Changing approaches to classroom assessment: An empirical study across teacher career stages

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ABSTRACT

Research indicates that there is considerable variability in teachers' approaches to assessment resulting in different learning cultures for students. The primary purpose of the study is to examine the relationship between teachers' approaches to assessment across a set of dimensions (including their conceptions of assessment purposes, processes, fairness, and measurement theory) and career stage. The results of this paper illustrate nuanced impacts of career stage on teachers' approaches to multiple dimensions of assessment and enable the generation of assessment profiles that provide empirical support for differences in teachers' approaches to assessment both within and between career stages.

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1. Introduction

There is no shortage of evidence to suggest that teachers' classroom assessment practices influence student learning and the learning environment. This influence is even more pronounced within the current accountability climate across many schools in North America and elsewhere (Bennett & Gitomer, 2009; Brookhart, 2011; Herman, 2008; Kauffman, Johnson, Kardos, Liu, & Peske, 2002). Recent policy developments towards data-informed teaching, assessment *for* learning, and a surge in large-scale assessments have resulted in a multitude of assessment practices occurring within classrooms, often predicated on fundamentally different orientations towards assessment and measurement (Birenbaum et al., 2015; Black & Wiliam, 2006; Stobart, 2008). As a result, teachers have variable understandings and approaches to assessment, with students experiencing classroom-learning cultures that value and use assessments in significantly different ways (Shepard, 2000). A teacher's approach to assessment is comprised of both conceptual understandings and practical

knowledge related to student assessment within the situated context of their classroom teaching (DeLuca, Valiquette, Coombs, LaPointe-McEwan, & Luhanga, 2016). For example, a classroom culture that values formative assessment tends to rely on a socio-constructivist understanding of learning in which students are actively engaged in monitoring their learning through self-, peer-, and instructor-based feedback with the aim of supporting both academic content learning and learner independence (Assessment Reform Group, 2002; Black & Wiliam, 2009; Earl, 2012). In contrast, traditional classroom cultures that prioritized summative assessments to benchmark student learning typically used a teacher-centric model of instruction (Bennett, 2011; Shepard, 2000; Wolf, Bixby, Glenn, & Gardner, 1991).

Previous research on teachers' approaches to assessment has pursued three dominant lines of inquiry. The first line of inquiry, rooted in assessment practice, has explored the psychometric and functional aspects of specific classroom assessment strategies to measure student learning (e.g., testing practices, summative assessments, portfolios, self- and peer-assessments, technology-based assessment) (e.g., Harrison, 2010; Heritage & Heritage, 2013; Hoover & Abrams, 2013; Klenowski, 2010; Ruiz-Primo & Li, 2013; Salend, 2009). This line of research focused on assessment *for* learning practices used to guide instruction and enhance student learning. Although aspects of the assessment process (i.e., designing assessments, communication of design and results) and

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assessment *of* learning practices are considered, these dimensions of classroom assessment are primarily framed in how they align with assessment *for* learning practices.

The second line of research has aimed to measure teachers' levels of assessment literacy—educators' knowledge, skills, and dispositions related to assessment (Popham, 2013) using various instruments (e.g., Campbell, Murphy, & Holt, 2002; Mertler & Campbell, 2005; Mertler, 2003, 2004; O'Sullivan & Johnson, 1993; Plake, Impara, & Fager, 1993). Findings from the majority of these studies indicate that teachers have low levels of assessment literacy, with pre-service teachers particularly limited in their assessment capabilities (Cowan, 2009; DeLuca & Klinger, 2010; MacLellan, 2004; Volante & Fazio, 2007). Furthermore, results from recent systematic reviews of existing assessment literacy instruments indicate that most of these measures are predicated on dated standards for teacher assessment practices and may not fully represent teachers' current responsibilities and knowledge requirements in assessment (DeLuca, LaPointe-McEwan, & Luhanga, 2015; Gotch & French, 2014).

Recently, teachers' assessment literacy has been reconceptualised as teachers' assessment identity (Adie, 2013; Cowie, Cooper, & Ussher, 2014; Looney, Cumming, van Der Kleij, & Harris, 2017; Scarino, 2013; Xu & Brown, 2016). Building upon previous research into teacher self-efficacy and teacher identity, assessment identity represents a dynamic construct that includes not only assessment knowledge and skills but also an affective dimension. This reconceptualization suggests that teacher assessment literacy is closely coupled with personal, social, and contextual aspects of their teaching identity and more than an accumulation of assessment knowledge and skills.

