

InSights

An approach to the accreditation of initial teacher education programs based on evidence of the impact of learning teaching

A paper prepared for the Australian Institute for Teaching and School Leadership

Professor Diane Mayer University of Sydney May 2015



Citation

Mayer, D 2015, An approach to the accreditation of initial teacher education programs based on evidence of the impact of learning teaching, Australian Institute for Teaching and School Leadership, Melbourne.

The Australian Institute for Teaching and School Leadership (AITSL) was formed to provide national leadership for the Commonwealth, state and territory governments in promoting excellence in the profession of teaching and school leadership with funding provided by the Australian Government.

ISBN 978-1-925192-27-8

© 2015 Australian Institute for Teaching and School Leadership (AITSL).

AITSL owns the copyright in this publication. This publication or any part of it may be used freely only for non-profit education purposes provided the source is clearly acknowledged. The publication may not be sold or used for any other commercial purpose. Other than permitted above or by the Copyright ACT 1968 (Commonwealth), no part of this publication may be reproduced, stored, published, performed, communicated or adapted, regardless of the form or means (electronic or otherwise), without prior written permission of the copyright owner.

Address inquiries regarding copyright to: AITSL, PO Box 299, Collins Street West, VIC 8007, Australia.

This project was funded by the Australian Institute for Teaching and School Leadership Limited (AITSL) with funding provided by the Australian Government.

InSights

An approach to the accreditation of initial teacher education programs based on evidence of the impact of learning teaching

A paper prepared for the Australian Institute for Teaching and School Leadership

Professor Diane Mayer University of Sydney May 2015



Contents

Introduction	1
Guiding principles for an accreditation s of impact	•
Robust assessment of graduating teachers Professional Standards for Teachers	
a) Capstone authentic teacher assessn	nents6
b) Developing an Australian capstone (graduate teacher assessment13
2. Longitudinal satisfaction surveys from preservice teachers and then beginning employers	teachers, as well as
Conclusion	21
Appendix 1.	22
Appendix 2.	
Appendix 3.	60
References	84





Introduction

The Teacher Education Ministerial Advisory Group (TEMAG) concluded that while there are examples of excellent teacher education practice in Australia, significant improvement to the content and delivery of teacher education programs is needed (Teacher Education Ministerial Advisory Group, December 2014). The Australian Government's response to this report assures swift and decisive action to assure:

- Stronger quality assurance of teacher education courses
- Rigorous selection for entry to teacher education courses
- Improved and structured practical experience for teacher education students
- Robust assessment of graduates to ensure classroom readiness
- National research and workforce planning capabilities.

This stimulus paper argues that 'robust assessment of graduates' is a core component of 'stronger quality assurance of teacher education courses' and makes some suggestions for doing so.

Linda Darling Hammond and her colleagues have argued for some time that framing teachers' work in terms of what they should know and be able to do is a valid way of capturing the complexity of teachers' work (e.g. Darling-Hammond & Bransford, 2005). During the 1990s and early 2000s, a lot of work was done across Australia in developing professional standards for teaching but this was done by groups working somewhat independently of each other with the resulting standards often being used in differing and unconnected ways (e.g. Australian Association of Mathematics Teachers, 2006; Australian Science Teachers Association, 2002; Mayer, Mitchell, Macdonald, & Bell, 2005; Ministerial Council on Education Employment Training and Youth Affairs, 2003; Standards for Teachers of English Language and Literacy in Australia (STELLA), 2002). So, while statements of professional standards are usually intended to create a shared and public 'language of practice' that describe how the specialised knowledge of teaching is used in practice and also be a vehicle for assessing and judging professional activity (Yinger & Hendricks-Lee, 2000), the standards landscape in Australia until relatively recently has been somewhat fragmented and uncoordinated.

With the establishment of the Australian Institute for Teaching and School Leadership (AITSL) in 2010 and its brief to oversee the development of national professional standards for teachers and principals, national regulation of teacher education accreditation, teacher registration, and national professional development for teachers and school leaders, a set of professional standards for teachers was developed and endorsed nationally in 2011 (Australian Institute of Teaching and School Leadership, 2011b). These standards are grouped into three domains of teaching; Professional Knowledge, Professional Practice and Professional Engagement, and include descriptors of four professional career stages - Graduate, Proficient, Highly Accomplished and Lead, with the Graduate level of most relevance for teacher education in that they describe what graduates from initial teacher education programs should know and be able to do.

In addition, AITSL developed Program Standards for the Accreditation of Initial Teacher Education (Australian Institute of Teaching and School Leadership, 2011a) and included an espoused focus on outcomes with one of the six principles underpinning accreditation being, 'The accreditation process sets high standards for graduate outcomes, and focuses on ensuring these are met' (Australian Institute of Teaching and School Leadership, 2011a, p.1). Indeed, the Program Standards that initial teacher education programs must meet to be nationally accredited, includes Standard 1: Program outcomes -



- 1.1 At the time of initial accreditation, providers must show that graduates of their programs will meet the Graduate career stage of the Australian Professional Standards for Teachers and how this will be demonstrated.
- 1.2 At the time of re-accreditation, providers must demonstrate that graduates of their programs meet the Graduate career stage of the Australian Professional Standards for Teachers.

(Australian Institute of Teaching and School Leadership, 2011a, p.12)

However, even though there are now nationally endorsed professional standards for teachers and an espoused focus on the outcomes of initial teacher education as a key framing for judging the quality of the programs, initial teacher education programs are largely still accredited and re-accredited using input criteria like measures of entry into teacher education programs and judgments about program content. Evidence of graduate outcomes, that is, of the impact of the teacher education program on teacher learning and then on student learning, is rarely captured. Key questions to be asked to inform an outcomes-focussed orientation to the accreditation of initial teacher education programs include:

- What should beginning teachers know and be able to do?
- How can judgments be made about what beginning teachers know and can do?
- What do stakeholders say about the preparedness and effectiveness of graduates?

This paper focuses on an outcomes approach to judging the quality of initial teacher education that is informed by these questions. It argues for two ways in which teacher education providers can demonstrate 'evidence of impact' as part of a stronger system of professional accountability for teacher education and accreditation of initial teacher education in Australia:

- Robust assessment of graduating teachers against the Australian Professional Standards for Graduate Teachers
- 2. Longitudinal tracking of preservice teachers into beginning teaching involving satisfaction surveys from the point of view of the preservice teachers and then beginning teachers, as well as employers.

The paper examines each of these approaches, reviews exemplars from North America and Australia, and suggests next steps to developing and trialling an Australian approach to common assessments of graduating teachers against standards and progress measures of graduates' early career effectiveness. These are but two approaches that could be used in the accreditation of initial teacher education programs based on evidence of the impact. Others like classroom observations, practicum assessments and HEI-based assessments of content and other professional knowledge would complement the two approaches in this paper to form a comprehensive 'evidence of impact' approach, but they are not examined in this paper.

First, I provide some suggested guiding principles for an accreditation system driven by such 'evidence of impact'. An agreed set of guiding principles is needed to frame a comprehensive and cohesive approach by which teacher education providers can demonstrate the impact of their programs on teacher learning that enhances student learning.



Guiding principles for an accreditation system driven by evidence of impact

- Purposes of accreditation:
 - · Provide quality assurance/ accountability
 - · Support continuous program improvement and ongoing innovation
- Accreditation processes are outcomes-focussed and evidence-informed
- The focus is on what it is that beginning teachers should know and be able to do to be (i.e. the professional standards ... need to ensure these are research-informed, consistently understood and accurately interpreted, and reflect the changing demands of the teaching workforce), professional standards for teaching must be based on a close examination of the work of teachers, their professional judgments, and the practice of teaching in relation to student learning (Darling-Hammond, 2013).
- The impact of teachers on P-12 student learning and development provides the ultimate framing to understand the effectiveness of initial teacher education programs but this link must be understood in such a way that accounts for the diversity of learning and teaching contexts in which preservice teachers are placed and beginning teachers work
- Recognition that initial teacher education providers are diverse and that there are multiple ways to prepare teachers and demonstrate high quality outcomes
- An evidence-informed process involves:
 - · data collection and monitoring
 - participation of and feedback from appropriate stakeholders
 - analysis of the results of quantitative and qualitative measures
 - using evidence to increase the effectiveness of preparation programs
- The onus is on initial teacher education providers to select and document relevant evidence that their graduates meet the Graduate career stage of the Australian Professional Standards for Teachers. This involves analysing and interpreting all relevant evidence. Prescription about exactly what evidence is to be utilized is to be avoided but formative feedback on how providers are progressing with this work is helpful and recommended
- Continuous improvement is demonstrated by evidence of:
 - regular and systematic data-driven analysis and appropriate changes to the provider's programs as needed
 - evidence that changes are grounded by research and evidence from the field as well as data analyses from the provider's own system
 - the provider's investigations of the effects of changes, determining whether they are improvements.
- The role of (re)accreditation is to assure teacher candidates, parents, employers, policymakers, and the public that the claims and promises a provider makes about its quality are true
- Applies to both traditional and non-traditional (i.e. alternative) teacher education pathways and providers



1. Robust assessment of graduating teachers against the Australian Professional Standards for Teachers

As noted in the introduction, while professional standards for teaching are now embedded into many regulatory systems, entry into the profession is often regulated by authorities using program design or input models to make decisions about teacher registration and readiness to teach. Authentic assessments of the actual professional practice of graduating teachers in the workplace, incorporating multiple measures, and focussing on judging the impact of teachers on student learning, are not always used as means to assess graduate readiness to teach. As Zeichner suggests,

[o]nce the activities of teachers are identified, the curriculum of teacher education programs should focus on preparing teacher candidates to know and do these things. Teachers should be evaluated on how well they know and do them rather than on the completion of certain required courses. (Zeichner, 2012, p.377)

This means providing opportunities for preservice teachers, close to point of graduation, to provide evidence of their effectiveness as beginning teachers. But currently the means used to judge graduates as meeting the standards are not always reliable, including for example, tick a box approaches to a list of competencies, proxies like passing university assignments, and the subjective comments of supervising teachers. Indeed, some of the ways in which judgments are made about graduate teacher capability and the value of teacher education are 'not particularly helpful and can be harmful' (Darling-Hammond, 2013, p.148). Assessments such as the practicum report do 'not address important differences in context and content, and they ignore ... the influence of teaching on learning' (Darling-Hammond & Snyder, 2000, p525).

Several characteristics (including teaching ability, subject matter expertise, and content pedagogy) are important when measuring teaching impact on student learning (e.g. Darling-Hammond & Youngs, 2002). Because no one single factor can be identified as the sole contributor to the impact a teacher has on student learning, evaluation of teachers on multiple measures is essential. In their some-what seminal paper, Darling-Hammond and Snyder proposed five aspects of authentic assessment to judge teaching:

- 1. The assessments sample the actual knowledge, skills and dispositions desired of teachers as they are used in teaching and learning contexts, rather than relying on more remote proxies.
- 2. The assessments require the integration of multiple kinds of knowledge and skill as they are used in practice.
- 3. Multiple sources of evidence are collected over time and in diverse contexts.
- 4. Assessment evidence is evaluated by individuals with relevant expertise against criteria that matter for performance in the field.
- 5. The assessment practice includes multiple opportunities for learning and practicing the desired outcomes and for feedback and reflection, ... in order to develop as well as measure teaching judgement and skill.

(Darling-Hammond & Snyder, 2000, p. 526-528)



Increasingly, any authentic assessment of readiness to teach, includes a focus on candidates' application of subject-specific pedagogical knowledge that research finds to be associated with successful teaching (e.g. Darling-Hammond, 2006c; Darling-Hammond & Bransford, 2005). Moreover, the importance of assessing the dimensions of teachers' work linked to successfully working with diverse student groups is highlighted. For example, with her colleagues at Boston College, Marilyn Cochran-Smith has challenged much of the discourse about the pervading 'cultures of evidence', highlighting the absence of cultural understandings and nuances in many approaches to gather and use evidence. They identify four key aspects designed to capture a more nuanced approach to evidence involving: (1) development of a portfolio of studies about processes and outcomes; (2) recognition that teacher education always poses values questions as well as empirical questions; (3) an exploratory, open-ended approach to evidence construction; and, (4) multiple structures that institutionalize evidence collection and use locally and beyond (Cochran-Smith & the Boston College Evidence Team, 2009).

In recent years, Australian teacher educators have begun exploring, implementing and investigating various approaches to authentic assessment of graduates for beginning teaching:

Authentic assessment requires preservice teachers to deploy combinations of knowledge, skills, and dispositions in their professional life. Authentic assessment makes the core aspects of teaching visible and measurable against a set of agreed standards. Authentic tasks engage preservice teachers in processes that are necessary to act professionally in planning curriculum units for a specific group of students, designing episodes of teaching, teaching, and evaluating the effectiveness of their teaching. Authentic assessment, therefore, requires preservice teachers to be explicit about their thinking and decision-making in designing teaching episodes, to reference the sources and rationale for their ideas, and to reflect upon the actual teaching experience and plans for revising and redesigning the teaching episodes. (The State of Queensland (Queensland College of Teachers), 2012, p.25).

The above mentioned report proposes features of a high quality assessment system to ensure quality graduates from preservice teacher education programs (The State of Queensland (Queensland College of Teachers), 2012):

- 1. The system is based on principles of authentic assessment.
- It is a system of assessment that is moderated within programs, informed by sharing quality assessment practices across the sector, and meets the requirements of reliability and validity.
- 3. It is a system that enhances the capacity of preservice teachers for self-assessment and reflection on their levels of developing knowledge and practice.
- 4. It captures the complexity of teaching.
- 5. It captures the multifaceted nature of teaching in a comprehensive manner.
- 6. It reflects the overall goals for education in Australia as currently agreed and elaborated in the Melbourne Declaration.
- 7. It aligns with current national and state professional standards.
- 8. It has support from key stakeholders.



a) Capstone authentic teacher assessments

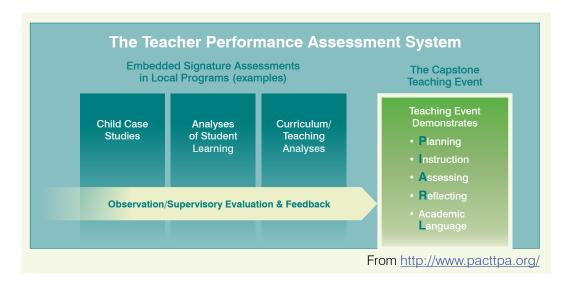
Portfolio assessments are widely used in teacher preparation programs, most often as a form of 'capstone' or culminating assessment (St. Maurice & Shaw, 2004), and can be structured and unstructured. Structured portfolios are those that require preservice teachers to submit specific artefacts of teaching in response to standardized prompts. These artefacts and responses are then scored in a standardized way by trained scorers using rubrics. With unstructured portfolios, what and how artefacts are selected varies. For example, in a 'showcase portfolio,' preservice teachers are free to choose artefacts that represent their 'best work'. In portfolios that are meant to be used as a tool for professional learning, preservice teachers' selection may be more scaffolded to include specific artefacts, such as a statement of teaching philosophy, a videotape of their teaching, lesson plans or units, or original curriculum materials they have developed, with accompanying analytical reflections. While a great deal of time and effort goes into the compilation and assessment of these portfolios, they serve primarily a formative purpose (Mayer, Pecheone, & Merino, 2012). However, if a portfolio is to be used to support a graduation or registration decision, then psychometric issues need attention:

[A teacher's portfolio] can be used as a summative evaluation tool, but to do so requires a much more structured process and a complex set of assessment strategies. The assessment component requires clear criteria, an established set of reliable and valid scoring rubrics, and extensive training for the evaluators in order to ensure fairness and reliability. These considerations can all be met, but they are often beyond the capacity or the will of a local university. (Wilkerson & Lang, 2003, pp.94-95).

Performance Assessment for California Teachers (PACT)

One example of a structured portfolio used for high stakes credentialing decisions is the Performance Assessment for California Teachers (PACT) - see http://www.pacttpa.org/. PACT represents a multiple measures assessment used for beginning teacher registration in California and is designed to collect evidence of graduating teachers' content and pedagogical knowledge as well as their higher-order thinking skills (Pecheone & Chung, 2006). It comprises a Teaching Event and Embedded Signature Assessments (ESAs). The Teaching Event is a common capstone assessment across all teacher education programs and measures the teaching standards for California student teachers, while the customized ESAs measure program specific outcomes (for example, related to a program's mission and purpose) as well as teaching standards not able to be adequately measured by the Teaching Event. Together, as shown in the diagram below, they form a comprehensive teacher performance system to inform the accreditation of teacher education programs in California and the credentialing (registration) of graduates for teaching.





A Consortium of 32 pre-service teacher preparation programs throughout the state of California developed the PACT Teaching Event and contribute annually with the ongoing improvements of the assessment. Institutions collaborated to prepare the Technical Report (Pecheone & Chung Wei, 2007) outlining the validity and reliability studies supporting the claim for PACT to be a recognised Teacher Performance Assessment mechanism for credentialing and accreditation by the California Commission of Teacher Credentialing, the regulatory authority in California. In addition, institutions use the data about their own candidates to inform continuous program improvement.

The design of the Teaching Event was informed by the portfolio assessments of INTASC (the Interstate New Teacher Assessment and Support Consortium) and the National Board for Professional Teaching Standards, incorporating:

[A]rtefacts created while teaching, accompanied by commentaries that provide context and rationales needed to understand and interpret the artefacts. The common assessment was also to place student learning at the center, with special attention to subject-specific pedagogy and the teaching of English Learners. The assessment design chosen was that of a portfolio assessment, with Context, Planning, Instruction, Assessment, and Reflection tasks documenting a brief segment of learning. An integrated task design was chosen to prompt candidates to make connections between these different teaching tasks, and to provide evidence to understand a candidate's teaching of a brief learning segment in some depth through the distinct lenses provided by the different tasks. (From 'A Brief Overview of PACT', available http://www.pacttpa.org/)

Thus, the PACT Teaching Event assesses 'the planning, instruction, assessment, and reflection skills of student teachers against professional standards of practice' (Darling-Hammond, 2006a, p.121) with tasks 'designed to measure and promote candidates' abilities to integrate their knowledge of content, students and instructional context in making instructional decisions and to stimulate teacher reflection on practice' (Pecheone & Chung, 2006, p.24). Features include:

- A focus on student learning on strategies used to support students' learning and opportunity to explain the thinking underlying teaching decisions
- A focus on a learning segment (3 to 5 hours of instruction, i.e., an instructional unit or part of a unit). A series of lessons that build upon one another towards a central goal or focus, not on individual lessons



Submission of teaching artefacts and analyses, including lesson plans, copies of teaching resources and assessment materials, one or two video clips of teaching, a summary of whole class learning, and an analysis of student work samples. In addition, commentaries describing the teaching context, analysing teaching practices, and reflecting on what was learned about teaching practice and students' learning, are completed.

The Teaching Event is designed to be subject specific with Handbooks for each of 19 secondary teaching areas and six elementary (primary) areas – see below (full handbooks are available http://www.pacttpa.org/). Also, Multiple Subject (elementary) candidates complete three additional Teaching Event tasks so that they are assessed in each of the core content areas (literacy, mathematics, history-social science, and science) taught in elementary schools.

Single Subject (Secondary) Teaching Event Handbooks:

- 1. Agriculture (General)
- 2. Agriculture (Science Emphasis)
- 3. Agriculture Technology and Design
- 4. Art
- 5. Business
- 6. English-Language Arts
- 7. Health Science
- 8. Home Economics
- 9. History & Social Science
- 10. Industrial Technology Education
- 11. Mathematics
- 12. Music
- 13. Physical Education
- 14. Science
- 15. World Languages
- 16. Bilingual English-Language Arts
- 17. Bilingual History-Social Science
- 18. Bilingual Mathematics
- 19. Bilingual Science



Multiple Subject (Elementary) Teaching Event Handbooks:

- Elementary Literacy
- 2. Elementary Mathematics
- 3. Bilingual Elementary Literacy
- 4. Bilingual Elementary Mathematics
- 5. Concurrent MS/ Educational Specialist Literacy
- 6. Concurrent MS/ Educational Specialist Mathematics

Teaching Events include 5 required tasks in the areas of:

- 1. Context for Learning
- 2. Planning Instruction & Assessment
- 3. Instructing Students & Supporting Learning
- 4. Assessing Student Learning
- 5. Reflecting on Teaching & Learning

Appendix A provides the Elementary Mathematics Teaching Event Handbook as an example.

