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Editorial: Exploring classroom assessment practices and teacher decision-making

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Editorial on the Research Topic

[Exploring classroom assessment practices and teacher decision-making](#)

Teaching is a series of decisions teachers make when they plan and deliver activities to help students learn. While some decisions will be taken by the head teacher or district, it is the teachers that are faced with and take the majority of the decisions in the classroom. Evidence of learning is generated as students take part in classroom activities and depend largely on the degree of the teacher's capability to recognize and notice usable information about student learning that they can interpret and use to inform instructional decisions and feedback to students (Bennett, 2011). This process provides actionable information for formative purposes that drive instruction and direct next steps in learning.

Borko et al. (1990) estimated that teachers make around 40–50 decisions in a 1 h lesson. Some of these are planned for within the lesson activities, while others arise during interactions in the classroom. Teachers' decision-making is influenced by their career stages. Experienced teachers call on their recollections of previous lessons to help them make decisions about how to take learning forward as they gauge how their current learners benefit from the lesson activities and use the incoming evidence to decide on next steps. Newer teachers do not have as many experiences to draw upon and will often be meeting student performance on a specific activity for the first time. They also will have less developed assessment knowledge and strategies to be able to respond to the assessment evidence that arises. Peterson and Comeaux (1987) reported that expert and novice teachers differ in the cognitive complexity with which they view classroom events enabling the expert to problem solve more broadly and effectively. Experienced teachers seem more able to focus on the assessment evidence arising from a specific classroom activity and to respond to this in terms of adapting upcoming activities to provide further opportunities for learning rather than taking a narrower view of lesson outcomes which novice teachers tend to do.

Teacher classroom assessment makes up the majority of the assessment activities that a student will experience, and if that assessment is designed to support learning, it can be one of the most powerful interventions to enhance student progress (Black and Wiliam, 1998; Hattie, 2008; Alonzo, 2020). When it comes to the concept of using assessment to support learning, many terms are used interchangeably to refer to similar assessment practices and procedures, including terms such as classroom-based assessment, formative assessment, assessment for learning, and, more recently, learning-oriented assessment. These terminologies all refer to pedagogically-linked assessment approaches that require embedding any assessment in learning and teaching processes to promote student learning.

The central role of teacher assessment practices in improving student learning has gained significant attention and has been extensively researched.

In parallel with this increasing focus on teacher assessment practices is a growing interest in the factors and processes involved in teacher decision-making because of their critical importance in improving learning and teaching (Bianco, 2010; Mandinach and Schildkamp, 2021a). Teacher decision-making is seen as an integral component of teacher assessment practice (Mandinach and Schildkamp, 2021b; Beswick et al., 2022). However, despite the strong pressure for teachers to use assessment information to inform instructional decisions, major drawbacks are reported in the literature. These include the capacity of teachers to translate information into insights (Datnow and Hubbard, 2015), the amount of time and onerous preparation needed (Datnow et al., 2021), equity concerns (Dodman et al., 2021), access and availability of various kinds of data (Kallemeyn, 2014), and data system design and construction (Drake, 2021). There are also decisions as to which type of information can best support teacher decision-making with differing understandings of what constitutes assessment information, some considering only the system-level data generated through standardized testing to be rigorous enough to provide insights to inform teacher practice. However, data for teacher decision-making can include “student achievement (from qualitative teacher records to high-stake tests), socio-demographic and contextual information about schools, teachers and students, and non-cognitive characteristics of students, teachers and school leaders (Beswick et al., 2022, p. 2).” Apart from these issues, teacher decision-making is also marred by competing evidence, with some studies showing no impact on student learning (Reeves and Burt, 2006; Staman et al., 2017). Hence, there is a need to gather more evidence to address these gaps identified in the literature.

Our Research Topic draws on current research adding to the growing evidence of the importance of teacher assessment practices and decision-making. There are 11 papers included in this Research Topic with diverse aims.

At the classroom level, Earle’s paper explores formative decision-making and the subsequent actions taken by teachers to inform learning and teaching. Her study reports that teacher decision-making informed by formative assessment data leads to immediate or future changes in learning and teaching activities. Näsström et al. describe one teacher’s formative assessment practice and the requirements for effective teacher decision-making. Their study found that students in the intervention teacher’s class increased their controlled and autonomous forms of motivation as well as their engagement in learning activities. In addition, Cowie et al. demonstrate how to use a Data Conversation Protocol to analyze and act on mathematics assessment data generated through a standardized assessment tool. The Conversation Protocol helps teachers to slow down the process of considering, interpreting and making a judgement about their students’ understanding. They also found that students responded positively to teachers’ data informed small group teaching, gaining in understanding and confidence. Further, Monteiro et al. examine how teachers and students view assessment and how teachers assess their students’ learning, how

teachers assess their students’ learning, and the similarities and disparities that occur when students’ and teachers’ conceptions and teachers’ practices of assessment are compared. Their results show that teachers’ conceptions of assessment contradict their actual assessment practices. In addition, their study shows that students’ conceptions of assessment are constructed from their classroom assessment experiences.

Three studies offer a broader understanding of teacher assessment and decision making skills. Gu offers an argument-based framework for validating formative assessment in the classroom. He offered an operational definition of formative assessment and classroom-based formative assessment. He argues that a clear operationalization is the starting point for researchers and teachers alike to examine the validity and effectiveness of the formative assessment construct. van der Steen et al. create a set of design principles to support teachers in designing formative assessment plans informing formative decision-making. Based on expert interviews expert interviews and subsequent evaluation of future users, there are eight suggested design principles that can be used and validated in educational practice. Phung and Michell report on the nature and dynamics of teacher decision-making, and conceptualized assessment decision-making pathways. They propose three assessment decision-making pathways which provide a new lens for understanding differences in teachers’ final assessment judgements of student oral language performances and their relative trustworthiness.

Three studies focus on pre-service teachers. Schnitzler et al. investigate how student teachers with high and low judgment accuracy differ with regard to their eye movements as a behavioral and utilization of student cues as a cognitive activity. Their findings highlight the power of behavioral and cognitive activities in judgment processes for explaining teacher performance of judgment accuracy. Kron et al.’s study focuses on pre-service mathematics teachers’ selection of tasks during one-to-one diagnostic interviews in a live simulation. The results highlight that pre-service teachers require further support to effectively attend to diagnostic task potential. Oo et al. report on the results of a study of the process of preservice teachers’ decision-making in assessment practices in Myanmar. They have demonstrated how beliefs and values shape pre-service teachers’ assessment practices. Lastly, Alonzo et al. report on a case study of a school in building an assessment culture with a strong focus on using a range of data for teacher decision making. Using the lens of activity theory, they have identified structural, organizational, social, and behavioral factors that contribute to the success of the program.

Despite the range of Research Topic reported in this special issue and extant literature, a continuous exploration of this critical enquiry is required to provide a more nuanced understanding of teacher decision-making skills. As argued above, effective teaching happens when teachers are engaged in ongoing decision-making. Thus, it is important that we further advance the theorisation of this construct to support teachers to improve their decision-making skills, making their practices more trustworthy.

Author contributions

All authors listed have made a substantial, direct, and intellectual contribution to the work and approved it for publication.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships

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