

# Research summary

## *Developing a teachers' assessment literacy and design competence framework*

**Summary developed by the IB Research department based on a report prepared by:**

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## Purpose

To support quality teaching and learning, teachers need a high degree of assessment literacy. Assessment literacy is a multifaceted concept that refers to teachers' competence in all aspects of assessment, specifically encompassing the following areas.

- The conceptual—different methods of assessment
- The practical—the practice of conducting assessment
- The socio-emotional—the social practice of assessment

The aim of this study was to develop a research-based assessment literacy and design framework that could support both the International Baccalaureate (IB) organization and IB World Schools in this important area of teaching and learning. Specifically, the IB could use the assessment literacy framework to inform curriculum and programme review processes as well as IB professional development. The definitional framework could also be useful to schools in supporting teacher self-evaluation and school-level initiatives to enhance teacher strengthening of assessment literacy.

## Research design

Researchers conducted several interconnected activities to inform the development of an assessment literacy framework.

- Literature review: the literature review helped to identify critical elements for inclusion in the assessment literacy and design competence framework.
- Document review of IB programme and subject guides: the document review illuminated the context in which assessment literacy and design competence are embedded in the IB.
- Consultations with IB staff: consultations with key IB staff were used to solicit their views on a number of elements of the framework, including the expectations it sets, the way it is structured, the methodology it puts in place, the resources it identifies, and the overall format.

## Key findings

### Assessment literacy framework

Based on the findings of the study, researchers developed a framework that includes seven elements of assessment literacy (see figure 1).

- Assessment knowledge and skills
- Formative assessment
- Assessment identity
- Professional development
- School environment
- Engagement of learners
- Integration of digital assessment

These elements are brought together under an umbrella phrase indicating that assessment should be central to teaching and learning.



Figure 1. Components of the assessment literacy framework

The following sections highlight some of the main findings from the assessment literacy framework. For detailed information on the characteristics associated with each of the dimensions, as well as suggested methodologies and resources, see "The framework" section of the full report.

### Assessment knowledge and skills

The knowledge, skills and attitudes related to assessment literacy are influenced by teacher career development and changes in attitudes towards education and assessment over time. All teachers need to have the skills and knowledge to evaluate the extent to which assessment items can generate reliable and valid data. Teachers need to be proficient in several fundamental areas of assessment, such as developing and grading

rubrics for open-response tasks, using assessment data to monitor learner progress, and utilizing results from assessments to inform their own teaching practice.

### Formative assessment

Formative assessment is regarded as a backbone of good teaching. It is important that all teachers are aware of the philosophies and appropriate tools that underscore these assessments. Ideally, teachers can design and implement a range of assessment activities to suit a diversity of learner needs and preferences. For IB teachers, this includes not only helping their learners to demonstrate skills and knowledge in curricular areas, but also attributes of the IB learner profile and 21st century skills, such as digital literacy, social skills, collaboration, self-initiative, creativity, and critical thinking.

### Assessment identity

Teachers' feelings, emotions, values and beliefs about assessment derive from their own personal experiences. Having positive beliefs and attitudes about the role that assessment can play in improving learning, as well as confidence in their own assessment skills, are an important part of teacher identity. In addition, teachers need to be aware of the legislative requirements and cultural expectations for assessment in the contexts in which they teach. Aligning their assessment practices with the relevant context is of crucial importance.

### Professional development

Having support and encouragement from school leaders can greatly enhance teachers' professional development. Teachers should feel free to try out innovative and experimental approaches to assessment within their professional practice. Continuous access to high-quality professional learning opportunities can help teachers to employ best practices and approaches to assessment.

### School environment

Schools can create enabling structures for assessment literacy among teachers. In supportive environments, school leaders clearly articulate the importance of using data to guide improvements. One way to empower teachers to optimize data use in schools is by using data teams. These teams can help analyse assessment data, design interventions and support colleagues in using data to inform teaching practice. Data teams should be comprised of teachers and school leaders working together to interpret data and to implement interventions based on evidence.

### Engagement of learners

Teachers can support learners to gain assessment literacy by ensuring learners understand learning goals and success criteria. Using questioning, probing and other instructional practices can enhance the effectiveness of assessment by helping learners to identify their strengths and areas for improvement. Furthermore, peer and self-assessment can help

students to become independent learners—teachers facilitate this by modelling how to make judgements about the quality of work.

### Integration of digital assessment

Digital assessments can improve efficiency in marking, moderating and storing information, enabling teachers to use their resources better. They can also provide opportunities to assess complex knowledge and reasoning that may not be possible through traditional, paper-based methods. Teachers should undergo training in digital assessment design and undertake digital assessments themselves to fully understand the demands they place on their learners—this experience should also improve their ability to design digital assessments.

Furthermore, professional development needs to evolve as digital technologies develop and change. It is vital to provide all teachers with opportunities to learn about and experience digital assessment on an ongoing basis.

## Conclusions

This study demonstrates the importance of assessment literacy and design competence for teachers and school leadership to support high-quality teaching and learning. As assessments are a significant part of teachers' daily practice, using the assessment literacy framework can assist teachers in understanding their own impact on learners' achievement, identifying learner needs and possible interventions, and providing constructive feedback to learners. Ultimately, the framework aims to enhance teachers' assessment literacy so that they can tailor their own practice and professional development to best support student learning.

This summary was developed by the IB Research department. A copy of the full report is available at: [www.ibo.org/en/research/](http://www.ibo.org/en/research/). For more information on this study or other IB research, please email [research@ibo.org](mailto:research@ibo.org).

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