

Formative Assessment Use and Training in Africa

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Overview of Presentation

- Background
- Purpose of literature review
- What is formative assessment?
- Formative Assessment Practices in Africa
 - Informal Methods
 - Formal Methods
- Professional Development on Formative Assessments

Background – where are we?

- We have seen significant increases in access to schooling (UNESCO, 2004; World Bank, 2011).
 - Primary school enrollment in Sub-Saharan Africa (Klein, 2011a)

57% in 1999 → 75% in 2009
- Quality of schooling is still in question.
 - Sub-Saharan Africa includes
 - 16 of the top 20 countries with the highest primary school repetition rates and
 - 9 of the top 10 countries with the highest secondary school repetition rates (Klein, 2011b).
- 1 out of 2 children in Africa will reach adolescence without basic skills in reading and mathematics (Brookings Institution, 2012)

Background – what now?

- **Focus is shifting from access to quality.** (UNESCO, 2004; World Bank, 2004; World Bank, 2011)
- **One activity strongly promoted by international agencies to improve educational quality is student assessment.** (Ottevanger, Akker, & Feiter, 2007; UNESCO, 2004; USAID, 2011; World Bank, 2011)
- **Many countries and agencies are developing classroom and formative assessment policies and initiatives.** (Clarke, 2012; Dibu-Ojerinde, 2005; Kapambwe, 2010; Kuze & Shumba, 2011; Mchazime, 2003; Pryor & Akwesi, 1998; Sebatane, 1994; UNESCO, 2000)

Purpose of Review of Literature

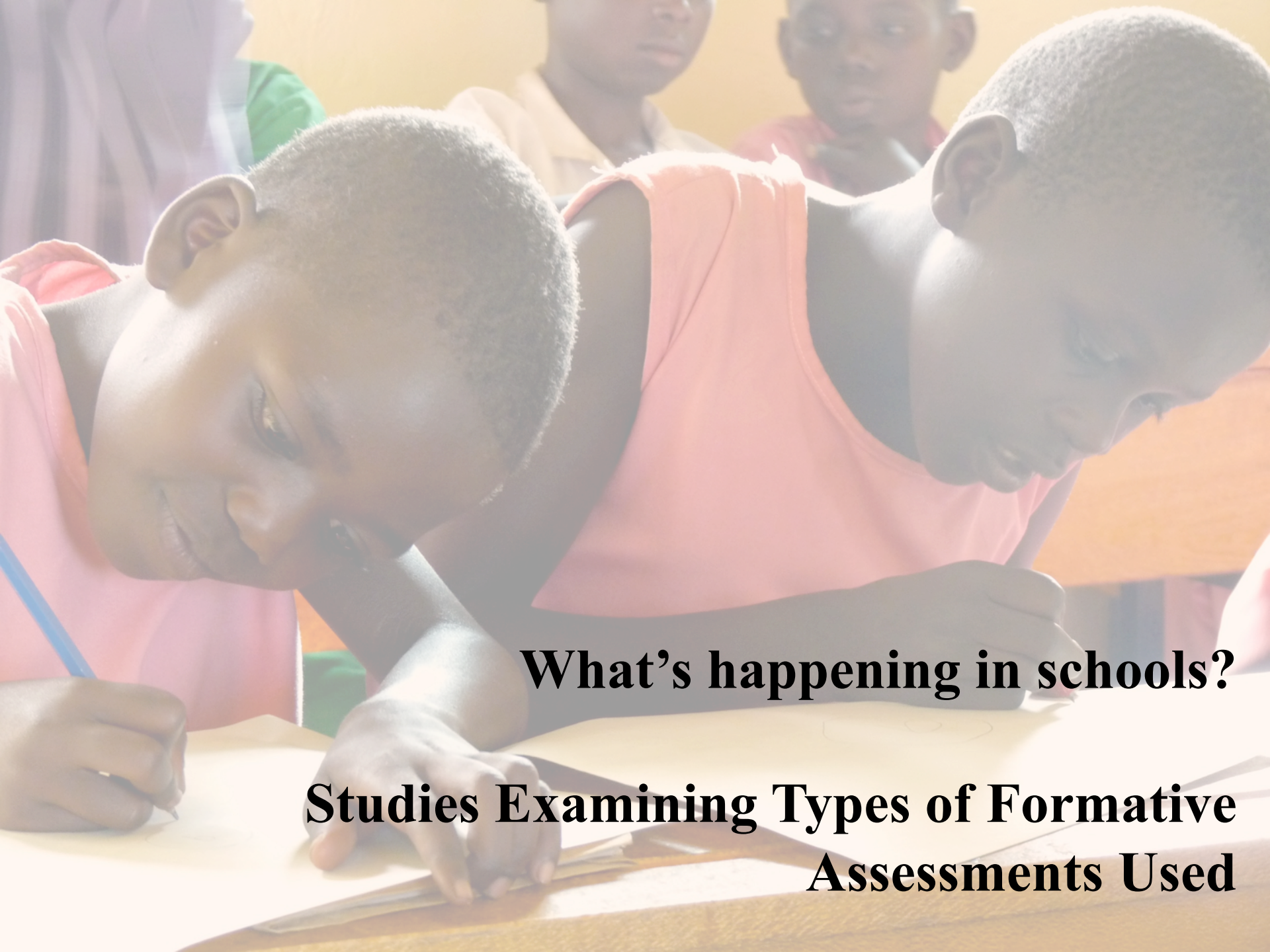
- What do we know about how teachers in Africa use formative assessments in their classrooms?
- What do we know about the effects of professional development on such assessments on instructional practices?

