NSW GOVERNMENT

QUALITY OF INITIAL TEACHER EDUCATION IN NSW

ONLINE INITIAL TEACHER EDUCATION IN NSW

GREAT TEACHING, INSPIRED LEARNING – A BLUEPRINT FOR ACTION
ACTION 5.3 – THE EXTENT AND QUALITY OF ONLINE STUDY IN TEACHER EDUCATION WILL BE EXAMINED

QUALITY TEACHING COUNCIL

BOSTES BOARD OF STUDIES TEACHING & EDUCATIONAL STANDARDS NSW

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LIST OF ABBREVIATIONS

ACU
Australian Catholic University

AGDE
Australian Government Department of Education

AITSL
Australian Institute for Teaching and School Leadership

ALTC
Australian Learning and Teaching Council

APST
Australian Professional Standards for Teachers

AQF
Australian Qualifications Framework

BOSTES
Board of Studies, Teaching and Educational Standards NSW

CEQ
Course Experience Questionnaire

COFA
College of Fine Arts

CSU
Charles Sturt University

GCA
Graduate Careers Australia

GTIL
Great Teaching, Inspired Learning – a Blueprint for Action

ICT
Information and Communications Technology

IT
Information Technology

ITE
Initial Teacher Education

LMS
Learning Management System

LTS
Learning and Teaching Services

OTL
Office of Teaching and Learning

SCU
Southern Cross University

SEET
Student Experience and Expectation of Technology

SULO
School University Liaison Officer

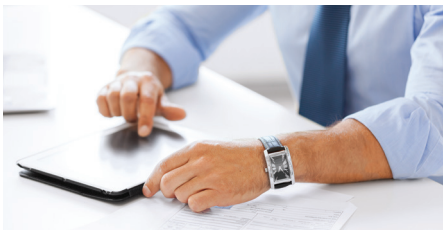
TES
Teacher Education Students

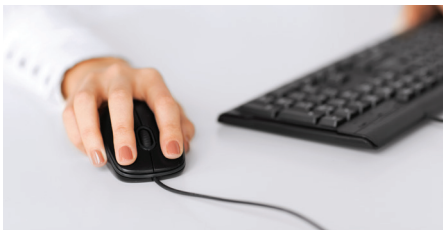
USA
United States of America

USQ
University of Southern Queensland

UTAS
University of Tasmania

CONTENTS





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GLOSSARY

Learning management system (LMS)

Software program for storing and delivering course content, for example unit outlines, staff contact details, learning materials and articles, library resources, interactive tools, assessment tasks and provision for submission

Mobile technology

Mobile devices including mobile phones, tablets, iPods

Professional experience

Teacher education practicum/practice teaching

Professional experience coordination

School-based professional experience coordinator, in-school coordinator, practicum coordinator

Professional Experience Office

Tertiary professional experience coordinator, Director of Professional Experience

Program

Course, that is Degree or Diploma

Provider

Institution (university or college providing the teacher preparation program)

School

Institution providing primary or secondary education for children

Student

School student

Supervising teacher

Cooperating teacher, mentoring teacher, in-school supervising teacher

Teacher education student

Pre-service teacher, student teacher, practicum student

Tertiary supervisor

University/college supervisor, university/college advisor, professional experience advisor

Unit of study

A subject within a program

ABOUT *GREAT TEACHING, INSPIRED LEARNING – A BLUEPRINT FOR ACTION*

Research shows that quality teachers are crucial for achieving an overall improvement in student learning outcomes.

In 2013, the NSW Government released *Great Teaching, Inspired Learning – a Blueprint for Action* (GTIL), which outlines 47 actions to improve the already high standards of teaching in NSW.

Responding to extensive community feedback about teaching quality, the plan includes actions to:

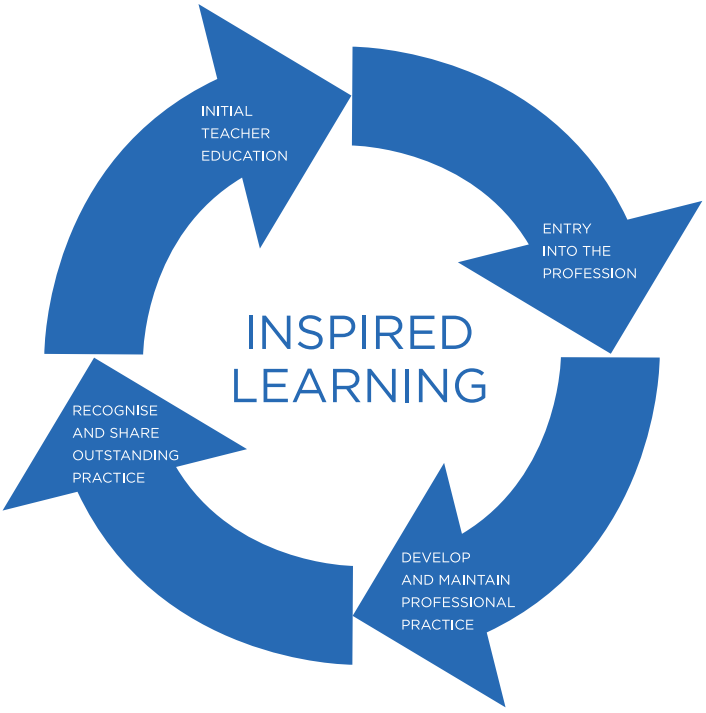
- better understand and share what makes an excellent teacher
- ensure beginning teachers are well suited and thoroughly prepared for the classroom
- make the Australian Professional Standards for Teachers central to delivering fair and accountable performance and accreditation processes and high quality professional development for all teachers
- ensure career pathways and improved support for school leaders.

The Blueprint is designed to help students to achieve better results by researching and sharing what makes an excellent teacher, and supporting the career long professional development of all teachers.

BOSTES, the NSW Department of Education and Communities, the Catholic Education Commission NSW and the Association of Independent School of NSW are working together to implement the Blueprint's reforms across NSW.

Visit nswteachers.nsw.edu.au to find out how the Blueprint is improving the quality of teaching and student leaning outcomes in NSW schools.

FIGURE 1: INSPIRED LEARNING DIAGRAM



The Blueprint is designed to help students to achieve better results by researching and sharing what makes an excellent teacher.

EXECUTIVE SUMMARY

A requirement of the NSW Government GTIL reform is action 5.3, 'the extent and quality of online study in teacher education will be examined'.

Specifically 'a study will be undertaken into the extent of online candidature in initial teacher education and the arrangements for and quality of professional experience placements in NSW schools. This study will assess the general quality of this mode of teacher preparation, the extent of professional experience demands on NSW schools from online students from interstate initial teacher education providers and the quality of the arrangements governing such school placements.'

