Using Assessment to Promote 21st Century Learning

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EDC and Me

I am Senior Scientist at EDC’s Center for Children and Technology, with 15 years researching the social issues of school reform and technology integration in schools around the world, from Jordan, to Turkey, India and Vietnam and much of Latin America.

The Education Development Center (EDC) was founded in 1958, as a non-profit educational organization engaged in a variety of research and development projects in over 50 countries around the world.

The mission of the Center for Children and Technology (CCT) is primarily focused on investigating the roles technology can play in improving teaching and learning.
My Goals for this presentation

- Discuss the importance of assessing 21\textsuperscript{st} Century Skills
- Present Assessment for Learning and its potential to improve education in emerging market countries
- Review six classroom assessment strategies that show potential
- Encourage MOEs to consider promoting these approaches and explain how Intel® Teach could help
What we need to teach is changing

21\textsuperscript{st} Century Skills are critical for success, students need to be able to:

- to communicate, share, and use information to solve complex problems,
- to adapt and innovate in response to new demands and changing circumstances,
- to marshal and expand the power of technology to create new knowledge and expand human capacity and productivity.
Assessment at all levels plays a key role

Governments and regional alliances have improved standardized examinations and there are valuable international efforts developing assessment tasks to measure many of more complex intellectual skills and abilities needed for the 21st century.

Assessment and Teaching of 21st-Century Skills (ATC21S) is a global research project, supported by Intel®, that proposes ways of assessing 21st-century skills and encourages teaching and adopting those skills in the classroom. ATC21S is currently developing and piloting standardized tasks to assess Collaborative problem-solving and ICT literacy — learning in digital networks.
Assessment for learning is an under-supported approach in developing countries, that has great potential.

- Assessment for learning is the idea that classroom assessments should support ongoing teaching and learning.

- Assessment for learning is one of the most powerful interventions available to improve student outcomes (Black and Wiliam).

- Our review of the policy and research literature found little focus on promoting their use in developing countries.
Assessment for Learning is already used in many developing country classrooms

- We observed the use of assessment for learning approaches in classrooms in countries as diverse as India, Turkey, Chile, Vietnam and Costa Rica.

- Our observations with Intel Teach show that classroom assessment strategies can work within the contextual challenges of developing countries—large class size, short lesson periods, and limited resources.

- More work needs to be done to adapt these approaches in developing countries.
Four dimensions of assessment for learning promote 21st century learning

1. Provide Insight on Student Learning so Teachers Can Modify Instruction
2. Assess a Broader Range of Skills and Abilities to Provide a more Robust Portrait of Student Ability
3. Offer students feedback about their learning with guidance on how they can improve
4. Give Students New Roles in the Assessment Process that Make Assessment a Learning Experience
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1. Rubrics

Rubrics are tool to measure students’ knowledge and ability and an assessment strategy. They measure certain skills and abilities not measurable by standardized testing systems.

- A rubric is a set of criteria that articulates expectations and describes degrees of quality along a continuum (not a checklist).

- A rubric can enhance the entire learning process by communicating expectations and providing formative feedback.

2. Performance-based Assessments

Performance-based assessments (PBA) are a summative strategy to assess student knowledge as well as their ability to apply knowledge in a “real-world” situation.

- PBA are inherently more student-centered and are better at assessing higher order thinking and other 21st century skills.
- PBA allow teachers to see how and the why a student might be struggling, they can also provide more timely feedback.
3. Portfolio Assessment

Portfolios are a collection of student work gathered over time to assess student effort, development, and achievement over a period of time.

- Portfolios assess a student’s ability to apply knowledge
- Portfolios are easily integrated into classroom instruction
- Portfolios foster self-reflection as students are often asked to review previous assignments and assess strengths and weaknesses of both their own work
4. Self-assessment

Self-assessment is a formative strategy that encourages students to identify their own strengths and weaknesses and to work to make improvements to meet specific criteria.

- Encourages students to take control of their own learning
- Positive effects on achievement, motivation, self-perception, communication, and behavior
- Allows every student to get feedback on his or her, makes them less reliant on teachers to advance their learning.
5. Peer Assessment

Peer assessment is a process for learners to consider and give feedback to other learners about the quality or value of their work.

- Peer Assessment develops both the assessor and assessee’s skills and knowledge.

- Peer Assessment is relevant for large classes since students will always have more time than teachers.

- Although any one student’s feedback may not be as in-depth as a teacher’s feedback, research suggests that peer assessment can improve learning.
Student response system (SRS), or “clickers,” are technology-based assessment tools that can gather student-level data instantly. SRS transforms common traditional assessment (i.e. recall tests) into assessment for learning.

- SRS allows teachers to analyzing information quickly and develop real-time pedagogical solutions to maximize student learning.
- Increasingly technologies like wireless mice or cell phones can create a SRS.
Reliability

- Reliability is a frequently cited concern for teacher-developed assessments, but this partly misconstrues the purpose of assessment for learning.

- Assessment for learning provides evidence to guide learning. Effective feedback to learners focuses on what they need to do to improve, not on comparing students.

- However, it is important that criteria are demanding and clear and that teachers and students can apply these criteria across a wide range of products or activities.
While all of these assessment strategies can be developed by a teacher in his or her classroom, in order to maximize the impact on teaching and learning, teachers require support beyond the confines of the classroom walls. School administrators as well as policy leaders need to be prepared to offer various types of supports including relevant professional development (PD), sufficient planning time, and access to high quality resources.
Intel Teach: example of quality professional development

Teachers need professional development and support when initially learning how to facilitate and structure these new processes.

Intel Teach programs promote assessment for learning strategies and are an example of one PD program that is already working in emerging market countries.
Conclusion

The research strongly suggests that these assessment strategies can positively impact a teaching and learning, yet little is being done to promote these strategies in developing countries.

There are two critical issues to be addressed

- undertaking research and development adapt these strategies to the complex contexts of developing countries;
- creating a policy context that supports teachers in using innovative, classroom based assessment for learning strategies.
Thank you

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