
Gender
Mapping

2012
2nd
Gender
Mapping

2012
Gender
Audit by
ILO

2013
Gender
Retreat
for MTS

1990
Jomtien EFA
Conference

2000
Dakar EFA
Conference

2006
MDG

2010~
LFA

2010~
21st Century
Skills

2012
Education
First

2012~
LMTF

IIEP has collaborated with SACMEQ

SACMEQ I	SACMEQ II	SACMEQ III	SACMEQ IV
Data collection 1995 and 1998	Data collection 2000, 2001, and 2002	Data collection 2007	Data collection 2013-2014
7 Ministries of Education	14 Ministries of Education	15 Ministries of Education	16 Ministries of Education
+20,000 Grade 6 pupils	+41,000 Grade 6 pupils	+61,000 Grade 6 pupils	Est. +64,000 Grade 6 pupils
Reading	Reading and Mathematics	Reading, Mathematics, and HIV & AIDS knowledge	Reading, Mathematics, and HIV & AIDS knowledge
Tests for pupils	Tests for pupils and teachers	Tests for pupils and teachers	Tests for pupils and teachers / Link with PASEC

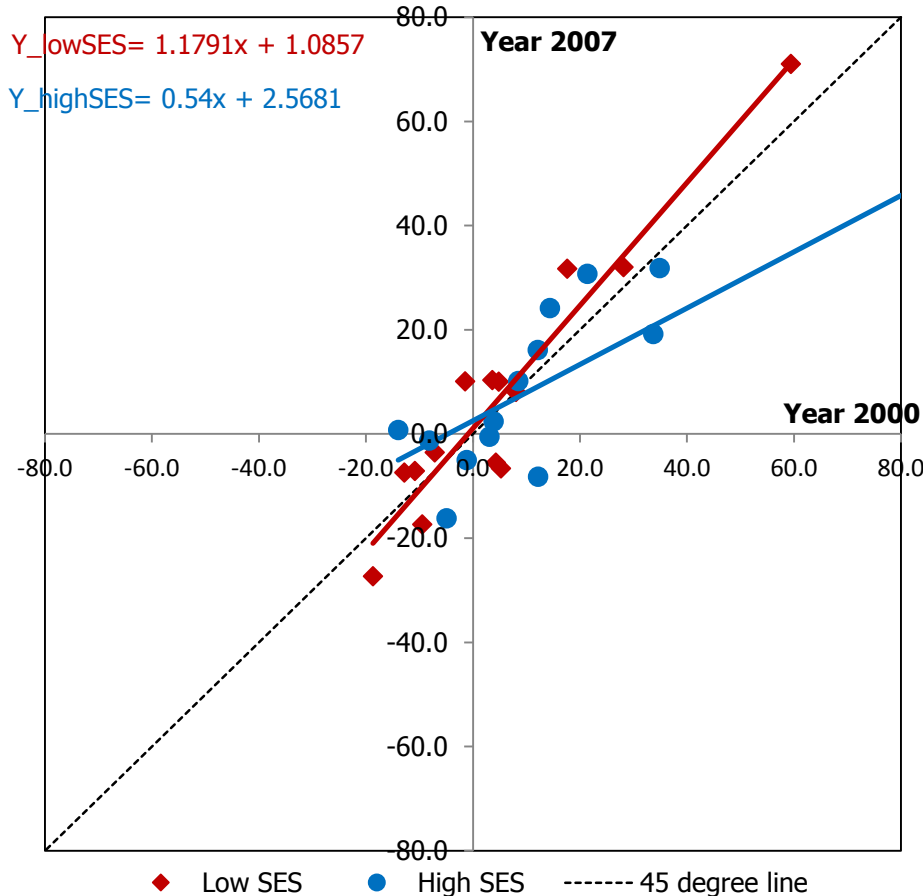# SACMEQ statistics to respond to policy questions with gender lenses

- Trends in gender differences in:
  - Pupils' participation / schooling processes / family background / learning achievement
  - Teachers' working and living conditions / teaching practices & approaches / performance
  - Gender balance in teaching force and school leadership
  - Relationship among teacher gender, teacher performance, and pupil achievement
  - "Gender sensitivity" in the school environment (sanitation, violence, etc.)
- Gender bias in tests

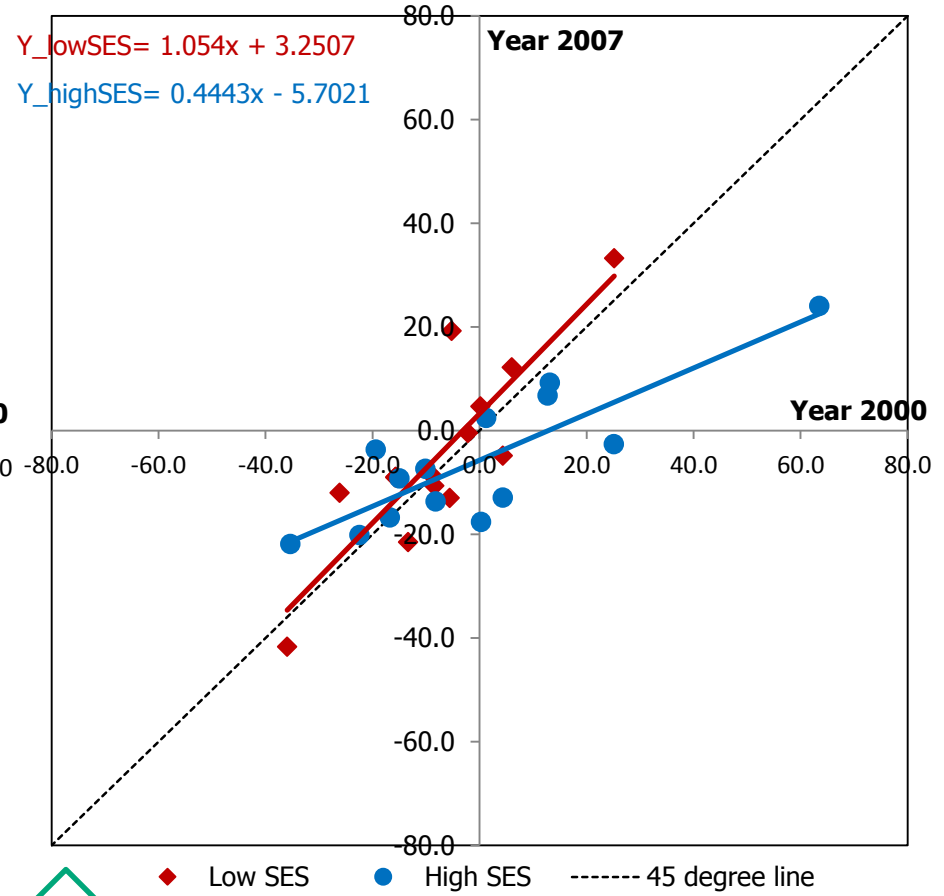# No change in gender differences between 2000 and 2007 (Reading)