1. While recognising that most initial teacher education (ITE) programs combine some online study with on-campus study in what is now called 'blended learning', this review has been confined to programs that are also labelled 'external' or 'distance' programs, that is where the majority or all the content is delivered online.
2. The number of students engaging in online/distance/external ITE programs has grown in the past few years. There is concern that the growth in student numbers is contributing to the current oversupply of teachers, particularly in primary education. There is also a perception that some providers are capitalising on online learning for economic reasons. The rapid growth of online learning and the perceived motives of providers have prompted enquiry into the quality of online programs.
3. The finding of this review is that in 2014, there are seven providers of online/external ITE in NSW enrolling 4804 NSW ITE students. The University of New England (UNE) has 58% of NSW provider enrolments, Charles Sturt University (CSU) has 22%, Southern Cross University (SCU) has approximately 11% and the other providers, that is Macquarie University (Institute of Early Childhood), Wesley Institute, Morling College and Alphacrucis College, have the remaining 9%. The majority of these providers also enrol interstate and international students.
4. It is estimated that at least 2460 NSW ITE students are enrolled in online/distance learning with interstate providers. Approximately 2000 of these students are enrolled at Curtin University and Swinburne Online. This means that in 2014 there are at least 7260 NSW students enrolled in online ITE programs and approximately one-third of these are studying with interstate providers. It is thus estimated that approximately 25% of NSW ITE students are studying in online programs.
5. Online/distance programs offered in ITE vary greatly and are thus hard to compare, but current evidence confirms that, overall, ITE students who study online can achieve equivalent academic results and are equally or more satisfied with their online programs as on-campus students. The result is widely reported in research, and is confirmed by Course Experience Questionnaire (CEQ) data, by a survey conducted by the Board of Studies, Teachings and Education Standards NSW (BOSTES) and by the reports by academics from participating universities and colleges.
6. Students who undertake ITE programs online in NSW are overwhelmingly mature aged, female and studying part time. Their reasons for studying online most often relate to family and work. Educators have reported that the high motivation levels of this cohort of students may be a major contributor to their academic success and satisfaction with online learning.
7. There is agreement that there are some essential underpinnings for the establishment and maintenance of quality online programs. These are: policies and procedures to guide practice; careful staff selection; ongoing staff training; investment in technology; support provided by design, multimedia and information technology (IT) personnel; and evaluation and research. Technology training for enrolling students is also seen as highly desirable.
8. The models for program delivery vary. Some programs supplement student course work by running on-campus schools while others conduct all their coursework online. Some programs are delivered using asynchronous methods which enable students the flexibility to study at any time and in any place. Others programs combine asynchronous and synchronous activities to provide highly interactive courses which include real-time opportunities for students to interact with staff and other students.
9. Students find some aspects of online delivery preferable to on-campus delivery and some aspects of on-campus programs preferable to online programs. However online/distance learning programs generally have not yet been able to provide high levels of interpersonal interaction between lecturers and students, and students and

their peers. These interactions are seen by many as critical to quality teacher preparation. All providers are exploring additional opportunities for student-to-staff and student-to-student interaction for incorporation into their suite of techniques for online learning.

10. Most providers reported variable teacher educator commitment to online learning and variable skill in the delivery of online programs among their staff. This impacts on the consistency of quality between units. The differences between staff appear, in the main, to be a reflection of the developmental stage of online learning within institutions. Providers are focusing on staff selection and staff training to overcome the differences.

11. Programs are improving as technology and software improve and as providers become more experienced in online delivery. All providers who participated in this review are highly committed to online learning and to the continuous improvement of their programs.

12. Ultimately all providers agree that it is the pedagogy not the mode of delivery that determines the quality of programs, and that technology-mediated learning can be equally as effective as on-campus learning in most areas of ITE. Pedagogy for quality online ITE is based on the same principles as the pedagogy for on-campus learning, but must be tailored to suit the online environment.

13. The differences in student responses to the pedagogy being employed in online programs as opposed to that used in on-campus programs (specifically those aspects relating to the interpersonal interaction methods being employed) suggest that accrediting authorities should consider not only the content of ITE programs, but also aspects of the pedagogy used for their delivery.

14. There is no evidence that NSW and interstate providers differ in the general quality of their online ITE programs, or in the challenges they face in providing adequate levels of interpersonal interaction and high-quality professional experiences for their students. However the rapid growth in online learning and the preference by large numbers of NSW students to study online with interstate providers raises questions about the extent to which they are currently being prepared with knowledge prerequisites for teaching in NSW school systems (eg curriculum content, policies, systems). Online education is expected to continue to grow and to become increasingly national and international. State authorities will need to be confident that programs not currently accredited in NSW adequately prepare graduates for teaching in NSW schools.

15. Online students more frequently are required to find their own professional experience placements than on-campus students, although many on-campus students are also required to find their own placements. Given the disparate locations of student bodies and the large number of students it is impossible for providers to organise all placements using current systems, thus new systems need to be created.

16. Online students are less often supervised by university personnel than on-campus students, although many on-campus students are not supervised by university personnel. Some providers (from NSW and interstate) have established systems to ensure students are supervised by university personnel or staff contracted specifically for the purpose. Sometimes this level of supervision occurs only in the last professional experience or internship.

17. Plans to address the issues relating to professional experience are currently being made at provider and state level. These include establishing formal partnerships between universities and schools; establishing partnerships between universities; setting up databases to register students requiring professional experience placements using technology including real-time video conferencing for university to school communication; altering the types of professional experience required of students; and delivering mentoring programs to classroom teachers who supervise professional experience.

18. Irrespective of the state of origin of provider it is clear that online students more frequently are from regional areas than their on-campus peers. Given that high-quality online programs can deliver the same or better outcomes as on-campus programs, regional students (and those city dwellers who are unable to access university colleges and campuses) can for the first time in Australia's history have equal opportunity to become teachers. This can happen only if online programs are resourced, staffed and conducted with pedagogy that ensures they are high quality and if the re-conceptualisation of professional experience leads to systems that are equitable to all students irrespective of where they live.

INTRODUCTION

A requirement of the NSW Government GTIL reform is action 5.3, 'the extent and quality of online study in teacher education will be examined'. Specifically, 'a study will be undertaken into the extent of online candidature in initial teacher education and the arrangements for and quality of professional experience placements in NSW schools. This study will assess the general quality of this mode of teacher preparation, the extent of professional experience demands on NSW schools from online students from interstate initial teacher education providers and the quality of the arrangements governing such school placements.'

Rationale

In the past few years teacher preparation has become a major focus for governments and educational organisations. In NSW the issues now commonly reported in the mainstream media expressed as concerns are:

- an oversupply of teachers, with some reports citing as many as 44,000 trained teachers awaiting permanent employment
- continuing high intake numbers in teacher education programs, especially in primary education which has the greatest oversupply
- low admission criteria to many teacher education programs
- perception that, in catering for high enrolment demand, the quality of programs has been diminished.