Formative Assessment

- Use of informal or formal assessment data to improve instruction and learning (Black & Wiliam, 2009; McManus, 2008; Pellegrino, Chudowsky, & Glaser, 2001; Shepard, 2006)

Rise of Formative Assessment Projects and Policies in Africa

- In 1992, assessment policies in 14 African countries rarely emphasized classroom assessment but focused on summative assessments such as examinations. (Kellaghan & Greaney, 1992)
- Increase in government policies supporting formative assessment and continuous assessment
 - Ghana (Pryor & Akwesi, 1998), Lesotho (Sebatane, 1994), Malawi (Mchazime, 2003), Nigeria (Dibu-Ojerinde, 2005), South Africa (Kuze & Shumba, 2011; Lubisi & Murphy, 2002), Zambia (Kapambwe, 2010)
- In 2011, 18 out of 41 World Bank projects that promoted student assessment included formative assessment components. (Lieberman & Clarke, 2011)



What's happening in schools?

**Studies Examining Types of Formative
Assessments Used**

Informal Methods

- Types of informal formative assessment techniques commonly used
 - Oral Questioning (Akom, 2010; Dibu-Ojerinde, 2005; Pontefract & Hardman, 2005; Sebatane et al., 1992)
 - Observing students as they work (Akom, 2010; Akyeampong, Pryor, & Ampiah, 2006)
 - Observing students' facial expressions (Akyeampong et al., 2006)
- These studies point to the conclusion that informal assessment strategies are frequently utilized in African classrooms, with oral questioning being one of the most dominant methods.



Formal Methods

- Formal formative assessments
 - Tests (Akom, 2010; Dibu-Ojerinde, 2005; Sebatane et al, 1992)
 - Homework (Akom, 2010; Sebatane et al, 1992)
 - Quizzes (Akom, 2010; Sebatane et al, 1992)
 - Diagnostic tests (Braun & Kanjee, 2006)
 - Progress monitoring systems
 - Tunisia created a formal progress monitoring system for teachers to use to recognize students' weaknesses and misconceptions as well as the reasoning behind students' misconceptions in mathematics, French, and Arabic. (UNESCO, 2000)

Formal Methods

- Formal formative assessments
 - Early Grades Reading Assessment (EGRA)
 - Of the five possible approaches and uses of the instrument, two are classroom based, namely mastery checks and progress monitoring.
 - Mali, one of the African countries implementing the EGRA, is implementing the classroom-based approach in order to provide teachers with data to use to modify instruction. (Gove & Cvelich, 2010)
 - Early Grades Mathematics Assessment (EGMA)

Formal Methods

- Formal formative assessments
 - Continuous Assessment Systems
 - System of assessment that utilizes both informal and formal methods to measure students' proficiency and provides teachers with data to inform instruction.
 - Used in **Botswana** (Ottevanger et al., 2007), **Ethiopia** (Smith, Stone, & Comings, 2012), **Ghana** (Pryor & Akwesi, 1998), **Lesotho** (Sebatane, 1994), **Malawi** (Mchazime, 2003), **Namibia** (Ottevanger et al., 2007), **Nigeria** (Dibu-Ojerinde, 2005), **South Africa** (Kuze & Shumba, 2011; Lubisi & Murphy, 2002), and **Zambia** (Kapambwe, 2010)

Are teachers using the data?

