

University of Wollongong

Research Online

Faculty of Social Sciences - Papers (Archive)

Faculty of Arts, Social Sciences & Humanities

1-1-2018

Preparing quality teachers: Bridging the gap between tertiary experiences and classroom realities

Corinne Green

University of Wollongong, corinneg@uow.edu.au

Michelle J. Eady

University of Wollongong, meady@uow.edu.au

Peter J. Andersen

University of Wollongong, petera@uow.edu.au

Follow this and additional works at: <https://ro.uow.edu.au/sspapers>



Part of the [Education Commons](#), and the [Social and Behavioral Sciences Commons](#)

Research Online is the open access institutional repository for the University of Wollongong. For further information contact the UOW Library: research-pubs@uow.edu.au

Preparing quality teachers: Bridging the gap between tertiary experiences and classroom realities

Abstract

There are many factors that impact student learning, with quality educators being one of the most important elements for student success. Accordingly, the promotion of quality teacher preparation programs has become a priority for tertiary institutions, researchers, policymakers, and practitioners. There is a known disparity between tertiary experiences and classroom realities that leave graduate teachers feeling unprepared for the teaching profession. Employing a contextualized learning approach such as situated learning theory in teacher preparation programs can reduce this gap and successfully prepare graduate teachers for the teaching arena. This research project surveyed one cohort (n=154) at the conclusion of a four-year initial teacher education program, and again six months after graduation, as well as analyzed the subject outlines of the core final year subjects. The study found that the final year of the program incorporated the key tenets of situated learning theory, integrated theory and practice, and prepared the graduates for the realities of the teaching profession by effectively contextualizing their tertiary learning.

Keywords

quality, teachers:, bridging, gap, preparing, between, realities, tertiary, experiences, classroom

Disciplines

Education | Social and Behavioral Sciences

Publication Details

Green, C., Eady, M. & Andersen, P. (2018). Preparing quality teachers: Bridging the gap between tertiary experiences and classroom realities. *Teaching and Learning Inquiry: the ISSOTL Journal*, 6 (1), 104-125.



Corinne Green, UNIVERSITY OF WOLLONGONG, corinneg@uow.edu.au
Michelle Eady, UNIVERSITY OF WOLLONGONG, meady@uow.edu.au
Peter Andersen, UNIVERSITY OF WOLLONGONG, petera@uow.edu.au

Preparing Quality Teachers

ABSTRACT

There are many factors that impact student learning, with quality educators being one of the most important elements for student success. Accordingly, the promotion of quality teacher preparation programs has become a priority for tertiary institutions, researchers, policymakers, and practitioners. There is a known disparity between tertiary experiences and classroom realities that leave graduate teachers feeling unprepared for the teaching profession. Employing a contextualized learning approach such as situated learning theory in teacher preparation programs can reduce this gap and successfully prepare graduate teachers for the teaching arena. This research project surveyed one cohort (n=154) at the conclusion of a four-year initial teacher education program, and again six months after graduation, as well as analyzed the subject outlines of the core final year subjects. The study found that the final year of the program incorporated the key tenets of situated learning theory, integrated theory and practice, and prepared the graduates for the realities of the teaching profession by effectively contextualizing their tertiary learning.

KEYWORDS

teacher education, pre-service teachers, quality teaching, situated learning, tertiary experiences

INTRODUCTION

Background

The profound impact of quality teachers on student learning has been widely recognised by researchers and stakeholders alike (Adoniou, 2013; Australian Institute for Teaching and School Leadership [AITSL], 2011; Darling-Hammond, 2006a; McConney, Price & Woods-McConney, 2012). Teachers are responsible for the increasingly complex task of preparing diverse students for a dynamic world that requires creative, reflective, and critical thinkers (Darling-Hammond, 2006b; Gigliotti, 2012; Ritchart, 2001). Research has consistently demonstrated the value of quality teachers, given their position as the “single most influential in-school factor in improving student learning” (Adoniou, 2013, p. 49) with a lasting impact on student outcomes (Baumert & Kunter, 2013; Darling-Hammond, 2006b; McConney, Price & Woods-McConney, 2012).

In recent years, the Federal and State Ministers for Education in New South Wales, Australia, have acknowledged the connection between quality teachers and quality teacher education that has been recognised by researchers for over a decade (Adoniou, 2013; Australian Government Department of Education, 2014; Baumert & Kunter, 2013; Cochran-Smith & Zeichner, 2005; Darling-Hammond, 2006b; NSW Department of Education and Communities [DEC], 2013). While there has been some research in the area of teacher education, investigations into the elements of teacher preparation programs that effectively prepare graduate teachers for the realities of the teaching profession are lacking

(Beck et al., 2007; Helfrich & Bean, 2011; Kleickmann & Anders, 2013). Such research is invaluable for practitioners and policymakers, particularly in light of the ‘reality shock’ often encountered by beginning teachers due to a disparity between their tertiary experiences and the classroom realities, contributing to a high early career attrition rate (Le Maistre & Paré, 2010; Nahal, 2010; Rots, Kelchtermans & Aelterman, 2012).

Research that has been conducted regarding quality teacher preparation programs has found that a balance between, and meaningful connection of, theory and practice is crucial (Baumert et al., 2013; Beck, Kosnik & Rowsell, 2007; Darling-Hammond, 2006b; Nahal, 2010). This can be achieved through the implementation of learning approaches such as situated learning theory, which advocates contextualized constructivist learning (Beck, Kosnik & Rowsell, 2007; Bell, Maeng & Binns, 2013; Kunter & Baumert, 2013). Although such approaches are not commonplace at the tertiary level, the principles of situated learning theory have been shown to be an effective method of instruction for pre-service teachers (Bell, Maeng & Binns, 2013; Herrington & Oliver, 2000; Mishra & Koehler, 2007; Vannatta, Beyerbach & Walsh, 2001) as well as other disciplines of higher education (Ratinen & Lund, 2016; Stanley, 2013; Zhu & Bargiela-Chiappini, 2013). For this reason, this study has value for a broad audience beyond teacher educators alone, particularly for those who identify with the Scholarship of Teaching and Learning (SoTL) community (Jaarsma, 2015; Trigwell, 2013).

This research project investigates the features of the final year of a Bachelor of Primary Education (BPrimEd) degree. The study aims to show that by implementing the key tenets of situated learning theory (that is, authentic context, social interaction, and constructivism), the program is able to prepare quality graduate teachers as defined by the NSW Quality Teaching Model (QTM) (NSW Department of Education and Training [DET], 2003) and the Australian Professional Standards for Teachers (APST) (AITSL, 2011). The teacher preparation programs offered by this university have been recognised as the best in Australia by Quality Indicators for Learning and Teaching (2015), and its quality and effectiveness have been recognised by staff, students, and external stakeholders alike (Mantei & Tindall-Ford, 2012; Quacquarelli Symonds, 2016). This BPrimEd degree is therefore an appropriate candidate for research in this area.

This investigation will suggest implications for teacher educators and inform their future practice (Beck, Kosnik & Rowsell, 2007; Helfrich & Bean, 2011). The findings of this investigation will thereby equip teacher educators with strategies to further improve their own quality and effectiveness in preparing graduates for the realities of the classroom (Kunter & Baumert, 2013; Nahal, 2010; NSW DEC, 2013).

LITERATURE REVIEW

Scholarship of Teaching and Learning

By investigating how one program enacts contextualized learning, this study aims to make transparent to a diverse audience the details of the program and why its graduates feel that they have been effectively prepared for the classroom when other studies have indicated high attrition rates and early career frustrations related to tertiary experiences (Auten & Twigg, 2015; Chick & Poole, 2013). In so doing, this study fulfills one of the purposes of SoTL identified by Trigwell and Shale (2004)—that SoTL is (at least in part) “making transparent, for public scrutiny, how learning has been made possible” (p. 525).

As a multi-disciplinary movement, SoTL allows academics interested in developing, evaluating, and improving programs across a range of disciplines to learn from each other and systematically improve their teaching and learning practices (Chick & Poole, 2014; Trigwell 2013). Therefore, while

this study is set within a teacher education course, and focuses primarily on teacher education, it has benefits for all who would engage with its findings and understand how contextualized learning could be implemented at the tertiary level (Auten & Twigg, 2015; Felten, 2013).

Quality teachers

The complexities of a profession that aims to develop core competencies in children have been widely recognised (Adoniou, 2013; Baumert et al., 2013; Darling-Hammond, 2006b; Gigliotti, 2012). The competing demands experienced by teachers daily “requires both specialised and wide ranging knowledge and skills, and personal and professional dispositions that develop over time” (McConney, Price & Woods-McConney, 2012, p. 7). Graduate teachers, who may not recognise the intricacies of the profession, can experience a discouraging or even traumatic introduction to teaching (Cookson, 2005; Le Maistre & Paré, 2010; Nahal, 2010).

Teachers who can successfully negotiate the complexities of the profession have a considerable and meaningful impact on students of all ages (Adoniou, 2013; Darling-Hammond, 2006b; NSW DET, 2003). The classroom practices employed by a teacher have significant and tangible effects on students’ learning, with immediate impacts that also resonate in their later years of learning (Darling-Hammond, 2006b; Liberante, 2012).