The tasks are completed and submitted as structured portfolios which are scored on multiple rubrics linked to the planning, instruction, assessment, and reflection dimensions of teachers' work against professional standards of practice, and including academic language:

- 1. Planning
 - a. Establishing a balanced instructional focus
 - b. Making content accessible
 - c. Designing assessments
- 2. Instruction
 - a. Engaging students in learning
 - b. Monitoring student leaning during instruction
- 3. Assessment
 - a. Analysing student work from an assessment
 - b. Using assessment to inform teaching
 - c. Using feedback to promote student learning
- 4. Reflection
 - a. Monitoring student progress
 - b. Reflecting on learning
- 5. Academic language
 - a. Understanding language demands and resources
 - b. Developing students' academic language repertoire

Appendix B provides the Elementary Mathematics Rubrics as an example.



A score of 2 is considered a passing score on each rubric. Scores of 3 and 4 represent increasingly strong performance. A score of 1 identifies an area in which the teaching event did not meet expectations. To meet state required expectations on the teaching event, a candidate must pass all five categories (Planning, Instruction, Assessment, Reflection, and Academic Language) and have no more than 2 failing scores of "1" across all rubrics. To pass a category, a candidate must have a majority (at least half) passing scores within the category:

- In Planning, two out of three scores must be a "2" or higher;
- In Instruction, Assessment, Reflection, and Academic Language, one out of two scores must be a "2" or higher.

Individual candidates' PACT scores, like other licensing test scores and academic records, are confidential and are not to be released without the prior consent of individual teachers to employers or induction programs. Institutions are required to submit to the California Commission on Teacher Credentialing summary information (including both demographic data and score results for each candidate in the program and a program summary of scores/ composite scores) about the approved Teaching Performance Assessments (like PACT) that are used to determine candidate competence and program effectiveness, including how assessors are trained, how often the scoring is calibrated, and the information particular to the location for how the TPA is administered. This is combined with other program effectiveness information such as the results of surveys of completers and their employers to determine whether the program adequately prepared educators for their positions in school districts. A key question that is then asked by accreditation reviewers is 'What is the evidence that a program gathers from each candidate to demonstrate competency or completion of the program and by what means is that evidence judged?'

Brent Duckor and his colleagues (Duckor, Castellano, Téllez, Wihardini, & Wilson, 2014) analysed score data from a large sample of teacher candidate responses across two public California university systems and found a sufficient degree of internal structure validity evidence to support the continued use of the PACT instrument as intended to measure California teacher candidates' "skills and abilities" in accordance with the state's professional standards in teaching. Their quantitative study of the Elementary Literacy Teaching Event reveals that item responses and teacher candidate proficiencies can be modelled employing well-established item response measurement models, which yield useful information for more valid score interpretation (p.413). However, (Ajayi, 2014) examined the appropriateness of PACT as an instrument of assessing English-language arts teacher candidates' effectiveness in a rural border community and questioned its effectiveness given the ways in which schools constrain candidates' abilities to develop culturally relevant practices. Moreover, there are increasing claims for research to judge the content and psychometric quality of instruments like PACT (Gitomer & Zisk, 2015; Tretter, Brown, Bush, Saderholm, & Holmes, 2013).

PACT and the Stanford Center for Assessment, Learning and Equity (SCALE) partnered with the American Association of Colleges for Teacher Education (AACTE) to create and deliver a support and assessment program for teacher candidates to be used across the US - known as edTPA, see https://scale.stanford.edu/teaching/edtpa, http://edtpa. aacte.org/ and http://www.edtpa.com/. More than 1,000 teachers and teacher educators from 29 states and 400 institutions participated in an extensive, multi-year development process including pilots and field tests with thousands of candidates. edTPA aims to provide a common set of expectations for licensure and nationally available performance standards (cut-scores) that can be used across programs and states to support licensing of new teachers and/or program accreditation. It is available nationally in over 27 individual content areas and was nationally validated in 2013 to establish its reliability and validity (Pecheone, Shear, Whittaker, & Darling-Hammond, 2013). However, it has been argued that moving this to scale and including the administration and support of Pearson Education Inc. (see http://www.pearsonassessments.com/teacherlicensure/edtpa.html), has compromised the use of such assessments to inform program improvement (e.g. Cochran-Smith, Piazza, & Power, 2013).



Deakin Authentic Teacher Assessment (ATA)

In 2010, Deakin University in Australia drew on both the structure and the content of PACT to inform the design, implementation and evaluation of what is now known as the Authentic Teacher Assessment (ATA) where graduates of the teacher education programs demonstrated their effectiveness in relation to the work of teachers in the workplace as framed by relevant professional standards for teaching. Like PACT, the ATA was designed to include 'multiple measures that allow a comprehensive view of what candidates learn and what a program contributes to their performance' (Darling-Hammond, 2006a, p.135). Five activities were designed to reflect components of teachers' work:

- Context for Learning: Preservice teachers write about the learning context within which they are working, describing the school and the classes they teach and factors impacting on the learning environment.
- 2. Planning Teaching and Assessment: Preservice teachers describe, explain, and justify their teaching and assessment plans for a sequence of 5-8 lessons.
- 3. Teaching Students and Supporting Learning: Preservice teachers videotape themselves teaching, submit a ten-minute segment of the video, and contextualize and reflect on the video segment in an accompanying written statement.
- Assessing Student Learning: Preservice teachers report on their assessment tasks providing samples of students' work and describe how the assessment outcomes are informing ongoing planning and teaching.
- 5. Reflecting on Teaching and Learning: Preservice teachers provide an analysis of their teaching practice and students' learning and how they have used this to improve their teaching practice.

(Deakin University, 2010-2012)

The ATA was assessed using rubrics framed by these aspects of teachers' work and the relevant professional standards.

In 2010, an evaluation investigated the initial implementation of the ATA with 30 pre-service teachers enrolled in a Master of Teaching, the classroom teachers who supervised them during the practicum, and the academics involved in the implementation of the ATA. The evaluation was guided by four key research questions:

- 1. Is the Deakin ATA a valid measure of professional practice for beginning to teach?
- 2. What are the key considerations in the development and implementation of the Deakin ATA as a capstone assessment in teacher education courses?
- 3. How does the Deakin ATA inform course evaluation and course improvement?
- 4. How does the Deakin ATA impact pre-service teachers' professional learning?

Appendix C provides the 2010 ATA Handbook which was developed and used in the trial that was evaluated.

The findings of the evaluation project are analysed and reported in the evaluation report



(Dixon, Mayer, Gallant, & Allard, 2011) and also in a chapter currently in press (Mayer, Allard, Moss, & Dixon, in press 2015), as well as referred to in (Allard, Mayer, & Moss, 2014). Some of the findings are repeated here for this paper.

Overall, the evaluation found that the preservice teachers, the classroom teachers who supervised them and the university academics all considered the ATA to be an authentic assessment of beginning teacher readiness. Preservice teachers reported it as being a more effective measure of their readiness for teaching work than an essay or other written assessments, and that at the same time it provided them with an opportunity to learn about and reflect on themselves as teachers. In addition, they reported that completing the ATA helped them better understand the range of skills and understandings encompassed in the professional standards and what those standards meant in practice. Despite some challenges associated with being a 'visitor' in someone else's classroom – as preservice teachers invariably are during the practicum – all the preservice teachers reported that they were able to undertake activities appropriate for the subject and year level they were teaching when completing the ATA (noting that the ATA Handbook included generic activities intended to be relevant to all teaching areas, rather than subject-specific tasks as in PACT).

Both the preservice teachers and the practicum supervisors highlighted the importance of having an extended, intensive period of practicum in order to complete the ATA, and that a four-week block of time in schools was the minimum length of time needed. Even with a four-week block, one preservice teacher experienced timetable constraints which impacted their ability to complete the tasks for the ATA. Practicum supervisors particularly stressed the need for sufficient time to build relationships with students to support teaching and learning, and to fully experience the work of teachers. This was seen as essential to effectively completing the ATA.

Practicum supervisors varied in their knowledge of the aims and requirements of the ATA. Many reported not receiving the information that was supplied to all schools and even when they received it, time pressures meant they were not always able to read all the information. It seems the main way in which supervisors were informed about the ATA was through conversations with their preservice teachers but this didn't regularly happen.

One preservice teacher was not able to do her own planning but instead had to use the lessons already planned by the practicum supervisor. Another was unable to complete the final assessment planned for the end of the unit being taught because the practicum supervisor made different plans for that day at the last minute. These were critical issues impacting the successful implementation of the ATA and highlighted the importance of both the practicum supervisors and the preservice teachers having a clear understanding of the requirements of the ATA from the beginning of practicum period. Results of the Assessment of Student Learning activity showed that preservice teachers were generally able to successfully design and implement assessments of student work, but were not able to effectively analyse the assessment data nor use it to inform their future teaching. The ATA assessor reported that the preservice teachers did less well on the assessment activity than any other component of the ATA. As a result of this finding, more focus was given in the program to helping preservice teachers use assessment data to plan curriculum.

Like Linda Darling Hammond and her colleagues (Darling-Hammond, Newton, & Chung Wei, 2012), the ATA evaluation found that the preservice teachers' professional learning was positively impacted as a result of completing the ATA, with preservice teachers reporting a deeper understanding of teachers' work and the relevant professional standards, and to learning quite a lot about assessment, particularly the use of assessment as a diagnostic tool. Moreover, all respondents agreed that completing the ATA helped the preservice teachers to move their focus from classroom management and organizational matters to important professional decisions about student as learners.

These evaluation findings highlight issues that would need some attention in the



development of any Australian graduate teacher assessment approach. As noted above, full evaluation and research findings in relation to the ATA are available in other publications (Allard et al., 2014; Dixon et al., 2011; Gallant & Mayer, 2012; Mayer et al., in press 2015).

b) Developing an Australian capstone graduate teacher assessment

PACT, edTPA and the ATA are built on the premise that 'readiness to teach' is demonstrated by doing the actual work of teachers over time in the workplace, and is backed-up with evidence. Darling-Hammond argues that '[t]he greatest benefits will be secured where multiple measures of learning are combined with evidence of practice' (Darling-Hammond, 2013, p.149). An effective teacher evaluation system should be 'based on professional teaching standards' and 'include multifaceted evidence of teacher practice, student learning, and professional contributions that are considered in an integrated way' (Darling-Hammond, 2013, p.153).

Given the work in the US on PACT and the EdTPA as common standardised assessment of graduates against professional standards, and also drawing on the work in trialling something similar in one Australian context at Deakin University, we need to know more about what will work in a scaled-up version in the Australian context. Can we have a common Australian graduate teacher capstone assessment to be used by all ITE providers as evidence of graduates achieving the Australian Professional Standards for Graduate Teachers?

Given that relevant assessment validity and reliability studies have been conducted on PACT examining the content validity of the Teaching Event, bias and fairness of the assessment based on scores for different groups, construct validity based on factor analyses, concurrent validity focusing on decision consistency, and score reliability and consistency (Pecheone & Chung Wei, 2007), it would be appropriate to trial PACT with minimal modifications for the Australian context, accompanied by a close and rigorous evaluation to determine the feasibility of such a common measure across Australia. It is expected that an Australian version would ultimately be needed and should indeed be the goal (along with relevant validity and reliability studies) but a starting point on that journey could be a trial implementation of PACT (or the EdTPA) much as it is used at the moment in the US, in a number of different settings across Australia. Building a rigorous research and evaluation program around the trial will be essential to finalising an Australian capstone graduate teacher assessment which provides evidence of graduates' capabilities in relation to the Australian Professional Standards for Graduate Teachers.

To do this, a central design team and/or consortium could be formed to work with and coordinate the work of development teams/ institutions.

In addition to required relevant validity and reliability studies noted above, the development of an Australian capstone graduate teacher assessment would need to attend to and consider the following issues:

- 1. Given our smaller population and embryonic work in the space, would an Australian graduate teacher assessment be generic with a handbook and rubrics accommodating all subjects or be subject-specific as in the PACT approach?
- 2. Do the current Australian Professional Standards for Graduate Teachers provide adequate descriptions of what graduating teachers should know and be able to do, to inform required tasks and activities for the assessment and appropriate rubrics for judgements to be made?
- 3. Who should be the assessor/ scorer? How will they be trained?



- 4. What should be the role of schools? Of teachers? Of principals?
- 5. What should be the role of the HEI subject curriculum and pedagogy experts?
- 6. Discussions about the cost of implementing an Australian graduate teacher assessment would be important and then decisions made about who pays. For example, in 2007 during the PACT development, the University of California system calculated a per student cost of roughly USD450 per assessment to administer the PACT.
- 7. How can we ensure the results/ grades can be accessed and used to inform program improvement? What sort of annual reporting would be relevant and in what form should program improvement decisions and outcomes be reported to the relevant regulatory authority?
- 8. Assessments like PACT and the ATA do not and cannot capture all dimensions of teachers' work. Essentially, they only capture teachers' individual activity in the classroom as they work to enhance the learning of their students. But all teachers work as part of a larger system and workforce. As Connell (2009) reminds us, 'whether an individual teacher appears to be performing well depends a great deal on what other people are doing. ... It is often the group of teachers, and the institution they work in, that are effective or not effective' (p.222). Thus, the challenge is to capture the collaborative and collegial dimensions of teachers' work in any system of teacher evaluation (Darling-Hammond, 2013).
- 9. Which professional standards and which program-specific outcomes are not measured by a PACT-like assessment? What other measures should be developed and used to complement an Australian graduate teacher assessment informed by PACT?
- 10. How should a capstone Australian graduate teacher assessment inform teacher registration decisions? At the graduate level? At the proficient level?
- 11. How does success or otherwise as a graduating teacher, as measured by an Australian graduate teacher assessment, link to early career retention and success? What is its predictive validity? This would need longitudinal studies following graduates into their early years of teaching.
- 12. What is the place and purpose of a capstone graduate teacher assessment in the teacher education program? What is the relationship to units of study? How can/should preservice teachers be prepared for and supported in completing the assessment? By whom?

It is important that we develop and rigorously trial authentic capstone assessments that are 'based on professional teaching standards' and 'include multifaceted evidence of teacher practice, student learning, and professional contributions that are considered in an integrated way' (Darling-Hammond, 2013, p.153). As noted,

A well conceptualized teacher assessment system that incorporates multiple sources of data, including an assessment of teaching performance, has the potential to provide the evidence needed to demonstrate the significant contribution of teacher education on teaching performance and ultimately on student learning. (Pecheone and Chung, 2006)



2. Longitudinal satisfaction surveys from the point of view of the preservice teachers and then beginning teachers, as well as employers

Nearly thirty years ago, Zeichner (1987) noted the need for research that would establish the particular contribution of initial teacher education to teacher quality, as distinct from other influences, as well as for research that could identify whether particular approaches promote particular capacities in teachers. More recent reviews have regularly concluded that research in the field of teacher education is under-developed, under-theorised, fragmentary and parochial, with little longitudinal, cumulative or meta-analytic work providing evidence of impact to inform policy and practice. (British Educational Research Association (BERA), 2014; Cochran-Smith & Zeichner, 2005; Menter, Hulme, Elliot, & Lewin, 2010; Murray, Nuttall, & Mitchell, 2008; Sleeter, 2014). There are some US studies that have moved further towards these ends, claiming evidence to show that teacher education does make a difference:

... teachers who have had more preparation for teaching are more confident and successful with students than those who have had little or none. Recent evidence also indicates that reforms of teacher education creating more tightly integrated programs with extended clinical preparation interwoven with coursework on learning and teaching produce teachers who are both more effective and more likely to enter and stay in teaching. (Darling-Hammond, 2000, p.166)

Although findings like these (Darling-Hammond, 2006b, 2006c) have influenced the design and structure of programs around the world, the results have not provided evidence of impact to respond to the criticisms of initial teacher education (Boyd et al., 2006; Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2009; British Educational Research Association (BERA), 2014). In this context, attention turns to the quality of the entrants into teacher education and control of the content of the teacher education curriculum as proxies for ensuring quality teachers for the profession.

After a 4-year review of initial teacher education research in the US by the American Educational Research Association's Panel on Research and Teacher Education, Ken Zeichner concluded:

The main issue in our view is to develop a research program in teacher education that can address the variety of questions that investigators seek about teacher education and its connections to the various kinds of outcomes important to society.

(Zeichner, 2005, p.738)

The panel pointed out that there was little evidence of a shared research program linking teacher education with professional learning and impact on student learning outcomes. Without a substantive research base to support decisions around the best curriculum, pedagogy, theory and practice for teacher education, it is difficult for the field to defend itself against criticism. As Grossman (2008) has noted, a significant problem for teacher education relates to the fact that 'as researchers and practitioners in the field of teacher education, we seem ill prepared to respond to critics who question the value of professional education for teachers with evidence of our effectiveness' (p.13). Grossman goes on to



claim that 'the ability of a profession to sustain its jurisdiction lies partly in the power and prestige of its academic knowledge' (pp. 53-4), highlighting the fact that, in the US as in the rest of the world, research in teacher education currently lacks both. As she argues:

To respond effectively to critics, university-based teacher educators must be able to prove credible evidence of the effectiveness of their practice in preparing teachers. (Grossman, 2008, p.14)

Some researchers have explored questions of effectiveness by following teacher education graduates into the classroom to examine what they are doing and what the students are learning. The Teacher Pathways Project in New York City in the US, for example, (Centre for Education Policy and Analysis, 2012) is investigating different pathways into teaching, the characteristics of those programs and the impact of those characteristics on a range of things, including student achievement in reading and mathematics (Boyd et al., 2006; Boyd et al., 2009). Work in the Australian context (Louden, Heldsinger, House, Humphry, & Darryl Fitzgerald, 2010) has identified that it is important to recruit well-qualified entrants to the teaching profession. In the Netherlands, Brouwer and Korthagen (2005) conducted a 4.5 year longitudinal study using quantitative survey data as well as in-depth qualitative data designed to evaluate effects of a program intended to improve the integration of theoretical and practical learning. In the UK, the six-year longitudinal Becoming a Teacher (BaT) study (Hobson et al., 2009), set out to explore beginner teachers' experiences of initial teacher training (ITT), induction and early professional development in England, including: i) the reasons that some did not complete their ITT, others completed but did not take up a teaching post, and others took up a teaching post but subsequently left the profession; and ii) the extent to which beginning teachers' experiences of ITT, induction and early career progression, and their retention or attrition, were subject to variation relating to the ITT route that they followed.

However, Sleeter's analysis of almost 200 articles published in 2012 in leading international teacher education journals 'did not see evidence of an emerging, shared research program designed to inform policy' (Sleeter, 2014, p.151). As she concludes:

The problem [...] is that the weight of the research, being fragmented, often narrowly focussed, and usually not directly connected to a shared research agenda on teacher education, does not position teacher educators strongly to craft an evidence-based narrative about teacher education ... (Sleeter, 2014, p.152)

She suggests that teacher education organisations should collaborate and develop a research agenda that links teacher education with its impact on teachers and on students, focus more on preparation for and rewarding of research that contributes to building a knowledge base, and emphasise collaboration amongst researchers. Similarly, the Report of the *BERA-RSA Inquiry into the Role of Research in Teacher Education* highlights the 'need for more research that looks systematically at the effectiveness of different types of initial teacher education' (British Educational Research Association (BERA), 2014, p.37).

In this context, the 'Studying the Effectiveness of Teacher Education' (SETE) project in Australia was designed to investigate the effectiveness of initial teacher education for early career teachers employed in diverse settings – see http://www.setearc.com.au/ and (Rowan, Mayer, Kline, Kostogriz, & Walker-Gibbs, 2015). It is a four-year longitudinal study funded by the Australian Research Council in partnership with two state departments of education and two associated teacher regulatory authorities. It followed 2010 and 2011 teacher education graduates in Queensland and Victoria to investigate their perceptions of the effectiveness of their teacher education programs for their current teaching positions, and their career pathways. In addition, it investigated their principals' perceptions of the graduate teachers'



effectiveness. The specific research questions were:

- 1. How well equipped are graduates to meet the requirements of the diverse settings in which they are employed?
- 2. What characteristics of teacher education programs are most effective in preparing teachers to work in a variety of school settings?
- 3. How does the teacher education program attended impact on graduate employment destination, pathways and retention within the profession?