There has been significant growth in the number of students studying through online learning. This has been the major contributor to the overall growth in teacher education student numbers over the past few years, and therefore has become a focus of attention in the teacher quality discourse. NSW teacher education students now enrol with NSW and interstate providers. The increased number of online teacher education students has added to the difficulties already being experienced by providers in finding professional experience placements for their student teachers.

The following study seeks to shed light on the extent and quality of online teacher education of NSW students and issues of associated professional experience placements.

Definition of online learning

It is not easy to find a shared understanding of the term 'online learning'. Student attendance patterns have changed. Where once the majority of students studied on campus in face-to-face group sessions with lecturers (internal or on campus) and a small number studied off campus (external or distance), the changing use of technology has made a range of different models of delivery possible. This means that some students now complete all their studies online without setting foot on campus, some complete the majority of their studies online but attend on-campus lectures/ workshops, yet others complete some units on campus and some units online, and others attend campus for most of or all their studies.

Whichever model students choose, the use of technology will be integrated into their program delivery in some way. Increasingly the concepts of 'internal', 'external' learning and 'on-campus' and 'distance' study are becoming blurred as students exercise more choice in their mode of study, for example studying some units on campus and some by distance off campus by accessing online podcasts of lectures. This means some students who enrol as 'internal' students might not attend on-campus lectures, preferring to access lectures using technology in a location and at a time that suits them.

In practice, the majority of ITE students engage in 'blended learning', that is, using a combination of face-to-face on-campus instruction with content and activities accessed via technology. The term 'blended learning' can be applied to a full range of practices from primarily technology-driven instruction with a small amount of on-campus instruction through to primarily on-campus instruction complemented by some technologically delivered content and/or activities. Even those students who undertake all their course work online could be said to be engaging in 'blended learning' because they are required to complete at least 60 days of professional experience.

The list of elements that can be included in a 'blended learning' approach include but are not limited to: traditional classroom lectures and workshops; synchronous online delivery (eg videoconferencing, chat rooms, computer conferencing); asynchronous delivery (eg online text, video recordings, audio recordings, email, discussion boards), use of

Student attendance patterns have changed. Where once the majority of students studied on campus in face-to-face group sessions with lecturers (internal or on campus) and a small number studied off campus (external or distance), the changing use of technology has made a range of different models of delivery possible.

social media (eg Twitter, Facebook). Most ITE programs now have learning management systems (LMSs) as online platforms which at minimum provide the opportunity for students to access course outlines, assessment tasks, required readings, links to resources and recordings of lectures. Here they can communicate with their lecturers and other students, and can submit assessments.

While recognising the complexities in defining current models of delivery, this study has been confined to those programs that enrol students in what could be termed 'distance or external studies'. These are programs conducted fully or primarily online.

Process

Ascertaining extent of online study

The data on the extent of online learning are sourced either directly from Australian Government Department of Education (Higher Education Statistics) or indirectly from the same sources via the 2014 Australian Institute for Teaching and School Leadership (AITSL) Initial Teacher Education Data Report, and from NSW and interstate providers directly via the Deans/Heads of Education. The interstate data are approximate as the numbers from all interstate providers are not included.

Ascertaining quality

This report seeks not only to assess the quality of online teacher education programs but to compare the effectiveness with programs delivered primarily on campus. For the purposes of this report quality has been defined as the degree to which students meet the goals of teacher preparation programs. The ultimate measure of quality therefore is the extent to which students are prepared for classroom teaching. Assessing the inputs, processes and outputs relating to quality teacher education is a complex and difficult task whether in relation to online or on-campus students. For purposes of this report the following information was used as evidence of quality.

- **Program Accreditation**
  A key quality assurance process relating to all providers is the assessment and approval of ITE programs by the BOSTES. The accreditation process endeavours to ensure that teacher education students gain the requisite knowledge and skills to become teachers, and that programs meet the required national standards irrespective of the mode of delivery. This process, which has been successfully undertaken by all current NSW providers, is a consistent and thorough measure of the major set of quality inputs. Interstate providers mentioned in the report have programs accredited through the relevant state/territory authorities.
- **Course Experience Questionnaire (CEQ)**
  The CEQ is an annual Australia-wide survey of student perceptions of their tertiary education programs conducted by Graduate Careers Australia (GCA). GCA administers the survey to all recent graduates from ITE programs approximately four months after they have completed their programs. The results for distance/online and on-campus programs are reported later in this document.
- **Teacher Survey**
  In a further bid to assess quality, an examination of current research literature and the items on the CEQ were used as the basis for a survey for practising teachers. The survey was trialled then distributed to teachers who were registered with BOSTES in 2013 who had the opportunity to study online (most from NSW but some from interstate). The surveys, which report teacher perspectives on their initial teacher training and their views about online learning, are reported later in this document.
- **Teacher Educator Survey**
  Using current research literature and information from interviews with university personnel, a survey for teacher educators was constructed, trialled and distributed to staff who teach online initial teacher preparation units. The results of the survey of teacher educator perspectives about online learning are reported later in this document.

- **Discussions**
  Further assessment of quality was gathered by talking with relevant NSW Deans of Education and by documenting the quality assurance processes implemented by their institutions. These are reported in the appendices of this document. Discussions were also conducted with Deans of interstate universities, and with NSW teacher educators and a number of school principals. Information from these discussions has been incorporated throughout the report.
- **Unit observation**
  An observation of one online unit from each provider was conducted to ascertain how the unit was presented and to understand how the students could interact with the content. Information from these observations is also incorporated throughout the report.

Professional experience

Information relating to professional experience was gathered from three sources, that is the Deans/Heads of Education, the BOSTES teacher survey which reports teacher perspectives and consultations with a small number of schools.

There are currently large numbers of students enrolled in teacher education courses, and student bodies are highly dispersed. Under their current professional experience systems providers find it difficult to form relationships with the large number of schools required to accommodate their students. In many instances providers rely on students to find their own placements and on schools to ensure a quality experience. An attempt has been made to quantify the extent student-located placements and to ascertain the extent of involvement of universities/colleges in student professional experience.

PART A – GLOBAL INCREASE IN ONLINE LEARNING

Development of online learning

Distance education has long been part of the education landscape but it has changed gradually over time from a paper-based to a computer-based activity. Recently, however, there has been a more rapid change in the nature of distance education due to the confluence of political, commercial and technological change.

The growth in access to high-speed computer and mobile technologies has altered the way business, education and leisure are conducted in all western countries. The ubiquitous use of technology has coincided with the recent trend by western governments to seek alternate methods of payment for traditionally government-funded enterprises. The difficult economic circumstances of the past 10 years have fuelled government desire to promote private enterprise and user-pays systems in publicly funded enterprises. Higher education is among the government-funded sectors seen as having to do more to 'pay its way'. Thus higher education has become a more commercial activity. Technologically delivered services have supported the change.