Defining quality teachers

The dynamic nature of teaching creates difficulty in determining an accurate and useable definition of quality teaching (Wiens, Hessberg, LoCasale-Crouch & DeCoster, 2013). Research-based frameworks that measure a teacher’s ability to develop students cognitively, while providing emotional and social support, can greatly assist the evaluation of effective teaching and quality teachers (McConney, Price & Woods-McConney, 2012; Wiens et al., 2013).

The QTM and APST are employed in New South Wales schools. They serve complementary purposes, with the recommended pedagogy described by the QTM well aligned with the benchmarks of effective teaching practice provided by the APST (NSW DET, 2008). By explicitly illustrating the principles of quality teaching, these frameworks demonstrate the expectations of quality teachers and can thus illuminate the classroom reality (Gigliotti, 2012; Nahal, 2010).

Developed to provide a “consistent pedagogical framework within which all NSW teachers and schools can operate” (NSW DET, 2003, p. 5), the QTM provides clear descriptions of effective pedagogy (Ladwig, 2009). It is comprised of three interconnected dimensions—Quality Learning Environment, Intellectual Quality, and Significance—each with six interrelated elements that are observable through teachers’ classroom practice (Hinde-McLeod & Reynolds, 2007; Ladwig, 2009; Liberante, 2012) (see Table 1). A substantial body of research supports the use of the QTM for improved student outcomes, and allows it to provide a sound definition of quality teaching within this research project (Ladwig, Smith, Gore, Amosa & Griffiths, 2007; NSW DET, 2003).

Table 1: NSW Quality Teaching Model dimensions and elements (NSW DET, 2003)

NSW QUALITY TEACHING MODEL		
DIMENSIONS	ELEMENTS	
Quality Learning Environment	Explicit quality criteria Engagement High expectations	Social support Students' self-regulation Student direction
Intellectual Quality	Deep knowledge Deep understanding Problematic knowledge	Higher-order thinking Metalanguage Substantive communication
Significance	Background knowledge Cultural knowledge Knowledge integration	Inclusivity Connectedness Narrative

The APST reflect widely agreed upon principles regarding the teaching profession, organised into three domains and seven standards (McConney, Price & Woods-McConney, 2012) (see Table 2). These measures “set benchmarks of effective teaching practice, using standards as common reference points” (NSW DET, 2008, p. 4) to explicitly define the expectations of teacher competence and form the basis of career-long teacher accreditation processes (AITSL, 2011; McConney, Price & Woods-McConney, 2012).

Table 2: Australian Professional Standards for Teachers domains and standards (AITSL, 2011)

AUSTRALIAN PROFESSIONAL STANDARDS FOR TEACHERS	
DOMAINS OF TEACHING	STANDARDS
Professional Knowledge	1. Know students and how they learn 2. Know the content and how to teach it
Professional Practice	3. Plan for and implement effective teaching and learning 4. Create and maintain supportive and safe learning environments 5. Assess, provide feedback, and report on student learning
Professional Engagement	6. Engage in professional learning 7. Engage professionally with colleagues, parents/carers, and the community

Quality teacher preparation

Given the value of quality teachers within the education system, it is imperative to carefully consider the quality and effectiveness of teacher preparation programs (Baumert & Kunter, 2013; McConney, Price & Woods-McConney, 2012; Rots, Aelterman, Devos & Vlerick, 2010). In fact, research indicates that exemplary preparation programs could reduce the high rates of teacher attrition, as well as affect schools and student achievement (Adoniou, 2013; Beck, Kosnik & Rowsell, 2007; Boyd, Grossman, Lankford, Loeb & Wyckoff, 2007; DeAngelis & Presley, 2011; Goldhaber, Gross & Player, 2007; Livingstone, Guild & Clark, 2012). Regrettably, many graduate teachers have expressed

dissatisfaction regarding their preparation, attributing their early career frustrations to a disconnection between their tertiary experiences and the classroom reality (Barret Kutcy & Schulz, 2006; Mansfield, Beltman, Price & McConney, 2012; Nahal, 2010). The ability of teacher preparation programs to facilitate early success in teaching can have a significant and long-lasting impact on teacher retention and achievement (Adoniou, 2013; Beck, Kosnik & Rowsell, 2007; Livingstone, Guild & Clark, 2012; Rots, Aelterman, Devos & Vlerick, 2010).

While some important research has been conducted to address this issue, gaps in the literature still remain (Beck, Kosnik & Rowsell, 2007; Rots et al., 2010; Tatto, 2006). The extent to which tertiary programs adequately equip teacher candidates for the teaching profession has been identified as a key question for educational research (Beck, Kosnik & Rowsell, 2007; Cochran-Smith & Zeichner, 2005; Kleickmann & Anders, 2013). With the declaration by McConney, Price and Woods-McConney (2012) that there is a substantial number of underprepared teachers in Australian schools, research into individual preparation programs is of value (Rots, Kelchtermans & Aelterman, 2012).

Defining quality teacher preparation

Just as there are inherent difficulties in accurately defining quality teachers, ascertaining an adequate understanding of quality teacher preparation is a complex task (McConney, Price & Woods-McConney, 2012; Wiens et al., 2013). Nevertheless, an accurate and useable definition is a vital element of the empirical assessment of teacher preparation program effectiveness (McConney, Price & Woods-McConney, 2012). This can again be informed by the APST and previous research.

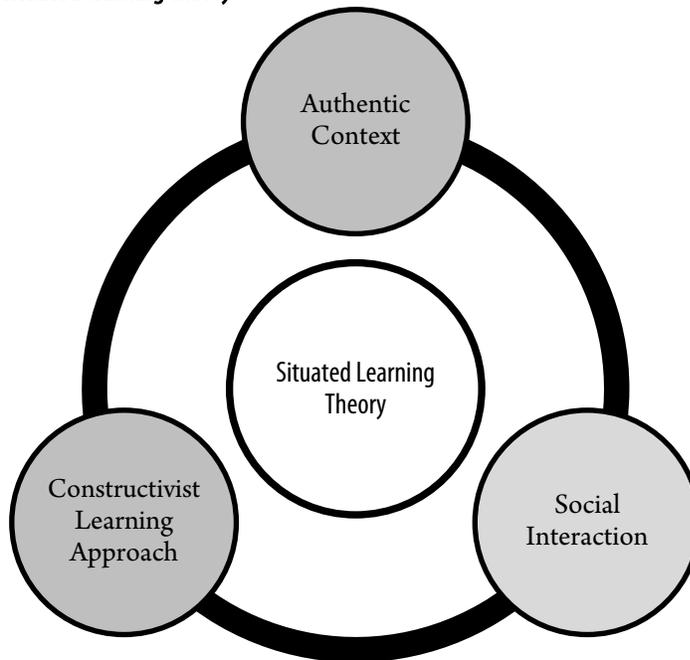
In Australia and other nations, an outcomes-based approach has been adopted to reveal a program's quality (McConney, Price & Woods-McConney, 2012; Wiens et al., 2013). Teacher preparation programs must demonstrate that they are aligned with the APST to gain accreditation from AITSL (AITSL, 2011; Mantei & Tindall-Ford, 2012).

Further to this alignment with "what beginning teachers should know and be able to do as they take up their practice in classrooms" (McConney, Price & Woods-McConney, 2012, p. v), quality programs have been shown to have a balance between, and meaningful connection of, theory and practice (Baumert et al., 2013; Beck, Kosnik & Rowsell, 2007; Darling-Hammond, 2006b; Nahal, 2010). Without an opportunity for practice, theoretical components may appear irrelevant or be superficially understood; without a solid foundation of theory, teacher practice may become uncontrolled and not achieve its purpose (Beck, Kosnik & Rowsell, 2007; Darling-Hammond, 2006b; Helfrich & Bean, 2011). Although providing this balance between theory and practice is more difficult and time consuming than other approaches, it is vital for the provision of quality teacher preparation (Adoniou, 2013; Beck, Kosnik & Rowsell, 2007; Darling-Hammond, 2006b; Nahal, 2010).

Situated Learning Theory

Implementing contextualized learning within the tertiary environment is one method by which thorough teacher preparation can be achieved (Bell, Maeng & Binns, 2013; Le Maistre & Paré, 2010). Situated learning theory is a learning approach that insists upon contextualized, authentic instruction for effective and long-term learning (Bell, Maeng & Binns, 2013; Herrington & Oliver, 2000). The key tenets of the theory are constructivist learning within an authentic context that incorporates social interaction (Bell, Maeng & Binns, 2013; Orgill, 2007; Schell & Black, 1997) (see Figure 1).

