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# Professional Learning in **Assessment and Data Literacy**

THE UNIVERSITY OF SYDNEY

Centre for Educational Measurement and Assessment (CEMA)

THE UNIVERSITY OF SYDNEY

# Professional learning

Professor Jim Tognolini, Director of the Centre for Educational Measurement and Assessment, has developed a suite of professional learning online modules for teachers on *Assessment and Data Literacy*. All modules can contribute to maintenance of accreditation at Proficient Teacher, or as Elective professional development (PD) for Highly Accomplished and Lead Teacher. The modules are mapped to the *Australian Professional Standards for Teachers*. Collectively, they provide a basic introduction to what you need to know and do to assess effectively and use data wisely, in order to maximise student learning.

## Why teachers should consider completing these modules …

- ✓ The modules have been designed by a leading expert in educational assessment
- ✓ You can start the fully-online modules when convenient and complete them at your own pace
- ✓ Each module is competitively priced
- ✓ Each module is accredited and endorsed by the education sectors
- ✓ Modules address Standard Descriptors in Proficient Teacher Standard 5: Assess, provide feedback and report on student learning (5.1.2, 5.2.2, 5.3.2, 5.4.2, 5.5.2)
- ✓ The University of Sydney has approved the modules for articulation to postgraduate award courses. Details are available on the Centre for Educational Measurement and Assessment's website

"Thank you for the six modules of this course. I completed my teacher education course 40 years ago and any reference to assessment was fleeting at most … My school is going through a process of updating assessment and reporting policy at the moment, and I really feel that I can now be a valuable voice in that conversation"
(Secondary Teacher)

"Engaging in high-quality professional learning is a major strategy for improving teacher practice"[1]

1. Australian Teacher Performance and Development Framework, AITSL, 2018, p. 8.

## Access the modules here:

Use your work email address and membership number and receive a10% discount!

https://sydney.nicheit.com.au/education_social_work/web/workshop

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## About the Assessment Literacy modules

The six modules include video presentations by Professor Jim Tognolini, downloadable PDF files, formative self-assessment, reflective questions, recommended short readings, and collaborative webinar opportunities.

Each module will take you between four and six hours to complete and achieve the requisite PD hours towards maintenance of accreditation.

You will be able to: develop understanding that assessment involves professional judgement based upon an image formed by the collection of information and is used to locate student performance on a developmental continuum; contextualise the role of assessment in teaching, and know, understand and use assessment related terms and strategies including reliability, validity, assessment for learning, assessment of learning, performance standards, and norm-referenced assessment. Modules also include a specific consideration of the standards-referenced system that is used in NSW, which is predicated on a measurement model.[2]

**1** Modern assessment theory including standards referencing

**2** Constructing selected response and short-answer items including Higher Order Thinking Skill (HOTS) items

**3** Constructing extended response and performance tasks, and writing analytic and holistic rubrics

**4** Evaluating the functioning of classroom assessment tasks and tests

**5** Examining the impact of feedback on learning

**6** Exploring the role of moderation and reporting in classroom assessment

"The pace of the module was just right and I liked how it was broken into three parts with lectures and an assessment at the end of each part … The module promoted self-reflection on my own assessment practice. I hadn't been over reliability and validity for a long time and was interested in this area in relation to the NSW curriculum …. I would love my team to work through this set of lectures to feel confident that we all have the same understanding"
(Deputy Principal, Module 1)

2. Tognolini, J., & Davidson, M. (2012). Assessment, standards-referencing and standard setting. In M. M. C. Mok (Ed.), *Self-directed learning oriented assessments in the Asia-Pacific* (pp. 23-41). Springer.

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| **Assessment Literacy modules in detail** | PD Hours | Standard Descriptors addressed | Cost Without discount |
|---|---|---|---|
| **1. Introduction to modern assessment theory including standards referencing.** Module 1 starts by defining several assessment related terms; introduces the notion of tracking student progress along a developmental continuum; discusses the two main principles of assessment (validity and reliability) from a teacher's perspective; and, then demonstrates how current standards referencing systems are examples of assessment theory in practice. | 6 | 5.1.2 | $300 +GST |
| **2. Constructing selected-response items including Higher Order Thinking Skills (HOTS) items.** Module 2 starts by revising the good practices that are required to develop good quality selected response items for classroom tests. It then reviews some of the characteristics of the taxonomies of learning that underpin curriculum, learning and assessment in contemporary schools. Finally, the Module will consider the meaning of HOTS and then present some suggestions for writing selected response items for assessing HOTS in teachers' classrooms. | 5 | 5.1.2 | $300 +GST |
| **3. Constructing extended response and performance tasks, and writing analytic and holistic rubrics.** Module 3 starts by providing a practical summary of information about how to develop and effectively use constructed-response and performance-based methods to assess student learning. It focuses on using these methods to assess Higher Order Thinking Skills (HOTS) and deep learning. The Module also provides practical advice on how to construct both analytic and holistic marking rubrics to accompany constructed-response and performance-based items. | 4 | 5.1.2 | $300 +GST |
| **4. Evaluating the functioning of classroom assessment tasks and tests.** Module 4 starts by providing a practical summary of the types of information that should be collected for each test and formal assessment provided in class. It includes the difficulty, discrimination, validity and reliability of the test. The Module then examines how each of the items (questions) that comprise the test have functioned. The comparison in relation to these item statistics, like the difficulty and discrimination information, is the expectation set by a teacher when setting the assessment. Finally, teachers will be introduced to a Guttman Scale which focuses on how students have performed relative to expectation of the test and their teacher. This information is pertinent to interpreting the results from NAPLAN, the HSC and other packages provided with standardised assessments. | 4 | 5.1.2, 5.2.2, 5.4.2 | $300 +GST |
| **5. Examining the impact of feedback on learning.** Module 5 starts by defining feedback. It then examines components of good assessment and identifies some strategies for providing feedback from both summative and formative assessments to students and tailoring it to their needs. It then provides strategies for determining whether the feedback that is given in class is understood by students. Finally, there is a focus on how to implement information that is derived from formative assessment to improve student learning. | 4 | 5.1.2, 5.2.2 | $300 +GST |
| **6. Exploring the role of moderation and reporting in classroom assessment.** Module 6 starts by considering what knowledge and understanding is required to participate in assessment moderation activities that are designed to support consistent and comparable judgements of student learning. The second presentation deals directly with what knowledge and understanding is required to report clearly, accurately and respectfully to students and parents/carers about student achievement, making use of accurate and reliable records and demonstrating an understanding of the meaning of grades and marks in a standards-referenced system. | 4 | 5.3.2, 5.5.2 | $300 +GST |