In the United States of America (USA) the changes in online learning have been tracked annually since 2002, initially by the Sloane Consortium but more recently by the Babson Survey Research Group (Allen & Seaman, 2014). Their 2014 report, which surveyed 2800 colleges and universities, showed that 60% of academic leaders report that online learning is critical to their long-term strategy. They also report that the proportion of students taking at least one unit online is now 33.5%. The total student body grew at an annual rate of 2.5% between 2002 and 2014 but the annual growth rate in students taking one or more courses online was 16.1%. Academic leaders believe that online education will continue to grow.

In 2012 the changes brought about by the confluence of political, commercial and technological factors were most evident in the higher education sector both internationally and in Australia. Internationally it was when MOOCs (Massive Open Online Courses) enrolled millions of people across the globe, providing welcome access to education for many and raising fears about the future of higher education for others. Currently 5% of US institutions offer MOOCS (Allen & Seaman, 2014).

MOOCs are generally non-award courses open to anyone outside or within academic institutions. MOOCs are seen as a way of increasing the profile of academic institutions to attract students, and as a flexible way of providing content for their own students. However in the USA some universities are using MOOCs produced by other universities as components of award-bearing classes. While the benefits of such an approach are clear, in that universities can offer classes that they may not have the expertise to design and deliver, academics across the USA are concerned about the implications for quality and for their profession. Others feel that MOOCs are unsustainable.

While educators across the globe endeavoured to come to terms with the longer term consequences of this new way of providing higher education, some Australian universities established themselves as MOOC providers. While MOOCs have yet to make a significant impact on tertiary programs globally, academics continue to draw attention to their potentially negative impacts on quality and equity in higher education and some link their concerns about MOOCs with issues in the provision of online degree programs.

In 2012, Australia saw the first results of change in Commonwealth Government funding for domestic bachelor-degree students at public universities (except medicine) from a 'supply-driven' system where the government allocated places to public universities to a 'demand-driven' system where universities enrol, and are funded for, as many students as wish to enrol.

In their bid to attract students and to be competitive, universities and colleges established business models to capitalise on the changes to the higher education landscape. The establishment of new models and the enhancements to existing models have been associated with an increase in online students.

Advantages of online learning

In responding to demand, providers cite the advantages of online learning as:

- Access and equity. Online study eliminates geographic barriers providing easier access for students who live remote from the university/college and for students who find class attendance difficult, for example those with disabilities.
- Flexibility. Most programs enable students to study when they wish, catering for those who need to fit their study around other aspects of their life, for example work and family. When posted, courses are generally available to students for 24 hours of the day.
- Cost. Costs to students can be less than for on-campus courses, which may require expenses such as travel, parking and child care.
- Online study can be more time efficient, for example by eliminating travel time and time spent on campus between lectures.
- Most online programs enable students to study at their own pace, and if necessary, to revise content by engaging with online material whenever they desire.
- Students can choose the types of programs that appeal to them most, that is their choices are not constrained by campus location.
- Integration of a variety of ways of presenting content can make online programs very engaging.
- Online programs have enabled providers to expand their interstate and international programs. For some this provides an opportunity for more market share for commercial reasons, for others it is seen as matter of survival, and yet others see it as an opportunity to contribute to developing countries.
- Online programs provide the opportunity for providers to expand their capacity in subject areas.
- Learning online improves student technology skills which are essential for classroom teaching.
- Some online programs are more cost effective than on-campus programs.
- The use of data analytics, that is collection and analysis of data about all aspects of online delivery, can lead to quality improvement of programs and higher student satisfaction and retention.

Criticisms of online learning

On the other hand critics of online learning commonly argue that:

- Student learning styles are not always suited to online learning, for example the majority of students need to engage in face-to-face interaction and ongoing discussion to learn, students may lack motivation to work alone, students may have an aversion to spending long periods engaging with technology.
- Not all lecturer styles are suited to online learning. Some lecturers believe that it is only through on-campus delivery that they can fully engage with their learners. Some lecturers have an aversion to spending long periods engaging with technology and some believe that it is only through on-campus discussion that students can develop a deep understanding of subject matter.
- Online learning is not a suitable mode for some types of content. There may be subject areas that cannot be effectively taught online, for example practical subjects such as physical education, design and technology, music.
- Online learning may not be as successful as on-campus learning in particular aspects of teacher education, for example building a student community, developing on-campus communication skills, developing deeper understanding of content.
- Online program delivery may result in more static content, that is, there may be less revision and adjustment to course content by lecturers who are required to rewrite units to keep them up-to-date.

Fundamental to many criticisms of online learning are the motives for its establishment. Many critics believe providers' financial imperatives are the main driver for online learning. They hold the view that the commercialisation of education has led to the marketing of online programs as 'commodities' to be purchased by student 'customers'. In questioning the motives for operating the programs these critics also question the extent that quality is compromised by financial concerns (Dinham, 2014; Sutherland-Smith & Saltmarsh, 2010).

Online learning enables initial teacher educators to recruit students throughout Australia. This means online providers can now offer programs to students who might once have attended local institutions, or may not have had the opportunity to undertake tertiary study. The locational advantage of online providers, along with deregulated funding, provides the opportunity for greater student numbers in each program, and therefore more income to the provider. Universities not only benefit financially by enrolling as many students as possible but also by retaining them throughout their programs.

It is argued that, in their quest for market share, online programs have contributed to lowering the admission criteria for students into ITE programs, for example by eliminating enrolment criteria and relying on successful completion of a qualifying unit for entry, by admission through foundation courses, admission on the basis of low ATAR scores and on the extent of credit for experience students can be given as contributors to admission criteria. These admission strategies are not unique to online learning, but it is clear that some of the online providers have the least rigorous pathways to program entry and that these are advertised to attract students.

Academics also argue that, without the constraints of physical space and the need to provide group sizes suited to on-campus learning, teacher educators may be required to take on greater numbers of students in online programs and that larger group sizes may make the level of interpersonal communication necessary for quality teacher education impossible. Yet others argue that online learning is more demanding for teacher educators and that increased demands will ultimately lead to reduced quality.

One of the greatest concerns expressed by academics is the prospect of employing less costly personnel to run courses. In this regard they cite programs that are prewritten by permanent academic staff and delivered by less credentialed and often casual personnel, for example tutors.

In teacher education there is also a concern that the providers of online learning have not been able to offer sufficient support to students in their professional experience placements.

Two examples of the way education is becoming commercialised follow. The Open University is a 'for-profit' company owned by seven universities. It sells courses provided by the seven major shareholders and other higher education and vocational education providers. It has experienced a significant rise in student numbers in the past few years. Curtin University is the major provider of online learning to NSW ITE students through the Open University. On the Open University website the Chairman writes about online education using expressions such as 'the market for online tertiary education', 'the domestic Australian markets becoming more and more competitive', 'customer service', 'being driven by what the market needs', 'having grown the business' 'delivering scalability', while also talking about delivering quality programs, providing engaging learning experiences for students, putting students at the centre of learning and other factors that can make the businesses successful.