Figure 1: Key tenets of situated learning theory



A teacher education program based on situated learning theory will provide opportunities for students to actively construct knowledge, with peers, in circumstances that reflect how that knowledge will be used in the real world (Bell, Maeng & Binns, 2013; Orgill, 2007). It may encourage student direction in regards to assessment tasks, and invite student input throughout tutorials, to promote a constructivist approach (Bell, Maeng & Binns, 2013; Herrington & Oliver, 2000). Situated learning can incorporate group work and peer reflections to encourage collaborative learning through social interactions (Owen-Pugh, 2002; Riveros, Newton & Burgess, 2012), thus enhancing the learning experience. Programs built on a foundation of situated learning strive to connect learning to, and position learning within, the classroom environment, encouraging students to apply their knowledge and understanding to this authentic context (Herrington & Oliver, 2000; Smetana & Bell, 2011).

Given the influence that tertiary experiences can have on teacher practice, implementing the key tenets of situated learning theory through a teacher preparation program can see graduate teachers implementing these same elements in their own classroom teaching (Luft, Roehrig & Patterson, 2003; Mishra & Koehler, 2007; Smetana & Bell, 2011). By doing so, these teachers will be addressing multiple elements of both the QTM (NSW DET, 2003) and the APST (AITSL, 2011), encouraging quality teaching practices. By employing elements of situated learning theory within a teacher preparation program, teacher candidates can become well-prepared for the teaching profession (Riveros, Newton & Burgess, 2012; Smetana & Bell, 2011).

METHOD

Setting

The Bachelor of Primary Education program provided in 2013 at the university was an AITSL accredited four-year traditional undergraduate degree. At the heart of the program was the goal to connect and position the undergraduates' learning within the classroom environment, encouraging the students to apply their knowledge and understanding to this authentic context (Herrington & Oliver, 2000; Smetana & Bell, 2011).

The primary teacher education program has been constantly evaluated and revised to ensure the quality and relevance of the subjects on offer. Such changes were made based on evidence gathered from students and graduates, as well as school leaders, to ensure that the primary teacher education program meets workplace needs and adequately prepares graduates for the teaching arena (Shuls & Ritter, 2013; Soccorsi, 2013). The reflective practices employed in the program’s development have ensured its continued quality and relevance for the teaching profession (Darling-Hammond, 2006b; Hollins, 2011).

The program prescribed for pre-service teachers numerous courses in pedagogy, child development, and primary education Key Learning Areas (KLAs), alongside professional experiences within the teaching arena (Mantei & Tindall-Ford, 2012; Shuls & Ritter, 2013). The final year of this cumulative professional degree consisted of five core subjects, two elective subjects, and a six-week internship within two thirteen-week semesters. The second semester of the final year was ‘front loaded,’ with pre-service teachers attending their six-week internship before seven weeks on campus to complete coursework (see Table 3).

The study took place as the 2013 cohort of 154 students concluded their degree and entered the workforce.

Table 3: Final year of the Bachelor of Primary Education degree in 2013

SEMESTER 1 (AUTUMN SESSION)	SEMESTER 2 (SPRING SESSION)	
EDPD401 Professional Development 3	Internship (6 weeks)	EDPD402 Professional Development 4
EDSD401 Education for Sustainability		EDIC402 ICT as Cognitive Tools
EDSE401 Education for Social Equity (Part 1)		EDSE401 Education for Social Equity (Part 2)
Education Elective A (Student’s choice)		Education Elective B (Student’s choice)

Research questions

The aim of this research was to identify the features of teacher education subjects in the final year of a program that prepare graduates to be quality teachers in the classroom. To achieve this aim, the following sub-questions were asked:

- **How do the final year subjects of the Bachelor of Primary Education program**
 - **align with situated learning theory?**
 - **prepare graduate teachers for classroom practice?**
 - **prepare graduate teachers to display the characteristics of quality teachers?**

The attitudes of the 2013 cohort, and the program itself, were investigated to answer these questions.

Participants

The primary participants for this study were graduate teachers from the BPrimEd program. Subject outline documents from the core subjects of the final year of the degree were also collected for analysis.

Teachers who graduated from the program in 2013 were chosen for this study as a convenience sample (Teddlie & Yu, 2008). The initial survey was conducted in November 2013 within a university lecture and garnered 154 responses relating to specific elements of the final year core subjects. It also provided the contact details of the 57 respondents of the second survey, conducted in May 2014, regarding the preparation provided by the university degree for their classroom practice, and their demonstration of quality teacher characteristics. As the entire 2013 cohort was involved with Survey 1, the similarity between the demographic figures of both surveys shows that the survey respondents were representative of their population (see Table 4).

Table 4: Demographic information from Surveys 1 and 2. Note that questions regarding employment status and education system were not asked in Survey 1.

		SURVEY 1 (NOV 2013) (N=154)		SURVEY 2 (MAY 2014) (N=57)	
		Σ	%	Σ	%
Gender	Male	23	15%	7	12%
	Female	131	85%	50	88%
Age	20-25 years old	116	75%	40	70%
	26-35 years old	31	20%	14	25%
	36-45 years old	3	2%	3	5%
	45+ years old	1	1%	0	0%
	<i>Did not answer</i>	3	2%	—	—
Employment Status	Full time teacher	—	—	17	30%
	Temporary teacher	—	—	8	14%
	Casual teacher	—	—	25	44%
	Not currently working as a teacher	—	—	7	12%
	<i>Did not answer</i>	—	—	—	—
Education System	Public school system	—	—	45	79%
	Independent school system	—	—	3	5%
	Catholic school system	—	—	5	9%
	<i>Did not answer</i>	—	—	4	7%

Subject outlines of the five core final year subjects of the BPrimEd degree were obtained for document analyses from the 2013 subject coordinators and the School of Education. These documents provided an understanding of the five core fourth year subjects—EDPD401 (Professional Development 3), EDSD401 (Education for Sustainability), EDSE401 (Education for Social Equity), EDPD402 (Professional Development 4), and EDIC402 (ICT as Cognitive Tools)—the final year of the BPrimEd program in 2013, and its alignment with situated learning theory.

Data collection

Surveys were used with graduate teacher participants to collect data about the preparation provided by the BPrimEd degree regarding their classroom practice and how they enacted the characteristics of quality teachers (see Appendix A). This method facilitated the collection of data from a large number of participants that could be easily compared and analysed, particularly through the use of online survey tools (Dillman, Smyth & Christian, 2009; Mertens, 2005).

The initial survey (S1), conducted prior to the commencement of this research project, focused on participants' predictions of their preparedness for future teaching practice. A second survey (S2) was distributed six months later, at which point the majority of participants had been teaching in casual, temporary, or permanent positions for a number of months. This survey asked the 57 respondents to reflect on how their teaching practice and professional characteristics were impacted by their final year of study.

Subject outlines of the five final year core subjects studied by participants in 2013 within the BPrimEd degree were collected and analysed to gain an understanding of these subjects and their implementation of the program's broad aims (see Appendix B) (Gillham, 2010; Mertens, 2005). This provided further evidence of the alignment of the given tertiary subjects with situated learning theory.

Data analysis

All qualitative data from Survey 1 (n=154), Survey 2 (n=57), and the subject outlines (n=5) underwent thematic analysis to identify themes and consolidate evidence to answer the research question (Bergman, 2010; Lieber & Weisner, 2010).

Qualitative data from the first and second survey consisted of typed responses to the survey questions. These data were open coded by repetition and related to the key elements of the research sub-questions—the alignment of the program with situated learning theory, its preparation of graduates for classroom practice, and its preparation of graduates to display the characteristics of quality teachers (as defined by the QTM and the APST) (Bryman, 2016; Gillham, 2010).

The text of the subject outlines was analysed using systematic coding based on the key tenets of situated learning theory—authentic context, social interactions, and constructivism (Creswell, 2014). This provided evidence with regard to the alignment of the final year core subjects to situated learning theory, and the subjects' preparation of graduates to display the characteristics of quality teachers (QTM and APST) (Bell, Maeng & Binns, 2013; McConney, Price & Woods-McConney, 2012; Ryan & Bernard, 2003).

Following coding, the preliminary findings of all data sources were compared for similarities and differences (Bryman, 2016; Onwuegbuzie & Combs, 2010). Where the subject outlines and survey responses differed (which was rare), it was understood that an intention of the subject (expressed in the subject outline) did not match the lived experience of the subject (expressed by survey respondents). As a form of triangulation, each piece of corroborating evidence was able to “shed light on a theme or perspective” (Creswell, 2013, p. 251). From this process, themes emerged that were related to the key research question and sub-questions.

Validity and reliability

A number of steps were taken to ensure the credibility and trustworthiness of this study. To ensure clarity and adequacy of the survey instruments, an expert in survey generation was consulted and pilot testing was conducted with a similar yet distinct set of participants (that is, the program's 2012 cohort) (Bryman, 2016; Flick, 2002). When analyzing the data and forming themes, the emerging

findings from the two surveys and the document analysis of the subject outlines were corroborated to enable triangulation (Bryman, 2016; Creswell, 2013). These emerging findings were also subjected to peer debriefing amongst the three authors to establish the credibility of the findings (Creswell, 2013).

Throughout the reporting process of this research project, the authors have sought to provide rich, thick descriptions of the setting and participants involved (Creswell, 2014). This has been done to assist the transferability of findings to other settings with shared characteristics (Creswell, 2013; Lincoln & Guba, 1985).

