Assessment Literacy Modules
Theory of Action

Providing Opportunities to Inform
Assessment Practice
There are three goals for this document:

- briefly describe what we mean by assessment literacy;
- illustrate in a logic model claims about how the Assessment Literacy Modules are intended to improve student learning; and
- provide research support for those claims.

## What Is Assessment Literacy?

Assessment literacy is acknowledged as a critical teaching skill. It is also included in the InTASC Model Core Teaching Standards and Learning Progressions for Teachers 1.0 (CCSSO, 2013), as well as the National Board for Professional Teaching Standards (NBPTS, 2012). While there are many definitions (Pastore & Andrade, 2019), we define it as “having knowledge or competence of assessment.”

The Assessment Literacy Modules are a set of 10 modules that use a combination of readings, video and audio content, and tasks and reflections to examine the components of a balanced assessment system. The modules also provide a systematic review of six important types of assessment. There are five design and use considerations, which are applicable to all assessment types and used to examine each type of assessment (Mislevy, Steinberg, & Almond, 2003; Wiggins, Wiggins, & McTighe, 2005). The logic model on page 3 should be read left to right. On the left are the critical features of the Assessment Literacy Modules, along with assumptions that we make about their use. The box to the right of the features then identifies the action mechanisms through which we anticipate change in practice can occur. The boxes on the far right describe the intermediate and final outcomes for teachers and students that we expect as a result of sustained use of the ideas presented in the modules.
Based on existing research evidence that supports the logical nature of each of the claims (numbered arrows in the diagram), we anticipate that the Assessment Literacy Modules will help teachers develop a better understanding of the types of assessments that can and should be used for different purposes (Claim 1). When teachers have increased assessment understanding, they can use more frequent and/or effective classroom assessment strategies to inform teaching and learning practices, as well as make more efficient and effective use of information from district- and state-level assessments. As a result, they will better understand the current status of student understanding and make more informed instructional decisions (Claim 2). When teachers make these changes over time, teaching and learning will better meet students’ individual and collective needs (Claim 3) which, in turn, supports improved student learning outcomes (Claim 4). The arrow labeled A indicates the assumptions about school/district climate and leadership support for learning that are necessary for the action mechanisms to occur.
Assessment Literacy Modules Features

The modules target conceptual knowledge that a teacher needs to appropriately employ a wide range of classroom assessment strategies that inform teaching and learning practices, as well as interpret data from district- and state-level assessments (Pastore & Andrade, 2019). In addition, the modules provide opportunities for teachers to reflect on their current practices and engage in collaborative learning with their peers about assessment type. For assessment practices most applicable to day-to-day instruction, teachers are provided opportunities for reflection and action planning to support the use of new assessment practices. Wayman and Jimerson (2014) identified a critical need for teachers to have opportunities to collaborate with colleagues — not only on how to interpret assessment results — but more critically on how to plan instruction in response to the evidence of student understanding. Across the modules, we provide opportunities to collaborate on approaches to assessment interpretation and actions that can be taken considering the information. The modules also provide opportunities for collaborative learning to help teachers connect their learning to classroom experiences and take ownership for their individual and collective learning (Howley et al. 2013; Wyatt-Smith et al., 2010; Willis et al., 2013). We hope the opportunities for collaborative learning translate to future joint efforts by teachers to develop assessments, use data and plan for next steps.

Reactions to the Assessment Literacy Modules from Teachers and Coaches

Preliminary evidence of the value of the Assessment Literacy Modules came from a small pilot with 14 individuals who teach grades 1–12, with the majority teaching grades 4–8. Nearly half the group (N=6) had more than 12 years of teaching experience, while almost half (N=6) indicated that they were unfamiliar or very unfamiliar with assessment literacy. The group reviewed the first three modules, with all teachers reporting that the content of the modules was useful and almost all (N=12) stating that they would like to continue with additional modules. Additional strong, positive feedback was collected from eight coaches from the New Jersey Principals and Supervisors Association who completed the first five modules. As reflected in the Coach Feedback sidebar on this page, one coach noted that the content could be valuable for all staff — not just teachers. Another coach who reviewed the modules highlighted their direct connections to real practice.