$y = 0.9852x - 0.0535$
$R = 0.9632757$

Year 2007

Year 2000

SEY
BOT MAU
NAM SOU
ZAN
LES SWA
KEN
MOZ
UGA
TAN
MAL ZAM

------- 45 degree line ——Linear (SACMEQ trend line)

Change in gender differences between 2000 and 2007

Reading Low vs High SES

$Y\_lowSES= 1.1791x + 1.0857$

$Y\_highSES= 0.54x + 2.5681$

Mathematics Low vs High SES

$Y\_lowSES= 1.054x + 3.2507$
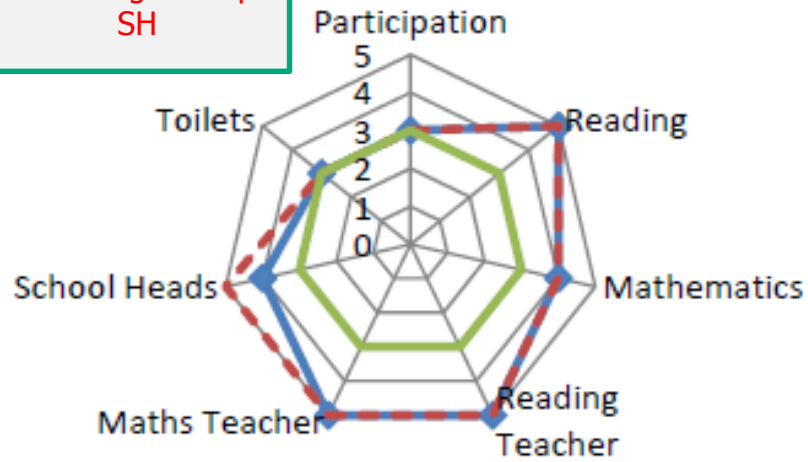
$Y\_highSES= 0.4443x - 5.7021$

Source: Saito (2011b)

Reduction of the size of gender differences in Reading and Mathematics <u>only in High SES group</u>

Botswana

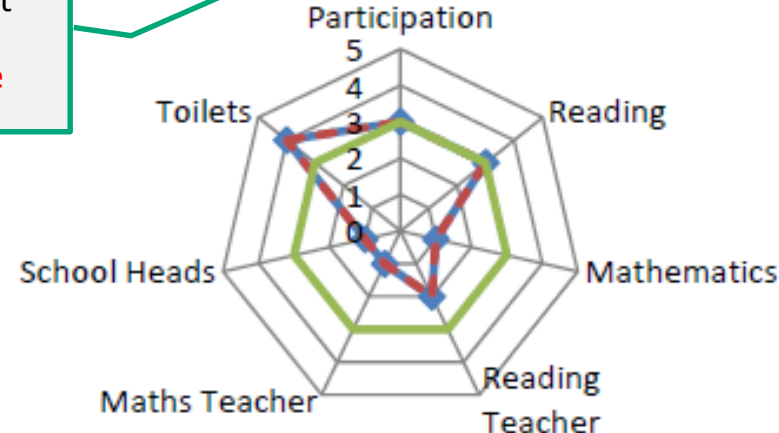Mostly in favor of female
No Change except SH

Participation · Reading · Mathematics · Reading Teacher · Maths Teacher · School Heads · Toilets

Kenya

Mostly in favor of male except Toilets
No Change

Participation · Reading · Mathematics · Reading Teacher · Maths Teacher · School Heads · Toilets

Mozambique

Mostly in favor of male
No Change except Toilets

Participation · Reading · Mathematics · Reading Teacher · Maths Teacher · School Heads · Toilets
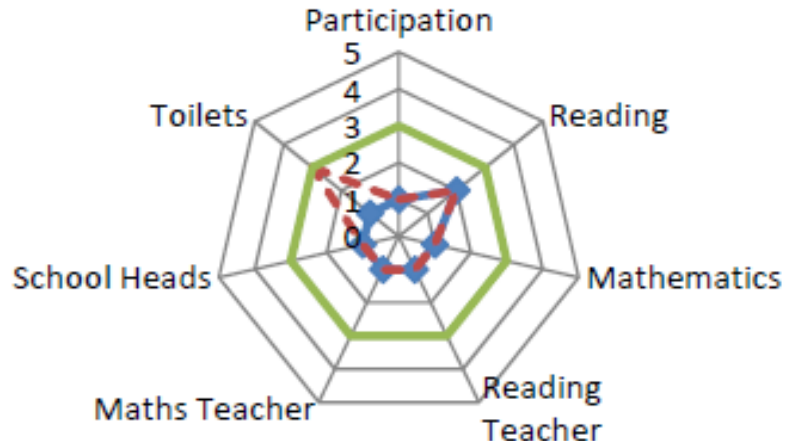
South Africa

