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High-quality research to advance methodology

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A joint submission to the Quality Teacher Education Review from the Centre for Educational Measurement and Assessment (CEMA) at the University of Sydney with input from Australian Curriculum, Assessment and Reporting Authority (ACRARA)

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Core content to build teacher understanding of assessment, data and evidence should be defined for initial teacher education, nationally.

Introduction

This submission addresses the following terms of reference of the ITE Review:

What more can we do to ensure that ITE curriculum is evidence-based and all future teachers are equipped to implement evidence-based teaching practices?

What more can ITE providers and employers do to ensure ITE students are getting the practical experience they need before they start their teaching careers?

The theme running through this submission is that **“Assessment and the use of data and evidence are crucial to the success of beginning teachers, and yet are the most underestimated”**

Of course, confident curriculum expertise is also crucial, as are basic and varied pedagogical principles. Assessment and the use of resulting evidence is the third point of this foundational triangle of teacher effectiveness. Assessment is inherent in understanding student needs at individual and class levels; determining the extent of content acquisition and understanding; determining the appropriateness of pedagogies; judging and reporting; analysing teacher practice and its effectiveness; and analysing the effectiveness of approaches across classes and schools.

Assessment is generative of continuing improvement for teachers and for students. It allows teachers to exercise independent and informed professional judgment, as well as coordinate with colleagues on a substantive basis.

The relative lack of confidence in key concepts or generally understood definitions in the assessment domain is therefore an acute problem for teaching, or put in more positive terms, an obvious point of leverage for building the capacity of the teaching profession.

The importance of assessment, data, and evidence to the Australian Curriculum

The effective implementation of the Australian Curriculum relies on a common understanding of core and essential assessment and data-use concepts.

It is critical for the successful take-up and implementation of the Australian Curriculum that teachers are prepared, from the day that they begin their teaching careers (Graduates), to develop quality (valid and reliable)

assessment activities; interpret student assessment data; and, modify their teaching practice to improve student learning.

There must be space in all ITE education for fundamental assessment, data and evidence-based concepts that will apply across all learning domains and year levels. Concepts such as validity and reliability, and the nature and purpose of moderation are foundational for any analytical and systematic approach to teacher effectiveness.

Such concepts need not, and should not, be addressed in the ITE curriculum to an extent that encroaches on the domain of statisticians. But there is a level understanding that modern professional teaching practice requires, and which is implied in the Australian Professional Standards for Teachers.

There is a need to align the use of evidence for teaching and learning with the quality of data (obtained from assessment activities). Poor quality assessment produces evidence that could impede learning.

Expecting beginning teachers to be able to critically engage with research evidence and then effectively use it to improve practice is a huge challenge. This challenge is made even more difficult if beginning teachers are not well equipped to engage with the skills to convert both quantitative and qualitative data into evidence.

Several pressures and incentives are converging to drive the need for more informed teacher use of student assessment and achievement data from the day that they start teaching. Advocacy for formative assessment (Black & Wiliam, 1998; Stiggins, 2008) and evidence-informed practice (Wayman & Jimerson, 2014) is part of this agenda.

The inculcation of higher order thinking skills, non-cognitive skills, and core competencies into the Australian Curriculum in accord with the 2019 Alice Springs (Mparntwe) Education Declaration has raised the stakes for beginning teachers to be able to teach, assess, interpret and measure progress on skills that have been traditionally found difficult, if not impossible, to measure.

In this context, assessment literacy and data literacy have emerged as concepts for focus in research and professional development, with both beginning and in-service teachers (Council of Chief State School Officers [CCSSO], 2012; DeLuca & Bellara, 2013).

All teachers should be assessment literate. This means, for example, that they should know that different types of assessment are more useful for determining knowledge of facts, than say for communicating an interpretation of those facts. Teachers should know how to write and select high-quality assessments (including HOTS items); integrate results obtained from assessments with improvements in learning (formative assessment and Assessment for Learning); and, communicate accurately about student learning. They should also be able to demonstrate data literacy. This means, for example, that they should know how to identify, collect, organise, analyse, summarise, prioritise data, develop hypotheses, identify problems, interpret data; and, determine, plan, implement, and monitor courses of action.

Jim Popham (2009, p. 4) noted that “educators’ inadequate knowledge in assessment can cripple the quality of education. The knowledge and skills are the sine qua non for today’s competent educator”. He could have added that it is critical that such knowledge and skills (as comprise assessment and data literacy) are developed in beginning teachers so that they enter the profession feeling **empowered**.

Relevance of assessment, data, and evidence to ITE and the aligned Teacher Performance Assessment (TPA)

Graduate teachers’ understanding and confidence of crucial assessment issues cannot be adequately addressed through the existing processes for evaluating ITE courses.

The motivation to focus on ITE (beginning teachers) is driven by the need to make sure that this group of teachers has informed and balanced attitudes and beliefs about assessment before entering the classroom.

Despite widespread calls for assessment capable teachers, research evidence indicates that teachers generally maintain low levels of assessment knowledge and skills, with beginning teachers particularly unprepared for assessment in schools (DeLuca & Klinger, 2010; MacLellan, 2004).