The project employed a mixed method approach to collect, record and analyse data sets over time. A recursive strategy, combining on–line survey research, database analysis/contextual mapping and case studies was used with first round case study data informing development of the first round survey instruments. Initial survey findings then informed second year case study foci. This pattern continued over the four-year data collection period. Each of the methods thus produced stand-alone and mutually informing findings. The study was conducted concurrently for 18 months with the Longitudinal Teacher Education and Workforce Study (LTEWS) (Mayer et al., 2013).

The SETE surveys as well as the interviews with early career teachers and their principals focused on nine key teaching areas and asked them to reflect on graduate preparedness and effectiveness across these areas:

- Teaching culturally, linguistically and socio-economically diverse learners
- Design and implementation of the curriculum
- Pedagogy
- Assessment and the provision of feedback and reporting on student learning
- Classroom management
- Collegiality
- Professional engagement with parents/carers and the community
- Professional ethics
- Engagement with ongoing professional learning

Overall, graduate teachers felt prepared across all nine areas, but more prepared in the areas of:

- Pedagogy
- Professional ethics
- Engagement with ongoing professional learning

And less prepared in the areas of:

- Teaching culturally, linguistically and socio-economically diverse learners
- Assessment and the provision of feedback and reporting on student learning
- Classroom management
- Professional engagement with parents/carers and the community



Overall graduate teachers felt effective across all nine areas, but more effective in the areas of:

- Professional ethics
- Engagement with ongoing professional learning

And less effective in the areas of:

- Teaching culturally, linguistically and socio-economically diverse learners
- Design and implementation of the curriculum
- Assessment and the provision of feedback and reporting on student learning
- Pedagogy

Principals and school leaders rated the graduate teachers as more effective than they rated themselves. The graduate teachers considered that they were more effective in all key areas of teaching than they had been prepared in these areas. In particular, there were significant increases over time in relation to effectiveness, with the most significant differences between preparedness and effectiveness in classroom management and professional engagement with parents/carers and the community.

Thus, SETE examined notions of *preparedness* and *effectiveness*; that is, preparation for beginning teaching and effectiveness as an early career teacher. As recurring discourses in the literature and practice of teacher education the universally understood and unproblematic nature of these terms are rarely questioned. The rhetoric suggests that a teacher is either i) effective and therefore well prepared, or ii) not effective and therefore not prepared. In the latter situation, the task then becomes finding out exactly what it is they are not prepared in or for (usually by asking their supervisors, asking the principals of school where they are employed, or by examining their students' test scores), and making recommendations that these areas be included in the teacher education program as another unit of study in the program or as another topic to be addressed in program documentation submitted for accreditation purposes. Issues of context are rarely considered. Moreover, a linear connotation is often implicit – one is prepared first and then one can be effective. However, the SETE study highlights messy, non-linear and sometimes unexpected storylines of learning teaching that problematise these generally accepted ways of thinking about 'being prepared' and 'being effective'.

SETE set out to backward map teachers' perceptions of effectiveness in their school context to their preparation for teaching. Our focus has been on how the graduate teachers perceived their teacher preparation as effective in relation to preparing them for the context in which they are working (Berry, Daughtrey, & Wieder, 2010; Creemers & Kyriakides, 2008), and to identify characteristics of various programs that are deemed effective for teachers in diverse school contexts within the broader social, political, historical and economic contexts within which initial teacher education is developed and regulated (Cochran-Smith & Power, 2010). Effectiveness in this research is determined through the graduates' and principals' perceptions of the relational (Day, Stobart, Sammons, & Kington, 2006) aspects of preparation with a focus on the outcomes of initial teacher education (McConney, Price, & Woods-McConney, 2012) coupled with the notion that initial teacher education is indeed 'initial' and that learning teaching is ongoing and continues in schools (Berry et al., 2010; Mockler, 2013).

While outcome measures of the effect of teacher education employed by follow-up surveys like these can be seen to be weakened by their heavy reliance on the beginning teachers' judgments of themselves, of their own growth, and of what their programs might have contributed to their growth (Kennedy, 1999), they can form one component of a comprehensive and cohesive approach by which providers demonstrate the impact of their programs for accreditation and registration purposes. This can comprise employer surveys and exit surveys of educator candidates as well as structured and validated observation



instruments and student surveys, that completers effectively apply the professional knowledge, skills, and dispositions that the preparation experiences were designed to achieve. While satisfaction surveys have been administered in connection with accreditation for many years, they typically have poor response rates, and designs that ask for sweeping opinions without descriptive feedback that would help providers improve their programs and professional experiences. However, if we can agree on relevant details needed to inform accreditation and program improvement, then the opportunities for surveys covering similar topics, and that offer both higher response rates and descriptive information for providers, may be possible.

In the US, for example, CAEP-conducted surveys of clinical educators, faculty, employers, and candidates are in development. CAEP suggests a comprehensive approach could include:

- 1. Results of employer surveys, and including retention and employment milestones
 - a) Employer satisfaction surveys (include instrument sampling, response rates, timing)
 - b) Employer satisfaction interviews
 - c) Employer satisfaction focus groups
 - d) Employer satisfaction case studies
- 2) Results of completer surveys
 - a) Graduate satisfaction surveys (include instrument sampling, response rates, timing)
 - b) Graduate satisfaction interviews
 - c) Graduate satisfaction focus groups
 - d) Graduate satisfaction case studies

CAEP further suggests that results are of particular use as tools to evaluate adequacy of preparation when the questions are specific to particular aspects of preparation; they are of greater value to providers when results indicate performance in relation to benchmarks, norms, and, cut scores.

The following summary excerpt from the CAEP Evidence Guide (Council for the Accreditation of Educator Preparation (CAEP), January 2015) provides an overview of the ways in which surveys can provide evidence of impact.



The quality of the evidence provided by surveys is directly linked to the quality of the survey with an emphasis on the accuracy, reliability and validity of the results. To this end, surveys should be carefully designed, systematically collect data related to the topic of the survey, measure the property the survey is claimed to measure, and produce data that are clear and usable. If ratings are based primarily on a candidate self-report, they should wherever possible be triangulated or supported by other evidence. [Some questions that should be asked by accreditation review teams include...]

1. HOW THE SURVEYS ARE USED

- Are the purpose and intended use of the survey clear and unambiguous?
- Is the point in the curriculum at which the survey is administered clear (e.g., first year, last year, etc.)?

2. HOW THE SURVEYS ARE CONSTRUCTED

- Is it clear how the EPP developed the survey?
- Are the individual items or questions in the survey constructed in a manner consistent with sound survey research practice?

3. HOW RESULTS ARE SCORED AND REPORTED

- What efforts were made to ensure an acceptable return rate for surveys?
 Has a benchmark been established?
- What conclusions can or cannot be determined by the data based on return rate? Is there a comparison of respondent characteristics with the full population or sample of intended respondents?
- How are qualitative data being evaluated?
- How are results summarized and reported? Are the conclusions unbiased?
- Is there consistency across the data and are there comparisons with other data?

4. SPECIAL NOTE ON SURVEYS OF DISPOSITIONS

 If surveys that address professional dispositions are included, does the EPP provide an explanation/justification of why they are included and how they are related to effective teaching and impact on P-12 student learning?

5. INFORMING SURVEY RESPONDENTS

- Is the intent of the survey clear to respondents and reviewers?
- Are clear and consistent instructions provided to respondents so they know how to answer each section?

(pp.25-27)

An approach whereby teacher education providers submit evidence of impact for (re)accreditation could be informed by such an approach to employer and completer survey data and complementary interviews, focus groups and/or case studies as well as by building on current longitudinal research studies.



Conclusion

This paper argues for two specific ways in which teacher education providers can demonstrate evidence of impact as part of a stronger system of professional accountability for teacher education and accreditation of initial teacher education in Australia:

- 1. Robust assessment of graduating teachers against the Australian Professional Standards for Graduate Teachers
- 2. Longitudinal tracking of preservice teachers into beginning teaching involving satisfaction surveys from the point of view of the preservice teachers and then beginning teachers, as well as employers.

Other measures like classroom observations, practicum assessments and HEI-based assessments of content and other professional knowledge would complement these two approaches to form a comprehensive evidence of impact approach to accreditation of initial teacher education in Australia.



Appendix 1.

Elementary Mathematics Teaching Event Candidate Handbook 2014-15

Performance
Assessment for
California
Teachers

©2009 the PACT Consortium

Last updated: December 5, 2014



PACT expresses appreciation to the following for their work on PACT and the Elementary Mathematics Teaching Event:

Elementary Development Team

Andrea Whittaker, Chair

Bobbie AllenCarolyn NelsonAlberto RodriguezAnnamarie FrancoisCindy Pease-AlvarezGordon SuzukiAnne JonesDella PerettiKip Tellez

Elementary Mathematics Benchmarkers and Statewide Trainers

Nathaniel Shultice Elizabeth Keithcart Ann Carlyle Sandy Crepps Kate Masarik Joi Spencer Kathy Evans Julie McNamara Jeanne Stone Barbara Ford Kip Tellez Al Mendle Michele Fortes Cheryl Trujillo Nicole Merino Nancy Walsack Annamarie François Nancy O'Rode

Donna Henderson Susan Scharton Shelley Herron Claudia Schwartz

and to Steve Athanases, George Bunch, Ann Elkund, Francisco Garcia, Jacki Gilmore, Valerie Henry, Rachel Lotan, Barbara Merino, Lori Rangel, Nadeen Ruiz, Misty Sato, Tine Sloan, Kip Tellez, Terry Underwood, and Andrea Whittaker for their work on developing the PACT assessment system, as well as to the hundreds of anonymous faculty, supervisors, and students who provide feedback and suggestions for improvement.

Use of PACT Scores

The scores from this Teaching Event will be combined with scores from the Subject Matter Tasks in core content areas to determine whether or not candidates for a Multiple Subject Teaching Credential pass the PACT teaching performance assessment. Individual candidates' PACT scores, like other licensing test scores and academic records, are confidential and should not be released without the prior consent of individual teachers to employers or induction programs.

Use of PACT Materials

Content developed to support the PACT assessment is proprietary. Any use of the PACT assessment beyond meeting the licensure requirements established by the California Commission on Teacher Credentialing (CTC) must be pre-approved by PACT leadership. For permission to use, reproduce, build derivative products or to widely distribute PACT materials please contact Nicole Merino (nmerino@stanford.edu), PACT Director at Stanford Center for Assessment, Learning and Equity (SCALE).

©2009 the PACT Consortium

Last updated: December 5, 2014



Overview of the PACT Teaching Event

Focus on student learning

In this Teaching Event, you will show the strategies you use to make mathematics accessible to your students, and how you support students in learning to read, write, and use academic language. You will explain the thinking underlying your teaching decisions and analyze the strategies you use to connect students with the content you are teaching. You will examine the effects of your instructional design and teaching practices on student learning, with particular attention to students with diverse cultural, language, and socio-economic backgrounds and learning needs.

Select a learning segment

A learning segment is a set of lessons that build upon one another toward a central focus that reflects key concepts and skills, with a clearly defined beginning and end. It may be part of a larger instructional unit that includes multiple learning segments. If you teach mathematics to more than one class of students, focus on only one class.

For the Teaching Event, you will plan a learning segment of about one week (approximately 3-5 lessons or, if teaching mathematics within a large time block, about 3-5 hours of connected instruction) that is designed to support students in building conceptual understanding, computational/procedural fluency, and mathematical reasoning skills. The learning segment should include learning objectives for both the curriculum content and the development of academic language related to that content. A Glossary of terms used in the Teaching Event appears on pages 20-22.

Submit teaching artifacts and analysis

You will submit lesson plans, copies of instructional and assessment materials, one or two video clips of your teaching, a summary of whole class learning, and an analysis of student work samples. You will also write commentaries describing your teaching context, analyzing your teaching practices, and reflecting on what you learned about your teaching practice and your students' learning. The instructions in the following pages will guide you in putting together the instructional materials, video selection, student work samples, and commentaries required in this Teaching Event.

Assessment of your Teaching Event

Your Teaching Event should clearly demonstrate how your practice meets the California *Teaching Performance Expectations* (**TPEs**). A list of the TPEs appears at the end of this Handbook. Scoring rubrics have been developed to align with these professional expectations for classroom teachers.

To download this Handbook or for more information about the Teaching Event, the scoring rubrics, and the TPEs, go to the PACT website at **www.pacttpa.org**.



Overview of Elementary Mathematics Teaching Event

Teaching Event Task	ching Event Task What to Do	
1. Context for Learning (TPEs 7,8)	✓ Provide relevant information about your instructional context and your students as learners of mathematics.	☐ Context Form ☐ Context Commentary
2. Planning Instruction & Assessment (TPEs 1,2,3,4,6,7,8,9, 10,12)	 ✓ Select a learning segment of 3-5 lessons (or, if teaching mathematics within a large time block, about 3-5 hours of connected instruction) that support students in building conceptual understanding, computational/procedural fluency, and mathematical reasoning skills. ✓ Create an instruction and assessment plan for the learning segment and write lesson plans. ✓ Write a commentary that explains your thinking in writing the plans. ✓ Record daily reflections, to submit in the reflection section of the Teaching Event. 	☐ Lesson Plans for Learning Segment ☐ Instructional Materials ☐ Planning Commentary
3. Instructing Students & Supporting Learning (TPEs 1,2,3,4,5,6,7,10, 11)	 ✓ Review your plans and prepare to videotape your class. Identify opportunities to develop your students' ability to engage in mathematical discourse and understand mathematical concepts. ✓ Videotape the lesson you have identified. ✓ Review the videotape to identify one or two video clips portraying the required features of your teaching. The total running time should not exceed 15 minutes. ✓ Write a commentary that analyzes your teaching and your students' learning in the video clip(s). 	☐ Video Clip(s) ☐ Video Label Form ☐ Instruction Commentary
4. Assessing Student Learning (TPEs 2,3,4,5,13)	 ✓ Select one student assessment from the learning segment and analyze student work. ✓ Identify three student work samples that illustrate class trends in what students did and did not understand. ✓ Write a commentary that analyzes the extent to which the class met the standards/objectives, analyzes the individual learning of two students represented in the work samples, describes feedback to students, and identifies next steps in instruction. 	☐ Student Work Samples ☐ Evaluative Criteria or Rubric ☐ Assessment Commentary
5. Reflecting on Teaching & Learning (TPEs 7.8,13)	 ✓ Provide your daily reflections. ✓ Write a commentary about what you learned from teaching this learning segment. 	☐ Daily Reflections ☐ Reflective Commentary



Task 1. Context for Learning

Purpose

The Context for Learning task is a brief overview of important features of your classroom context that influence your instructional decisions during the learning segment. It provides evidence of: 1) your knowledge of your students; and 2) your ability to identify and summarize important factors related to your students' learning and the school environment. You'll be referring to your description of students and the teaching context in your responses in subsequent tasks.

Overview of Task

- Select a central focus for your learning segment and reflect on the relevant features of your classroom context that will impact your planning, instruction, and assessment. The focus of your learning segment should provide opportunities to develop your students' conceptual understanding, computational/procedural fluency, and mathematical reasoning skills
- Provide descriptive information about your instructional context and instructional resources.
- Describe important features of your class that will affect your instructional decisions.

What Do I Need to Do?

- ✓ Complete the **Context for Learning Form**. The form is located after the instructions for this task.
- ✓ Respond to each of the prompts in the Context Commentary.

Context Commentary

Write a commentary of **3-5 single-spaced pages** (including prompts) that addresses the following prompts. You can address each prompt separately, through a holistic essay, or a combination of both, as long as all prompts are addressed. (If you're responding via an electronic platform, your 3 to 5 pages may appear as text boxes for individual questions.) Please see pages 23-24 for other requirements.

- 1. Briefly describe the following:
 - a. Type of school/program in which you teach, (e.g., elementary/middle school, themed magnet, or charter school)
 - b. Kind of class you are teaching (e.g., third grade self-contained, sixth grade core math/science) and organization of subject in school (e.g., departmentalized, interdisciplinary teams)
 - c. Degree of ability grouping or tracking, if any



2. Describe your class with respect to the features listed below. Focus on key factors that influence your planning and teaching of this learning segment. Be sure to describe what your students <u>can do</u> as well as what they are <u>still learning</u> to do.

a. Academic development

Consider students' prior knowledge, key skills, developmental levels, and other special educational needs. (TPE 8)

b. Language development

Consider aspects of language proficiency in relation to the oral and written English required to participate in classroom learning and assessment tasks. Describe the range in vocabulary and levels of complexity of language use within your entire class. When describing the proficiency of your English learners, describe what your English learners can and cannot yet do in relation to the language demands of tasks in the learning segment. (TPEs 7, 8)

c. Social development

Consider factors such as the students' ability and experience in expressing themselves in constructive ways, negotiating and solving problems, and getting along with others. (TPE 8)

d. Family and community contexts

Consider key factors such as cultural context, knowledge acquired outside of school, socio-economic background, access to technology, and home/community resources.

3. Describe any district, school, or cooperating teacher requirements or expectations that might impact your planning or delivery of instruction, such as required curricula, pacing, use of specific instructional strategies, or standardized tests.



Task 1. Context for Learning Form

Provide the requested context information for the class selected for this Teaching Event. This form is designed to be completed electronically. The blank space does not represent the space needed. Use as much space as you need.

About the subject area/course you are teaching

3								
1. How much time is devoted each day to mathematics instruction in your classroom?								
About the students in your class								
2. How many students are in the class you are documenting?								
3. How many students in the class are: English learners Proficient English speakers?								
4. Please complete the following table about your English Learners' latest CELDT scores (if available):								
# of Students at Each CELDT Level in Different Modalities								
Score Level	Listening	Speaking	Reading	Writing	Overall			
Beginning								
Early Intermediate								
Intermediate								
Early Advanced								
Advanced								
5. How many students have Individualized Education Plans (IEPs) or 504 plans?								
6. How many students participate in a Gifted and Talented Education (GATE) program?								
About the school curriculum and resources								
7. Describe any specialized features of your classroom setting, e.g., bilingual, Structured English								

Immersion, team taught with a special education teacher.



- 8. If there is a particular textbook or instructional program you primarily use for mathematics instruction, what is it? (If a textbook, please provide the name, publisher, and date of publication.)
- 9. What other major resources do you use for mathematics instruction in this class?



Task 2. Planning Instruction & Assessment

Purpose

The Planning Instruction & Assessment task describes and explains your plans for the learning segment. It demonstrates your ability to organize curriculum, instruction, and assessment to help your students meet the standards for the curriculum content and to develop academic language related to that content. It provides evidence of your ability to select, adapt, or design learning tasks and materials that offer your students equitable access to mathematics curriculum content.

Overview of Task

- Identify the central focus, student academic content standards, English Language Development (ELD) standards (if applicable), and learning objectives for the learning segment. The focus of your learning segment should provide opportunities to develop your students' conceptual understanding, computational/procedural fluency, and mathematical reasoning skills.
- Identify objectives for developing academic language, taking into account students' prior language development and the language demands of the learning tasks and assessments.
- Select/adapt/design and organize instructional strategies, learning tasks, and assessments to promote and monitor your students' learning during the learning segment.

What Do I Need to Do?

- ✓ Complete a plan for each lesson in the learning segment.
 - Be sure to address the learning of curriculum content and related academic language.
 - To identify standards, please list the standard number, followed by the text of the standard. If only a portion of a standard is being addressed, then only list the relevant part(s).
 - Use the preferred lesson plan format in your program or the optional lesson plan format provided. The plan should include at least the following information: student academic content standards, ELD standards (if applicable), learning objectives, formal and informal assessments, instructional strategies and learning tasks, and resources and materials.
- ✓ Submit copies of all instructional materials, including class handouts, overheads, and informal and formal assessment tools (including evaluation criteria or rubrics) used during the learning segment. If any of these are included from a textbook, please provide a copy of the appropriate pages. If any of these items are longer than **four** pages, provide a summary of relevant features in lieu of a photocopy. (TPEs 1, 2,4,7,9)
- ✓ Label each document or group of documents with a corresponding lesson number.