- 67.9% of teachers in Cameroon said that they used assessment data to improve teaching. (Akom, 2010)
- 54% of the teachers in Nigeria noted that using formative assessments affected their teaching to a great degree. (Dibu-Ojerinde, 2005)
- However, more observational evidence is needed to understand how teachers utilize formative assessment data.

Need for Teacher Training

- Taken together, these studies suggest that teachers in Africa utilize multiple formative assessments in their classrooms. However,

Using techniques ≠ Changing instruction

- Supporting teachers in understanding how to use formative assessment data is integral to its benefit (Ottevanger et al., 2007)
- Additional teacher training is being advocated for in this area due to the lack of attention it has previously received and because insufficient teacher training is frequently identified as a barrier to implementation and change. (Braun & Kanjee, 2006; Kuze & Shumba, 2011; OECD 2005; Pryor & Akwesi, 1998)



VOICES

ACTIVE VOICE	PASSIVE VOICE
1. Simon broke the window	→ The window was broken by him
2. The teacher clapped the teacher	→ The teacher was clapped by the teacher
3. Chomani opened the door	→ The door was opened by Chomani
4. I cleaned the chalkboard	→ The chalkboard was cleaned by me
5. The headteacher keeps the keys	→ The keys are kept by the head teacher
6. Farmers grow maize	→ Maize is grown by farmers
7. Mr. Phiri teaches English	→ English is taught by Mr. Phiri
8. Rhodes started the National Anthem	→ The National Anthem was started by Rhodes



ATTENDING	
Tim	✓
Max	✓
Trace	×
Cheri	✓
Meg	×



SMU What are the effects of providing training on how to use formative assessments?

- Lack of training cited as a barrier to implementation, suggesting that training might influence implementation and changes in instruction
- Positive, yet limited, evidence on the effect of training on instructional practices in Africa
 - General formative assessment techniques
 - Cameroon (Akom, 2010)
 - Malawi (Miske, 2003)
 - Specific formative assessment tools
 - South Africa (Kanjee, 2009)
 - Zambia (Kapambwe, 2010)



SMU What are the effects of providing training on how to use formative assessments?

General formative assessment techniques

- Cameroon (Akom, 2010)
 - Collected pre/post classroom observation data
 - Conducted a 1-day assessment workshop on effective questioning, how to analyze student work, and the formative assessment cycle
 - Findings
 - Teachers were assessing students throughout instruction after receiving the training
 - Teachers' level of questioning and quality of feedback improved.
 - Teachers had difficulty making real-time instructional changes based on assessment information.



SMU What are the effects of providing training on how to use formative assessments?

General formative assessment techniques

- Malawi (Miske, 2003)
 - Teachers received 4 weeks of intensive training throughout school year on assessing students, providing remediation, and giving feedback.
 - Teachers also received classroom visits, feedback, and support from coaches.
 - Findings
 - Teachers were able to effectively assess student learning and use the data to modify their teaching.
 - Quantitative data suggests that the training impacted students' math and English performance.



SMU What are the effects of providing training on how to use formative assessments?

Specific assessment tools

- South Africa (Kanjee, 2009)
 - Teachers attended 3 workshops on how to use assessment resource banks, monitor student progress, and develop interventions.
- Zambia (Kapambwe, 2010)
 - Teachers received intensive training on use of continuous assessment materials.
- Findings
 - Both found that teachers were effectively utilizing the formative assessment tools in their classroom and planning of instruction.
- Two treatments – materials and training?

Components of training on formative assessment

- The evidence presented in these studies does not converge on the most effective method of training teachers in Africa.
- Additional evidence on effective training programs must be examined from the developing and developed world.

Components of training on formative assessment

1. Trainings should be **intensive** and **provide on-going support**.
(Bransford, Brown, & Cocking, 2000; Darling-Hammond & McLaughlin, 1995; Garet, Porter, Desimone, Birman, & Yoon, 2001; Lukin, Bandalos, Eckhout, & Mickelson, 2004; Stiggins, 2002)
 - “Change is a gradual and difficult process for teachers” (Guskey, 2002, p. 386)
 - Multiple workshops and meetings over time (Brookhart, Moss, & Long, 2010; Kanjee, 2009; Mchazime, 2003; William, Lee, Harrison, & Black, 2004)
 - Must move from mere exposure toward ongoing learning (Thompson & Goe, 2009)
 - Classroom-based support with observations, feedback, and coaching assists teachers (Darling-Hammond & McLaughlin, 1995; Guskey, 2002; Kanjee, 2009; Miske, 2003; William et al., 2004)