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## About the Data Literacy modules

Like the *Assessment Literacy* modules, the *Data Literacy* modules include video presentations by Professor Jim Tognolini, downloadable PDF files, formative self-assessment, reflective questions, recommended short readings, and collaborative webinar opportunities.

Each module will take you four hours to complete and achieve the requisite PD hours towards maintenance of accreditation.

You will be able to define data literacy in relation to assessment literacy; define evidence-informed decisions and consider some of the more common evidence-based decision-making models; collect, organise, analyse, interpret, draw conclusions from and apply assessment results to modify teaching practice; interpret key statistics that are used to evaluate the outcomes from analyses of student assessment data, e.g., effect size; standard error of measurement; confidence-intervals; explain and give examples of how assessment results can be misinterpreted and lead to unintended consequences; and explain the role of moderation in making assessments like the HSC and NAPLAN comparable.

**1** Data types and sources, and conceptualising a framework for Data Literacy

Available Now

## Coming later in Semester 2, 2021…

**2** Evidence-informed decision-making

**3** Meaning and use of formative assessment and feedback

**4** Common high-stakes summative assessments (e.g., NAPLAN, PISA, TIMSS, ATAR)

**5** NAPLAN feedback (Primary Teachers)
**or**
HSC results (Secondary Teachers)

**6** Practical strategies to promote data use for teaching and learning

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| **Data Literacy modules in detail** | PD Hours | Standard Descriptors addressed | Cost Without discount |
|---|---|---|---|
| **1. Data types and sources, and conceptualising a framework for Data Literacy.** Module 1 defines data and data literacy and relates these to assessment literacy; it introduces an operational conceptual framework and outlines how the remaining modules address the main components of this framework. | 4 | 5.1.2, 5.4.2, 5.5.2 | $300 +GST |
| **2. Evidence-informed decision-making.** Module 2 starts by explaining why evidence-informed decision-making is important in the current context; it describes the key components; considers some of the issues and challenges associated with teachers using data; introduces some statistics language needed by teachers to be able to interrogate data at the classroom level; provides a context for understanding assessment as a means of collecting data about student performance; and directly addresses the use of the data component of the conceptual framework. | 4 | 5.1.2, 5.2.2, 5.3.2, 5.4.2, 5.5.2 | $300 +GST |
| **3. Meaning and use of formative assessment and feedback.** Module 3 considers the meaning and use of formative assessment; it considers research on how formative feedback can be used to support knowledge and skill acquisition; the module considers graphing of frequency distributions and the role that presentation of data plays in organising and summarising evidence in education; and introduces measures of central tendency and their role in summarising and explaining data. | 4 | 5.1.2, 5.2.2, 5.4.2, 5.5.2 | $300 +GST |
| **4. Common high-stakes summative assessments (e.g. NAPLAN, PISA, TIMSS, ATAR).** Module 4 Examines common high-stakes summative assessments and examines their purpose and role in providing evidence of learning at the student, school, system and national level; it considers some of the more common results that come from large-scale, high-stakes reporting and how results are reported and often misrepresented and misinterpreted. | 4 | 5.1.2, 5.2.2, 5.3.2, 5.4.2, 5.5.2 | $300 +GST |
| **5. NAPLAN feedback (Primary Teachers) or HSC results (Secondary Teachers).** Module 5 provides a choice. Participants can choose to listen to the lecture examining NAPLAN feedback, showing how the data from this summative test can be used to inform teaching and learning; or they can listen to how the HSC results package can be used to inform learning. The module also considers ways that teachers can move from problem identification to framing the right question and constructing a hypothesis that can guide the collecting, analysing, interpreting and answering of the initial question. Finally, the module addresses some of the characteristics of measures of variability. | 4 | 5.1.2, 5.2.2, 5.3.2, 5.4.2, 5.5.2 | $300 +GST |
| **6. Practical strategies to promote data use for teaching and learning.** Module 6 examines some strategies that schools have used to promote data use for teaching and learning and describes the effect that these have had on principals' and teachers' practice; it explores some of the practical factors that teachers and schools must deal with, and some ways that teachers can work collaboratively with data in and across schools. Finally, the module discusses the use of common statistics in summarising and reporting data: z-scores; t-scores; and correlations. | 4 | 5.1.2, 5.2.2, 5.3.2, 5.4.2, 5.5.2 | $300 +GST |

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https://sydney.edu.au/arts/our-research/centres-institutes-and-groups/centre-for-educational-measurement-and-assessment.html