Ethics

Ethics approval for this study was granted by the university's Human Research Ethics Committee. Participants were informed that responding to the surveys would be considered consent, and that their responses would remain anonymous and would have no bearing on their marks in the subject or their relationship with the university.

RESULTS

The results of the study were revealed through the analysis of both surveys and the careful review of the subject outlines for the subjects in question, and are presented thematically in the following sections.

A number of the fourth-year subjects seek to consolidate skills and develop varied teaching resources. EDIC402, a subject that focuses on technology, seeks to pull together skills developed through the degree and introduce new tools that can improve classroom practice. EDPD402, a professional development subject, encourages pre-service teachers to make goals for the future, as well as generates a comprehensive resource designed to assist beginning teachers to navigate the pressures of the profession. EDSD401, Education for Sustainability, is a practical, classroom-based subject that generates teaching resources for Science and Human Society and its Environment. These core subjects seek to complete students' preparation for the teaching profession, encouraging professional reflection on how they have developed over the course of the four-year degree, implementing a situated learning based approach to do so.

In their fourth year of study, students were urged to consider how each element of the Bachelor of Primary Education degree built upon one another in a deliberate manner to produce graduate teachers ready for the realities of the teaching profession. The subject outlines revealed a distinct focus in the final year of the BPrimEd degree on the immediate future of its graduates. The results have been presented according to the key elements of the research questions.

Alignment with situated learning theory

The implementation of the key tenets of situated learning theory—authentic context, social interactions, and constructivism—can provide the meaningful balance between theory and practice that is critical for any quality teacher preparation program. The results below have been categorized by each of these tenets.

Implementation of authentic context

The results of the surveys showed that tutorial activities and assessment tasks of all final year core subjects provided a simulation of the classroom environment, as well as providing a connection to real world situations. One participant stated that subjects required pre-service teachers to “reflect on [their] own experiences from the classroom and how possible provided situations could be completed”

(S2), with another stating that the subjects “connected us to real world situations” (S2). Each subject encouraged pre-service teachers to draw on previous experiences to complete coursework and assessment tasks, by requiring students to “explore and justify your initiative based on your experience in the school” (EDSD401).

A few of the participants indicated they would appreciate a greater number of authentic, practical examples of various aspects of teaching, such as one participant who, given the variety of cultures in their classroom, would have appreciated “more practical examples of how to be inclusive without it being ‘token’ inclusive” (S2). These few participants typically expressed a desire to either have a certain area (such as inclusivity, assessment, or classroom layout) addressed more completely, or to graduate from the degree amply equipped with resources for specific teaching areas and needs of the students in the classroom.

Implementation of social interactions

Research participants frequently stated that group assignments, present in almost all final year core subjects, provided valuable opportunities for collaboration and the sharing of ideas and resources. One participant found that “other students exposed me to different aspects/views of looking at things” (S2). Similarly, tutorials provided participants with the opportunity to “bounce ideas off each other and share experiences to help others” (S2), with fourth year tutorials deemed “more interactive and engaging” (S2) than previous years. As one participant asserted, “The collaborative learning experience allowed us to share ideas and progress with greater understanding” (S1).

Concern was expressed regarding the issues that arise when group work is inappropriately implemented. Some echoed one participant’s assertion that the “difficulties... [associated with] coordinating a large group [to complete an assessment task] overshadowed the content” (S1), while others identified tasks that were unsuitable for group work, such as addressing selection criteria for job applications. Some subjects, such as EDPD402, proactively implemented a firm structure for group assessments, which appeared to assist in the provision of a productive social environment for those tasks.

Implementation of a constructivist approach

A constructivist approach was difficult to identify due to the nature of this project. Even so, observations were made and opportunities presented for student-directed learning which was clearly evident through most assessment tasks within all subject outlines. This was appreciated by participants as they could “research what was relevant to us” (S1); however, one participant expressed a desire for “a greater degree of choice and adaptability” (S2) in the final year to accommodate a broader range of career options.

Integration of theory and practice

Participants expressed a need for meaningful connections between theory and practice throughout their teacher preparation. Many were grateful for the opportunities presented within fourth year, saying “the assignment created a complete picture of both theory and practice” (S1) and “[it is] very helpful... to be prepared for the classroom practically rather than just theoretically” (S1). Others provided suggestions for further improvement, including the streamlining of EDPD401 and EDPD402 with “guest speakers from within the field that would tie theory to actual practice [to] make this subject more relevant and meaningful, especially in the final year” (S2).

Preparation for the classroom

Reflecting the realities of the profession and developing appropriate resources and skills through coursework can prepare graduate teachers for classroom practice. The sections below highlight the participants' views on these issues that arose from the data.

Reflecting the realities of the teaching profession

The realities of the teaching profession were made clear to participants throughout the final year of the BPrimEd degree in a variety of ways. Where appropriate, assessment tasks required the use of the NSW Syllabi for the Australian Curriculum, currently being implemented in NSW schools. Subject outlines conveyed the notion that while teachers aim to be creative and innovative, they should also be realistic in planning lessons and activities, requiring in assessment tasks that participants “show creativity, along with a realistic approach” (EDSD401), and that they “try to be innovative but also realistic” (EDIC402). Coursework and assessment tasks encouraged participants to consider “issues and challenges I may face as a classroom teacher” (S1), showing “how much more is involved when teaching than we realised” (S1).

Few participant responses gave evidence of a reality shock in the transition from university to the classroom, with participants instead saying that because of the degree “I knew what was expected of me” (S2) in the classroom, and that the degree “has helped with teaching on a full-time basis” (S2). Some responses suggested improvements to further reduce the risk of reality shock, which was experienced by one participant who admitted that “as a classroom teacher now I did feel slightly overwhelmed when it came to all the aspects of my classroom” (S2). Data collected indicated that additional theory-based, practical, and realistic examples of various aspects of the teaching profession (such as classroom management, cultural integration, reporting, and parent interviews) could further assist graduate teachers in their beginning careers. One participant suggested that facilitating connections with professional organisations would familiarise pre-service teachers “with the real world of teaching beyond university” (S2). Additionally, some requested that tasks and activities recognise the broad range within the teaching profession, including casual teaching and overseas contexts.

Developing resources

According to the subject outlines, a variety of resources (including lesson plans, units of work, job applications, and classroom design plans) were developed through the coursework and assessment tasks of the final year subjects. Participants expected these resources to “eliminate some stress as [they] can pick it up and go” (S1) and “offer the necessary support when not in the university environment” (S1), with one participant acknowledging that “many of the tasks/activities [in the final year of the degree] were aimed towards the hypothetical situation of being a full-time teacher in an Australian NSW public school” (S2). Many respondents echoed one participant's comment that “the resources are endless and this helps to set me up for my career” (S1).

Developing skills

Through the final year of the degree, graduate teachers felt that they gained various skills that are important and beneficial for beginning teachers to possess, such as competent use of technology, planning and programming, differentiation, and reflection.

Participants learned how to implement technology for “student collaboration and positive support and feedback” (S2), as well as “for engagement and interactivity” (S2). Planning and programming was deemed a valuable skill that had been addressed in the final year, although given its

relevance for all teachers across their career, one participant believed it deserved more focus throughout the degree.

Differentiation was supported by coursework and assessment tasks that “taught us how to refine our skills to be able to provide lessons to students that catered to all levels of ability and all learning styles to ensure that students could succeed within the classroom” (S2). In particular, EDSD401 promoted the provision of achievable challenges for students, while EDPD402 gave “a broad range of information and strategies” (S1) related to differentiation.

Skills relating to the teaching profession beyond the classroom were also developed, with job application skills developed in EDPD401 and EDPD402. These were valuable to the participants, with one stating, “I had absolutely no idea how to answer selection criteria, now I am very confident and have used my skills” (S1). A few of the participants requested a greater focus on the procedures required for achieving AITSL accreditation within the first few years of teaching.

Preparation for quality teaching characteristics

The participants were able to identify the aspects of the QTM and the APST that were evident through their studies, and that, as a result, are now implemented in their classroom practice.

Quality Teaching Model

The QTM (NSW DET, 2003) indicates the expectations of quality teaching within NSW, with three dimensions and six elements in each domain. Participants noted several ways that various elements of the QTM were evident in their final year of study, and then implemented in their classroom practice. The specific elements mentioned by participants have been indicated in the following section in italics (see Table 1).

Explicit quality criteria were evident across all subjects for all assessment tasks, and this encouraged one participant to be

explicit about the quality of work that is expected [in the classroom]. Just like we received marking criteria and examples of past assignments [through the degree], I always show my students the marking criteria and an example of how their work should be set out. This gives something for the students to strive towards (S2).

Similarly, the *high expectations* expressed through all subjects within assessment task criteria reportedly influenced the classroom practice of a number of the graduate teachers, such as one who stated “I always keep high yet achievable expectations of my students” (S2) because of their studies.

Several responses acknowledged the *social support* provided within the final year subjects, “making sure I was able to achieve” (S2). It made a direct impact on teaching practice for one participant who stated “I relied on social support throughout my degree, and have used that in the classroom to my advantage” (S2) in areas such as behaviour management.