Mostly in favor of female except SH
Some Change

Participation · Reading · Mathematics · Reading Teacher · Maths Teacher · School Heads · Toilets

Legend:
- SACMEQ II
- SACMEQ III
- Equality Line

Outside green→In favor of Female
Inside green→In favor of Male

Source: Saito (2011a)
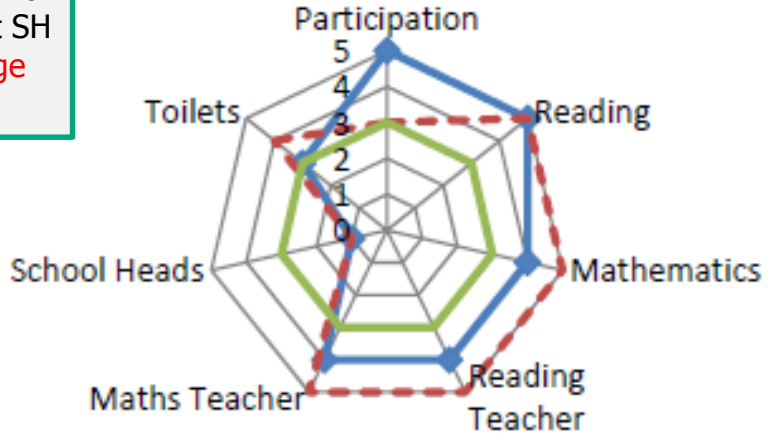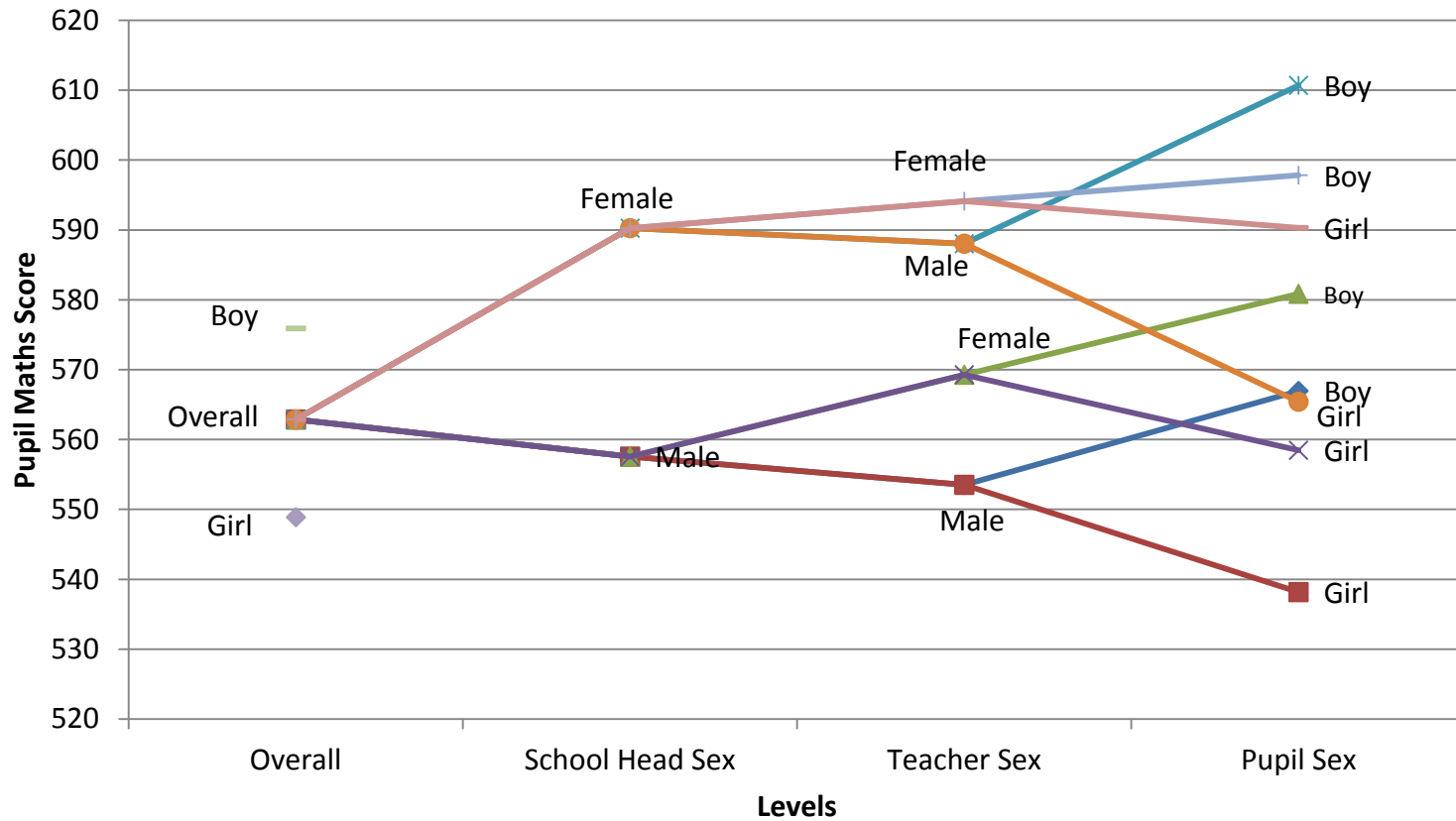
Kenya (Mathematics)

