



Chapter 17

Assessment in 21st Century Learning: Improvisation and Inquiry

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ABSTRACT

This chapter contributes a more complex understanding of how formative assessment can support the practice of 21st century literacies. The study is situated in discourses of assessment for learning and 21st century learning in Ontario, Canada. Vignettes from narrative inquiries with four, junior elementary teachers explore different enactments of a literacy program, drawing on perspectives of teachers as curriculum makers and sociomaterial theories on practice and relational space. Findings present a conceptual framework of how practices for convergence or divergence in teacher improvisation and inquiry enact inferential, iterative, resonant, or fluid formative spaces for learning.

INTRODUCTION

The practice of literacy education is highly complex now that digital and social media have multiplied resources for meaning making in multimodal, multilinear, multi-player ways (Rowse, 2016). As if that were not enough, the narrative driving 21st century learning reform goes something like this: Much of what kids learn today will be irrelevant by 2050 (Harari, 2018). What literacies are needed for the fluid world of the 21st century? And what practices of assessment will support what we don't yet know?

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Formative assessment aspires to be assessment *for* learning when teachers have a pedagogy of seeking out data to provide feedback to students and to plan instruction (James, 2017). Assessment for learning promised to improve achievement by using real-time evidence about rich learning opportunities, an educational holy grail offered as an alternative to the impoverishing effects of externally sourced, standardized assessments (Wiliam, 2017). In this approach to formative pedagogy, questions are a key source of data for teachers (Black & Wiliam, 2009; Heritage & Popham, 2013). However, assessment cannot be for learning if it is asking the wrong kinds of questions. As Delandshere (2002) points out, the first question to pose when seeking an answer to ‘what do students know?’ is what it means to learn.

Thought leaders of the 21st century learning movement suggest that in an era of mass technological change and social disruption, students must develop cross-disciplinary competencies through inquiry-based learning so they can work critically, creatively, and collaboratively to solve complex problems (Fullan & Langworthy, 2013; OECD, n.d.). But the kinds of problems which matter, and what it means to be critical, to be creative, to work collaboratively, and to engage in inquiry, are open to question. For example, arts educator Margaret Latta and colleagues (Latta, Hanson, Ragoonaden, Briggs, & Middleton, 2017) studied how teachers enact cross-disciplinary learning in an education system undergoing 21st century reform. In this work, the authors define ‘critical thinking’ as a competency for thinking creatively and rigorously. They discuss the need for open-ended inquiries which allow space and time for indeterminacy so that new forms of learning may emerge. The Organisation for Economic Development (OECD), on the other hand, has developed an assessment of ‘collaborative problem-solving’ which engages students with artificial intelligence to solve a science problem in a scripted computer simulation (Griffin, McGraw & Care, 2012; OECD, 2017).

But from the standpoint of literacy education, teachers may wonder if the shift to the language of 21st century competencies is either an addendum to or a simplification of their already cross-disciplinary work. After all, in this study’s context of Ontario, Canada, the Language and Literacy Curriculum acknowledges that inquiry is at the core of all communication, and tasks teachers with developing competencies in literacy that will allow learners to work across subject disciplines (Ontario, 2006). Rather than beginning with assumptions about 21st century learning, then, this research seeks a better understanding of how elementary teachers practice the complexities of literacy teaching and formative assessment in the 21st century.

The best way to understand how something works is to watch it being made. This project views teachers as curriculum makers, a commitment which will be explored further in the section on methodology. Four elementary teachers were provided online access to a literacy curriculum in development and asked to make changes in ways that made sense with the students, pedagogical influences, and technological resources in their classrooms. Drawing on vignettes and transcriptions of classroom activities and discussions, this chapter conceptualizes how the formative use of convergent and divergent questions makes different relational spaces for literacy practices. Metaphors of orchestration and improvisation from relevant literature on dialogic inquiry and teacher expertise are explored to illustrate these relationships. First, though, sociomaterial perspectives (Fenwick, 2011) employed in this chapter on knowledge, practice, and relational space are introduced that can help educators engage with complexity.

Introducing Complexity: Convergence and Divergence

Assessment for learning takes place within assumptions *about* learning. If these assumptions are not well understood, formative assessment will not improve learning, and may make things worse (Bennett,

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