Components of training on formative assessment

2. Trainings should **promote collaboration** between teachers, because the most effective professional development provides participants with opportunities to interact, discuss, and reflect with **one another**. (Akom, 2010; Brookhart et al., 2010; Darling-Hammond & McLaughlin, 1995; Fuchs, Fuchs, Karns, Hamlett, & Katzaroff, 1999; Garet et al., 2001; Guskey, 1994; Miske, 2003; Wiliam et al., 2004; Wilson & Berne, 1999)
 - Could establish/utilize professional learning communities (Black & Wiliam 1998b; Bransford et al., 2000; Lukin et al., 2004)
 - Allows teachers to share ideas, lesson plans, implementation experiences in a supportive atmosphere

Components of training on formative assessment

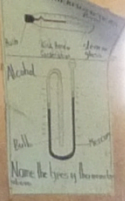
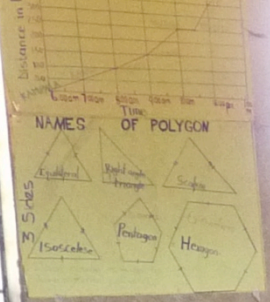
3. Trainings should **emphasize the purpose** of formative assessment and **how data can be used** in the classroom. (Akom, 2010; Brookhart et al., 2010; Kanjee, 2009; Lukin et al., 2004; Mchazime, 2003)
 - Includes learning basic assessment principles, effective questioning strategies, a variety of techniques for formatively assessing students, and appropriate uses of assessment information

Components of training on formative assessment

4. Trainings should instruct participants on **how to interpret the results** of formative assessments and **how to use the data to inform instruction**. (American Federation of Teachers, National Council on Measurement in Education, & National Education Association, 1990; Brookhart, 2011; Lukin et al., 2004; Ottevanger et al., 2007)
 - May include providing guidance on how to analyze student work and data in order to provide effective feedback to students (Akorn, 2010; Fuchs et al., 1999; Guskey, 2001, 2003) and on the design of remediation lessons and interventions based on students' needs (Guskey, 2003; Miske, 2003)

Components of training on formative assessment

5. Training should be closely **related to teachers' actual classroom experiences** and take into consideration the regional context and classroom environment. (Bransford et al., 2000; Cobb, McClain, Lamburg, & Dean, 2003; Darling-Hammond & McLaughlin, 1995; Guskey, 1994; Miske, 2003)
 - Implementation barriers: large class sizes
 - Use available resources



PE CENTRE

POST-TITLE BALL

11-STEP KICK

PE TIME TABLE

TIME	PERIOD	PERIOD	PERIOD	PERIOD	PERIOD
8:00-8:30	PE	PE	PE	PE	PE
8:30-9:00	PE	PE	PE	PE	PE
9:00-9:30	PE	PE	PE	PE	PE
9:30-10:00	PE	PE	PE	PE	PE
10:00-10:30	PE	PE	PE	PE	PE
10:30-11:00	PE	PE	PE	PE	PE
11:00-11:30	PE	PE	PE	PE	PE
11:30-12:00	PE	PE	PE	PE	PE
12:00-12:30	PE	PE	PE	PE	PE
12:30-1:00	PE	PE	PE	PE	PE
1:00-1:30	PE	PE	PE	PE	PE
1:30-2:00	PE	PE	PE	PE	PE
2:00-2:30	PE	PE	PE	PE	PE
2:30-3:00	PE	PE	PE	PE	PE
3:00-3:30	PE	PE	PE	PE	PE
3:30-4:00	PE	PE	PE	PE	PE
4:00-4:30	PE	PE	PE	PE	PE
4:30-5:00	PE	PE	PE	PE	PE
5:00-5:30	PE	PE	PE	PE	PE
5:30-6:00	PE	PE	PE	PE	PE

Conclusions

1. Moderate evidence that formative assessment techniques are being utilized in classrooms in Africa.
 - Future research → How teachers utilize the assessment data to inform instruction
2. Positive, but limited, evidence that training on formative assessments impacts instruction
 - Future research → Comparing effects of this type of training with other educational interventions

Conclusions

3. Evidence converges on a few key characteristics of effective formative assessment training. Trainings should:
 - Be intensive and provide ongoing support
 - Promote collaboration
 - Emphasize the purpose of formative assessment
 - Assist teachers in learning how to interpret the results and use data
 - Be related to actual classroom experiences

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