Boys' and Girls' Mathematics Mean Scores based on the Gender of School Heads and Mathematics Teachers in Kenya

School Head	Maths Teacher	Teacher Characteristics and Teaching Practices					
		Maths Scores	Maths. Homework			Give M. Tests	Meet Parents
			Give	Correct	Explain		
Male	Male	913	68%	37%	29%	22%	22%
Male	Female	894	70%	46%	36%	30%	26%
Female	Male	903	64%	49%	40%	33%	9%
Female	Female	929	80%	40%	36%	22%	41%

Source: Saito (2013b)

Relationship between pupils' and teachers' Mathematics competencies in Zambia

Source: Saito (2013b)
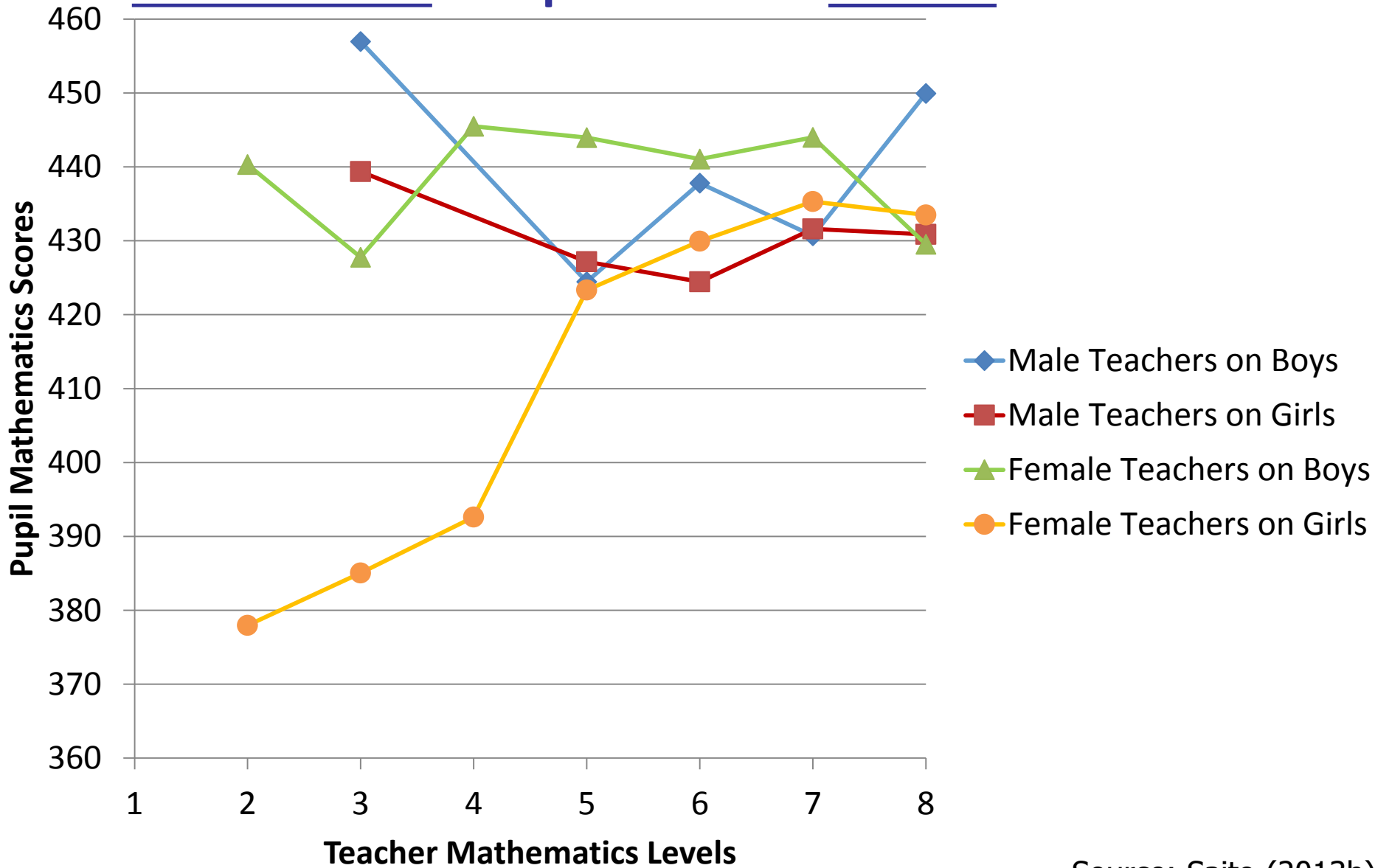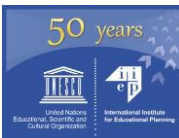
School Heads' Perception on Sexual Harassment (2000-2007)