Substantive communication was “always encouraged during tutorials across all fourth year subjects” (S2), and continues to be implemented within classroom discussions by a number of participants. Responses indicated that the “abundance of terminology that was relevant to various KLAs” (S2) used within final year BPrimEd subjects encouraged graduates to use and teach *metalanguage* within the classroom for greater student understanding.

Knowledge integration was evident through the cumulative nature of the degree. As recognised by several respondents, “all the new learning in the fourth year built upon knowledge we learnt

throughout our degree” (S2). Participants believed the opportunities to build on and integrate previous knowledge and pre-service teaching experiences deepened their understanding of the teaching profession.

Explicit opportunities to “demonstrate and make links with *background knowledge* were provided throughout our degree and through the discussion in tutorials” (S2), and resulted in graduate teachers making use of students’ background knowledge in their teaching practice. Similarly, *connectedness* was evident through most final year subjects in the degree, where pre-service teachers were “connected to real world situations and shown strategies and resources for use in our classrooms” (S2). These experiences impacted graduate teachers’ classroom practice, with many indicating they seek to “ensure that I am able to build on from what students already know and refer to real life situations” (S2).

These responses confirm the ways that the QTM was present in the degree, and how participants then applied it in their classroom teaching.

Australian Professional Standards for Teachers

The APST (AITSL, 2011) forms the required benchmarks for Australian teachers at different stages in their career, and consists of three domains and seven standards (see Table 2). Each subject outline developed for the degree clearly identified the APST that the subject addressed, with some also reflecting the Standards within the learning outcomes for the subject. Participants also generally agreed that, due to the final year core subjects, they felt “prepared to address the Standards as graduate teachers” (S2).

A handful of respondents indicated a desire for a greater focus on the APST in the final year of their studies. A more explicit and consistent focus on the Standards and teacher accreditation requirements could take place, they suggest, through final year tasks and activities, or through a session “where the APST are explained and examples given so pre-service teachers know what they have to achieve in order to become eligible to... be considered for teaching” (S2).

DISCUSSION

The findings of this research indicate that the final year core subjects of the BPrimEd program consistently implement authentic contexts, social interactions, and constructivism, thereby meaningfully integrating theory and practice throughout coursework and assessment tasks (Adoniou, 2013; Bell, Maeng & Binns, 2013; Le Maistre & Paré, 2010). By listening to the voices of the program’s graduates, this study has confirmed that the employment of the key tenets of situated learning theory appropriately prepares graduates of the program to demonstrate quality teaching characteristics, as well as develop realistic expectations of the teaching profession, and resources and skills relating to classroom practice (AITSL, 2011; Beck, Kosnik & Rowsell, 2007; Clift & Brady, 2005; Darling-Hammond, 2006b; NSW DET, 2003; Rots, Kelchtermans & Aelterman, 2012; Tatto, 2006; Woodcock & Reupert, 2013).

Alignment with situated learning theory

Implementing contextualized learning approaches, such as situated learning theory, within the tertiary environment can enable graduate teachers to be better prepared for the realities of the classroom (Bell, Maeng & Binns, 2013; Le Maistre & Paré, 2010; Mishra & Koehler, 2007; Wiens et al., 2013). The participants of this study have shown that their final year of study anticipated the complex situations they would face, and prepared them for the classroom.

The provision of an authentic context for learning is the “fundamental premise upon which [situated learning theory] rests” (Herrington & Oliver, 2000, p. 34), and within the final year core subjects of the BPrimEd program, authentic contexts were consistently provided. Throughout coursework and assessment tasks, primarily through the simulation of the classroom environment, or reflection upon previous classroom experiences, the subject content was shown to align with these tenets. Such tasks have been shown to encourage the exploration of new knowledge within contexts that were inherently similar to where and how the knowledge would be applied (Beck, Kosnik & Rowsell, 2007; Nahal, 2010) and it was no different for the participants of this study. This encourages them not only to be successful consumers of authentic learning but then in turn to become proponents of authentic learning experiences in their own classrooms.

Graduate teachers reflected that the knowledge and skills achieved through authentic tasks throughout the final year of the BPrimEd program could be successfully applied in a variety of contexts. This echoes the literature on situated learning theory acknowledging that authentic tasks enable learners to view their knowledge as “a tool to be used dynamically to solve problems” (Herrington & Oliver, 2000, p. 23), promoting its implementation in novel and complex situations (Bell, Maeng & Binns, 2013; Riveros, Newton & Burgess, 2012; Schell & Black, 1997; Smetana & Bell, 2011). In understanding this, these new teachers can envision ways that they can adapt authentic tasks, not only in their own classrooms, but in other contexts as well. These teachers now see the value in implementing authentic learning in various school and community learning opportunities.

In relation to the social context, the findings of this research project mirror that of previous research indicating the power of peer collaboration to heighten the perceived effectiveness of teaching and learning (Bell, Maeng & Binns, 2013; Herrington & Oliver, 2000; Riveros, Newton & Burgess, 2012). Graduate teachers recognised the value of collaboration and discussion to share ideas, experiences, and resources, and to progress with greater understanding. Sharing alternate perspectives through group work and tutorial discussions was deemed by participants to be a valuable teaching strategy in both tertiary and primary contexts, as has been shown previously (Churchill et al., 2011; Trees, 2013).

While most of the feedback from the surveys was positive, respondents did raise concerns regarding the inappropriate implementation of group work, echoing the work of Trees (2013) and Volet and Mansfield (2006). If employing group work does not address the main purpose of the task, the task becomes more demanding and less useful. This can be addressed through the appropriate assignment of group tasks, as well as the proactive provision of firm structures for group assessments, as seen in some of the final year core subjects (Mansfield & Volet, 2014; Volet & Mansfield, 2006). The difficulties of identifying and implementing constructivist learning in both the tertiary and primary classroom that have been acknowledged by Savasci and Berlin (2012), such as an inconsistency between teacher beliefs and teacher practice, the impact of institutional culture, and available resources, as well as the incomplete picture provided by survey instruments, were also seen in this study.

Graduate teachers expressed appreciation for assessment tasks that encouraged them to make meaningful connections between their experiences, theory, and practice, shown by comments such as “Thank you for actually creating an assignment which will assist in my actual teaching in my first year” (S1), and “Many assessment tasks...had strong links to elements in the classroom, personal experiences, reflective practices, and future possible situations” (S2). Such tasks were identified by respondents as particularly evident in the final year of the degree, and productively prepared them for the classroom environment. Combining theory and practice in this way enabled respondents to develop realistic

expectations of the teaching arena (Le Maistre & Paré, 2010; Nahal, 2010; Rots, Kelchtermans & Aelterman, 2012).

Preparation for the classroom

A significant contributing factor to the reality shock experienced by many beginning teachers is the disparity between tertiary experiences and the classroom reality (Barret Kutcy & Schulz, 2006; Le Maistre & Paré, 2010; Nahal, 2010; Soccorsi, 2013). Rots, Kelchtermans, and Aelterman (2012) argue “teacher educators should strive to help their students develop realistic images of the teaching profession and of themselves as teachers” (p. 9), which has been evident within the BPrimEd degree. Assessment tasks in the final year enabled participants to be prepared for what is required of classroom teachers (Gigliotti, 2012; Rots, Kelchtermans & Aelterman, 2012; Wiens et al., 2013). Preparation for both the expected and unexpected can absorb the shock and help future teachers to be flexible, resilient, and courageous in their positions.

Some evidence was given of a tough transition between the university and school contexts by a small number of graduate teacher participants. However, on the whole, the discouraging or traumatic beginnings in the teaching profession found in previous research were not the experience of these graduates (Barret Kutcy & Schulz, 2006; Le Maistre & Paré, 2010; Nahal, 2010; Rots, Kelchtermans & Aelterman, 2012; Soccorsi, 2013). This disconfirmation of previous research may be due to the generation of realistic expectations throughout the final year of the program that promoted the recognition of issues and challenges in the teaching profession.

The assessment tasks and coursework of the final year of the degree made use of syllabi currently implemented within NSW schools. Pre-service teachers were encouraged to be creative, innovative, and realistic as they plan lessons and activities, reflecting the complex expectations of teachers (Darling-Hammond, 2006b; Gigliotti, 2012). Furthermore, skills and resources developed throughout the program prepared graduates to successfully negotiate a variety of difficult situations as they implement quality teaching practices.

Resources (including lesson plans, units of work, job applications, and classroom design plans) were generated within an authentic context informed by typical early career teacher experiences. This heightened the relevance of the product for graduate teachers, providing them with a variety of tools for use within diverse situations in the teaching profession (Bell, Maeng & Binns, 2013; Liberante, 2012). Participants explained that providing graduates with a “good repertoire” (S1) of resources “helped set [them] up for [their] career” (S1), and encouraged the implementation of quality teacher practices such as “increased student engagement” (S2).