- ✓ Provide appropriate citations for all materials whose sources are from published text, the Internet, or other educators.
- ✓ Respond to each of the prompts in the Planning Commentary.
- Record a **daily reflection** after teaching each lesson by responding to the following prompts: (TPEs 12, 13)
 - 1. What is working? What is not? For whom? Why? (Consider teaching and student learning with respect to both content and academic language development.)
 - 2. How does this reflection inform what you plan to do in the next lesson?

Daily reflections will be submitted with Task 5. Reflecting on Teaching & Learning.

Planning Commentary

Write a commentary of **5-8 single-spaced pages** (including prompts) that addresses the following prompts. You can address each prompt separately, through a holistic essay, or a combination of both, as long as all prompts are addressed.

- 1. What is the central focus of the learning segment? Apart from being present in the school curriculum, student academic content standards, or ELD standards, why is the content of the learning segment important for your particular students to learn? (TPE 1)
- 2. Briefly describe the theoretical framework and/or research that inform your instructional design for developing your students' knowledge and abilities in both mathematics and academic language during the learning segment.
- 3. How do key learning tasks in your plans build on each other to support students' development of conceptual understanding, computational/procedural fluency, mathematical reasoning skills, and related academic language? Describe specific strategies that you will use to build student learning across the learning segment. Reference the instructional materials you have included, as needed. (TPEs 1, 4, 9)
- 4. Given the description of students that you provided in Task 1.Context for Learning, how do your choices of instructional strategies, materials, technology, and the sequence of learning tasks reflect your students' backgrounds, interests, and needs? Be specific about how your knowledge of **your** students informed the lesson plans, such as the choice of text or materials used in lessons, how groups were formed or structured, using student learning or experiences (in or out of school) as a resource, or structuring new or deeper learning to take advantage of specific student strengths. (TPEs 4,6,7,8,9)

31



- 5. Consider the language demands¹ of the oral and written tasks in which you plan to have students engage as well as the various levels of English language proficiency related to classroom tasks as described in the Context Commentary. (TPE 7)
 - a. Identify words and phrases (if appropriate) that you will emphasize in this learning segment. Why are these important for students to understand and use in completing classroom tasks in the learning segment? Which students?
 - b. What oral and/or written academic language (organizational, stylistic, and/or grammatical features) will you teach and/or reinforce?
 - c. Explain how specific features of the learning and assessment tasks in your plan, including your own use of language, support students in learning to understand and use these words, phrases (if appropriate), and academic language. How does this build on what your students are currently able to do and increase their abilities to follow and/or use different types of text and oral formats?
- 6. Explain how the collection of assessments from your plan allows you to evaluate your students' learning of specific student standards/objectives and provide feedback to students on their learning. (TPEs 2, 3)
- 7. Describe any teaching strategies you have planned for your students who have identified educational needs (e.g., English learners, GATE students, students with IEPs). Explain how these features of your learning and assessment tasks will provide students access to the curriculum and allow them to demonstrate their learning. (TPEs 9. 12)

¹ Language demands can be related to vocabulary, features of text types such as problem solutions or mathematical notation, or other language demands such as language conventions and structures within mathematical reasoning. For early readers/writers, this will include sound-symbol correspondence and a word or number as a text but might also involve the development of oral skills which are antecedents to reading and writing, oral narratives, and explanations.



Task 2. Lesson Plan Template (Optional)

You may use the lesson plan format preferred by your program if it includes the following information or you add any missing information. Otherwise, please use this format for your lesson plans, using as much space as you need.

Lesson
Content standards that are the target of student learning (list the complete text of the relevant parts of each standard): (TPE 1)
English Language Development (ELD) standards (if applicable): (TPE 1)
Learning Objectives (both content and language): (TPE 1)
Formal and Informal Assessments: (TPE 2)
Instructional Strategies and Learning Tasks to Support Student Learning (what you and the students will be doing) (TPEs 1,4,5,6,9,10)
Resources and Materials: (TPEs 4,9)



Task 3. Instructing Students & Supporting Learning

Purpose

The Instructing Students & Supporting Learning task illustrates how you work with your students to improve their understanding of mathematical concepts and their ability to engage in mathematical discourse. It provides evidence of your ability to engage students in meaningful mathematics tasks and monitor their understanding.

Overview of Task

- Examine your plans for the learning segment and identify learning tasks in which students are actively engaged in understanding mathematical concepts and participating in mathematical discourse.
- Videotape one or more of these tasks.
- View the video(s) to check the quality, analyze your teaching, and select the most appropriate video clip(s) to submit.

What Do I Need to Do?

Videotape your classroom teaching

✓ Provide **one or two video clips of no more than fifteen minutes total**. Select clip(s) that demonstrate how you engage students in understanding mathematical concepts and participating in mathematical discourse. (You may select conceptual understanding either as the primary focus of instruction or integrate it with the development of your students' understanding of a computation or procedure.) The clip(s) should include interactions among you and your students and your responses to student comments, questions, and needs. (TPEs 1, 2, 4, 5, 6, 11)

Videotape Guidelines

- A video clip should be continuous and unedited, with no interruption in the events. If you elect to use two clips, they should portray key events that cannot be portrayed in a fifteen minute clip. **The two clips should come from the same lesson.**
- The clip(s) can feature either the whole class or a small group of students.
- Both you and your students should be visible and clearly heard on the video submitted.
- Tips for videotaping your class are available on the PACT website, www.pacttpa.org.
- Before you videotape, ensure that you have the appropriate permission from the parents/guardians of your students and from adults that appear on the videotape.



- ✓ Provide a copy of any relevant writing on the board, overhead, or walls if it is not clearly visible on the video. Attach this document to the Instruction Commentary.
- ✓ Complete the Video Label Form and either attach it to the videotape or put it in a folder with the video file(s). The form is located after the instructions for this task.
- ✓ Respond to each of the prompts in the Instruction Commentary.

Instruction Commentary

Write a commentary of **4-7 single-spaced pages** (including prompts) that addresses the following prompts. You can address each prompt separately, through a holistic essay, or a combination of both, as long as all prompts are addressed.

- 1. Other than what is stated in the lesson plan(s), what occurred immediately prior to and after the video clip(s) that is important to know in order to understand and interpret the interactions between and among you and your students? Please provide any other information needed to interpret the events and interactions in the video clip(s).
- 2. Describe any routines or working structures of the class (e.g., group work roles, class discussion norms) that were operating in the learning task(s) seen on the video clip(s). If specific routines or working structures are new to the students, how did you prepare students for them? (TPE 10)
- 3. In the instruction seen in the clip(s), how did you further the students' knowledge and skills and engage them intellectually in understanding mathematical concepts and participating in mathematical discourse? Provide examples of both general strategies to address the needs of all of your students and strategies to address specific individual needs. (TPEs 1, 2, 4, 5, 7, 11)
- 4. Given the language abilities of your students as described in Task 1. Context for Learning, provide examples of language supports seen in the clips that help your students understand the content and/or academic language central to the lesson. (TPEs 4,7)
- 5. Describe the strategies you used to monitor student learning during the learning task shown on the video clip(s). Cite one or two examples of what students said and/or did in the video clip(s) or in assessments related to the lesson that indicated their progress toward accomplishing the lesson's learning objectives. (TPEs 2, 3)

35



Task 3. Video Label Form

Can	didate ID #
Ele	mentary Mathematics Clip(s)
Less	son from which clip(s) came: Lesson #
If E	Electronic, Video Format of Clip(s): (check one)
	Quicktime
	Real One
	Windows Media Player
	Other (please specify)



Task 4. Assessing Student Learning

Purpose

The Assessment of Student Learning task illustrates how you diagnose student learning needs through your analysis of student work samples. It provides evidence of your ability to 1) select an assessment tool and criteria that are aligned with your central focus, student standards, and learning objectives; 2) analyze student performance on an assessment in relation to student needs and the identified learning objectives; 3) provide feedback to students; and 4) use the analysis to identify next steps in instruction for the whole class and individual students.

Overview of Task

- Summarize and analyze meaningful patterns in whole class performance on a selected student assessment **from the learning segment**. The assessment should be the work of individuals, not groups.
- Demonstrate a variety of student performances for the assessment using three student work samples, including any feedback you wrote directly on the work.
- Analyze the performance of two individual students and diagnose individual learning needs.

What Do I Need to Do?

- ✓ Provide a copy of the directions/prompt for the assessment, if these are not apparent from the student work samples.
- ✓ Collect student work from your entire class. Analyze the student work to identify patterns in understanding across the class.
- ✓ Provide any **evaluative criteria** (**or rubric**) that you used to assess the student work. Evaluative criteria are performance indicators that you use to assess student learning. Categories of evaluative criteria include computational accuracy, understanding properties of a triangle, or translating a word problem into mathematical symbols.
- ✓ Select three student work samples which together represent what students generally understood and what a number of students were still struggling to understand. At least one of these students should be an English Learner². If multiple drafts of the assessment were collected, you may include all drafts as the work sample.
- ✓ Label these work samples as "Work Sample 1", "Work Sample 2", and "Work Sample 3". If your students use invented spelling, please write a translation directly on the work

² If you do not have any English Learners, select a student who is challenged by academic English. Examples may include students who speak varieties of English or special needs learners with receptive or expressive language difficulties.



sample. Be sure that reviewers can distinguish any written feedback to students from the students' written work.

- ✓ Document your feedback to these three students, either as individuals or as part of a larger group. If it is not written directly on the work sample, provide a copy of any written feedback or write a summary of oral feedback (summary may be included with Commentary prompt #5 below).
- ✓ Respond to each of the prompts in the Assessment Commentary.

Assessment Commentary

Write a commentary of **5-8 single-spaced pages** (including prompts) that addresses the following prompts. You can address each prompt separately, through a holistic essay, or a combination of both, as long as all prompts are addressed.

- 1. Identify the specific standards/objectives measured by the assessment chosen for analysis. You may just cite the appropriate lesson(s) if you are assessing all of the standards/objectives listed.
- 2. Create a summary of student learning across the whole class relative to your evaluative criteria (or rubric). Summarize the results in narrative and/or graphic form (e.g., table or chart). Attach your rubric or evaluative criteria, and note any changes from what was planned as described in Planning commentary, prompt 6. (You may use the optional chart provided following the Assessment Commentary prompts to provide the evaluative criteria, including descriptions of student performance at different levels.) (TPEs 3, 5)
- 3. Discuss what most students appear to understand well, and, if relevant, any misunderstandings, confusions, or needs (including a need for greater challenge) that were apparent for some or most students. Cite evidence to support your analysis from the three student work samples you selected. (TPE 3)
- 4. From the three students whose work samples were selected, choose two students, at least one of which is an English Learner. For these two students, describe their prior knowledge of the content and their individual learning strengths and challenges (e.g., academic development, language proficiency, special needs). What did you conclude about their learning during the learning segment? Cite specific evidence from the work samples and from other classroom assessments relevant to the same evaluative criteria (or rubric). (TPE 3)
- 5. What oral and/or written feedback was provided to individual students and/or the group as a whole (refer the reviewer to any feedback written directly on submitted student work samples)? How and why do your approaches to feedback support students' further learning? In what ways does your feedback address individual students' needs and learning goals? Cite specific examples of oral or written feedback, and reference the three student work samples to support your explanation.



6. Based on the student performance on this assessment, describe the next steps for instruction for your students. If different, describe any individualized next steps for the two students whose individual learning you analyzed. These next steps may include a specific instructional activity or other forms of re-teaching to support or extend continued learning of objectives, standards, central focus, and/or relevant academic language for the learning segment. In your description, be sure to explain how these next steps follow from your analysis of the student performances. (TPEs 2, 3, 4, 13)



Task 4. Summary of Student Learning Chart (Optional)

List the categories of evaluative criteria as well as the corresponding characteristics of student work and the percent of students in the class at levels of performance that increase in quality. This chart is designed to be completed electronically, so the blank space does not represent the space needed. Use as much space and as many rows as you need.

Evaluative	Chara	cteristics of Studen	t Work
Criteria	Performance	Performance	Performance
Category	Level 1	Level 2	Level 3, etc.
			(Insert more
			columns if
			needed)
	(provide	(provide	(provide
	description of	description of	description of
	student	student	student
	performance) &	performance & %	performance & %
	% of class)	of class)	of class)
	(provide	(provide	(provide
	description of	description of	description of
	student	student	student
	performance) &	performance & %	performance & %
	% of class)	of class)	of class)
	(provide	(provide	(provide
	description of	description of	description of
	student	student	student
	performance) &	performance & %	performance & %
	% of class)	of class)	of class)

The boxes indicating levels of student performance should include key characteristics of student work at that level, as well as the approximate percentage of the class performing at that level.



Task 5. Reflecting on Teaching & Learning

Purpose

The Reflecting on Teaching & Learning Task describes what you learned from teaching the learning segment. It provides evidence of your ability to analyze your teaching and your students' learning to improve your teaching practice.

Overview of Task

- Record your reflections after teaching each lesson, discussing how the lesson went for the class as a whole as well as for specific students. (See instructions in the daily reflection box in Task 2. Planning Instruction and Assessment.)
- Review your daily reflections and your analyses of the effectiveness of instructional and assessment strategies in previous tasks. Use these specific analyses and reflections to identify more general patterns within your planning, instruction, and assessment practices across the learning segment.
- Reflect on your experience teaching the learning segment in light of 1) your observations of the effectiveness of your teaching practice in helping your students learn; and 2) the theoretical perspectives and research principles that you learned during teacher preparation.

What Do I Need to Do?

- ✓ Submit the daily reflections that were completed as part of Task 2. Planning Instruction & Assessment.
- ✓ Respond to each of the prompts in the Reflection Commentary.

Reflection Commentary

Write a commentary of **3-5 single-spaced pages** (including prompts) that addresses the following prompts. You can address each prompt separately, through a holistic essay, or a combination of both, as long as all prompts are addressed.

- 1. When you consider the content learning of your students and the development of their academic language, what do you think explains the learning or differences in learning that you observed during the learning segment? Cite relevant research or theory that explains what you observed. (See Planning Commentary, prompt # 2.) (TPEs 7, 8, 13)
- 2. Based on your experience teaching this learning segment, what did you learn about your students as mathematics learners (e.g., easy/difficult concepts and skills, easy/difficult learning tasks, easy/difficult features of academic language, common misunderstandings)? Please cite specific evidence from previous Teaching Event tasks as well as **specific** research and theories that inform your analysis. (TPE 13)



3. If you could go back and teach this learning segment again to the same group of students, what would you do differently in relation to planning, instruction, and assessment? How would the changes improve the learning of students with different needs and characteristics? (TPE 13)



Glossary

Academic Language: Academic language is the language needed by students to understand and communicate in the academic disciplines. Academic language includes such things as specialized vocabulary, conventional text structures within a field (e.g., essays, lab reports) and other language-related activities typical of classrooms, (e.g., expressing disagreement, discussing an issue, asking for clarification). Academic language includes both productive and receptive modalities (see below).

Assessment: Evidence teachers collect of student prior knowledge, thinking, or learning in order to evaluate what students understand and how they are thinking. Informal assessments include such things as student questions and responses during instruction and teacher observations of students as they work. Formal assessments may include such things as quizzes, homework assignments, lab reports, papers, journals, and projects.

Central focus: The target of the student learning that the standards, learning objectives, instructional tasks, and assessments within a learning segment are intended to produce. A central focus can be expressed by a theme, overarching concept, or essential question.

Curriculum content: The student learning that is expected to occur, including various areas of knowledge, e.g., facts, concepts, procedures, methods of inquiry and making judgments.

Engaging students in learning: When students are actively increasing their knowledge, skills, and abilities related to the learning objectives for the lesson. This is in contrast to **participating** in learning tasks where the students complete the activities, but little learning takes place because the tasks are not well-designed and/or implemented.

English Language Development standards: The standards in the *English-Language Development Standards for California Public Schools* (California Department of Education). This document organizes standards for English Learners in reading, writing, speaking, and listening in English according to sequential stages of development of English proficiency. It is intended to identify what English Learners must know and be able to do as they move toward full fluency in English.

Guiding question: Questions used by PACT to identify the focus of each rubric, i.e., what it measures about the candidate's teaching practice as documented in the Teaching Event. Each rubric level descriptor provides an answer to the related guiding question at a different level of performance. (See rubric level descriptor)

Language Demands: In the context of learning in classrooms, language demands are descriptions of the language students need to effectively participate in classroom tasks. This includes demands related to listening, speaking, reading, writing, and shifting between those modalities. These demands can be vocabulary, features of text-types, and other language demands (e.g., sharing ideas with a partner, listening to instructions). The degree of language



demand also varies with the cognitive complexity of the content, a student's current language development, a student's relevant knowledge and experience, and the context in which the language demand occurs (e.g., participating in a discussion with or without notes). Teachers can draw upon students' language strengths (including language abilities in another language or context) and supply scaffolds to enable students to understand or produce language beyond their current level of mastery.

Learning Objectives: Student learning outcomes to be achieved by the end of the lesson.

Learning Segment: A set of lessons that build one upon another toward a central purpose, with a clearly defined beginning and end.

Learning Tasks: Purposefully designed activities in which students engage (not just participate – see Engagement in Learning) to meet the learning objectives for the lesson.

Productive modalities: Ways that students communicate to others, e.g., speaking, writing, drawing. Assessment of productive modalities focuses on student communication of their own understanding or interpretation. Examples of students' demonstration of productive abilities with respect to understanding curriculum content are writing an analysis, drawing and labeling a scale model, sculpting a figure from clay.

Receptive modalities: Ways that students receive communications from others, e.g., listening, reading, viewing. Assessment of receptive modalities focuses on student communication of their understanding of the meaning of communications from others. Because this is done through a productive modality, assessment of students' skills and abilities with respect to receptive modalities is not as straightforward as that of productive modalities. Examples of students' demonstration of receptive abilities with respect to curriculum content are using tonal qualities of voice to help convey meaning from a passage read aloud, restating a classmate's comment, describing how the key and tempo of a piece of music set a mood.

Redesignated English Learners: Students whose primary language is other than English and who have been reclassified from English Learners to Fluent English Proficient (FEP) by meeting district criteria for English proficiency.

Routines and working structures: Regular processes for conducting activities within a classroom. Once they are established, the rules and norms for routines and working structures are understood by the teacher and students and help classroom activities flow efficiently. Examples are roles during groupwork, how students signal that they have a question, procedures for taking turns during discussions, norms for what the rest of the class does when the teacher is working with a small group, types of questions expected to be asked when exploring a problem.

Rubric level descriptor: The text that describes performance at a particular rubric level.



Scaffolding: A special type of instructional support to allow students to do a task that they cannot yet do independently. Like scaffolding for buildings under construction, the support is designed to be temporary and to be removed or gradually reduced as students learn to do the task by themselves.

Student academic content standards: A set of knowledge, skills, and abilities that students are to learn by the end of a particular grade, grade level, or course. California's student academic content standards are published by the California Department of Education. They guide curriculum and instruction in California public schools.



Required Format for the Teaching Event

The following guidelines should be used to prepare all parts of your Teaching Event. This format will allow faculty/supervisors to efficiently review and score all Teaching Events.

Commentaries Submitted on Paper

Commentaries are your written descriptive, analytic, and reflective responses to specific prompts in the Teaching Event directions. Commentaries should be in the following format.

- Typed or word processed on 8.5" by 11" white paper in black ink
- Font size should be at least 12 point size and an easily readable font (e.g., Times, Times New Roman, or Arial; not italics)
- Length kept within suggested page limits, which are based on previous experience with Teaching Event submissions. Suggested page lengths are based on single spaced text, with a blank line between paragraphs, 1" margins, and include copies of the prompts.
- Individual pages **should not be** enclosed in plastic page protectors.

Video Clips

Video clip(s) are submitted as part of **Task 3. Instructing Students & Supporting Learning**. Video should be submitted in the following format.

- Video formats will be specified by your program based on the formats that it can accept. Select appropriate equipment based on your program's requirements.
- The time length of the video to be submitted is specified in the Teaching Event directions.
- You and your students should be clearly visible and audible.
- Individual video clips should be continuous and unedited, with no interruption in events.
- If possible, use a tripod to avoid wobbling.
- Further recommendations for videotaping your class are available in **Procedures for Classroom Videotaping**, located on the PACT website, **www.pacttpa.org**.