	Pupils Harass Pupils			Pupils Harass Teachers			Teachers Harass Teachers			Teachers Harass Pupils		
	2000	2007		2000	2007		2000	2007		2000	2007	
Botswana	15	28	▲	0	3	▲	0	4	▲	1	4	►
Kenya	17	49	▲	4	8	►	0	7	▲	5	12	▲
Lesotho	12	23	▲	3	4	►	3	4	►	4	7	►
Malawi	36	42	►	7	12	►	7	14	►	16	17	►
Mauritius	9	15	►	0	2	►	0	1	►	0	3	▲
Mozambique	22	20	►	12	6	►	3	0	▼	11	8	►
Namibia	36	38	►	5	6	►	2	8	▲	7	10	►
Seychelles	49	62	▲	5	0	▼	0	0	►	0	0	►
South Africa	25	40	▲	6	5	►	4	5	►	4	5	►
Swaziland	34	39	►	8	6	►	4	9	▲	4	11	▲
Tanzania	50	38	▼	22	20	►	15	17	►	18	19	►
Uganda	41	58	▲	19	30	▲	18	31	▲	17	37	▲
Zambia	35	48	▲	14	12	►	6	13	►	11	20	▲
Zanzibar	47	NA	XX	14	NA	XX	8	NA	XX	8	NA	XX
Zimbabwe	NA	42	XX	NA	12	XX	NA	19	XX	NA	19	XX
SACMEQ	29	NA	XX	8	NA	XX	5	NA	XX	7	NA	XX

| Trend (2000-2007) of SH perception: % 'sometimes' or 'often'	
▲	Significant increase (>=2SE)
▲	Reasonable increase (>=SE)
►	Marginal change
▼	Reasonable decrease (>=SE)
▼	Significant decrease (>=2SE)

Based on SH reports on frequency to manage sexual harassments:

✓Very common between pupils across SACMEQ countries.

✓In 7 school systems – Significant increase between pupils since 2000.

✓In Uganda considerable increase in all combinations between 2000-2007.

Source: Saito (2013a)

Differences between boys' and girls' achievement scores in schools perceived as low violence vs. high violence

Source: Saito (2013a)
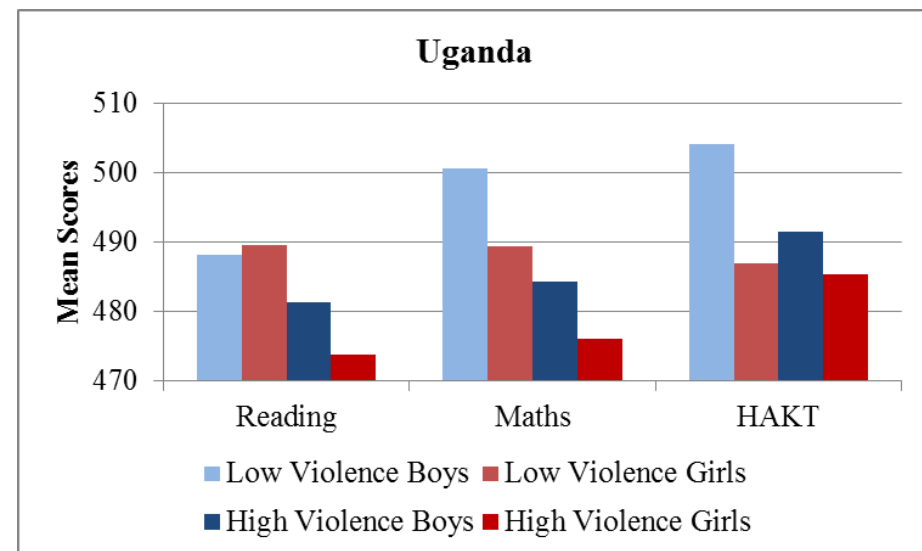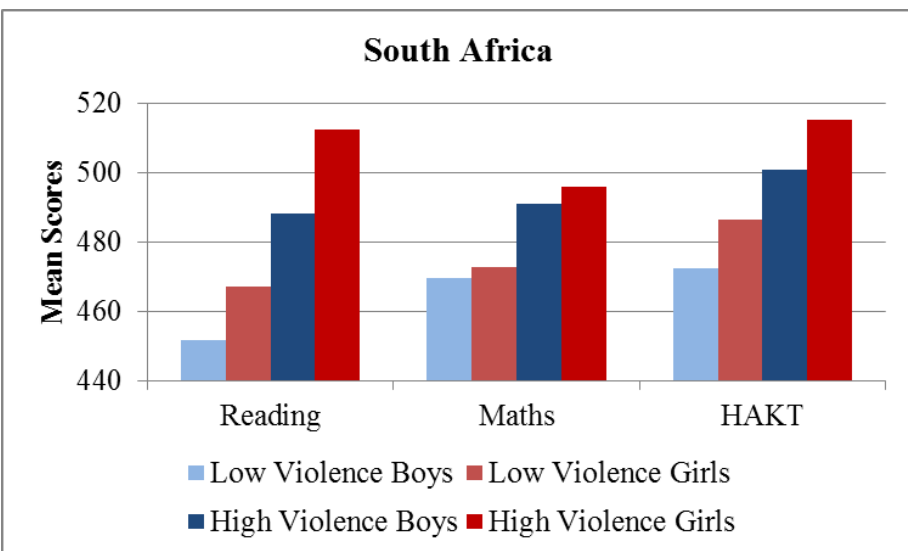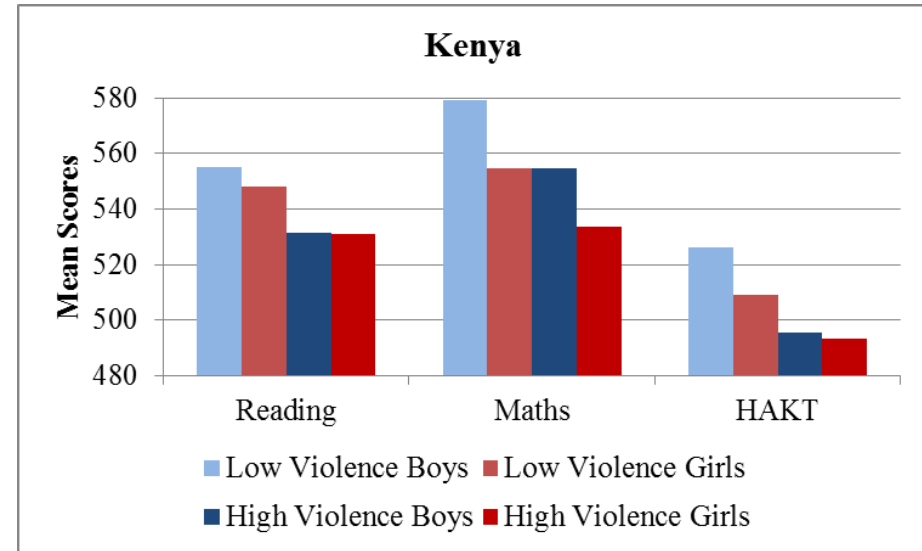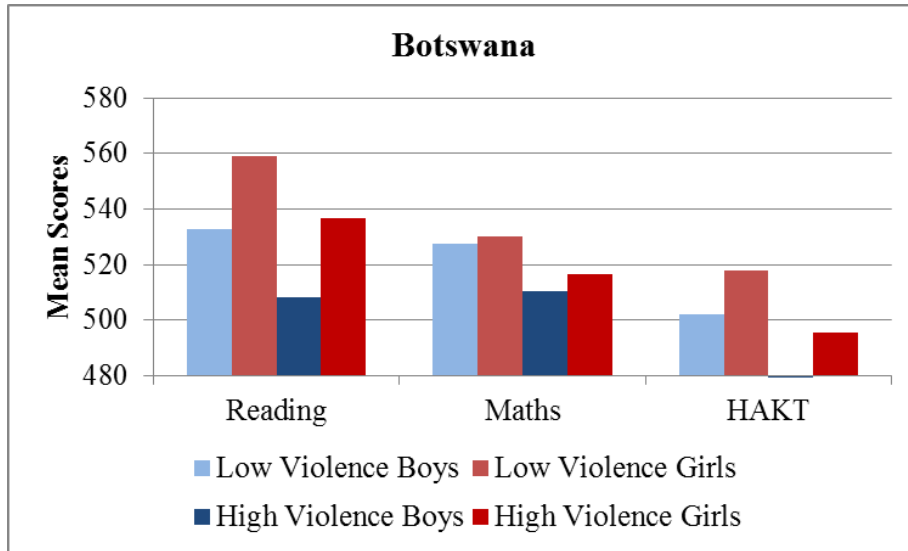
IIEP Study on "Stories behind gender equality in student achievement": Pilot case in Kenya