Swinburne University has joined with SEEK to create Swinburne Online. Swinburne lecturers write programs and have them accredited, and award grades to students. Swinburne Online runs the programs including professional experience. It employs casual tutors who are usually teachers, principals or academics to run the programs.

The more commercial online providers have excellent marketing strategies which include widespread mainstream media and online advertising, and the use of highly responsive websites to handle student enquiries.

PART B – RESEARCH

General research

There is vast research relating to the quality and efficacy of online learning. It ranges from large country-wide studies through to studies conducted across and in academic institutions and classes, to qualitative reports of individual experiences with online learning. The subjects used for studies range from academic leaders to teaching staff and students.

Much of the empirical research on the effectiveness of online learning has focused on comparing online courses to those delivered on campus. It is difficult to conduct such comparative research because of the variables in student composition (eg age, sex, location, ethnicity, prior study, capacity to use technology, learning style), teacher educators (commitment to online learning, skill in using technology, skill in presenting content online, teaching competence), size and type of courses and the technology and supportive software being used. Despite these difficulties and the varying quality of research, there are some clear themes emerging from the literature.

Overall, the majority of researchers have concluded that there are no significant differences between online and on-campus student satisfaction and achievement. However researchers find one mode of delivery more effective than the other under particular circumstances (Dell, Low & Wilker, 2010; Allen & Seaman, 2014).

One of the largest and most often cited studies about online learning is the annual survey, previously conducted by the Sloan Consortium but this year undertaken by the Babson group, which has been tracking the development of online learning in the USA since 2002. In the most recently published study Allen & Seaman (2014), provide a picture of the current status of online learning by surveying personnel in more than 2800 US higher education colleges and universities. The survey demonstrates that three-quarters of academics rate the learning outcomes for online learning 'as good as or better than those for on-campus instruction'.

In teacher education the same findings are generally reported. Here the most often cited study is the 2009 US Department of Education meta-analysis reported in "Evaluation of Evidence-based Practices in Online e-Learning: A meta-analysis and Review of Online Learning Studies the Department of Education" which reported that of 51 studies, 11 were significantly positive, favouring online or blended instruction, and only two favoured on-campus instruction. The overall finding was that classes with online learning (where they were taught completely online or blended) on average produce stronger student learning than on-campus instruction. The positive effect was stronger for blended instruction. The report cautioned that the interpretation of this result, however, should take into consideration the fact that online and on-campus conditions generally differ on multiple dimensions, including the amount of time that learners spent on task. Criticising and reanalysing the meta-analysis, Jaggars and Bailey (2010) found only a small number of rigorous studies in the meta-analysis but still concluded that in comparison to on-campus courses the typical online college course had higher student withdrawal rates but equal learning outcomes. However, they claimed that the finding applied only to well-prepared students, that is, even the critical researchers have reported that, under some conditions, online learning can provide equivalent outcomes to on-campus learning.

In the years following the US Department of Education meta-analysis, an increasing number of studies have demonstrated that online learning can produce equal academic results and student satisfaction to on-campus programs. The studies have used different ways of assessing outcomes, different cohorts of students and different timeframes. For example when comparing teacher education students training to be teachers of students with severe disabilities McDonnell et al. (2011) found no significant difference in the measures of learning between one group studying on campus and the other by video conference. Dell, Low and Wilker (2010) compared assignments by teacher education students in a graduate course in human development between those taught online and those taught on campus and found no significant difference. Chiero and Beare (2010) analysed data collected from teacher education graduates from a large state American university system over seven years, and concluded that graduates of online programs clearly feel their preparation was superior compared to the campus-based programs. There were some demographic differences in cohorts but even given those differences they concluded that a well-designed online

Overall, the majority of researchers have concluded that there are no significant differences between online and on-campus student satisfaction and achievement. However researchers find one mode of delivery more effective than the other under particular circumstances *(Dell, Low & Wilker, 2010; Allen & Seaman, 2014)*.

teacher preparation program can be as effective as or more effective than campus-based programs.

More recently the majority of research attention has focused on the elements essential for quality program design and delivery. Specifically, focus has been on aspects of learning that some teacher educators regard as critical to high-quality face-to-face learning, but are difficult to replicate in the online environment. The concerns expressed are:

- students may not engage with content in online environments as well as when teacher educators facilitate engagement through face-to-face interaction
- students may not have the opportunities to enhance their learning by exploring and developing ideas with their peers
- the capacity for the development of higher order thinking and the development of deep understanding of content may not be as good as in the on-campus environment where lecturers and students can exchange and debate ideas
- teacher education students are being trained for a 'human to human' profession, and online learning divorces them from the opportunities to learn about and practise their human interaction skills.

In brief, many teacher educators are concerned that the online environment is not conducive to the personal interactions required to provide the knowledge, the higher order thinking skills and the communication skills required of teachers.

Student engagement

Student engagement is essential for learning. It is generally considered that in teacher education high-quality courses require students to engage in three ways, that is, with course content, with their lecturers and with other students. It has been demonstrated that student interaction is not only the key to engagement in online ITE courses, but that higher levels of interactivity correlate with higher levels of student satisfaction and performance (Ravenna, Foster & Bishop, 2012; Castano, Duart & Sancho-Vinuesa, 2013).

It has also been demonstrated that increased online teacher/lecturer involvement results in increased learning (Ryan & Scott, 2008, in Ravenna, Foster & Bishop, 2012). Instructor involvement should result in the feeling of 'teaching presence' which is seen to be important for student engagement and interaction in online learning (Pelz, 2004; Shea 2006 in Heirdsfield et al., 2011). Teacher presence is essentially the feeling that students are interacting with a real person. Some writers contend that technology should provide the opportunity for people to be 'virtually' in the same classroom (Ferrari & Hall, 2009). Teacher presence is seen as vital for 'complete learning', that is, where the student can engage with content and can apply higher order thinking skills (Garrison, Anderson & Archer, 2000). This sense of presence should be extended to fellow students (Garrison, Anderson & Archer 2000), to enable peer-to-peer learning and to practise skills required to engage groups of children in classrooms.

A variety of methods is available to teacher educators to assist them to develop the sense of presence and to promote student interaction, for example, interactive study guides, video and audio presentations, case studies, open-ended activities, engaging discussions which establish the instructor as an active participant and activities that promote higher level thinking and application of learning (Ravenna, Foster & Bishop, 2012). Opportunities for interaction can include: student with teacher educator, student with a student partner, small group interaction or whole of group interaction. Through such activities an 'online learning community' can be created. This can commence with activities at the beginning of courses.