This research finding is unsurprising as assessment has historically been a neglected area of study in teacher education programmes, at least in Anglophone countries (La Marca, 2006; Shepard, Hammerness, Darling-Hammond, & Rust, 2005; Stiggins, 1999; Taras, 2007).

The often short and fragmented structure of ITE programs, diversity of lecturers and variability in their approaches to assessment and competing learning priorities limit the consistency and prominence of effective assessment education within ITE programs (DeLuca & Volante, 2016; Taras, 2007).

In some cases, lecturers' own levels of assessment capability might also be limited. This is probably true of programs where assessment and data literacy are taught only within a specialist curriculum area.

The Australian Institute for Teaching and School Leadership has adopted the Teaching Performance Assessment (TPA) as the key element of its approach to assuring ITE in Australia. We support the use of TPAs and recognise that an effective and common approach to TPAs, with core common standards and evidence types, will contribute to a truly effective assurance system for graduates of Australian ITE courses.

We are also of the view that some common content in the curriculum of ITE courses is necessary to achieve the assurance of the standards that are expected. There are two fundamental reasons for this: Firstly, to be truly effective TPAs will require a common moderation and judgment process against common standards. This will also require reference to common evidence within a common process. Secondly, and most significantly for this aspect of our submission, the TPAs can only, and are only designed for, a wholistic judgment of a student's preparedness to enter teaching practice. Specific dimensions of practice, such as assessment, can be judged through a TPA process but not reliably enough in all its core elements.

Some core content to build teacher understanding of assessment, data, and evidence

There is a need to mandate some assessment content for all ITE courses that will be a useful and moderate contribution to supporting the quality of teaching. It is generally agreed that there are advantages to Australia's approach of varied and independent higher education, including initial teacher education. On the other hand, there are also advantages that accrue from a level of commonality and standardisation in ITE content.

Many internationally effective educational jurisdictions seek uniformity in ITE curricula. Benefits arise from establishing common understandings of intended learning in key domains. These common understandings also help relieve the pressure on curriculum documents in describing, and sometimes prescribing a common intent. The challenge is to achieve a level of common understanding and expectations without unduly undermining the flexibility afforded to ITE providers to address priorities in their context.

In Australia recent policies have sought commonality in curriculum domains that are considered crucial to all other student learning. Literacy for example is one domain Ministers have regarded as necessary to be assured of having a more detailed level of content in initial teacher education.

A common foundational knowledge of key assessment, data and evidence-based issues is as significant as any other area of teacher preparation. It is not a precedent for ever greater intervention and prescription because no other area is as integral to and essential for effective practice across all content areas and pedagogical approaches.

There will be no argument that core assessment content should always be present in ITE courses. In fact, the argument will be that it is already there. The current assurance processes, including descriptors in the Australian Professional Standards for Teachers, and the processes for accreditation of programs cannot however provide any assurance of the specific nature or extent of the assessment content included in the programs.

There have been several relatively recent studies carried out in Australia that have provided some indication of the key content and characteristics that describe the knowledge, skills and understandings that might form the basis of core assessment content that should be included in ITE programs. One of these studies is the Learning Assessment Report (BOSTES, 2016) <https://educationstandards.nsw.edu.au/wps/wcm/connect/c204171e-a570-4947-8107-dc934ab2f70b/learning-assessment-report.pdf?MOD=AJPERES&CVID> and the other is a study carried out by the Centre for Educational Measurement and Assessment (CEMA) (2020) at the University of Sydney, which used as its base the assessment requirements imbedded in the Australian Professional Standards for Teachers (AITSL, 2014).

Conclusion

An increased focus on assessment and data literacy in ITE programs will facilitate curriculum implementation nationally and build the professional resilience and expertise of teachers. A common approach to assessment and building confident understanding of agreed concepts will relieve some of the descriptive burden placed on the formal curriculum documentation itself. This is a feature of jurisdictions with common ITE curricula where the school curriculum can then be less descriptive of requirements on the basis of confidence in teachers' common understanding of the intentions of the curriculum.

With the advent of important national initiatives such as Progressions and a shared Australian curriculum, it is more important than ever that there is confidence and capacity built into the teaching profession in assessing achievement, analysing student needs and sharing judgments.

There is more pressure on teachers to understand assessment data, and more opportunity for them to utilise such data (qualitative and quantitative) to analyse practice. It is easy to understand how crowded ITE curricula may have responded unevenly to contemporary pressures in this area. Contestation around the National Assessment Program – Literacy and Numeracy has generated an anti-measurement discourse and level of distrust among many teachers. For this reason, genuine and confident knowledge and understanding built from a considered and professional base is necessary for supporting the quality of teaching practice in Australia.

Recommendations

1. Core assessment literacy and data literacy content should be in the ITE curricula across all ITE providers.
2. Core assessment literacy and data literacy content in ITE curricula should be closely aligned with the requirements in the Australian Professional Standards for Teachers.

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