- Follow-up to SACMEQ assessment
- <u>Partnership</u> between Ministry of Education, UNESCO-IIEP, UNICEF-ESARO
- <u>Capacity development</u> of Kenyan planners and researchers (2012 –2013) in:
  - Qualitative data collection techniques
    - School Observation
    - Classroom Observation
    - Once-on-one interview
    - Focus-group interview
  - Data validation, data coding, and text analysis
  - Story writing for policy messages

Policy Questions in "Stories behind Gender Equality in Student Achievement"

- Class management to provide equal learning processes for boys and girls

- Schools management by male and female school heads to provide equal opportunities for (i) boys and girls to progress in learning, and (ii) male and female teachers to advance professionally

- Views and beliefs of male and female teachers, school heads, and educational leaders regarding gender equality issue

- Views, beliefs, and aspirations of boys and girls and their parents regarding the education and future life

Stories behind toilet statistics

Table 1: Selected Information through 'Gender Lens' in Kenya (2000 and 2007)

Selected Indicators	2000	2007
Female Reading Teacher	46%	46%
Female Mathematics Teacher	24%	27%
Female School Head	9%	15%
Schools with Fences	80%	86%
# Boys per Boys' Toilet	49	56
# Girls per Girls' Toilet	45	52

Source: Wasanga et al (2011)

Standard 6 boy: "I'm scared of using it because I may fall."

Standard 6 boy: "... when you come out of the toilet, you find there is no water to wash your hands."

Standard 6 girl: "Boys sometimes peep at girls' toilets…"

Standard 6 girl: "I don't like to share the toilets with smaller children."

Standard 6 girl: "I keep the used napkin in my pocket and throw away at home."

Standard 6 girl: "During the menstruation period, I sneak out class to use the staff toilet."

Source: Saito (Ed.) (forthcoming)

Stories behind violence/bullying/harassment

Case of a male teacher (girl's uncle) molesting a female pupil and patting other girls' buttocks in the staircase…
- The girl reported to her teacher who reported to School Head.
- School Head called in girl's parents.
- Parents protested: 'if you talk the truth, our brother can lose his job … no, our brother cannot do something like that!' (girl's parents took the side of the 'teacher' – girl's uncle.)
- Teacher applied for an external transfer, and the case ended w/o follow-up.

Case of a male volunteer teacher asking a young boy to take his shorts off in front of his class…
- Boy's parents: 'My son says he does not want to go to class, because the teacher removed his clothes before the children and beat him'
- School Head: 'The teacher wanted the all boys to remove the clothes, so as to learn to name the kind of clothes the people wear'.

Source: Saito (Ed.) (forthcoming)

Top Nairobi School
Grade 6 Maths Class

- 89 pupils
- 17 textbooks
- Periodically rotates seating arrangement based on performance.
- Uses peer learning approach, by pairing the brightest and the weakest, regardless of gender.