The skills acquired through the final year of the degree likewise benefited graduate teachers’ practice, preparing them for the complexities of quality teaching. This was demonstrated by responses like the following: “Subjects in fourth year taught us how to refine our skills to be able to provide lessons to students that catered to all levels of ability and all learning styles to ensure that students would succeed within the classroom” (S2). Gaining competency in technology use, planning and programming, differentiation, and reflection through the core final year subjects of the degree encouraged graduates to become “creative, reflective and critical thinkers capable of supporting the needs of an increasingly diverse population in the increasingly accountable climate that is education” (Mantei & Tindall-Ford, 2012, p. 4).

Due to the cumulative nature of the degree, certain skills and resources (such as assessment and classroom management) may have been addressed earlier in the program (Beck, Kosnik & Rowsell, 2007; Woodcock & Reupert, 2013). Even so, graduate teachers did indicate a desire for an increased focus on some aspects of the profession, including planning and programming, reporting, and

accreditation. According to participants, effective teacher preparation needs to be comprehensive and consider all facets of the teaching profession.

Preparation of quality teacher characteristics

Graduate teacher responses indicated a keen awareness of, and interest in implementing, the characteristics of quality teachers as provided by the QTM. Given the influential role of teachers as the “most important element of the education system” (Baumert et al., 2013, p. 25), the fact that these graduates display the characteristics of quality teachers early in their careers should be of great interest to practitioners and policymakers.

The APST are an important component of all subjects within the degree, with participants generally agreeing that the final year core subjects had prepared them to address the Standards at the Graduate level.

Overall, quality teaching is both experienced within the final year of the BPrimEd program, and put into practice by its graduates in the classroom as they implement the QTM and address the APST.

LIMITATIONS

As with all research, there were limitations to this study that must be recognised (Creswell, 2014; Durn, 2010). Most of this study’s limitations were a result of the constraints of the one-year project, limiting the time and resources available for the research.

The fixed nature of the surveys diminished the opportunity for clarification or elaboration with participants (Dillman, Smyth & Christian, 2009). Furthermore, the self-reporting measures used in the surveys means that the validity of the findings are dependent upon the honesty of the participants, and the use of convenience sampling restricted the generalisability of the findings from this study (Collins, 2010; Kleickmann & Anders, 2013; Suri, 2011).

Even so, the data collection tools used were appropriate given the large number of participants and limited time available for data collection (Denscombe, 2010). Steps were taken (such as pilot testing the surveys, maintaining participant anonymity, and ensuring a representative population) to mitigate the effects of these limitations on the results (Bryman, 2016; Creswell, 2014; Kervin et al., 2006).

CONCLUSION

Research literature indicates that many teacher preparation programs are failing to adequately prepare graduates to be quality teachers within the realities of the classroom (Barret Kutcy & Schulz, 2006; Beck, Kosnik & Rowsell, 2007; Nahal, 2010; Rots, Kelchtermans & Aelterman, 2012). The findings of this research project, however, indicate that graduates of the BPrimEd program are appropriately prepared for the realities of the classroom in regard to expectations, skills, and resources. The contextualized approach provided in this program, which is not often found at the tertiary level, contributes to this preparation of quality teachers (Bell, Maeng & Binns, 2013; Herrington & Oliver, 2000; Smetana & Bell, 2011).

Within this program, the effective preparation of quality teachers has been achieved by incorporating the key tenets of situated learning theory and integrating theory and practice throughout coursework and assessment tasks. All final year core subjects contextualized the learning and prepared graduates for the realities of the teaching profession. This consistent integration of theory into practice is widely recognised as an element of exemplary teacher preparation programs (Adoniou, 2013; Beck, Kosnik & Rowsell, 2007; Darling-Hammond, 2006b; Soccorsi, 2013).

Additionally, the resources and skills developed throughout the final year of the degree provided graduates with the tools required to successfully negotiate their early teaching positions. Realistic

expectations of teaching were likewise generated throughout final year subjects, easing the transition between the university and school contexts. The implicit and explicit engagement with the QTM and APST equipped graduates with the skills and experience to implement these elements of quality teaching within the classroom.

By illuminating the details of the program, and the ways that the key tenets of situated learning theory have been implemented effectively, this project inspires educators to continue to provide creative and meaningful learning opportunities for their students (deBraga, Boyd & Abdunour, 2015; Trigwell & Shale, 2004). In doing so, this piece of SoTL research can allow a broad audience to understand how contextualized learning could be implemented at the tertiary level (Auten & Twigg, 2015; Felten, 2013). Along with future research into the preparedness of graduate teachers, the long-term impact of quality teacher preparation programs, and the effective elements of these programs, this study can reveal not only how quality teacher preparation programs, and quality teachers, can be developed, but also a way of enhancing student learning across a variety of disciplines.

Corinne Green is a PhD Student at the University of Wollongong, Australia, as well as a Lecturer and Tutor in teacher education. She is currently researching school-university partnerships in initial teacher education programs.

Michelle Eady is a Senior Lecturer in teacher education at the University of Wollongong, Australia. Her research interests include work-integrated learning, communities of practice, school-university partnerships, and Indigenous strengths.

Peter Andersen is a Lecturer in teacher education at the University of Wollongong, Australia. His research explores how to empower children and teachers to become environmental change agents in their schools, communities, and homes.

REFERENCES

- Adoniou, M. (2013). Preparing teachers: The importance of connecting contexts in teacher education. *Australian Journal of Teacher Education*, 38(8), 47-60, <http://dx.doi.org/10.14221/ajte.2013v38n8.7>.
- Australian Government Department of Education. (2014). *Teacher Education Ministerial Advisory Group Issues Paper*. Canberra: Australian Government Department of Education.
- Australian Institute for Teaching and School Leadership. (2011). *Australian Professional Standards for Teachers*. Melbourne, VIC: Australian Institute for Teaching and School Leadership.
- Auten, J. G., & Twigg, M. M. (2015). Teaching and learning SoTL: Preparing future faculty in a pedagogy course. *Teaching and Learning Inquiry*, 3(1), 3-13, <http://dx.doi.org/10.20343/teachlearningqu.3.1.3>.
- Barret Kutcy, C. E., & Schulz, R. (2006). Why are beginning teachers frustrated with the teaching profession? *McGill Journal of Education*, 41(1), 77-90, <http://mje.mcgill.ca/article/viewArticle/510>.
- Baumert, J., & Kunter, M. (2013). The COACTIV model of teachers' professional competence. In M. Kunter, J. Baumert, W. Blum, U. Klusmann, S. Krauss, & M. Neubrand (Eds.), *Cognitive Activation in the Mathematics Classroom and Professional Competence of Teachers* (pp. 25-48). New York, NY: Springer.
- Baumert, J., Kunter, M., Blum, W., Klusmann, U., Krauss, S., & Neubrand, M. (2013). Professional competence of teachers, cognitively activating instruction, and the development of students' mathematical literacy (COACTIV): A research program. In M. Kunter, J. Baumert, W. Blum, U. Klusmann, S. Krauss, & M. Neubrand (Eds.), *Cognitive Activation in the Mathematics Classroom and Professional Competence of Teachers* (pp. 1-21). New York, NY: Springer.
- Beck, C., Kosnik, C., & Rowsell, J. (2007). Preparation for the first year of teaching: Beginning teachers' views about their needs. *New Educator*, 3(1), 51-73, <http://dx.doi.org/10.1080/15476880601141581>.
- Bell, R. L., Maeng, J. L., & Binns, I. C. (2013). Learning in context: Technology integration in a teacher preparation program informed by situated learning theory. *Journal of Research in Science Teaching*, 50(3), 348-379, <http://dx.doi.org/10.1002/tea.21075>.
- Bergman, M. M. (2010). Hermeneutic content analysis: Textual and audiovisual analyses within a mixed methods framework. In A. Tashakkori & C. Teddlie (Eds.), *SAGE Handbook of Mixed Methods in Social and Behavioral Research* (2nd ed., pp. 379-396). Thousand Oaks, CA: SAGE.