Student Work Samples

Student work samples will be submitted in **Task 4. Assessing Student Learning.** Student work samples should be submitted in the following format.

- Select samples to meet the criteria indicated by the Teaching Event directions.
- Work samples should be written by the students.
- Names of students, yourself, and the school should be removed with correcting fluid, tape, or marker prior to copying/scanning.
- Label work samples as Work Sample 1, 2, or 3.



Documentation of Lessons

Documentation of lessons such as lesson plans, handouts, assessments, rubrics, overhead transparencies, or other instructional materials will be submitted with various Teaching Event tasks to demonstrate the events that occurred in the learning segment. Documentation should be submitted in the following format.

■ Label all documents with a number corresponding to the relevant lesson plan(s).

Page Numbering

Number every page of the paper copy of your Teaching Event sequentially from beginning to end, *including pages of student work and documentation of lessons*. Page numbers may be handwritten on paper copies.

Candidate Identification Number

Label all pages of the paper copy of your Teaching Event (commentaries, student work samples, and lesson documentation) with your Candidate ID number, which will be given to you by your program. If you use a word processor, include your Candidate ID number as a running header or footer on every page. You may find it saves time to print a sheet of labels containing your Candidate ID number and apply the labels in the top or bottom margin of student work samples and lesson documentation.

Electronic Format for Teaching Events

Each program using an electronic submission format may provide additional guidelines for completing the Teaching Event that are specific to its electronic format. However, if you use a mixed format (i.e., part electronic and part paper), submit **two copies** of any paper portions (e.g., student work samples).

Use of Submitted Materials

Your Teaching Event and related materials may be used for training scorers or university faculty/supervisors or for purposes of research for validating the assessment. Your name, school, and students' names will be kept absolutely confidential.

An approach to the accreditation of initial teacher education programs based on evidence of the impact of learning teaching, AITSL, 2015



Teaching Event Authenticity Sign-Off Form

Submit this form with your completed Teaching Event.

This Teaching Event has been submitted as part of an assessment whose passage will be required for completing the requirements for a California Multiple/Single Subject(s) Teaching Credential under S.B. 2042. This attestation is acknowledgement that the ultimate responsibility for compiling the documentation (including writing the commentaries) lies with the credential candidate. However, credential candidates are encouraged to seek assistance, input and feedback from their university supervisors, cooperating/master teachers, university instructors, or other credential candidates during the Teaching Event development process.

Attestation by Credential Candidate

- I have primary responsibility for teaching the students/class during the learning segment profiled in this Teaching Event;
- The video clip(s) submitted show me teaching the students/class profiled in this Teaching Event;
- The student work included in the documentation is that of my students who are profiled in the learning segment documented in this Teaching Event;
- I am sole author of the teacher commentaries and other written responses to prompts and forms in this Teaching Event;
- Appropriate citations have been made for all materials in the Teaching Event whose sources are from published text, the Internet, or other educators.

Teacher Candidate's Signature	Teacher Candidate's Name (printed)	 Date
Teacher Candidate ID#	_	
Attestation by Universit	y Supervisor	
To the best of my knowledge, th	e statements above are accurate.	
University Supervisor's Signature	University Supervisor's Name (printed)	 Date

25



Checklist for Assembling Your Teaching Event

For the paper copy of your Teaching Event, place the following materials in the order listed. If you are constructing an electronic Teaching Event, make sure that all of the following are included. Your program will give you instructions for submitting the **Teaching Event Authenticity Sign-Off Form**. In addition, you should complete the **PACT Demographic Survey** according to instructions from your program.

Required Forms (these can be downloaded from www.pacttpa.org)

_	aching Event Authenticity Sign-Off Form ecklist for Assembling Your Teaching Event
Co.	. Context for Learning ntext for Learning Form mmentary on your instructional context
Task 2.	. Planning for Instruction & Assessment
☐ Les	sson Plans for learning segment
eva	tructional materials, e.g., class handouts, overheads, and formal assessments (including aluation criteria) labeled by the lesson number(s) (e.g., Lesson 1, Lessons 2-3) for which document will be used
☐ Co	mmentary explaining your thinking behind your instruction and assessment plans
☐ Vio	Instructing Students & Supporting Learning deo clip(s) deo Label Form mmentary explaining and analyzing the teaching and learning portrayed in the video
Task 4.	. Assessing Student Learning
	ork samples from three students to illustrate what students generally understood and at a number of students were still struggling to understand
☐ Eva	aluative criteria or rubrics used to assess student performance on the assessment
	mmentary analyzing student learning and identifying next steps in instruction
Da Da Co	Reflecting on Teaching & Learning ily reflections for each lesson taught within your learning segment mmentary analyzing what you learned about your students and your teaching practice m teaching the learning segment and identifying changes you might make in your ching practice based on this analysis



Submitting Your Teaching Event

Jub	init two copies to rout Frogram
	To enable ongoing validation of the assessment process across multiple campuses, you need to submit TWO copies of all text submitted as a paper copy (e.g., student work, instructional materials) and all video. If your Teaching Event is submitted via electronic files on a CD, submit two copies of the CD. You need not submit multiple copies of electronic Teaching Event materials that are stored electronically on a common platform.
	Follow the instructions from your program as to when and where your Teaching Event should be submitted.
Orga	anizing your Teaching Event for Submission (non-Electronic)
	Organize the commentaries and paper documentation in the order shown in the Checklist for Assembling Your Teaching Event .
	Fasten all pages together in order. Do not submit pages in plastic protectors.
	Place all materials (Teaching Event documentation, video, and/or CD) into a large envelope. Follow your program's instructions for submitting the Teaching Event Authenticity Sign-Off Form .
	Write your candidate ID number on the outside of the envelope.
	 Retain for your own records a complete copy of your Teaching Event, including: 1) Computer file copies of all commentaries and other materials created by you 2) Paper copies of materials from other sources (e.g., student work, assessment instruments) 3) A copy of the videotape or file(s) with the video clip(s)
Elec	etronic Teaching Events
	Follow the directions provided by your program for format specifications.
	Provide two sets of paper copies of all documents if you are submitting a mixed format Teaching Event.
	Follow your program's instructions for submitting a copy of the Teaching Event Authenticity Sign-Off Form if you are completing an electronic Teaching Event.



Teaching Performance Expectations (TPEs)

A. Making subject matter comprehensible to students

TPE 1. Specific Pedagogical Skills for Subject Matter Instruction

B. Assessing student learning

- TPE 2. Monitoring Student Learning During Instruction
- TPE 3. Interpretation and Use of Assessments

C. Engaging and supporting student learning

- TPE 4. Making Content Accessible
- TPE 5. Student Engagement
- TPE 6. Developmentally Appropriate Teaching Practices
- TPE 7. Teaching English Learners

D. Planning instruction and designing learning experiences for students

- TPE 8. Learning about Students
- TPE 9. Instructional Planning

E. Creating and maintaining effective environments for student learning

TPE 10. Instructional Time

TPE 11. Social Environment

F. Developing as a professional educator

TPE 12. Professional, Legal, and Ethical Obligations

TPE 13. Professional Growth

The full text of the TPEs can be downloaded from www.pacttpa.org.

An approach to the accreditation of initial teacher education programs based on evidence of the impact of learning teaching, AITSL, 2015

51



Appendix 2.

ELEMENTARY MATHEMATICS RUBRICS 2014-2015

PLANNING	ESTABLISHIN	ESTABLISHING A BALANCED INSTRUCTIONAL FOCUS	AL FOCUS
EM1: How do the pl	EM1: How do the plans support students' development of conceptual understanding, computational/procedural fluency, and	f conceptual understanding, computa	ational/procedural fluency, and
mathematical	mathematical reasoning skills? (TPEs 1,4,9)		
Level 1	Level 2	Level 3	Level 4
 The standards, learning objectives, 	• The standards, learning objectives,	 Learning tasks or the set of 	• Both learning tasks and the set of
learning tasks, and assessments	learning tasks, and assessments have	assessment tasks focus on multiple	assessment tasks focus on multiple
either have no central focus or a	an overall focus that is primarily	dimensions of mathematics learning	dimensions of mathematics learning
one-dimensional focus (e.g., all	one-dimensional (e.g., procedural or	through clear connections among	through clear connections among
procedural or all conceptual).	conceptual).	computations/procedures, concepts,	computations/procedures, concepts,
	• The focus includes vague	and reasoning/problem solving	and reasoning/problem solving
	connections among	strategies.	strategies.
	computations/procedures, concepts,	 A progression of learning tasks and 	 A progression of learning tasks and
	and reasoning/problem solving	assessments is planned to build	assessments guides students to build
	strategies.	understanding of the central focus of	deep understandings of the central
		the learning segment.	focus of the learning segment.

PLANNING	MAKING CON	MAKING CONTENT ACCESSIBLE	
EM2: How do the pla	EM2: How do the plans make the curriculum accessible to the students in the class? (TPEs 1,4,5,6,7,8,9)	o the students in the class? (TPEs 1,4,5	;,6,7,8,9)
Level 1	Level 2	Level 3	Level 4
• Plans refer to students' experiential	• Plans draw on students' experiential • Plans draw on students' prior	 Plans draw on students' prior 	All components of Level 3 plus:
backgrounds ¹ , interests, or prior	backgrounds, interests, or prior	learning as well as experiential	 Plans include well-integrated
learning ² that have little or no	learning to help students reach the	backgrounds or interests to help	instructional strategies that are
relationship to the learning	learning segment's	students reach the learning	tailored to address a variety of
segment's standards/objectives.	standards/objectives.	segment's standards/objectives.	specific student learning needs.
OR	 Plans for implementation of learning 	 Plans for learning tasks include 	
 There are significant content 	tasks include support ³ to help	scaffolding or other structured	
inaccuracies in plans that will lead	students who often struggle with the	forms of support ⁴ to provide access	
to student misunderstandings.	content.	to grade-level standards/objectives.	

Cultural, linguistic, social, economic

Stanford Center for Assessment, Learning and Equity (SCALE).

In or out of school

Such as strategic groupings of students; circulating to monitor student understanding during independent or group work; checking on particular students.

Such as multiple ways of representing content; modeling problem solving strategies; relating pictures/diagrams/graphs and equations. © 2010 the PACT Consortium

established by the California Commission on Teacher Credentialing (CTC) must be pre-approved by PACT leadership. For permission to use, reproduce, build derivative products or to widely distribute PACT materials please contact Nicole Merino (<u>nmerino@stanford.edu</u>), PACT Director at Last updated: December 5, 2014 Content developed to support the PACT assessment is proprietary. Any use of the PACT assessment beyond meeting the licensure requirements



EM3: What opportunities do students have to demonstrate their understanding of the standards/objectives? (TPEs 1,5,11) Level 1 There are limited opportunities are provided for students to learn what is assessments. There are limited opportunities are provided for students to learn what is assessments. There are limited opportunities are provided for students to learn what is assessments. There are limited opportunities are provided for students to learn what is assessment of one or more standards / objectives go between one or more assessment instruments or methods and the instruments or methods and the standards/objectives being assessed. There is a significant mismatch between one or more assessment instruments or methods and the instruments or methods and the standards/objectives being assessed. There is a significant mismatch between one or more assessment instruments or methods and the instruments or meth	to demonstrate their understanding of the standarc Level 3 ided for • Opportunities are provided for students to learn what is assessed.	rds/objectives? (TPEs 1,5,11) Level 4 All components of Level 3 plus: Assessments are modified, adapted, and/or designed to allow students
hat is t	• Opportunities are provided for students to learn what is assessed.	All components of Level 3 plus: • Assessments are modified, adapted, and/or designed to allow students
hat is	• Opportunities are provided for students to learn what is assessed.	All components of Level 3 plus: • Assessments are modified, adapted, and/or designed to allow students
• st is		 Assessments are modified, adapted, and/or designed to allow students
• eq.		and/or designed to allow students
ed.	ssessment of • The assessments allow students to	D
.ed.	/objectives go show some depth of understanding	with special needs opportunities to
	or skill with respect to the	demonstrate understandings and
instruments or methods and the standards/objectives being assessed.	standards/objectives.	skills relative to the
standards/objectives being assessed.	• The assessments access both	standards/objectives.
	productive (speaking/writing) and	
	receptive (listening/reading)	
	modalities to monitor student	
	understanding.	

reproduce, build derivative products or to widely distribute PACT materials please contact Nicole Merino (nmerino@stanford.edu), PACT Director at Last updated: December 5, 2014 Content developed to support the PACT assessment is proprietary. Any use of the PACT assessment beyond meeting the licensure requirements established by the California Commission on Teacher Credentialing (CTC) must be pre-approved by PACT leadership. For permission to use, Stanford Center for Assessment, Learning and Equity (SCALE). © 2010 the PACT Consortium



INSTRUCTION		ENGAGING STUDENTS IN LEARNING	
EM4: How does the	candidate actively engage students in	EM4: How does the candidate actively engage students in their own understanding of mathematical concepts and discourse?	natical concepts and discourse?
(TPEs 1,5,11)			
Level 1	Level 2	Level 3	Level 4
• Students have limited opportunities	 Strategies for intellectual 	Strategies for intellectual	Strategies for intellectual
in the clip(s) to engage with content	engagement seen in the clip(s) offer	engagement seen in the clip(s) offer	engagement seen in the clip(s) offer
in ways likely to improve their	opportunities for students to	structured opportunities for	structured opportunities for students
understanding of mathematical	develop their own understanding	students to actively develop their	to actively develop their own
concepts and discourse.	of mathematical concepts and	own understanding of mathematical	understanding of mathematical
OR	discourse.	concepts and discourse.	concepts and discourse.
• The clip(s) do not focus on		• These strategies reflect attention to	• These strategies are explicit , and
conceptual understanding and		student characteristics, learning	clearly reflect attention to students
mathematical discourse.		needs, and/or language needs.	with diverse characteristics, learning
OR			needs, and/or language needs.
 Classroom management is 			
problematic and student behavior			
interferes with learning.			

INSTRUCTION		MONITORING STUDENT LEARNING DURING INSTRUCTION	INSTRUCTION
EM5: How does the	candidate monitor student learning	EM5: How does the candidate monitor student learning during instruction and respond to student questions, comments, and	udent questions, comments, and
needs? (TPEs 2,5)	(5,5)		
Level 1	Level 2	Level 3	Level 4
• The candidate primarily monitors	• The candidate monitors student	• The candidate monitors student	All components of Level 3 plus:
student understanding by asking	understanding by eliciting student	understanding by eliciting student	• The candidate elicits explanations
surface-level questions and	responses that require	responses that require mathematical	of students' mathematical reasoning
evaluating student responses as	mathematical reasoning or	reasoning or problem solving	or problem solving strategies, and
correct or incorrect.	problem solving strategies.	strategies.	uses these explanations to further
• Candidate responses are not likely to	 Candidate responses represent 	• Candidate responses build on	the understanding of all students.
promote student thinking.	reasonable attempts to improve	student input to guide	
OR	student understanding of	improvement of students'	
Materials or candidate responses	mathematical concepts and	understanding of mathematical	
include significant content	discourse.	concepts and discourse.	
inaccuracies that will lead to student			
misunderstandings.			

established by the California Commission on Teacher Credentialing (CTC) must be pre-approved by PACT leadership. For permission to use, reproduce, build derivative products or to widely distribute PACT materials please contact Nicole Merino (nmerino@stanford.edu), PACT Director at © 2010 the PACT Consortium

Content developed to support the PACT assessment is proprietary. Any use of the PACT assessment beyond meeting the licensure requirements Stanford Center for Assessment, Learning and Equity (SCALE).



ASSESSMENT		ANALYZING STUDENT WORK FROM AN ASSESSMENT	ESSMENT
EM6: How does the	candidate demonstrate an understan	EM6: How does the candidate demonstrate an understanding of student performance with respect to standards/objectives?	spect to standards/objectives?
(TPEs 1,3)			
Level 1	Level 2	Level 3	Level 4
• The criteria/rubric and analysis have	• The criteria/rubric and analysis focus	• The criteria/rubric and analysis focus • The criteria/rubric and analysis focus All components of Level 3 plus:	All components of Level 3 plus:
little connection with the identified	on what students did right or	on patterns of student errors,	 The criteria/rubric and analysis focus
standards/objectives.	wrong in relationship to identified	skills, and understandings to	on partial understandings as well.
OR	standards/objectives.	analyze student learning in relation	• The analysis is clear and detailed.
 Student work samples do not 	 The analysis of whole class 	to standards and learning objectives.	
support the conclusions in the	performance describes some	 Specific patterns are identified for 	
analysis.	differences in levels of student	individuals or subgroup(s) in	
	learning for the content assessed.	addition to the whole class.	

ASSESSMENT		USING ASSESSMENT TO INFORM TEACHING	
EM7: How does the	candidate use the analysis of student	EM7: How does the candidate use the analysis of student learning to propose next steps in instruction? (TPEs 3,4)	truction? (TPEs 3,4)
Level 1	Level 2	Level 3	Level 4
• Next steps are vaguely related to or	 Next steps focus on improving 	 Next steps focus on improving 	All components of Level 3 plus:
not aligned with the identified	student performance through general	student performance through	• Next steps demonstrate a strong
student needs.	support that addresses some	targeted support to individuals and	understanding of both the identified
OR	identified student needs.	groups to address specific identified	content and language
• Next steps are not described in	 Next steps are based on accurate 	needs.	standards/objectives and of
sufficient detail to understand them.	conclusions about student	 Next steps are based on whole class 	individual students and/or
OR	performance on the assessment and	patterns of performance and some	subgroups.
• Next steps are based on inaccurate	are described in sufficient detail to	patterns for individuals and/or	
conclusions about student learning	understand them.	subgroups and are described in	
from the assessment analysis.		sufficient detail to understand them.	

Last updated: December 5, 2014 © 2010 the PACT Consortium

reproduce, build derivative products or to widely distribute PACT materials please contact Nicole Merino (nmerino@stanford.edu), PACT Director at Stanford Center for Assessment, Learning and Equity (SCALE). Content developed to support the PACT assessment is proprietary. Any use of the PACT assessment beyond meeting the licensure requirements established by the California Commission on Teacher Credentialing (CTC) must be pre-approved by PACT leadership. For permission to use,



TANDED DO LINE		USING FEEDBACK TO PROMOTE STUDENT LEAKNING	EAKNING
EM8: What is the quality of f	ity of feedback to students? (TPEs 3,4)	3,4)	
Level 1	Level 2	Level 3	Level 4
• Feedback is general and provides	Timely feedback identifies what	• Specific and timely feedback helps	Specific and timely comments are
little guidance for improvement	was done well and areas for	the student understand what s/he	supportive and prompt analysis
related to learning objectives.	improvement related to specific	has done well, and provides	by the student of his/her own
OR	learning objectives.	guidance for improvement.	performance.
• The feedback contains significant			• The feedback shows strong
inaccuracies.			understanding of students as
			individuals in reference to the
			content and language objectives
			they are trying to meet.

Last updated: December 5, 2014 © 2010 the PACT Consortium

Content developed to support the PACT assessment is proprietary. Any use of the PACT assessment beyond meeting the licensure requirements established by the California Commission on Teacher Credentialing (CTC) must be pre-approved by PACT leadership. For permission to use, reproduce, build derivative products or to widely distribute PACT materials please contact Nicole Merino (nmerino@stanford.edu, PACT Director at Stanford Center for Assessment, Learning and Equity (SCALE).



REFLECTION FM9: How does the contract the co	N MONITORING	REFLECTION MONITORING STUDENT PROGRESS FM9: How does the candidate monitor student learning and make appropriate adjustments in instruction during the learning	instruction during the learning
segment? (TPEs 2,10,12,13)	ss 2,10,12,13)		0
Level 1	Level 2	Level 3	Level 4
 Daily reflections indicate inconsistent monitoring of student performance. There is limited evidence of adjusting instruction in response to observed problems, e.g., student confusion, a lack of challenge, time management. 	 Daily reflections identify what students could or could not do within each lesson. Adjustments to instruction are focused on improving directions for learning tasks, time management, or reteaching. 	Daily reflections indicate monitoring of student progress toward meeting the standards/objectives for the learning segment. Adjustments to instruction are focused on addressing some individual and collective learning	All components of Level 3 plus: • Adjustments to instruction are focused on deepening students' conceptual understanding, computational/procedural fluency, and mathematical reasoning.
		needs.	