Source: Saito (Ed.) (forthcoming)
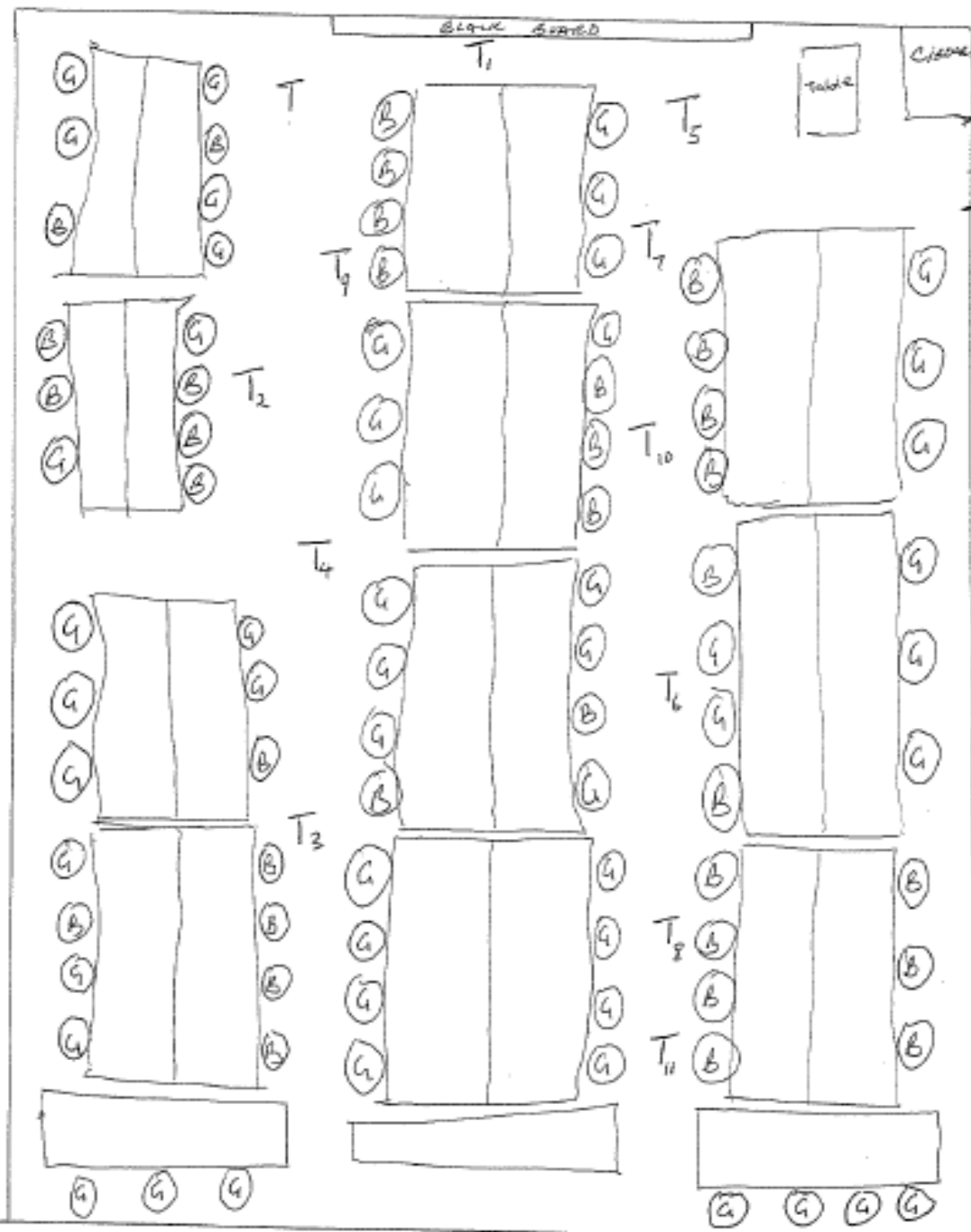
Policy Messages: Implications for Monitoring and Evaluation, Policy and Planning (1)

- Need for a review on gender-related interventions through detailed analyses on budget for quality improvement as opposed to parity improvement (Planning Department).
- Need to agree on gender equality indicators to monitor the quality of learning of boys and girls (Planning Department).
- Need 'targeted' teaching /learning materials for different domains and competency levels of boys and girls (Curriculum Branch).
- Need not to ignore teachers' subject knowledge training in order to overcome Maths anxiety (Teacher Service Commission).
- Need to enhance teachers' skills to work with adolescents through in-service training (Teacher Service Commission).

Source: Saito (Ed.) (forthcoming)