- Boyd, D. J., Grossman, P. L., Lankford, H., Loeb, S., & Wyckoff, J. (2007). *Who Leaves? Teacher Attrition and Student Achievement*. Albany, NY: State University of New York Press.
- Bryman, A. (2016). *Social research methods* (5th ed.). Oxford, UK: Oxford University Press.
- Chick, N., & Poole, G. (2013). Launching TLI: SoTL's purposes, processes, and people. *Teaching and Learning Inquiry*, 1(1), 1–4, <http://dx.doi.org/10.20343/teachlearningu.1.1.1>.
- Chick, N., & Poole, G. (2014). The necessary and dual conversations in a vibrant SoTL. *Teaching and Learning Inquiry*, 2(1), 1–2, <http://dx.doi.org/10.20343/teachlearningu.2.1.1>.
- Churchill, R., Ferguson, P., Godinho, S., Johnson, N. F., Keddie, A., Letts, W., Mackay, J., McGill, M., Moss, J., Nagel, M. C., Nicholson, P., & Vick, M. (2011). *Teaching: Making a Difference*. Milton, QLD: John Wiley & Sons Australia.
- Clift, R. T., & Brady, P. (2005). Research on methods courses and field experiences. In M. Cochran-Smith & K. M. Zeichner (Eds.), *Studying Teacher Education: The Report of the AERA Panel of Research and Teacher Education* (pp. 309–424). Washington, DC: American Educational Research Association.
- Cochran-Smith, M., & Zeichner, K. M. (Eds.). (2005). *Studying Teacher Education: The Report of the AERA Panel on Research and Teacher Education*. Washington, DC: American Educational Research Association.
- Collins, K. M. T. (2010). Advanced sampling designs in mixed research: Current practices and emerging trends in the social and behavioral sciences. In A. Tashakkori & C. Teddlie (Eds.), *SAGE handbook of mixed methods in social and behavioral research* (2nd ed., pp. 353–378). Thousand Oaks, CA: SAGE.
- Cookson, P. W. (2005). Your first year: Why teach? *Teaching Pre K-8*, 36(3), 14–21, <http://eric.ed.gov/?id=EJ729709>.
- Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five traditions* (3rd ed.). Thousand Oaks, CA: SAGE.
- Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches* (4th ed.). Croydon, UK: SAGE.
- Darling-Hammond, L. (2006a). Assessing teacher education: The usefulness of multiple measures for assessing program outcomes. *Journal of Teacher Education*, 57(2), 120–138, <http://dx.doi.org/10.1177/0022487105283796>.
- Darling-Hammond, L. (2006b). *Powerful Teacher Education*. San Francisco, CA: Jossey-Bass.
- DeAngelis, K. J., & Presley, J. B. (2011). Toward a more nuanced understanding of new teacher attrition. *Education and Urban Society*, 43(5), 598–628, <http://dx.doi.org/10.1177/0013124510380724>.
- deBraga, M., Boyd, C., & Abdunour, S. (2015). Using the principles of SoTL to redesign an advanced evolutionary biology course. *Teaching and Learning Inquiry*, 3(1), 15–29, <http://dx.doi.org/10.20343/teachlearningu.3.1.15>.
- Denscombe, M. (2010). *The good research guide for small-scale social research projects* (4th ed.). Berkshire, UK: Open University Press.
- Dillman, D. A., Smyth, J. D., & Christian, L. M. (2009). *Internet, Mail and Mixed-mode Surveys: The Tailored Design Method* (3rd ed.). Hoboken, NJ: John Wiley & Sons, Inc.
- Durn, J. L. (2010). *No Teacher Left Behind: Effectiveness of New Teacher Groups to Facilitate Induction* (Doctoral dissertation). Retrieved from ProQuest (<http://search.proquest.com/docview/365733484>).
- Felten, P. (2013). Principles of good practice in SoTL. *Teaching and Learning Inquiry*, 1(1), 121–125, <http://dx.doi.org/10.20343/teachlearningu.1.1.121>.
- Flick, U. (2002). *An introduction to qualitative research*. London, UK: SAGE.
- Gigliotti, A.-R. (2012). Quality teaching and learning in the educational context : Teacher pedagogy to support learners of a modern digital society. *Journal of Student Engagement: Education Matters*, 2(1), 78–84, <http://ro.uow.edu.au/cgi/viewcontent.cgi?article=1019&context=jseem>.
- Gillham, B. (2010). *Case Study Research Methods*. London: Continuum International Publishing.
- Goldhaber, D. D., Gross, B., & Player, D. (2007). *Are Public Schools Really Losing Their Best? Assessing the Career Transitions of Teachers and Their Implications for the Quality of the Teacher Workforce*. Washington, DC: Urban Institute.
- Helfrich, S., & Bean, R. (2011). Beginning teachers reflect on their experiences being prepared to teach literacy. *Teacher Education and Practice*, 24(2), 201–222, <http://eric.ed.gov/?id=EJ918928>.
- Herrington, J., & Oliver, R. (2000). An instructional design framework for authentic learning environments. *Educational Technology Research and Development*, 48(3), 23–48, <http://ro.uow.edu.au/cgi/viewcontent.cgi?article=1031&context=edupapers>.
- 122 Green, C., Eady, M., & Andersen, P. (2018). Preparing quality teachers. *Teaching & Learning Inquiry*, 6(1). <http://dx.doi.org/10.20343/teachlearningu.6.1.10>

- Hinde-McLeod, J. H., & Reynolds, R. (2007). *Quality Teaching for Quality Learning: Planning Through Reflection*. South Melbourne, VIC: Cengage Learning Australia.
- Hollins, E. R. (2011). Teacher preparation for quality teaching. *Journal of Teacher Education*, 62(4), 395-407, <http://dx.doi.org/10.1177/0022487111409415>.
- Jaarsma, A. S. (2015). On being taught. *The Canadian Journal for the Scholarship of Teaching and Learning*, 6(2), 1-14, <http://dx.doi.org/10.5206/cjsotl-rcacea.2015.2.6>.
- Kervin, L., Vialle, W., Herrington, J., & Okely, T. (2006). *Research for educators*. South Melbourne, VIC: Cengage Learning.
- Kleickmann, T., & Anders, Y. (2013). Learning at university. In M. Kunter, J. Baumert, W. Blum, U. Klusmann, S. Krauss, & M. Neubrand (Eds.), *Cognitive Activation in the Mathematics Classroom and Professional Competence of Teachers* (pp. 321-332). New York, NY: Springer.
- Kunter, M., & Baumert, J. (2013). The COACTIV research program on teachers' professional competence: Summary and discussion. In M. Kunter, J. Baumert, W. Blum, U. Klusmann, S. Krauss, & M. Neubrand (Eds.), *Cognitive Activation in the Mathematics Classroom and Professional Competence of Teachers* (pp. 345-368). New York, NY: Springer.
- Ladwig, J. G. (2009). Working backwards towards curriculum: On the curricular implications of quality teaching. *The Curriculum Journal*, 20(3), 271-286, <http://dx.doi.org/10.1080/09585170903195886>.
- Ladwig, J. G., Smith, M., Gore, J., Amosa, W., & Griffiths, T. (2007). *Quality of Pedagogy and Student Achievement: Multi-level Replication of Authentic Pedagogy*. Paper presented at the Australian Association for Research in Education (AARE) 2007 International Education Research Conference, Fremantle, WA, <http://publications.aare.edu.au/07pap/lad07283.pdf>.
- Le Maistre, C., & Paré, A. (2010). Whatever it takes: How beginning teachers learn to survive. *Teaching and Teacher Education*, 26(3), 559-564, <http://dx.doi.org/10.1016/j.tate.2009.06.016>.
- Liberante, L. (2012). The importance of teacher-student relationships, as explored through the lens of the NSW Quality Teaching Model. *Journal of Student Engagement: Education Matters*, 2(1), 2-9, <http://ro.uow.edu.au/jseem/vol2/iss1/2>.
- Lieber, E., & Weisner, T. S. (2010). Meeting the practical challenges of mixed methods research. In A. Tashakkori & C. Teddlie (Eds.), *SAGE Handbook of Mixed Methods in Social and Behavioral Research* (2nd ed., pp. 559-580). Thousand Oaks, CA: SAGE.
- Lincoln, Y. S., & Guba, E. (1985). *Naturalistic inquiry*. Beverly Hills, CA: SAGE.
- Livingstone, D., Guild, D., & Clark, R. (2012). *Teacher Learning and Power in the Knowledge Society*. Rotterdam, Netherlands: Sense Publishers.
- Luft, J. A., Roehrig, G. H., & Patterson, N. C. (2003). Contrasting landscapes: A comparison of the impact of different induction programs on beginning science teachers' practices, beliefs, and experiences. *Journal of Research in Science Teaching*, 40, 77-97, <http://dx.doi.org/10.1002/tea.10061>.
- Mansfield, C. F., Beltman, S., Price, A., & McConney, A. (2012). 'Don't sweat the small stuff': Understanding teacher resilience. *Teaching and Teacher Education*, 28, 357-367, <http://dx.doi.org/10.1016/j.tate.2011.11.001>.
- Mansfield, C. F., & Volet, S. E. (2014). Impact of structured group activities on pre-service teachers' beliefs about classroom motivation: An exploratory study. *Journal of Education for Teaching*, 40(2), 155-172, <http://dx.doi.org/10.1080/02607476.2013.869967>.
- Mantei, J., & Tindall-Ford, S. (2012). *Faculty of Education Review: Primary Education Undergraduate Program*. Wollongong, NSW: University of Wollongong.
- McConney, A., Price, A., & Woods-McConney, A. (2012). *Fast Track Teacher Education: A Review of the Research Literature on Teach For All Schemes*. Perth, WA: Murdoch University Centre for Learning, Change and Development.
- Mertens, D. M. (2005). *Research and Evaluation in Education and Psychology: Integrating Diversity with Quantitative, Qualitative, and Mixed Methods*. Thousand Oaks, CA: SAGE.
- Mishra, P., & Koehler, M. J. (2007). Technological pedagogical content knowledge (TPCK): Confronting the wicked problems of teaching with technology. In R. Carlsen, K. McFerrin, J. Price, R. Weber, & D. Willis (Eds.), *Proceedings of Society for Information Technology and Teacher Education International Conference 2007* (pp. 2214-2226). Chesapeake, VA: Association for the Advancement of Computing in Education.
- Nahal, S. P. (2010). Voices from the field: Perspectives of first-year teachers on the disconnect between teacher preparation programs and the realities of the classroom. *Research in Higher Education Journal*, 8, 1-19, <http://www.aabri.com/manuscripts/10446.pdf>.
- Green, C., Eady, M., & Andersen, P. (2018). Preparing quality teachers. *Teaching & Learning Inquiry*, 6(1). <http://dx.doi.org/10.20343/teachlearningqu.6.1.10>