Very often online teacher education programs are delivered asynchronously and some of the above activities can only be conducted in synchronous environments. While asynchronous programs have the advantage of maximum flexibility in the time and place of study for students, it is harder to build a connection between students and teachers and students with students without real-time interactions. Students can therefore feel isolated (Dickey, 2004 and Daviault & Coelho, 2003 in Heirdsfield et al., 2011) and learning can suffer. While researchers have shown it is possible to create a sense of community using asynchronous technology, the majority agree that using synchronous communication is more effective (Garrison, Cleveland-Innes & Fung, 2010).

Studies have demonstrated the ways this can be done, for example, in a study with 93 students Tucker (2012) used Centra, web-based software enabling real-time synchronous communication, collaboration and learning. Participants were able to see each other and talk to each other simultaneously. They were able to work together to develop interactive presentations and learning content. All participants were required to have a video camera and a microphone. Chat sessions were mandatory. Students were divided into groups of six and each group was scheduled to chat at times convenient to everyone in the group. The teacher was always present. The study concluded that synchronous communication does indeed promote a sense of community and that presence is a significant determinant of student satisfaction and perceived learning.

The ability to balance synchronous and asynchronous techniques to match the content being presented is one of the

keys to engaging students and providing high-quality programs. Technology offers a variety of possibilities for stimulating, engaging synchronous and asynchronous strategies to be incorporated into course delivery. Lecturing staff generally need to learn many new skills to operate in the online environment. These skills may relate not only to delivering programs to an online student body but also may require simultaneous engagement of on-campus students which requires yet a further set of skills (Bower et al., 2014).

It is generally agreed that high-quality and low-quality programs are provided both on campus and online. The key to the provision of high-quality outcomes in either mode is sound pedagogy. While the principles of sound pedagogy are the same both for on-campus and online learning, new skills are required for teacher educators to reconfigure their programs for online delivery.

Transition of teacher educators from on-campus to online instruction

Research literature and university personnel report that many academics have difficulty with the transition from on-campus to online teaching. Indeed some are resistant to making the change. There are multiple reasons for their lack of enthusiasm; the most frequently cited are:

- the belief that online learning is not as effective as on-campus teaching
- the view that the motives for online learning are commercial rather than pedagogical and that quality is the compromise
- a lack of skills with technology and online course delivery
- a lack of confidence to make the transition
- the perception that already heavy workloads will be exacerbated
- the perception that control over the content and delivery of courses will be diminished (Russell et al. 2014).

From a practical perspective some teacher educators prefer not to forsake on-campus human interaction for time sitting at a computer.

Online learning requires academics to rethink their roles as teachers. Academics build their identities around in-class teaching and creating on-campus relationships with students (Hanson 2009 in Russell et al., 2014). There are many dimensions to these on-campus relationships, and many lecturers have high levels of expertise in, and enjoyment of, on-campus pedagogy. It is difficult for academics to move from methods in which they have expertise and find rewarding to methods where they are novices and which they perceive will not be either as effective or enjoyable. Redefining identity and teaching practices takes time (Redmond, 2011). The change to online programs has implications for course design and delivery. Along with new technical skills it requires a rethinking of the role of a teacher. Workload and working hours often change.

It has been reported that often in the first iterations of online units, teacher educators simply post written content onto an LMS and accompany this delivery with online forums, that is, largely replicating paper-based distance education courses. At this point in the development of online units, the LMS is seen as a repository of information and the technology the determiner of the content delivery. Once lecturers learn to capitalise on the dynamic nature of technologically enhanced teaching and learning (Redmond, 2011), the LMS is perceived as a teaching space, which is capable of the most dynamic course delivery. The technology then becomes the vehicle for, rather than the determiner of, pedagogy.

Learners

It is widely held that the current generation of students are significantly different from students of the past. Typically writers refer to 'digital natives', that is, those under 35 years of age who have grown up with technology and developed digital skills, having used mobile phones, email, instant messaging and web searching. This group of students are perceived to have different expectations of and attitudes towards technology, and superior technology skills to older students. While this may be true to some extent (Andrews & Tynan, 2012), it is apparent that there are different levels of competence in all age groups (Kregor, Breslin and Fountain, 2012).

The older students who enrol in online courses expect, like their younger peers, to use computer technology as the vehicle for their study, and generally enter programs with at least basic computer skills and as mobile phone users. However most students need to learn how to use the technology required for their program, which will include the LMS, accompanying software and Web 2 technologies (Regional Universities Network, 2013). Students, particularly those re-entering study after a period of absence, very often need additional support with other aspects associated with their return to study, for example online essay writing, meeting deadlines etc. Research confirms that being well prepared to undertake online learning is important for success (Jaggars & Bailey, 2010).

Establishment and maintenance of quality online programs

Recent Australian reports have contributed to understanding ways to run quality online programs. Holt et al. (2013), researchers from five Australian universities, reported the findings of a nationally funded Australian Learning and Teaching Council (ALTC) project on the quality management of online learning environments. This project developed a 'quality management through distributed leadership' model to underpin quality assurance in online programs which has a framework of six interrelated elements. The elements are planning, organisational structures, governance, technologies, resourcing (including, staff development and maintenance and enhancement of technologies) and evaluation.

Recently Russell et al. (2014) reinforced the importance of evaluation and the way it can support program quality. They reported a study where feedback from a quality analysis of the Student Experience and Expectation of Technology (SEET) survey was used by universities for institutional planning and for informing the academic community, although they used the data in different ways to inform their educational technology support strategies.

The following essential underpinnings of high-quality programs was compiled by synthesising the views promoted in the current literature and using information from discussions with key university and college personnel:

- The goals, processes and expectations of online programs must be clearly defined. The importance of systematic organisational policies as a contributing factor to supporting the adoption of online technologies in teaching and learning has been well documented (West, Waddoups & Graham, 2007 in Palmer & Holt, 2014).
- Investment must be made in suitable technology and infrastructure. The original selection of hardware and software to operate online programs must be followed not only by the maintenance of systems but also by continual evaluation of emerging technologies and software to ensure the quality of programs continues to develop. The current rate of change in technology makes this particularly challenging for online providers.
- Support teams including technology, design and multimedia personnel must be available. It is possible to run online programs by uploading written content to a LMS and provide access to forums or chat rooms. However higher quality programs capitalise on the variety of engaging, interactive opportunities available in the online environment. The design and production of such activities, for example high-quality video recordings, interactive assessment tasks, generally require the skills of a team of people who can contribute their knowledge of content, pedagogy, course design, multimedia and technology.
- The selection of teacher educators to deliver programs should include an assessment of their predisposition towards, and enthusiasm for, online learning and their suitability for the use of technology to deliver teacher education programs.
- Teacher educators must be trained to design and deliver online programs in professional development that focuses both on the use of technology and online pedagogy.
- There must be ongoing program evaluation, tailored to online delivery, with the aim of program improvement.