Policy Messages: Implications for Monitoring and Evaluation, Policy and Planning (2)
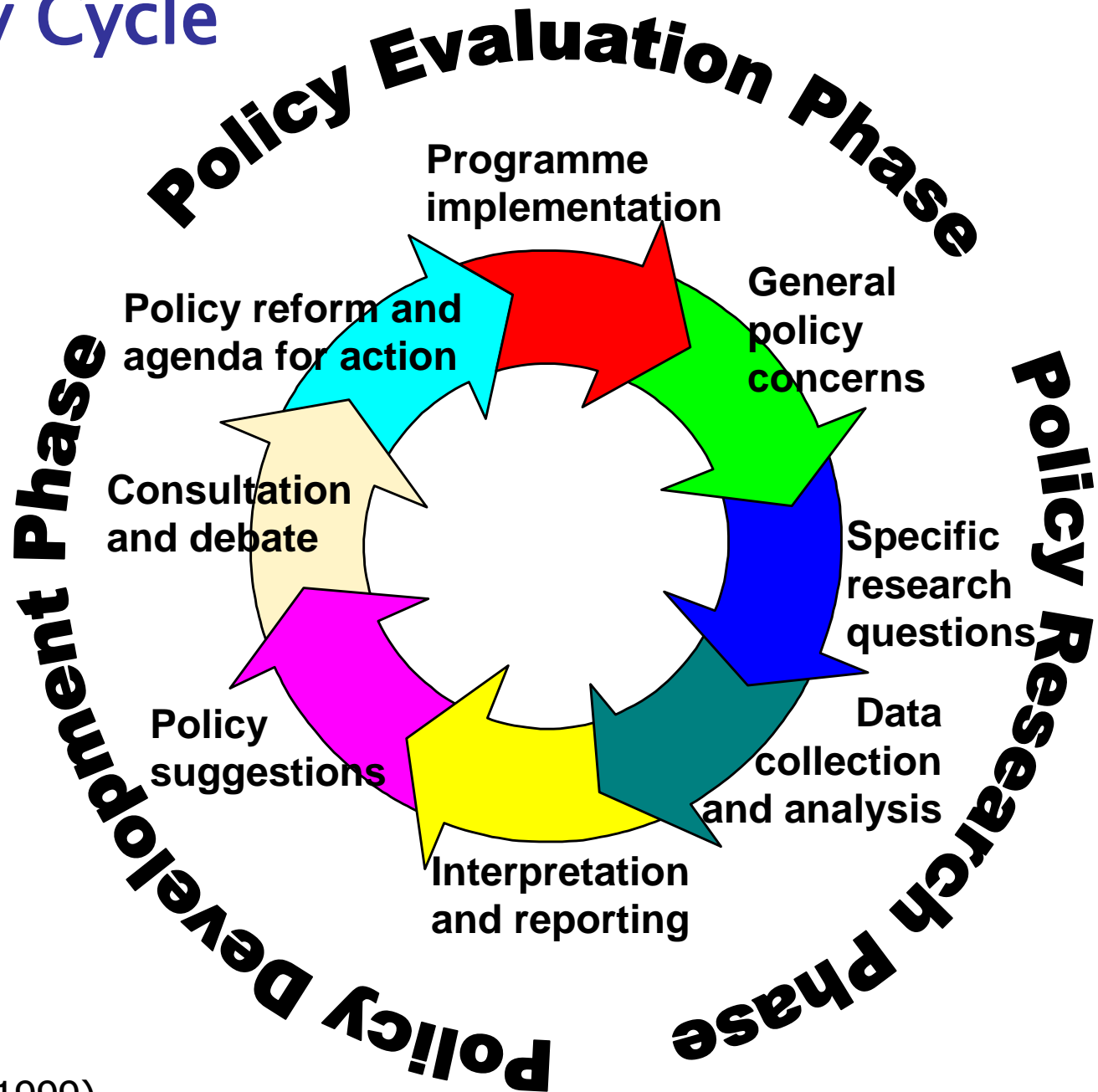
- The DEO should provide gender awareness programmes to both the schools (school heads, teachers, pupils, and all support staff) and the parents;

- Feasible reporting mechanisms must be put in place for school heads to report to the DEO;

- A system of redress should be established that could take the form of a 'code of behaviour' along with clearly defined consequences for inappropriate behaviour.

- District or City quality assurance officers may wish to include a description of the quality of toilets in the school inspection reports.

- School Heads may wish to prioritize the maintenance of toilets on the use of school grants.

- School Heads and the School Management Committee may wish to mobilize a toilet cleaning campaign.

Source: Saito (Ed.) (forthcoming)

Policy Cycle

Policy Evaluation Phase

Policy Research Phase

Policy Development Phase

Policy Development Phase

- Programme implementation
- General policy concerns
- Specific research questions
- Data collection and analysis
- Interpretation and reporting
- Policy suggestions
- Consultation and debate
- Policy reform and agenda for action

Source: Saito (1999)

References

Ross, K., & Saito, M. (forthcoming). *SACMEQ III Project International Report: The Condition of Schooling and the Quality of Education in Southern and Eastern Africa (2000-2007).* Volume 1: Technical Report, Chapter 2: "Sampling". Paris: SACMEQ.

Ross, K., Saito, M., Dolata, S., Ikeda, M., & Zuze, L. (2004). Data archive for the SACMEQ I and SACMEQ II projects. Paris: IIEP-UNESCO.

Saito, M. (1999). A generalizable model for educational policy research in developing countries. *Journal of International Cooperation in Education, 2*(2), 107–117.

Saito, M. (2010). The gender gap in learning – Back to square one. IIEP Newsletter 28 (3).

Saito, M. (2011a). *Trends in gender equality in learning achievement Southern and Eastern Africa: Exploration of characteristics of educational environment and curriculum areas*. Paper presented at IIEP Policy Forum on Gender Equality in Education (Paris, October 2011).

Saito, M. (2011b). Trends in the magnitude and direction of gender differences in learning outcomes. *SACMEQ Working Paper #4.*

Saito, M. (2013a). *Violence in Primary Schools in Southern and Eastern Africa: Some Evidence from SACMEQ.* SACMEQ Gender Series Contribution #1. Paris: SACMEQ.

Saito, M. (2013b). *The classroom gender dynamics on the quality of learning at primary schools in Southern and Eastern Africa.* Presentation at the 57th Annual Conference of the Comparative and International Education Society (CIES) (March 2013).

Saito, M. (Ed.) (forthcoming). *Stories behind gender differences in student achievements*. Paris: UNESCO-IIEP.

Wasanga, P. M.; Ogle, M. A.; Wambua, R. M. (2011). *Progress in gender equality in education: Kenya.* SACMEQ (Policy Brief No. 6). Nairobi: Kenya National Examinations Council.

More information about IIEP's Gender Equality Programme:

m.saito@iiep.unesco.org