The last line of inquiry has served to understand teachers' perspectives on the value and function of various assessment purposes (e.g., Brown, 2004; Remesal, 2011; Smith, Hill, Cowie, & Gilmore, 2014; Wolf et al., 1991). For example, Brown and colleagues' (Brown & Harris, 2009; Brown, 2004, 2006; Brown, Lake, & Matters, 2011) have worked to identify major conceptualizations of assessment purposes across diverse geographic and teaching contexts. Dominant conceptualizations identified include *assessment for the improvement of teaching and learning, assessment for school accountability, assessment for student accountability*, and *assessment as irrelevant*. Moreover, this body of research draws a consistent distinction between various purposes of classroom assessment, ranging from societal/systemic accountability purposes to formative/pedagogical purposes, while acknowledging the influence of systemic educational cultures on teachers' approaches to assessment. Overall, studies on teachers' approaches to assessment consistently demonstrate that teachers conceptualize and value assessment purposes differently and that teachers' classroom practices are driven, in part, by their overarching understandings of the purposes of classroom assessment.

Across these third lines of inquiry, studies have also examined the influence of teachers' career stages on their assessment practices, knowledge, and skills, as well as the value and function of various assessment purposes. Taken together, these studies suggest that more experienced teachers have a greater perceived skill in assessment practices (DeLuca, Valiquette, et al., 2016), possess a greater knowledge of assessment theory and classroom practices (Mertler, 2003), place greater value on peer assessment activities (Wen, Tsai, & Chang, 2006), value intrinsic goals, metacognitive self-regulation strategies, and higher-order thinking tasks (Birenbaum & Rosenau, 2006), and implement a more differentiated approach to issues of fairness in assessment (DeLuca, Valiquette, et al., 2016) compared to teachers in earlier career stages. Interestingly, studies examining teachers' conceptions of assessment purposes (e.g., Brown, 2004) or self-perception of

assessment abilities (e.g., Zhang & Burry-Stock, 2003) did not identify significant differences according to teachers' career stages. Despite inconsistent influences of career stage on teachers' approaches to assessment, it is important to note that much of the career stage literature focuses on pre-service teachers' assessment literacy and practice, thus precluding a comprehensive understanding of how career stage influences teachers' approaches to assessment as they move through their careers. Additional research that includes both pre- and in-service teachers is needed to further explore the specific relationships between career stage and teachers' approaches to assessment.

This study extends previous research by examining variability in teachers' approaches to assessment across a broad range of career stages based on a set of underlying dimensions. These dimensions include not only teachers' conceptions of assessment purposes, but also their approaches to assessment processes, their understandings of assessment fairness, and their orientations toward measurement theory. Using a cohort sampling design, our analysis of data from 727 pre- and in-service teachers who completed the *Approaches to Classroom Assessment Inventory* (ACAI) aimed to identify patterns in teachers' approaches to classroom assessment. We purposefully use the term, *approaches to assessment*, rather than assessment literacy, to signal not only teachers' assessment practices but also their underpinning theoretical orientations to and philosophies of assessment. Hence, we view a teacher's approach to assessment as comprising both conceptual understandings and practical knowledge related to student assessment within the situated context of their classroom teaching (DeLuca, LaPointe-McEwan, & Luhanga, 2016). This study was guided by the following two research questions:

(1) What are teachers' approaches to classroom assessment at various career stages?
(2) Are there significant differences in teachers' approaches to classroom assessment across career stages?

2. Variability in teachers' approaches to assessment across career stages

Research on the influence of career stage on teachers' approaches to specific assessment practices, learning orientations, or assessment beliefs have identified inconsistent findings: some studies have identified a strong influence of career stage on discrete components of assessment literacy (e.g., Birenbaum & Rosenau, 2006; Mertler, 2003; Wen et al., 2006) while others have not (e.g., Brown, 2004; Zhang & Burry-Stock, 2003). Using a large-scale survey, Plake et al. (1993) examined in-service teachers' assessment knowledge, concluding their low scores on the instrument indicated a lack of preparedness for classroom assessment practices. Using the same survey instrument, Campbell et al. (2002), determined pre-service teachers' assessment knowledge was lower than that of the in-service teacher population in Plake et al. (1993). Mertler (2003) compared pre-service and in-service teachers' assessment knowledge with a slightly modified instrument to the previous studies, obtaining similar results to those previously discussed. Mertler and Campbell (2005) created an instrument based upon assessment scenarios, albeit still with a set of correct and incorrect responses, to examine the assessment knowledge of pre-service teachers. Despite the contextualized nature of the instrument, pre-service teachers scored similarly to previous studies. Recently, Volante and Fazio (2007) and DeLuca & Klinger (2010) identified variable levels of pre-service teachers' self-perceived levels of assessment literacy across the multiple aspects of classroom assessment (i.e., higher confidence in summative assessment