Professional experience

It is widely accepted that effective teacher preparation depends on the quality of the professional experience provided to teacher education students. Indeed, surveys of new teachers suggest that student teaching is the most important part of their teacher training experience (Greenburg, Pomeranch & Walsh, 2011).

As the National Council on Teaching Quality in the USA report states, 'the stakes in student teaching are high' (Greenburg, Pomeranch & Walsh, 2011). Professional experience not only assists students to acquire teaching skills but also contributes to the student's perception of their competence as a teacher as well as setting expectations about quality teaching. A mediocre or poor experience 'can never be undone' (Greenburg, Pomeranch & Walsh, 2011), conversely consistently good professional teaching experiences improve not only individual teachers but ultimately the quality of teaching as a whole.

In recognition of the importance of 'practice' teaching GTIL states that, 'All teacher education students will receive high quality professional experience as part of their teacher education programs' (GTIL p.9).

Much time and effort has been dedicated to trying to determine the factors that lead to a 'high-quality' or 'effective' professional experience. For purposes of this review the six most commonly identified factors are discussed.

- **Length of professional experience**

  Programs should provide sufficient professional experience for students. In Australia pre-service teachers must complete a mandatory numbers of days of professional experience, that is no fewer than 60 days of well-structured, supervised and assessed teaching practice in schools in graduate entry programs, and no fewer than 80 days in undergraduate and double-degree teacher education programs (Program Standards AITSL p 14). The grouping of the days and the experiences offered to students vary, and educators differ in their views on the ideal organisation of professional experience days. The recently released LEWS study reported that graduate teachers and principals valued a combination of regular one to two days professional experience placements along with block placements of five weeks duration, followed by internships as the final part of their programs. The Australian Council of Deans of Education (2014), citing researchers Darling-Hammond and Haselkorn (2009), suggests that longer placements (10 weeks to 4 months) are the preferred mode of engagement and have greater success for retention.

- **Guidance and assessment of pre-service teachers according to a set of standards**

  Programs should conform to a set of agreed standards. ITE programs throughout Australia are required to be accredited against a set of national standards (AITSL, 2014). The Program Standards describe key features expected of high-quality ITE programs that are the characteristics of programs that give confidence that a set of graduate teacher standards will be achieved. All teacher education programs are now required to prepare their teacher education students to meet the AITSL Graduate Teacher Standards. Student teaching during their professional experience placements is assessed against those standards.

- **Quality of partnership between institutions supporting professional experience**

  There is widely held view that close relationships between providers and the schools where students undertake professional experience lead to more effective professional experience placements. The relationship should help align professional experience with course work. A number of past reviews have made calls for more investment in building school–university partnerships in teacher education programs to bridge theory and practice (Mayer et al., 2014). Graduates surveyed for the Longitudinal Teacher Education Workforce Study (Mayer et al., 2014) expressed the need for stronger links between content, theory and application in schools supported by strong school–university partnerships.

  The Queensland Government's *Report from the Teacher Education Implementation Task Force* agreed, 'that partnerships need to be strengthened and formalised to enable a better alignment between what aspects of the program the Tertiary Education Institution delivers and what the school delivers. The roles and responsibilities of all partners need to be clearly articulated to reflect their shared responsibilities in ensuring the theoretical and practical components of the approved program are delivered and assessed as intended' (2012: 8).

  AITSL Program Standard 5, 'School Partnerships', recognises and institutionalises the value of school/provider relationships. Among the criteria under this standard is:

  5.1 Providers have established enduring school partnerships to deliver their programs, particularly the professional experience component. Details of the way in which the partnership should work must be described to regulating authorities (AITSL p.16).

- **Supervision by university/college personnel**

  University/college supervisors bridge the gap between the content taught in teacher education programs and the learning that takes place in schools (Allen, Ambrosetti & Turner, 2013). University/college staff who visit schools can understand the contexts in which their students are operating and can understand what they are doing and why (Allen, Ambrosetti & Turner, 2013). These supervisors are able to provide support both to school personnel and to the student.

- **Quality of supervision and support by cooperating/ supervising teacher**

  It is widely acknowledged that an effective professional experience relies on the quality of the mentoring/supervision provided by their supervising teacher. The supervising teacher has many roles, which have been the subject of research and description. These roles include: providers of information, role models, providers of feedback, supporters of reflection, provision of encouragement and evaluators. They also help students to understand and adapt to the culture of the schools where they are teaching. These roles must be undertaken while attending to the primary purpose of their employment, that is optimum development of their students.

  AITSL Program Standard 5.5 states that, 'providers and their school partners ensure that teachers supervising professional experience (in particular the supervised teaching practice) are suitably qualified and registered. They should have expertise and be supported in coaching and mentoring, and in making judgements about whether students have achieved the Graduate Teacher Standards.'

- **The role of the school-based coordinator**

  In-school coordinators not only facilitate professional experience placements and act as the conduit from school to university/college staff but also ensure that students learn about the school as a whole, not just the class where they are based. They are important in fostering student learning about their broader role as a teacher.

PART C – THE EXTENT OF ONLINE LEARNING

National ITE enrolments

In April 2014 there were 400 accredited ITE programs offered by 48 institutions across Australia. These programs graduate approximately 16,700 teachers each year (AITSL, 2014).

The following were taken either directly from data gathered by the Higher Education Statistics team at the Australian Government Department of Education (AGDE) or indirectly from the same source via the AITSL Initial Teacher Education Data Report (2014). AGDE collects data on tertiary students by mode of study. Categories used are internal, external and multi-mode (meaning some units online and some on campus). The AGDE data demonstrates that the provision of online programs has increased and in 2012, 50% of ITE programs had some commencing students studying by external or multi-mode attendance (AITSL, 2014).

For total enrolments in ITE programs in 2012 (ie 78,212 students), 66.8% were studying internally, 18.6% were studying externally and 14.6% were studying by multi-mode. Of total enrolments 81% of students were undergraduate and 19% were post-graduate students. Sixty four per cent of post-graduate students were studying internally, 28% of post-graduate students were studying externally and 8% were studying by multi-mode. Whereas 67.6% of undergraduate students were studying internally, 16.4% of undergraduate students were studying externally and 16% were studying by multi-mode.

When examining total enrolments it was evident that there was a much higher proportion of part-time study in external (63%) than internal (12%) or multimode (10%) study.

External students were generally older, with 79% of external students over 24 years, 75% of internal students 24 years or under and 77% of multi-mode students 24 or under.

In 2012, 30,457 students commenced ITE programs. Of these students 69% commenced studying internally, 22% of students began studying externally, and 9% commenced studying by multi-mode.

In 2012, of those students who commenced through an external mode of attendance, 59% were studying part time and 10% of multi-mode students were studying part time.

External students were generally older, with 24% of internal students 25 years or older, 77% of external students 25 years or older and 30% of multi-mode students 25 years or older. The majority of undergraduate commencing students were 24 years or younger (76%) and the majority of post-graduate students were between 20 and 39 (86%).