- NSW Department of Education and Communities (NSW DEC). (2013). *Great Teaching, Inspired Learning*. Sydney: New South Wales Department of Education and Communities.
- NSW Department of Education and Training (NSW DET). (2003). *Quality Teaching in NSW Public Schools*. Sydney: Professional Support and Curriculum Directorate, New South Wales Department of Education and Training.
- NSW Department of Education and Training (NSW DET). (2008). *Quality Teaching to Support the NSW Professional Teaching Standards: Part A—Linking the NSW Professional Teaching Standards and the NSW Quality Teaching Model*. Sydney: NSW Department of Education and Training Professional Learning and Leadership Development Directorate.
- Onwuegbuzie, A. J., & Combs, J. P. (2010). Emergent data analysis techniques in mixed methods research: A synthesis. In A. Tashakkori & C. Teddlie (Eds.), *SAGE Handbook of Mixed Methods in Social and Behavioral Research* (2nd ed., pp. 397–430). Thousand Oaks, CA: SAGE.
- Orgill, M. (2007). Situated cognition. In G. M. Bodner & M. Orgill (Eds.), *Theoretical Frameworks for Research in Chemistry/Science Education* (pp. 187–203). Upper Saddle River, NJ: Prentice Hall.
- Owen-Pugh, V. (2002). The elite British basketball club as a 'community of practice': A critique of Lave and Wenger's model of situated learning. *Management Research News*, 25(8-10), 147–149, <http://ezproxy.uow.edu.au/login?url=http://search.proquest.com.ezproxy.uow.edu.au/docview/223534789?accountid=15112>.
- Quacquarelli Symonds. (2016). QS world university rankings® 2016/17. Retrieved from <http://www.topuniversities.com/university-rankings/world-university-rankings/>.
- Quality Indicators for Learning and Teaching. (2015). Teacher education results 2015. Retrieved from <http://www.qilt.edu.au/institutions/institution/university-of-wollongong/teacher-education>.
- Ratinen, M., & Lund, P. D. (2016). Alternative view on niche development: Situated learning on policy communities, power and agency. *Technology Analysis & Strategic Management*, 28(1), 114–130, <http://dx.doi.org/10.1080/09537325.2015.1073251>.
- Ritchart, R. (2001). From IQ to IC: A dispositional view of intelligence. *Roeper Review*, 23(3), 571–576, <http://dx.doi.org/10.1080/02783190109554086>.
- Riveros, A., Newton, P., & Burgess, D. (2012). A situated account of teacher agency and learning: Critical reflections on professional learning communities. *Canadian Journal of Education*, 35(1), 202–216, <http://www.cje-rce.ca/index.php/cje-rce/article/view/837>.
- Rots, I., Aelterman, A., Devos, G., & Vlerick, P. (2010). Teacher education and the choice to enter the teaching profession: A prospective study. *Teaching and Teacher Education*, 26(8), 1619–1629, <http://dx.doi.org/10.1016/j.tate.2010.06.013>.
- Rots, I., Kelchtermans, G., & Aelterman, A. (2012). Learning (not) to become a teacher: A qualitative analysis of the job entrance issue. *Teaching and Teacher Education*, 28(1), 1–10, <http://dx.doi.org/10.1016/j.tate.2011.08.008>.
- Ryan, G. W., & Bernard, H. R. (2003). Techniques to identify themes. *Field Methods*, 15(1), 85–109, <http://dx.doi.org/10.1177/1525822x02239569>.
- Savasci, F., & Berlin, D. F. (2012). Science teacher beliefs and classroom practice related to constructivism in different school settings. *Journal of Science Teacher Education*, 23, 65–86, <http://dx.doi.org/10.1007/s10972-011-9262-z>.
- Schell, J. W., & Black, R. S. (1997). Situated learning: An inductive case study of a collaborative learning experience. *Journal of Industrial Teacher Education*, 34(4), 5–28, <http://eric.ed.gov/?id=EJ548508>.
- Shuls, J. V., & Ritter, G. W. (2013). Teacher preparation: Not an either–or. *Phi Delta Kappan*, 94(7), 28–32, <http://dx.doi.org/10.1177/003172171309400712>.
- Smetana, L. K., & Bell, R. L. (2011). Computer simulations to support science instruction and learning: A critical review of the literature. *International Journal of Science Education*, 34, 1337–1370, <http://dx.doi.org/10.1080/09500693.2011.605182>.
- Soccorsi, L. (2013). Instilling a personal teaching philosophy in pre-service teachers: Vitally important but not always easy to achieve. *Journal of Student Engagement: Education Matters*, 3(1), 21–28, <http://ro.uow.edu.au/jseem/vol3/iss1/4/>.
- Stanley, T. (2013). Bridging the gap between tertiary education and work: Situated learning in accountancy. *Issues in Accounting Education*, 28(4), 779–799, <http://dx.doi.org/10.2308/iace-50527>.
- Suri, H. (2011). Purposeful sampling in qualitative research synthesis. *Qualitative Research Journal*, 11(2), 63–75,
- 124 Green, C., Eady, M., & Andersen, P. (2018). Preparing quality teachers. *Teaching & Learning Inquiry*, 6(1). <http://dx.doi.org/10.20343/teachlearninqu.6.1.10>

- <http://dx.doi.org/10.3316/QRJ1102063>.
- Tatto, M. T. (2006). Education reform and the global regulation of teachers' education, development and work: A cross-cultural analysis. *International Journal of Educational Research*, 45(4-5), 231–241, <http://dx.doi.org/10.1016/j.ijer.2007.02.003>.
- Teddlie, C., & Yu, F. (2008). Mixed methods sampling: A typology with examples. In V. L. Plano Clark & J. W. Creswell (Eds.), *The Mixed Methods Reader* (pp. 199–228). Thousand Oaks, CA: SAGE.
- Trees, K. (2013). Effectively teaching diverse student groups: A reflection on teaching and learning strategies. *Australian Journal of Adult Learning*, 53(2), 234–252, <http://ezproxy.uow.edu.au/login?url=http://search.proquest.com.ezproxy.uow.edu.au/docview/1444016019?accountid=15112>.
- Trigwell, K. (2013). Evidence of the impact of Scholarship of Teaching and Learning purposes. *Teaching and Learning Inquiry*, 1(1), 95–105, <http://dx.doi.org/10.20343/teachlearningu.1.1.95>.
- Trigwell, K., & Shale, S. (2004). Student learning and the scholarship of university teaching. *Studies in Higher Education*, 29(4), 523–536, <http://dx.doi.org/10.1080/0307507042000236407>.
- Vannatta, R., Beyerbach, B., & Walsh, C. (2001). From teaching technology to using technology to enhance student learning: Preservice teachers' changing perceptions of technology infusion. *Journal of Technology and Teacher Education*, 9(1), 105–127, <http://www.learntechlib.org.ezproxy.uow.edu.au/p/8456>.
- Volet, S. E., & Mansfield, C. F. (2006). Group work at university: Significance of personal goals in the regulation strategies of students with positive and negative appraisals. *Higher Education Research & Development Journal*, 25(4), 341–356, <http://dx.doi.org/10.1080/07294360600947301>.
- Wiens, P. D., Hessberg, K., LoCasale-Crouch, J., & DeCoster, J. (2013). Using a standardized video-based assessment in a university teacher education program to examine preservice teachers knowledge related to effective teaching. *Teaching and Teacher Education: An International Journal of Research and Studies*, 33, 24–33, <http://dx.doi.org/10.1016/j.tate.2013.01.010>.
- Woodcock, S., & Reupert, A. (2013). Does training matter? Comparing the behaviour management strategies of pre-service teachers in a four-year program and those in a one-year program. *Asia-Pacific Journal of Teacher Education*, 41(1), 84–98, <http://dx.doi.org/10.1080/1359866X.2012.753991>.
- Zhu, Y., & Bargiela-Chiappini, F. (2013). Balancing emic and etic: Situated learning and ethnography of communication in cross-cultural management education. *Academy of Management Learning and Education*, 12(3), 380–395, <http://dx.doi.org/10.5465/amle.2012.0221>.



Copyright for the content of articles published in *Teaching & Learning Inquiry* resides with the authors, and copyright for the publication layout resides with the journal. These copyright holders have agreed that this article should be available on open access under a Creative Commons Attribution License 4.0 International (<https://creativecommons.org/licenses/by/4.0>). The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited, and to cite *Teaching & Learning Inquiry* as the original place of publication. Readers are free to share these materials—as long as appropriate credit is given, a link to the license is provided, and any changes are indicated.