REFLECTION		REFLECTING ON LEARNING	
EM10: How does the	candidate use research, theory, and	EM10: How does the candidate use research, theory, and reflections on teaching and learning to guide practice? (TPEs 10,11,12,13)	to guide practice? (TPEs 10,11,12,13)
Level 1	Level 2	Level 3	Level 4
Reflections on teaching practice are	 Reflections on teaching practice are 	 Reflections on teaching practice are 	 Reflections on teaching practice
erroneously supported through a	consistent with principles from	based on sound knowledge of	integrate sound knowledge of
significant misapplication of theory	theory and research.	research and theory linked to	research and theory about effective
or research principles.	 Changes in teaching practice are 	knowledge of students in the class.	teaching practice, knowledge of
OR	based on reasonable assumptions	 Changes in teaching practice are 	students in the class, and
• Changes in teaching practice are <i>not</i>	about how student learning was	based on reasonable assumptions	knowledge of content.
based on reasonable assumptions	affected by planning, instruction, or	about how student learning was	 Changes in teaching practice are
about how student learning was	assessment decisions.	affected by planning, instruction, or	specific and strategic to improve
affected by planning, instruction, or		assessment decisions.	individual and collective student
assessment decisions.			understanding of
			standards/objectives.

© 2010 the PACT Consortium

Last updated: December 5, 2014

reproduce, build derivative products or to widely distribute PACT materials please contact Nicole Merino (<u>nmerino@stanford.edu</u>), PACT Director at Stanford Center for Assessment, Learning and Equity (SCALE). Content developed to support the PACT assessment is proprietary. Any use of the PACT assessment beyond meeting the licensure requirements established by the California Commission on Teacher Credentialing (CTC) must be pre-approved by PACT leadership. For permission to use,



ACADEMI	ACADEMIC LANCHAGE HINDERSTAN	TINDERSTANDING LANGITAGE DEMANDS AND BESOITEGE	AND RESOURCES
FM11. How door 4	Lo condidate identify the language of	lomonde of looming tooks and accoss	monte reletive to the etudente?
current leve	rrow upes the candidate includy the ranguage uch current levels of academic language proficiency?	EZVIII: TIOW GOES THE CAHOUMATE INCHILITY THE TANGUAGE UCHNAHUS OF ICATIONG TASKS AND ASSESSMENTS I CHAUVE TO THE STUDENTS. CURTENT levels of academic language proficiency?	ments retaine to the students
Level 1	Level 2	Level 3	Level 4
 Candidate's description of 	Candidate describes academic	Candidate describes academic	 Candidate describes academic
students' academic language	language strengths and needs of	language strengths and needs of	language strengths and needs of
proficiency at lower levels is	students at different levels of	students at different levels of	students at the full range of
limited to what they CANNOT do.	academic language proficiency.	academic language proficiency.	academic language proficiency.
	• The language genre(s) discussed are	• The language genre(s) discussed are	 The language genre discussed is
 Language genre(s)⁶ discussed are 	clearly related to the academic	clearly related to the academic	clearly related to the academic
only tangentially related to the	purposes of the learning segment	purpose of the learning segment	purpose of the learning segment
academic purposes of the learning	and some language demands are	and language demands are	and language demands are
segment.	identified.	identified. One or more linguistic	identified. One or more genre-
		features and/or textual resources	related linguistic features or textual
 Candidate identifies unfamiliar 	 Candidate identifies vocabulary 	of the genre are explicitly	resources of the specific
vocabulary without considering	that may be problematic for	identified.	tasks/materials are explicitly
other linguistic features.	students.		identified and related to students'
		• Candidate identifies essential	varied levels of academic
		vocabulary for students to actively	language proficiency.
OR		engage in specific language tasks.	
			 Candidate identifies for instruction
 Candidate did not identify any 			related clusters of vocabulary-
language demands within the			
learning and assessment tasks.			

understandings; using complex sentences to express conjectures; using precise language to explain mathematical concepts or reasoning; combining language and numbers to persuade distinguishing mathematical uses of words used in everyday language (e.g., balance, product, irrational, factor, simplify, function); using technical language to explain intuitive ⁵ Language demands might include: translating words or sentences into symbols or symbols into words and sentences; quickly decoding symbols into their abstract meanings; an audience to accept a proposition.

6 Key genres in mathematics might include: interpreting or representing mathematical meanings represented symbolically, graphically or linguistically; recounting computational Last updated: December 5, 2014 procedures or strategies used to solve mathematical problems; evaluating or constructing mathematical arguments; explaining mathematical concepts; defining technical terms; engaging in collaborative and oral mathematical reasoning $©\,2010$ the PACT Consortium

reproduce, build derivative products or to widely distribute PACT materials please contact Nicole Merino (nmerino@stanford.edu), PACT Director at Content developed to support the PACT assessment is proprietary. Any use of the PACT assessment beyond meeting the licensure requirements established by the California Commission on Teacher Credentialing (CTC) must be pre-approved by PACT leadership. For permission to use, Stanford Center for Assessment, Learning and Equity (SCALE).



ACADEMIC	ACADEMIC LANGUAGE DEVELOPING	DEVELOPING STUDENTS' ACADEMIC LANGUAGE REPERTOIRE	JAGE REPERTOIRE
EM12: How do the	candidate's planning, instruction, an	EM12: How do the candidate's planning, instruction, and assessment support academic language development? (TPEs 1,4,7,8)	iage development? (TPEs 1,4,7,8)
Level 1	Level 2	Level 3	Level 4
 The candidate gives little or 	• The candidate uses scaffolding or	• The candidate's use of scaffolding or	• The candidate's use of scaffolding or
sporadic support to students to	other support 8 to address identified	other support provides access to core	other support provides access to core
meet the language demands of the	gaps between students' current	content while also providing explicit	content while also providing explicit
learning tasks.	language abilities and the language	models, opportunities for practice,	models, opportunities for practice,
OR	demands of the learning tasks and	and feedback for students to	and feedback for students to develop
 Language and/or content is 	assessments, including selected	develop further language	further language proficiency for
oversimplified to the point of	genres and key linguistic features.	proficiency for selected genres and	selected genres and key linguistic
limiting student access to the core		key linguistic features.	features.
content ⁷ of the curriculum.	 Candidate articulates why 		 Candidate articulates why the
	instructional strategies chosen are	 Candidate articulates why the 	instructional strategies chosen are
	likely to support aspects of	instructional strategies chosen are	likely to support specific aspects of
	students' language development.	likely to support specific aspects of	students' language development for
		students' language development for	the full range of language
		different levels of language	proficiency and projects ways in
		proficiency.	which the scaffolds can be
			removed as proficiency increases.

7 Core content is the set of facts, concepts, skills, and abilities that are absolutely necessary to participate at least minimally in the learning/assessment tasks in the learning segment.

8 Such support might include one or more of the following: modeling of strategies for comprehending or constructing word problems or number sentences; explicit communication of development (e.g., graphic organizers); vocabulary development techniques (context cues, categorization, analysis of word parts, etc.); opportunities to work together with students with different kinds of language and literacy skills, etc. the expected features of oral or written texts (e.g., using rubrics, models, and frames); use of strategies that provide visual representations of content while promoting literacy

reproduce, build derivative products or to widely distribute PACT materials please contact Nicole Merino (nmerino@stanford.edu), PACT Director at Last updated: December 5, 2014 Content developed to support the PACT assessment is proprietary. Any use of the PACT assessment beyond meeting the licensure requirements established by the California Commission on Teacher Credentialing (CTC) must be pre-approved by PACT leadership. For permission to use, Stanford Center for Assessment, Learning and Equity (SCALE). © 2010 the PACT Consortium



Appendix 3.

Deakin ATA Handbook

Faculty of Arts and Education



EPR 703

Reflecting on practice in professional experience

Deakin Authentic Teacher Assessment

Handbook

2010



Introduction

This Handbook contains the guidelines for successfully completing the *Deakin Authentic Teacher Assessment (Deakin ATA)*. This is the major assessment task (70%) for EPR 703. Collectively, the activities that make up the *Deakin ATA* are designed to authentically assess your readiness for beginning teaching. In trimester 3 2010, the compiling of data for the Deakin ATA will occur *after* professional experience.

By completing the *Deakin ATA* you will have the opportunity to demonstrate your ability to:

- Demonstrate teaching proficiency in relation to the VIT Standards of Professional Practice for Graduating Teachers;
- Identify the important features of the classroom context that influence your planning, teaching and assessment;
- Draw on students' prior learning when planning and teaching lessons;
- Work with students to build their knowledge in a particular area;
- Engage students in meaningful activities and monitor their understanding;
- Critically reflect on your professional practice and its impact on students' learning;
- Assess student learning and determine patterns in whole class learning as well as individual learning needs; and,
- Use student assessment to inform your professional practice.

Overview of the Deakin ATA

In the *Deakin ATA*, you will focus on student learning and demonstrate your proficiency with the strategies you use to support students' learning. You will also have the opportunity to explain the thinking underlying your teaching decisions, assessment and examine the effectiveness of your professional practice.

The main activity is the development and teaching of a sequence of 5-8 lessons that build upon one another towards a central focus. These lessons may be part of a larger unit.

Required teaching artefacts and analysis - You will submit lesson plans, copies of teaching resources and assessment materials, a 10-minute video clip of your teaching, a summary of whole class learning and an analysis of student work samples. You will also submit descriptions of the teaching context and an analysis



of your own teaching practices, reflecting on what you have learned about your own teaching practice and also about students' learning

Components of the Deakin ATA

Activity 1: Context for Learning

Activity 2: Planning Teaching & Assessment

Activity 3: Teaching Students and Supporting Learning

Activity 4: Assessing Student Learning

Activity 5: Reflecting on Teaching & Learning

1. Context for Learning

Description and commentary on context for learning Activity 1

2. Planning Teaching & Assessment	3. Teaching Students and Supporting Learning	4. Assessing Student Learning	5. Reflecting on Teaching & Learning
Lesson plans	Video clip	Analysis of whole class achievement + 3	Daily reflections
Resources, handouts,	Commentary	student work samples	Reflective commentary
overheads, etc.		Analysis of learning needs for the 3	
Planning commentary		students Assessment	
Activity 2	Activity 3	commentary Activity 4	Activity 5

Assessment of the Deakin ATA

The *Deakin ATA* will be assessed according to criteria framed by key questions related to the activities and aligned with the *VIT Standards of Professional Practice for Graduating Teachers*. The rubrics reflect the quality of performance and discriminate the between levels of quality learning. Submit the Deakin ATA in a ring binder with the five sections of this task.

Journal

You are required to keep a journal for this task. This is to record your teaching, resource development, reflections and to serve as a prompt to complete the Deakin ATA. You are to begin using this journal at the start of Professional



Experience from Day 1. You will not be able to complete this task without ongoing recording in this journal and are required to submit the journal.



Activity 1: Context for Learning

Link to VIT Standards of Professional Practice for Graduating Teachers

- 3.4 Have an understanding of cultural and religious diversity and of socioeconomic factors which may influence the students they teach
- 3.3 Know how to identify the prior knowledge, the learning strengths and weaknesses of students, and other factors which impact on learning
- 3.2 Regard all students as capable of learning and demonstrate an understanding of, and commitment to, equity in their practice

Purpose:

The purpose of Activity 1 is to provide a brief overview of the important features of the classroom/ school/ community. Understanding these contexts will influence your teaching and planning your sequence of lessons.

Activity:

You are required to describe the subject /key learning area you are going to teach in the sequence of lessons, the school in which you are teaching, the students in the class and provide information about the content required by the curriculum and the resources available in the classroom.



1. Context for Learning Commentary

Students are to provide the following context information for the class you have selected for the *Deakin ATA*.

1. Subject/Learning Area

Grade/ year level/s
Subject/ learning area
Specific topic / focus

- **2. School Context -** Briefly describe the school / community in which you teach. This includes: location, socio economic /cultural background, school type, number of students, like school, My School website and other contexts that may be influential.
- **3. Students** How many students are in your class? What is the ratio of boys/ girls in your class? What is the cultural diversity of students in your class? What languages are spoken by students in your class?
- **4. Students' academic development -** What do you observe about the students' learning styles? What can they do and what are they are still learning to do? Describe how you would identify the prior knowledge and learning strengths and weaknesses of students and other factors that impact on their learning and other factors that impact on learning.
- **5. Students' social development** Describe the students' abilities, getting along with each other and expressing themselves –verbally, in writing, through individual or group problem solving or experiments.
- **6. Resources** What resources (textbooks, handouts, computers, equipment, etc) are available in your classroom/ school to help students learn?
- **7. Other** Include any other relevant information about the learning context not covered by the above points.

Presentation - Students may present this data in a table format



Activity 2: Planning Teaching & Assessment

Link to VIT Standards of Professional Practice for Graduating Teachers

- 4.1 Use their professional knowledge to establish clear, challenging and achievable learning goals for students as individuals and groups
- 4.2 Design lesson and unit plans which integrate a range of activities, resources, and materials to support learning, including the use of ICT and other learning technologies
- 4.3 Evaluate student responses and work samples, using a variety of strategies and tools to make appropriate assessments of learning and plans for future teaching and activities
- 4.4 Plan learning sequences and units which are consistent with curriculum statements, frameworks and assessment structures commonly used in schools
- 4.5 Monitor and record student learning, providing appropriate feedback to students on their progress and how to improve, and for reporting to parents
- 4.6 Have a sound knowledge of current learning theories and of pedagogical models from which they draw their practice

Purpose

The purpose of this activity is to explain your decisions as you develop the teaching and assessment plan for the 5-8 lessons. You are asked to demonstrate your ability to develop a lesson and unit plan designed to help students achieve the intended learning goals for students. You are to plan assessment activities designed to inform both you and the students about learning outcomes.

Activity

You are required to write a commentary that asks you to describe, explain and critically reflect on your teaching and assessment plan for your sequence of 5-8 lessons.



2. Planning Teaching & Assessment Commentary

Answer separately the following prompts.

1. Teaching Focus and rationale

What is the central teaching focus of your planned lessons? Why is the content or what you planned important for your students to know? What concepts are you teaching? How is your teaching consistent with current curriculum documents (Early Years, VELS, VCAL, VCE)?

2. Theoretical and Pedagogical Framework

Describe the theoretical framework/learning theories/ pedagogical models and/or research/readings that inform your lesson plans.

3. Learning Activities

How does the design of your lessons develop students' knowledge and abilities? How do the learning activities in your lesson plans challenge students to learn?

4. Teaching Strategies

How do your choices of teaching strategies, materials and the sequence of learning activity reflect students' backgrounds, developmental levels, interests and needs? Be specific about how your knowledge of these students informed the lesson plans.

5. Assessment

Explain when and how you will assess student learning. How will student assessments help you understand if students have achieved the learning objectives?

Supporting Documentation

Attach the plans for your 5-8 lessons. In addition, attach and submit all teaching resources materials, including class handouts, PowerPoint presentations, etc, and informal and formal assessment tools (including evaluation criteria and rubrics) used during the lesson plan sequence. If any of these materials are from a textbook, please provide a copy of the pages you used along with a list of references. Include resources you have designed or developed yourself for example handouts, experiment materials, web pages, Power Points, to support your teaching.



Activity 3: Teaching Students and Supporting Learning

Link to VIT Standards of Professional Practice for Graduating Teachers

- 7.1 Teachers regularly reflect on and critically evaluate their professional knowledge and the effectiveness of their teaching;
- 7.2 Be aware of their own strengths, preferences and needs as a learner, and can identify areas for development as an emerging practitioner and member of the profession

Purpose

Activity 3 requires you to videotape a 10-minute segment of a lesson and provide a commentary and a reflection about the lesson. Complete the consent form for filming in the classroom and have the appropriate permission from the school/parents/guardians of your students.

Activity

- 1. You are required to provide a commentary about the lesson and reflect on the video clip of your teaching and students' learning. Write a commentary that answers the prompts provided.
- 2. Submit a 10-minute unedited videotape segment of the lesson that illustrates how you facilitated students' engagement in meaningful learning. Ensure that you follow the following guidelines:
 - The videotape should be continuous and unedited, with no interruptions. You can videotape as much of the lesson as you wish, but then select a continuous 10-minute segment to submit.
 - The video clip can feature either the whole class or a small group of students.



3. Teaching Students and Supporting Learning Commentary

In this section you are required to reflect on the videotape of your teaching. Write a commentary that answers the following prompts:

Sequence in Lesson

- 1. Other than what is stated in the lesson plan(s), what occurred immediately prior to and after the video clip that is important in order to understand and interpret the interactions between and among the students during the videotaped segment?
- 2. Describe any routines such as group work, experiments, problem solving, use of materials, etc that were operating during the learning activity(s) seen on the video clip. If specific learning activities were new to the students (group work for example), how did you prepare students for them? From viewing the video what surprised you?

Engage students in Learning

- 3. In the teaching seen on the clip, how did you further students' knowledge and skill and engage them in understanding concepts? Provide examples of both overall strategies to address the needs of all of your students and strategies to address the specific needs of individual students.
- 4. Describe and justify the use of the strategies you used to monitor student learning during the lesson shown on the video clip. Provide two examples of what students did or said (in summative or formative assessments). Analyse how this gave you information about whether the students were/ were not progressing towards achieving the lesson learning objectives?
- 5. Evaluate what you learned about your (a) planning and (b) teaching from viewing yourself in the video clip (what worked well and what you might want to work on in the future). Explain how and why in your next lesson, you will build on the successful aspects of your lesson and address aspects that you have identified need further development.
- 6. How did this reflection (in 5) assist you to identify your strengths, preferences and areas for development as an emerging practitioner?



Reflect on what implications this has for improving your own teaching. Refer to journal entries to support your comments.

Required documents:

1. The 5-8 lesson plans focussed on the development of key concepts (as in Activity 2). These can be photocopied or scanned. Indicate which lesson included the videotaped segment.

2. Journal Entries

Daily teaching reflections after teaching each lesson that respond to the following prompts:

- What is working? What is not? For whom? Why?
- How will you change or adapt your next lesson based on this reflection?



Activity 4: Assessing Student Learning

Link to VIT Standards of Professional Practice for Graduating Teachers

- 4.3 Teachers monitor student engagement in learning and maintain records of their learning progress;
- 4.4 Teachers select assessment strategies to evaluate student learning, to provide feedback to students and their parents/guardians and to inform further planning of teaching and learning.
- 6.4 Teachers provide meaningful feedback to students and their parents/quardians about their developing knowledge and skills.

Purpose

In this section you are to demonstrate how you evaluate student learning needs through analysis of work samples. You are to collect all students' work in relation to this assessment task. You will provide evidence of your ability to:

- Select or design an assessment tool and criteria aligned with curriculum/ central focus/big idea and learning objectives;
- Analyse students' learning in relation to the identified learning objectives;
- Provide evidence of feedback to students; and,
- Use the analysis to inform and identify next steps in teaching for the whole class and also for individual students.

Activity

This activity requires you to focus on the assessment task to:

- Identify and synthesise patterns in relation to the learning outcomes for the whole class.
- Provide assessment examples from 3 students whose work demonstrates a
 variety of learning outcomes. All 3 examples need to include the feedback that
 you provided where you outlined what the student had learnt and what they
 still not fully understood.
- Examine the students' work samples and analyse these with the intention of identifying successful learning and future learning needs.



4. Assessing Student Learning Commentary

In this section you are required to write a commentary that addresses the following prompts. You are to include aspects of the assessment task such as specific objectives for the task, criteria for assessment (or rubric) and curriculum documents.

1. Assessment task

Report how the selected criteria assisted in measuring student learning of the objectives? Demonstrate how your assessment tool can indicate what a student does and does not understand?

2. Whole Class Assessment

Summarise from marking the assessment task the whole class results in table form.

How will you know that the assessment tool is reliable and valid? Evaluate if the assessment tool is effective in assessing learning?

What are the gaps in student learning? How would you know if the assessment was appropriate?