1 Teachers can also work individually on the modules. Many activities have additional resources to support an individual teacher. However, we anticipate the greatest benefit to teacher learning and effecting change in practice will occur when teachers have opportunities to work collaboratively on the modules and the application of new learning to practice.
Assumptions About School Climate and Leadership

The logic model lays out some important assumptions about school and district climate that we consider essential for teachers to benefit from learning about assessment literacy, as well as enact what they learn in their classrooms. Research supports the critical nature of principal leadership for the establishment and ongoing support of school cultures that enable teachers to engage in learning that is focused on improving teaching and learning (Anderson et al., 2010; Wayman & Jimerson, 2014). Furthermore, school leaders need to create a school climate that is focused on reflection and learning from mistakes — rather than a culture of blame (Park & Datnow, 2009). School and department leaders serve important roles that influence teacher learning in their actions as agenda setters, knowledge brokers and learning motivators (Printy, 2008).

In addition, strong school leaders place both student and teacher learning at the center of their concerns (Day et al., 2016). Based on practical experiences with engaging school-based, assessment-focused and teacher-learning communities, Wylie and Lyon (2009) identify supports that school and district leaders need to provide. These include having critical knowledge of formative assessment and the skills to support teachers in ongoing school-based professional learning, such as protecting teacher learning time, providing feedback and encouragement as teachers are trying new practices and aligning school priorities.

Learning About Assessments Leads to Better Classroom Assessments

While there are many research articles about assessment literacy, there are few that report the impact of learning about it on teacher knowledge and practice. Some of the work has been done in the context of preservice, such as the study by McGee and Colby (2014) that documented the improvements in teachers’ assessment knowledge as a result of an assessment literacy course. A study by Edwards (2017) tracked eight New Zealand preservice teachers’ assessment literacy across 10 dimensions, with teachers generally demonstrating most progress in their learning after a classroom-based practicum. Zhang and Burry-Stock (2003) investigated teachers’ self-reported assessment practices across teaching levels and content areas, as well as their self-perceived assessment skills. They found that regardless of teaching experience, teachers with measurement training reported a higher level of self-perceived assessment skills in using performance measures in standardized testing, test revision, and instructional improvement, as well as in communicating assessment results.
Improved Teacher Use of Assessment Leads to Improved Student Outcomes

We have not yet collected research evidence about the impact of teachers’ use of the Assessment Literacy Modules on student learning. However, existing research on improved assessment practices has demonstrated a positive impact on students, particularly when the assessment is proximal to classroom teaching and learning.

Research studies that target the impact of improved teacher understanding of student learning needs are mostly in the context of classroom or formative assessment. Significant work has been done in the context of cognitively guided instruction. One study (Fennema et al., 1996) focused on professional development that helped teachers deepen their understanding and use of models of children’s thinking. This study demonstrated that the participating teachers consistently ascertained what students knew by eliciting and analyzing evidence of understanding and using that information to decide on future instruction. Another later CGI study (Carpenter et al., 2000) demonstrated that participating teachers were more likely to adjust instruction in ways that met students’ needs when they understood why students struggled and had resources to develop that understanding.

As teachers developed new ways of thinking about their roles as assessors and supporters of students’ thinking, they were better able to support improvements in student understanding. Other research studies that used treatment and control group methodologies have demonstrated that when teachers use assessment evidence to adapt instruction, student learning improves (Bergan et al., 1991; Fuchs et al., 1991).

Closest to the teaching and learning process is formative assessment, which can have a significant impact on student learning when used consistently and systematically (Black & Wiliam, 1998; Brookhart, 2005; Hattie, 2009; Hattie & Timperley, 2007). For other kinds of classroom summative and interim assessment, the results are more mixed. Research has suggested that frequent and spaced quizzing with feedback can lead to improved student performance on subsequent assessments (McDaniel et al. 2013; Paul., 2015). But as Oláh (in press) noted, “research on the effectiveness of interim assessments for improving instruction and student learning fails to show consistent effects.” However, when these assessments are well-aligned to standards and curriculum, they can serve to focus teachers’ attention on important content (Clune & White, 2008).

Finally, some research has indicated that the use of classroom and formative assessment can improve students’ perception of the classroom climate. For example, Steadman (1998) examined the impact of classroom assessment tasks on undergraduate college students. Faculty indicated — and results of a student survey supported the idea — that major benefits of the use of classroom assessment are that students have “increased control and voice in the classroom,” are more involved in their own learning, benefit from improved instruction as faculty use the results from the classroom assessments to improve instruction and understand that their teacher “cares about them and wants to be effective” (Steadman, 1998, p. 30).
References