To demonstrate the patterns you have identified in the student learning discuss what most students appear to understand and, if relevant, any misconceptions, confusions, or needs (including a need for greater challenge) that became apparent for some or most students.

3. Sample Student assessment

Analyse the three student work samples to provide specific evidence to support your analysis of student learning.

For the 3 students whose work samples were selected, describe their prior knowledge of the content and their individual learning strengths and challenges. Cite specific evidence from the work assessment and from other classroom assessments relevant to the same evaluative criteria (or rubric).

4. Feedback



What written feedback did you provide to individual students and/or the group as a whole (refer the reviewer to any feedback written directly on submitted student work samples)? Explain how and why your approach to feedback supports students' learning? In what ways does your feedback address individual student needs and learning goals? Cite specific examples and reference the 3 student work samples as evidence to support your analysis.

5. Assessment for Learning

Based on the student performance on this assessment, include how your specific learning plan you would design to improve the areas of weakness identified and monitor the improvement.

For those who achieved learning goals, what new challenges and ways of monitoring would you consider for this group of students? These next steps may include a specific teaching activity or other forms of re-teaching to support or extend continued learning of objectives, standards and/or central focus/big idea for the learning segment. Document how these next steps will improve student performance?

6. Conclusion: Assessment for teaching

Reflect on how to improve the task for next time that would influence your teaching?

Required documents:

- Assessment tool and criteria (or rubric) that was used to assess the students' work.
- Record of student learning in assessment task as a Table
- Three student work samples. These should represent what students generally understood in the class as well as those areas that students were still struggling to understand. Label these work samples as "Work Sample 1", "Work Sample 2", and "Work Sample 3".
- Provide your feedback to these 3 students. If it is not written directly on the work sample, provide a copy of any written feedback or write a summary of oral feedback.



Activity 5: Reflecting on Teaching & Learning

Link to VIT Standards of Professional Practice for Graduating Teachers

- 7 Teachers reflect on, evaluate and improve their professional knowledge and practice.
- 7.1 Teachers regularly reflect on and critically evaluate their professional knowledge and the effectiveness of their teaching;

Purpose

The purpose of this section is to reflect on what you have learned from your teaching and assessing students' learning. This section draws from your journal entries and your thinking around the lessons. It provides you with the opportunity to demonstrate your ability to analyse teaching and students' learning in order to improve your teaching practice. You should also comment on your relationships with students.

Activity

- Ensure that you keep a record your reflections after teaching each lesson, that includes discussion of how the lesson went for the class as a whole as well as for specific students. (See instructions for Activity 4)
- Review your daily reflections (journal) and your analyses of the effectiveness
 of teaching and assessment strategies. Use these specific analyses and
 reflections to identify more general patterns within your planning, teaching,
 and assessment practices across the learning sequence.
- Reflect on your teaching of the sequence of lessons in light of your observations of the effectiveness of your teaching practice in helping students learn; and, the theoretical perspectives/ current learning theories and pedagogical models from your Master of Teaching course.
- Using your journal as evidence reflect on how your thinking about teaching has shifted.



5. Reflecting on Teaching & Learning Commentary

You will need to draw from your journal to address the following prompts.

- 1. When you consider the learning of your students, what do you think explains the learning or differences in learning that you observed during the sequences of lessons? Cite relevant research or theory that explains what you observed that has been noted in your journal.
- 2. Based on your experience teaching these lessons, what did you learn about your students as learners (e.g., easy/difficult concepts and skills, easy/difficult learning activities, common misconceptions)? What is working? What is not? For whom? Why? Please cite specific evidence from your teaching as well as specific research and theories that inform your analysis and your journal entries.
- 3. If you were to teach this sequence of lessons again to the same class to improve the learning, what would you do differently in terms of planning, teaching and assessment? How does this reflection inform what you plan to do in the next lesson? How will you change or adapt your next lesson based on this reflection?



Appendix 3: Deakin ATA Assessment Criteria and Rubrics

EPR 703 Reflecting on Practice in Professional Experience

Name

		Comment
Activity 1: Contexts for Learning	24 marks	
Activity 2: Planning Teaching & Assessment	40 marks	
Activity 3: Teaching Students and Supporting Learning	48 marks	
Activity 4: Assessing Students' Learning	52 marks	
Activity 5: Reflecting on Teaching and Learning	34 marks	
Total	196 marks = /70	



Activity 1: Contexts for Learning

Criteria	Not shown 0-4	Beginning 4	Established 5-6	Advanced 7-8
Classroom Context:	Does not include all features of	Lists features of the classroom	Explains features of the	Comprehensive and clear
Grade/ year level/s and subject/	the classroom context	environment	classroom environment	description of all features of the
learning area; Specific topic for				classroom environment
teaching; Number of students in				
the class; Cultural diversity;				
Language/s spoken; Resources				
available in your classroom/				
school.				
Students' academic			Identifies and describes learning	Identifies and describes
development:			styles supported through some	students learning styles
Description of students learning	Does not identify/insufficient	Identifies some learning styles	sets of evidence.	supported through evidence
styles, strengths and	identification of learning styles	of lose two factors that impact		linked to learning styles.
weaknesses with evidence	without evidence. Does not	at least two lactors that impact on student learning.	Identifies more than two factors	A thorough account of all
	identify factors that impact on	.00	that impact on student learning.	factors that impact students'
Identification of prior	learning			learning styles.
knowledge, the learning				
strengths and weaknesses of				
students, and other factors				
which impact on learning				
/8				
Students' social development:	Does not adequately describe	Describes superficially students	Describes in some depth	A thorough description of
Description of students social,	students social, development	social, development using some	students social, development.	students social, development
development using appropriate	with little evidence from	appropriate language evidenced	Uses language evidenced from	that is fully supported using
language evidenced from	classroom observation	from some classroom	supported classroom	appropriate language and
classroom observation		observation	observation	justified with evidence from
/8				classroom observation
Marks /40				
Mai no / 40				



Activity 2: Planning Teaching & Assessment

0				
Criteria	Not shown	Beginning	Established	Advanced
	0-4	4	2-6	7-8
1.Teaching Focus and	Does not include aspects of	Teaching Focus and Rationale	Teaching Focus explained	Teaching Focus explained
rationale: Inclusion of,	teaching focus, rationale and	provided Description of	with supported rationale.	with justified supported
teaching focus, rationale,	assessment	concepts with links to Current	Clear description of concepts	rationale. Clear description of
concepts and links to current		curriculum documents	with links to current	appropriate concepts with
curriculum documents.			curriculum documents	appropriate links to current
/8				curriculum documents
2. Theoretical and Pedagogical	Provides a sketchy description	Notes theoretical framework/s	Notes and accounts for the	A thorough description and
Framework: Description of	with little/ no links to	with some connection to the	selection of theoretical	rationale for the selection of
theoretical framework that	theoretical framework	lesson	framework with links to the	theoretical framework with
informs your lesson /8			lesson	justification to the lesson
3. Learning Activities: Design	Provides an incomplete	An account that describes how	An in depth account that	An in depth account that
of lessons to build knowledge	account of lesson design and	the lesson design links to	describes how the lesson	describes how the lesson
and skills to challenge	students learning	building knowledge and skills.	design links to building	design links to building
students' learning		A description of how the	knowledge and skills.	knowledge and skills.
8/		lesson challenges students'	An explanation of how the	An thorough explanation of
		learning	lesson challenges students'	how the lesson challenges
			learning	students' learning
4. Teaching strategies:	Gives an insufficient account	Some explanation about the	A thorough explanation about	A supported explanation
Explanation of teaching	that does not draw from	selection of teaching strategies	the selection of teaching	about the selection of teaching
strategies in terms of students.	knowledge of students.	aligned to some aspects of	strategies aligned to students.	strategies justified to your
/8		students.		knowledge of students.
5. Assessment:	Gives an incomplete	An explanation of assessment	A justified explanation of	A justified explanation of
Explanation of assessment	explanation of assessment	timing.	assessment timing. An account	assessment timing.
timing and teaching to	timing and student	An account of relationships	of relationships between	A demonstrated
learning objectives. /8	achievement	between assessment and	assessment and student	understanding of relationships
		student achievement.	achievement.	between assessment and
				student achievement.
Marks/40				



Activity 3: Teaching Students and Supporting Learning

Secribes in detail contexts for learning through connection storough learning through connection storough learning through connection storough learning from the film clip. Identifies and explains how teaching strategies promote student engagement knowledge and skills (individual and class) in learning from the film clip learning from the film clip with evidence from two strategies to monitor learning with evidence from two strategies to monitor learning with evidence from two strategies to monitor learning objectives. The second student examples some in depth analysis of student progression towards learning objectives. Evaluation and interpretation of of own learning in planning and teaching through evidence film clip to inform practice.	Criteria	Not shown	Beginning	Established	Advanced
Does not identify or limited contexts of film clip. Does not identify or limited contexts of film clip. Does not identify or limited contexts of film clip. Does not identify or limited contexts of tilm clip. Does not identify or limited contexts on identifies and describes and identifies and describes conting activities. Does not identify or limited contexting. Identifies and explains how teaching strategies to strategies to strategies and skills in knowledge and skills in find clip. Individual and class) in learning. Does not describe nor account monitor learning through two strategies to monitor. Does not describe nor account monitor learning through two strategies to monitor learning contexting from the film clip. Does not describe nor account monitor learning through with evidence from two analysis of strategies to monitor learning contexting from the film clip. Does not describe nor account monitor learning objectives. Description of your own perming in planning planning and teaching to monitor learning objectives. Little explanation of your own perming inform next lesson. Little explanation of your own perming inform next lesson. Evaluation of context lesson. Description of context lesson. Description of context lesson. Description of context lesson. Description of context lesson. Descriptio			4	5-6	7-8
description of contexts of film clip Does not identify or limited carring. Does not identify or limited bearing. Does not identify or limited carring. It carring through carring carring carring. Does not identify or limited carring. It carring carring carring carring carring. Does not identify or limited carring. It carring carring carring carring carring carring. Does not identify or limited carring. It carring carring carring carring carring carring. Does not describe nor account carring carring carring carring. Does not describe nor account carring carring carring carring. Does not describe nor account carring carring carring carring. Does not describe nor account carring carring carring carring. Does not describe nor account carring carring carring carring carring. Does not describe nor account carring carring carring carring carring carring. Does not describe nor account carring carring carring carring carring carring. Does not describe nor account carring ca	1. Lesson sequence:	Does not identify or limited	Identifies and describes	Describes in detail contexts for	A fully supported explanation
description of your own possering to explanation of your own paraming objectives. Does not identify or limited after film clip. Does not identify or limited bearing activities. Does not identify or limited explanation of your own bearing activities. Does not identify or limited explanation of your own bearing activities. Does not identify or limited explanation of your own bearing the property of the planning and teaching to inform the limited bearing the planning and teaching to inform the film clip of widence from the film clip after the planning and teaching to inform the film clip and planning and teaching to inform the film clip of widence from the film clip of own learning inform next lesson. Does not identify or limited explanation and interpretation of for white principles to monitor learning through two strategies to monitor learning objectives. Does not describe nor account progression of strategies to monitor learning through two strategies to monitor learning objectives. Description of strategies to monitor learning objectives. Description of your own planning and teaching to planning and teaching to and teaching through evidence from the film clip to inform planning and teaching to inform planning planning and teaching to inform the film clip the progression planning and teaching to inform planning and teaching to inform the film clip the progression planning and teaching to inform planning pl	Description and explanation of	description of contexts of film	contexts for learning through	learning through connection s	of the film clip with evaluation
Does not identify or limited describes and identifies how description of routines and classroom routines influence learning learning activities. Does not identify or limited evidence learning. Student engagement student engagement complimited evidence horse not describe nor account description of strategies to monitor learning trom film clip learning. Does not describe nor account description of strategies to monitor learning through two strategies to monitor learning through two strategies to monitor learning through two strategies to monitor learning objectives. Does not describe nor account description of strategies to monitor learning through two strategies to monitor learning through two strategies to monitor learning objectives. Does not describe nor account description of strategies to monitor learning through two strategies to monitor learning objectives. Does not describe nor account description of strategies to monitor learning through two strategies to monitor learning objectives. Does not description of your own dearning objectives. Little explanation of your own dearning to punction and interpretation of planning and teaching to evidence from the film clip of own learning in planning inform next lesson.	the contexts of the film clip	clip	reference to lesson before &	to evidence before and after	of the significance of 'before'
Does not identify or limited classroom routines influence learning learning. Does not identify or limited classroom routines influence learning learning. Does not identify or limited learning. Does not identify or limited evidence learning. Identifies and describes through film clip evidence learning strategies promoted strategies to strategies that promoted teaching strategies promote students in learning. Identifies and describes learning strategies promoted strategies to moving strategies promoted students learning. Identifies and explains how teaching strategies promote student engagement knowledge and skills in knowledge and skills in learning from film clip learning. Does not describe nor account monitor learning through two strategies to monitor learning through two strategies to monitor learning through two strategies to monitor learning objectives. Does not describe nor account monitor learning through two strategies to monitor learning through it learning objectives. Does not describe nor account monitor learning objectives. Little explanation of your own planning elarning of own learning in planning elarning elarning of own learning in planning elarning or form control of inform or progression progresi	8/		after film clip.	film clip.	and 'after' the film clip.
description of routines and classroom routines influence learning learning activities. Does not identify or limited learning. Does not identify or limited evidence strategies to strategies to monitor learning from film clip from film clip Does not describe nor account from for strategies to monitor learning students learning. Does not describe nor account bearing strategies to monitor learning through two strategies to monitor learning through two strategies to monitor learning objectives. Does not describe nor account bearing strategies to monitor learning through two strategies to monitor learning objectives. Does not describe nor account bearing strategies to monitor learning student examples. Some analysis of student progression student examples. Some in towards learning objectives. Little explanation of your own bescription of your own bearing through elarning in planning and teaching to elarning cited through of own learning in planning and teaching to elarning cited through elarning inform nearling inform maratice.	2. Routines and Learning	Does not identify or limited	Describes and identifies how	Accounts for how classroom	A critical interpretation of the
Does not identify or limited evidence strategies to another from film clip evidence students in learning. Strategies to another from film clip film clip from film clip from film clip from film clip film clip from film clip film cli	activities: Interpretation of the	description of routines and	classroom routines influence	routines influence learning	classroom routines and
Does not identify or limited strategies that promoted eaching strategies to strategies that promoted engage students in learning. Does not/limited evidence knowledge and skills in from film clip learning. Does not describe nor account monitor learning through two strategies to monitor learning to strategies to monitor learning to strategies to monitor learning objectives. Does not describe nor account monitor learning through two strategies to monitor learning through two analysis of student examples. Some in towards learning objectives. Little explanation of your own planning and teaching to learning cited through learning inform next lesson. Evaluation and interpretation of your practice inform the film clip to and teaching through evidence film clip to inform practice.	contexts for learning /8	learning activities.	learning.	through film clip evidence	learning activities with film clip
Does not identify or limited strategies to strategies to end explains bow description of strategies to engage students in learning. Does not describe nor account for strategies to monitor learning through two analysis of student examples. Some students learning objectives. Little explanation of your own planning and teaching to learning circle from the film clip of widence from the film clip learning objectives. Little explanation of your own planning and teaching to learning circle from the film clip of windows and interpretation of strategies to monitor learning objectives. Little explanation of your own planning and teaching to learning cited through of own learning inform next lesson. Evaluation and explains how strategies promote from the film clip to inform practice.					evidence
o description of strategies to strategies that promoted engage students in learning. Does not/limited evidence knowledge and skills in from film clip from film clip learning to students learning. Does not describe nor account Description of strategies to monitor learning through two students learning. Towards learning objectives. Ititle explanation of your own planning and teaching to learning cited through of your learning of of own learning inform next lesson. Little explanation of strategies to monitor learning of own learning inform next lesson. Evaluation and interpretation of strategies to monitor learning inform next lesson. Evaluation and interpretation of strategies to monitor learning inform next lesson. Evaluation and interpretation of strategies to monitor learning inform next lesson. Evaluation and interpretation of strategies to monitor learning inform next lesson. Evaluation and interpretation of strategies to monitor learning inform next lesson. Evaluation and interpretation of strategies to monitor learning inform next lesson. Evaluation and interpretation of strategies to monitor learning inform next lesson.	3. Engage students in learning:	Does not identify or limited	Identifies and describes	Identifies and explains how	A justified account of the
ing. engage students in learning. Student engagement boes not/limited evidence knowledge and skills in from film clip learning from film clip learning hor account boes not describe nor account for strategies to monitor learning through two students learning. Does not describe nor account monitor learning through two strategies to monitor learning through two students learning. Students learning. Towards learning objectives. It it le explanation of your own bescription of your own planning and teaching to learning cited through inform next lesson. To student examples. Some analysis of student progression towards learning objectives. Towards learning objectives. Evaluation and interpretation of your own planning inform next lesson. Evaluation and interpretation of your own planning inform hearling in planning inform practice.	Accounts for strategies to	description of strategies to	strategies that promoted	teaching strategies promote	rationale for teaching
from film clip from film clip from film clip from film clip Does not describe nor account monitor learning through two strategies to monitor monitor learning through two strategies to monitor student examples. Some students learning.	engage students in learning.	engage students in learning.	student engagement	student engagement	strategies that promoted
from film clip Does not describe nor account The strategies to monitor learning through two students learning. The strategies to monitor learning through two students learning. The strategies to monitor learning through two strategies to monitor learning student examples. Some analysis of student progression student examples. Some in towards learning objectives. The strategies to monitor learning student examples. Some analysis of student progression towards learning objectives. The strategies to monitor learning through objectives. The strategies to monitor learning student examples. Some in towards learning objectives. The strategies to monitor learning objectives. The strategies to monitor learning objectives. The strategies to monitor learning student examples. Some in towards learning objectives. The strategies to monitor learning objectives. The strategies to monitor learning objectives. The strategies to monitor learning cited through objectives. The strategies to monitor learning in planning and teaching through evidence from the film clip to inform maching in planning and teaching through evidence from the film clip to inform maching in planning and teaching through evidence from the film clip to inform maching in planning and teaching through evidence from the film clip to inform maching in planning and teaching through evidence from the film clip to inform the film clip to the	/8	Does not/limited evidence	knowledge and skills in	knowledge and skills	student engagement,
Does not describe nor account monitor learning through two strategies to monitor learning through two students learning. The students learning. The students learning. The students learning. The student seamples. Some in the student searning objectives. The students learning student progression towards learning objectives. The student examples. Some in the student searning objectives. The student examples in the student progression towards learning objectives. The student examples in the student progression towards learning objectives. The student examples in the student progression of student planning objectives. The student examples in the student progression towards learning objectives. The student examples in the student progression towards learning objectives. The student examples in the student progression towards learning objectives. The student examples in the student progression towards learning objectives. The student examples in the student progression towards learning objectives. The student examples in the student planning and teaching the output planning and teaching the output planning and teaching the student planning and teaching the output planning and teaching the output planning and teaching the student planning and teachi		from film clip	learning	(individual and class) in	knowledge and skills (both
Does not describe nor account monitor learning through two students learning. Towards learning objectives. Little explanation of your own planning and teaching to learning circle inform next lesson.				learning from the film clip	individual and class) in
Does not describe nor account monitor learning through two strategies to monitor learning through two students learning. Towards learning objectives. Description of your own planning and teaching to monitor learning cited through inform next lesson. Does not describe nor account monitor learning to student examples. Some in towards learning objectives. Description of your own planning and teaching to learning cited through of own learning in planning inform next lesson.					learning with evidence from
Does not describe nor account monitor learning through two strategies to monitor learning through two students learning. Towards learning objectives. Little explanation of your own planning and teaching to meet lesson. Little explanation of your own planning inform next lesson. Does not description of strategies to monitor learning through two strategies to monitor learning through the planning inform next lesson. Description of strategies to monitor learning through the film clip to inform practice inform planning and teaching through evidence from the film clip to inform practice.					the film clip
students learning student examples. Some student searning . student examples. Some analysis of student progression student examples. Some in towards learning objectives. depth analysis of student progression towards learning objectives. I.ittle explanation of your own planning and teaching to learning cited through inform next lesson. Inform filting and teaching to learning inform practice inform practice film clip to learning inform practice inform practice film clip to learning inform practice film clip to learning inform practice inform practice inform practice film clip to learning inform practice information practice informati	4. Strategies to monitor	Does not describe nor account	Description of strategies to	Description and justification of	Description and justification of
students learning student examples. Some with evidence from two analysis of student progression student examples. Some in towards learning objectives. depth analysis of student progression towards learning objectives. I ittle explanation of your own planning and teaching to learning cited through of own learning inform next lesson. learning inform film clip to and teaching through evidence from the film clip to inform practice.	students learning: Accounts	for strategies to monitor	monitor learning through two	strategies to monitor learning	strategies to monitor learning
tion learning. analysis of student progression student examples. Some in towards learning objectives. depth analysis of student progression towards learning objectives. by progression towards learning objectives. consideration of your own planning and teaching to learning cited through of own learning in planning inform next lesson. considerate through of your own planning inform practice film clip to inform practice inform practice.	for strategies to monitor	students learning	student examples. Some	with evidence from two	with evidence from two
tion of your own Little explanation of your own planning and teaching to planning and teaching to learning cited through inform next lesson.	students in learning.		analysis of student progression	student examples. Some in	student examples. A thorough
progression towards learning objectives. Little explanation of your own planning and teaching to planning inform next lesson. progression towards learning objectives. Evaluation and interpretation of your own planning in planning evidence from the film clip to inform practice inform practice.	/8		towards learning objectives.	depth analysis of student	and in depth interpretation
tition of your own bescription of your own planning and teaching to learning cited through of own learning in planning inform next lesson.				progression towards learning	and reflection of student
ition of your own Little explanation of your own planning and teaching to inform next lesson. Little explanation of your own learning inform of your own learning inform the film clip to and teaching through evidence inform practice.				objectives.	progression towards learning
ition of your own Little explanation of your own planning and teaching to inform next lesson. Little explanation of your own learning inform of your own learning inform the film clip to and teaching through evidence inform practice.					objectives
planning and teaching to learning cited through of own learning in planning in planning in planning in planning in planning inform next lesson. evidence from the film clip to inform practice	5. Evaluation of your own	Little explanation of your own	Description of your own	Evaluation and interpretation	Critical reflection of your own
inform next lesson. evidence from the film clip to and teaching through evidence inform future practice.	learning	planning and teaching to	learning cited through	of own learning in planning	learning in planning and
film clin to inform practice	/8	inform next lesson.	evidence from the film clip to	and teaching through evidence	teaching through evidence
			inform future practice.	film clip to inform practice.	from the film identified as



				successes and challenges to inform future practice.
Self knowledge of teaching: Awareness of one's progress	Does not show evidence or little evidence of self-	A description that shows awareness of strengths,	A description that shows self- knowledge in strengths,	A reflection on self-knowledge that shows understanding of
as an emerging practitioner	knowledge as a teacher.	preferences and areas for	preferences and areas for	one's strengths, preferences
/8		to journal entries.	and reflection that shows a	a teacher. Draws from journal
			plan for improvement.	entries and includes a plan for improvement.
Marks/48				

8



Activity 4: Assessing Students' Learning

Criteria	Not shown	Beginning	Established	Advanced
Assessment task: Explanation of how the assessment task criteria	Description does not report on how the assessment task criteria measured student	Superficial description of the relationship between assessment task criteria and	Clear explanation of the relationship between assessment task criteria and	Thorough explanation of the relationship between assessment, task criteria and
measured student learning. /4	learning.	student learning	student learning	student learning. Description of the implications for future assessment task design
2. Whole Class Assessment in table /4	Does not show / limited whole class assessment in table form	Shows whole class assessment in table form	n/a	n/a
Description of assessment using terms – reliable and valid.	Does not explain meaning of assessment.	Explains meaning of assessment with some use of the terms.	Accurately explains assessment using reliability and validity of assessment	Thorough explanation using assessment terms such as reliability and validity and student supported by evidence in the table.
Evaluating student learning using evidence based assessment /8	Does not show/limited explanation of assessment and student learning.	Explanation of assessment with some evidence of student learning.	Explanation of assessment with sufficient evidence from student learning.	Thorough explanation and analysis of assessment with sufficient evidence from student learning. Draws conclusions about the relationship between assessment and student learning.
3. Sample Student Assessment: Analysis of student work samples /8	Does not/limited analysis of student work samples	Some explanation and analysis of student work samples using appropriate terminology.	Description and analysis of students' samples that illustrate connections to assessment and teaching.	Description and analysis of students' samples that illustrate understanding of assessment, implications for teaching and learning.



23

4. Feedback: Description, explanation and application of feedback to students	Does not show /limited description and explanation of feedback to students	Some description and explanation of feed- back to students. Evidence for feedback provided linked to student learning.	Describes feedback given and explains how feedback relates to improving students learning.	Describes and justifies feedback related to improving students learning drawn from evidence and theory to support your answer.
5. Assessment for Learning:	Does not show /limited	A description of assessment for	A thorough description of	An in-depth analysis of
Application from assessment to	description of assessment for	learning that cites evidence and	assessment for learning that	assessment for learning that
student learning	learning.	theory to create a learning plan	draws from some evidence and	draws from evidence and
/8		for students who did not	theory. Creates a learning plan	theory. Creates a learning plan
		achieve and a 'next steps' for	for students who did not	for students who did not
		students who achieved goals.	achieve and a 'next steps' for	achieve and a 'next steps' for
			students who achieved goals.	students who achieved goals.
6. Assessment for Teaching:	Does not/limited comment on	An description of assessment	An description of your	An account that includes critical
Critiques assessment task for	assessment for teaching.	that informs teaching that	knowledge of assessment to	reflection on your knowledge of
improvement		draws from existing practice	inform future teaching through	assessment to inform future
8/		(assessment task)	some critique of existing	teaching through a critique of
			practice (assessment task)	existing practice (assessment
				task)
Marks /52				

Note: There are two changes to this section of the Deakin ATA rubrics from Wednesday 8th Dec discussion.

- 1. Students as learners. There is only one rubric now on students as learners. In the previous one there were two. This was confusing because there was a lot of similarity and little discrimination between the two.
- teaching. "This will allow you to bring together your reflections on your current knowledge and effectiveness of your teaching drawing from the journal, comments made in 2. Reflective Practice There is a rubric 'reflective practice' directly related to VIT standard - " teachers reflect on their professional knowledge and effectiveness of their previous sections of the Deakin ATA and from readings and/ or theoretical perspectives. It is now clear that these rubrics are different. This allows you to bring together effectiveness. teaching and knowledge professional current your and learners as students oę knowledge your

82

83



Activity 5: Reflecting on Teaching and Learning

Criteria	Not shown / Limited	Beginning	Established	Advanced
	0-5	8-9	9-10	11-12
1. Student Learning:	Does not/limited comment on	Describes students' learning	Describes and explains students	Comments using 'reflection on
Reflect on students as learners	students as learners.	drawn from journal entries.	as learners drawn from journal	practice and for action' of
/12			entries and some theories of	students as learners drawn
			learning.	from journal entries and
				theories of learning.
2. Reflective Practice:	Little evidence of a reflective	Little/some evidence of a	Some evidence of a reflective	Evidence of a reflective
Reflect on your overall	practitioner with little /no	reflective practitioner with	practitioner with examination	practitioner with clear
professional knowledge and	examination of current	some examination of current	of current professional	examination of current
teaching effectiveness.	professional knowledge and	professional knowledge and	knowledge and teaching	professional knowledge and
	teaching effectiveness.	teaching effectiveness.	effectiveness.	teaching effectiveness.
/20				Employs thoughtfully selected
	Employs excerpts from the	Employs excerpts from the	Employs selected excerpts from	excerpts from Deakin ATA
	Deakin ATA /journal with little	Deakin ATA /journal to support	Deakin ATA /journal to support	/journal to support an insightful
	connection between reflection	this reflection with some	this reflection.	reflection.
	and journal excerpts.	connection between reflection		
		and journal excerpts.		
Marks/32				



References

Ajayi, L. (2014). Performance Assessment for California Teachers and English-Language Arts candidates in a rural border community. *The Educational Forum*, 78(3), 275-290.

Allard, A., Mayer, D., & Moss, J. (2014). Authentically assessing graduate teaching: Outside and beyond neo-liberal constructs. *Australian Education Researcher*, 41(4), 425-443. doi: 10.1007/s13384-013-0140-x

Australian Association of Mathematics Teachers. (2006). *Standards for Excellence in Teaching Mathematics in Australian Schools*. Adelaide, SA: The Australian Association of Mathematics Teachers Inc.

Australian Institute of Teaching and School Leadership. (2011a). *Accreditation of initial teacher education programs in Australia: Standards and Procedures*. Carlton, Victoria: Ministerial Council for Education, Early Childhood Development and Youth Affairs (MCEECDYA).

Australian Institute of Teaching and School Leadership. (2011b). *National Professional Standards for Teachers*. Carlton, Victoria: Ministerial Council for Education, Early Childhood Development and Youth Affairs (MCEECDYA).

Australian Science Teachers Association. (2002). *National Professional Standards for Highly Accomplished Teachers of Science*. Canberra: Australian Science Teachers Association.

Berry, B., Daughtrey, A., & Wieder, A. (2010). Teacher Effectiveness: The Conditions that Matter Most and a Look to the Future. *Center for Teaching Quality* (March), 1-20.

Boyd, D., Grossman, P., Lankford, H., Loeb, S., Michelli, N., & Wyckoff, J. (2006). Complex by design: Investigating pathways into teaching in New York city schools. *Journal of Teacher Education*, 57(2), 155-166.

Boyd, D., Grossman, P., Lankford, H., Loeb, S., & Wyckoff, J. (2009). Teacher preparation and student achievement. *Educational Evaluation and Policy Analysis*, 31(4), 416-440.

British Educational Research Association (BERA). (2014). Research and the Teaching Profession: Building the capacity for a self-improving education system. Final Report of the BERA-RSA Inquiry into the Role of Research in Teacher Education. London: BERA.

Brouwer, N., & Korthagen, F. (2005). Can teacher education make a difference? *American Education Research Journal*, 42(1), 153-224.

Centre for Education Policy and Analysis. (2012). Teacher pathway project. Teacher Policy Research. Retrieved October 14, 2014, from http://www.cepa.stanford.edu/tpr/teacher-pathway-project

Cochran-Smith, M., Piazza, P., & Power, C. (2013). The politics of accountability: Assessing teacher education in the United States. *The Educational Forum*, 77(1), 6-27. doi: 10.1080/00131725.2013.739015

Cochran-Smith, M., & Power, C. (2010). New Directions for Teacher Preparation. *Educational Leadership*, 67(8), 6-13.

Cochran-Smith, M., & the Boston College Evidence Team. (2009). "Re-Culturing" Teacher Education: Inquiry, Evidence, and Action. *Journal of Teacher Education*, 60(5), 458-468.

Cochran-Smith, M., & Zeichner, K. (Eds.). (2005). Studying Teacher Education: The Report of the AERA Panel on Research and Teacher Education. Mahwah, NJ: Lawrence Erlbaum Associates.



Connell, R. W. (2009). Good teachers on dangerous ground: towards a new view of teacher quality and professionalism. *Critical Studies in Education*, 50(3), 213-229.

Council for the Accreditation of Educator Preparation (CAEP). (January 2015). CAEP *Evidence Guide*. Washington DC: CAEP.

Creemers, B. P. M., & Kyriakidés, L. (2008). The Dynamics of Educational Effectiveness: A contribution to policy, practice and theory in contemporary schools.

Darling-Hammond, L. (2000). How teacher education matters. *Journal of Teacher Education*, 51(3), 166-173.

Darling-Hammond, L. (2006a). Assessing teacher education: The usefulness of multiple measures for assessing teacher outcomes. *Journal of Teacher Education*, 57(2), 120-138.

Darling-Hammond, L. (2006b). Constructing 21st century teacher education. *Journal of Teacher Education*, 57(3), 300-314.

Darling-Hammond, L. (2006c). *Powerful Teacher Education: Lessons from exemplary programs*. San Francisco: Jossey-Bass.

Darling-Hammond, L. (2013). Getting teacher evaluation right: What really matters for effectiveness and improvement. New York: Teachers College Press.

Darling-Hammond, L., & Bransford, J. (Eds.). (2005). *Preparing Teachers for a Changing World: What teachers should learn and be able to do.* San Francisco, CA: Jossey-Bass.

Darling-Hammond, L., Newton, S., & Chung Wei, R. (2012). Developing and Assessing Beginning Teacher Effectiveness: The Potential of Performance Assessments. Stanford University, Palo Alto, CA: Stanford Center for Opportunity Policy in Education (SCOPE).

Darling-Hammond, L., & Snyder, J. (2000). Authentic assessment of teaching in context. *Teaching and Teacher Education*, 16(5-6), 523-545.

Darling-Hammond, L., & Youngs, P. (2002). Defining "highly qualified teachers": What does "scientifically-based research" actually tell us. *Educational Researcher*, 31(9), 13-25.

Day, C., Stobart, G., Sammons, P., & Kington, A. (2006). Variations in the work and lives of teachers: relative and relational effectiveness. *Teachers and Teaching: theory and practice*, 12(2), 169-192.

Deakin University. (2010-2012). *Deakin Authentic Teacher Assessment (ATA) Handbook: Master of Teaching EPR 703 Reflecting on Practice in Professional Experience.* Burwood: Faculty of Arts and Education, School of Education.

Dixon, M., Mayer, D., Gallant, A., & Allard, A. (2011). Authentically Assessing Beginning Teaching: Professional Standards and Teacher Performance Assessment. Report on a project funded by the Victorian Department of Education and Early Childhood Education and the Victorian Institute of Teaching: Deakin University, Australia.

Duckor, B., Castellano, K., Téllez, K., Wihardini, D., & Wilson, M. (2014). Examining the internal structure evidence for the Performance Assessment for California Teachers: A validation study of the elementary literacy teaching event for Tier I teacher licensure. *Journal of Teacher Education*, 65(5), 402-420.

Gallant, A., & Mayer, D. (2012). Teacher performance assessment in Malaysian teacher education. *Journal of Education for Teaching: International research and pedagogy,* 38(3), 295-307.



Gitomer, D. H., & Zisk, R. C. (2015). Knowing what teachers know. In J. Abedi & C. Faltis (Eds.), *Teacher assessment and the assessment of students with diverse learning needs* (Vol. 39 Review of Research in Education, pp. 1-53). AERA: SAGE.

Grossman, P. (2008). Responding to our critics: From crisis to opprtunity in research on teacher education. *Journal of Teacher Education*, 59(1), 10-23.

Hobson, A. J., Malderez, A., Tracey, L., Homer, M. S., Ashby, P., Mitchell, N., . . . Tomlinson, P. D. (2009). Becoming a Teacher: Teachers' experiences of initial teacher training, Induction and early professional development (Final report). Nottingham: Department for Children, Schools and Families (DCSF).

Kennedy, M. M. (1999). The problem of evidence in teacher education. In R. Roth (Ed.), *The role of the university in the preparation of teachers*. London: Falmer Press.

Louden, W., Heldsinger, S., House, H., Humphry, S., & Darryl Fitzgerald, D. (2010). Learning from Teacher Education: The Impact of Teacher Education on Knowledge of Literacy and Mathematics Teaching. Study of Effective Teacher Education: Progress Report 2. Canberra: Australian Institute for Teaching and School Leadership (AITSL).

Mayer, D., Allard, A., Moss, J., & Dixon, M. (in press 2015). Initial teacher education and assessment of graduates in Australia. In J. Lee & C. Day (Eds.), *Quality and change in teacher education: Western and Chinese perspectives*. New York: Springer.

Mayer, D., Doecke, B., Ho, P., Kline, J., Moss, J., Kostogriz, A., ... Walker-Gibbs, B. (2013). Longitudinal Teacher Education and Workforce Study (LTEWS): Final Report to DEEWR.

Mayer, D., Mitchell, J., Macdonald, D., & Bell, R. (2005). Professional standards for teachers: A case study of professional learning. *Asia Pacific Journal of Teacher Education*, 33(2), 159-179.

Mayer, D., Pecheone, R., & Merino, N. (2012). Rethinking teacher education in Australia: The teacher quality reforms. In A. Lieberman & L. Darling-Hammond (Eds.), *Teacher Education around the World: Changing policies and practices* (pp. 110-129). New York: Routledge.

McConney, A., Price, A., & Woods-McConney, A. (2012). Fast track teacher education: A review of the research literature on Teach For All schemes. Perth: Centre for Learning Change and Development, Murdoch University.

Menter, I., Hulme, M., Elliot, D., & Lewin, J. (2010). Literature Review on Teacher Education in the Twenty-First Century. Edinburgh, Scotland: Education Analytical Services, Schools Research, Scottish Government.

Ministerial Council on Education Employment Training and Youth Affairs. (2003). *National Framework for Professional Standards for Teaching*. Melbourne: MCEETYA.

Mockler, N. (2013). The slippery slope to efficiency? An Australian perspective on school/university partnerships for teacher professional learning. *Cambridge Journal of Education* (Published online: 22 Jul 2013), 1-17. doi: 10.1080/0305764X.2013.818103

Murray, S., Nuttall, J., & Mitchell, J. (2008). Research into initial teacher education in Australia: a survey of the literature 1995-2004. *Teaching and Teacher Education*, 24(1), 225-239

Pecheone, R., & Chung, R. (2006). Evidence in teacher education. *Journal of Teacher Education*, 57(1), 22-36.



Pecheone, R., & Chung Wei, R. (2007). Technical Report of the Performance Assessment for California Teachers (PACT): Summary of Validity and Reliability Studies for the 2003-04 Pilot Year. Stanford University: PACT Consortium.

Pecheone, R., Shear, B., Whittaker, A., & Darling-Hammond, L. (2013). edTPA Field Test: Summary Report. Stanford University, CA: Stanford Center for Assessment, Learning and Equity (SCALE).

Rowan, L., Mayer, D., Kline, J., Kostogriz, A., & Walker-Gibbs, B. (2015). Investigating the effectiveness of teacher education for early career teachers in diverse settings: The longitudinal research we have to have. *The Australian Educational Researcher*, 42(3), 273-298. doi: 10.1007/s13384-014-0163-y

Sleeter, C. (2014). Towards teacher education research that informs policy. *Educational Researcher*, 43(3), 146-153.

St. Maurice, H., & Shaw, P. (2004). Teacher portfolios come of age: A preliminary study. *NAASP Bulletin*, 88, 15-25.

Standards for Teachers of English Language and Literacy in Australia (STELLA). (2002). from http://www.stella.org.au/statements.jsp

Teacher Education Ministerial Advisory Group. (December 2014). *Action Now: Classroom ready teachers*. Canberra: Australian Government.

The State of Queensland (Queensland College of Teachers). (2012). An investigation of best practice in evidence-based assessment within preservice teacher education programs and other professions. Brisbane, Queensland: Queensland College of Teachers.

Tretter, T. R., Brown, S. L., Bush, W. S., Saderholm, J. C., & Holmes, V. (2013). Valid and reliable science content assessment for science teachers. *Journal of Science Teacher Education*, 24, 269-295.

Wilkerson, J. R., & Lang, W. S. (2003). Portfolios, the pied piper of teacher certification assessments: Legal and psychometric issues. *Education Policy Analysis Archives*, 11(45), Retrieved on August 30, 2008 from http://epaa.asu.edu/epaa/v2011n2045/.

Yinger, R., & Hendricks-Lee, M. S. (2000). The language of standards and teacher education reform. *Educational Policy*, 14(1), 94-106.

Zeichner, K. (1987). Preparing reflective teachers: An overview of instructional strategies which have been employed in preservice teacher education. *International Journal of Educational Research*, 11(5), 565-575.

Zeichner, K. (2005). A research agenda for teacher education. In M. Cochran-Smith & K. Zeichner (Eds.), *Studying Teacher Education: The Report of the AERA Panel on Research and Teacher Education* (pp. 737-759). Mahwah, NJ: Lawrence Erlbaum Publishers.

Zeichner, K. (2012). The turn once again toward practice-based teacher education. *Journal of Teacher Education*, 63(5), 376–382.



- f facebook.com/aitsl
- twitter.com/aitsl
- youtube.com/aitsleduau