Regional students were more highly represented in external courses (34%) and multi-mode courses (46%) than internal courses (20%). Lower socioeconomic status (SES) students were also more represented in external courses (24%) and multi-mode courses (22%) than internal courses (17%). Similarly, the small number of indigenous students was higher proportionally in distance and multi-mode courses than on-campus courses (AITSL, 2014).

Pattern of change

From 2005 to 2010 new students by mode of attendance for all teacher education programs showed a steady increase in external attendance. In ITE programs a large increase in external/online learning took place in 2012 when the total commencements was 30,456. Nationally total enrolments in online learning grew by approximately 33% and there was an 8% increase in commencing external students from 2011 to 2012. The majority of the increase was in external/online programs and much of that was associated with the introduction of Open University programs offered by Curtin University whose total online numbers rose from 2983 in 2012 to 4825 in 2012.

Data recently released by AGDE showed a decline in external commencing students from 2012 to 2013 from 6664 to 5545, however enrolments of the newer provider Swinburne Online have not been included in 2013 data. Enrolments at Swinburne accounted for the majority of the difference in the figures. Nationally, commencements in ITE are reported by AGDE as having declined by 2.7% (from 29,393 to 28,612). However Swinburne Online numbers indicate that overall enrolments have remained approximately the same.

Data available to illustrate the growth in online learning Australia wide shows that, in 2012, approximately 20% of ITE students were enrolled in external programs. The majority of external students were studying part time and were over 25 years of age whereas those commencing in internal or multi-mode were generally studying full time and were 24 and under. Of commencing students, approximately one-third of external students came from regional areas. External students were more frequently from lower socioeconomic backgrounds than internal students. There has been significant growth in online ITE

attendance in the past few years. The greatest increase took place from 2011 to 2012 when total external enrolments rose by 33% and there was an 8% increase in commencing external students. The majority of the increase was attributed to online learning. Following the dramatic increase, online ITE student numbers appear to have remained at similarly high levels.

NSW ITE enrolments

More recent data for NSW students has been gathered for this report. In April 2014, seven providers in NSW enrolled initial teacher preparation students in external/distance/online courses. The three major providers are regional universities, that is UNE (3210 students), CSU (1203 students) and SCU (523 students). Other online providers are: Wesley Institute (242 students), Macquarie University – Institute of Early Childhood (Birth to 12 years program) (141 students), Alphacrucis College (35 students) and Morling College (15 students). This means 5369 students were enrolled in online programs with NSW providers. Of these at least 565 were from interstate. This means that 4804 NSW students were studying online with NSW providers.

Among the other Australian universities preparing teachers by distance are: Curtin University, Edith Cowan University, Queensland University of Technology, Monash University, Charles Darwin University, James Cook University, Central Queensland University, University of Southern Queensland (USQ), Swinburne University, Griffith University and the University of Tasmania (UTAS). While the figures of all interstate providers have not been included in the calculation, it is conservatively estimated that there are at least 2460 NSW students studying online through these providers, with the newer providers, that is Swinburne University and Curtin University, accounting for 2000 of the enrolments.

This means that at least 7260 NSW students were studying ITE programs in online/distance mode in 2014.

NSW is also home to a number of students who study on campus in adjoining states. This is particularly the case for students from northern NSW who study in universities in southern Queensland. These students often undertake professional experience in NSW schools.

NSW providers report that their online students are mostly mature aged, female and studying part time.

Reasons for increase

Providers report that the following factors have influenced student uptake of online learning.

Technology. Almost all Australians live in a 'connected' world. The opportunity for technological interaction between providers and students has grown and continues to develop in ways that support online learning. Hardware including high-speed computers and mobile devices (eg tablets and smart phones) along with improving software enable increasingly sophisticated program delivery. Most current students are regular users of fixed and mobile devices. They expect that at least some elements of their programs will be accessed via technology.

Student lifestyle. Where once ITE students fitted the rest of their lives around their studies, more frequently their studies are being fitted around other elements of student life. This is certainly the case for mature-aged students who fit their studies around family and work, but has also been reported for school leavers, the majority of whom work to support their studies and lifestyles. Online learning, which enables more flexibility of time and place, is often more suited to their lifestyles.

Nationalisation and globalisation. Online learning has enabled increasing nationalisation and globalisation of higher education. Universities are establishing programs that can be accesses by students distant from their campuses whether they are across the country or across the world. This trend is evidenced by: universities establishing national and national campuses; NSW students who are studying online at interstate universities; interstate students studying online at NSW universities; overseas students studying online at NSW universities; and the amalgamation of an Australian provider (Wesley) with an American University.

Commercialisation. As mentioned earlier, the provision of education both in Australia and internationally is gradually changing to a commercial activity. The establishment of new more commercial teacher education providers, for example the Open University and Swinburne Online, and the way they package, market and deliver programs has proved attractive to students.

Swinburne Online reports that the rapid uptake of their online ITE programs relates primarily to their focus on catering for student needs. They establish models with maximum flexibility, that is, with multiple enrolment times, no requirement for campus attendance and the opportunity to undertake professional experience at times and in places of student choice. Additionally there are low student to teacher educator ratios which ensure individual attention can be provided to all learners.

PART D – PROGRAM QUALITY

The perspective of tertiary educators and regulators

Discussions and written responses from the Deans/Heads of Education about the underpinnings of quality online programs follow.

- **Accreditation**

  All NSW providers of online ITE have been deemed to have met the Australian Professional Standards for Teachers (APST) and accredited with the BOSTES. This means that their graduate students, whether they study online or on campus must be taught the required content and undertake the required professional experience to give them the opportunity to meet the AITSL Graduate Teacher Standards. The interstate providers consulted for this study run programs accredited through their state authorities.

- **Policy**

  The formulation and promulgation of clear policies and procedures to underpin online learning was seen as vital to ensuring quality outcomes. Management, staff and students need to share expectations of what is being offered online and staff need clear guidelines to assist them to understand and deliver high-quality units. The need for these policies and procedures to be regularly reviewed and altered to suit changing circumstances was also considered important.

  The findings of this review are that the major providers have comprehensive plans and policies to guide the development and delivery of online programs. An example is the online learning 'Commitment Document' at CSU. This document clearly sets out the commitment to the provision of high-quality online learning along with the commitment to improvement. The document specifies expectations of teacher educators, for example in response time to students and the level of synchronous activity to be included in units. Impressively, students have online access to commitments and expectations (see CSU later). UNE has a 'Signature Pedagogy Document' and SCU has a 'Guiding Principles Document'.

  The smaller providers generally rely on practical guidelines to steer their courses. These are usually published in their course handbooks.

- **Staff selection**

  All Deans/Heads of Education reported that their selection criteria for online program staff included not only the traditional competencies for lecturers but also a commitment to the provision of quality online learning and technology skills. For example, Macquarie University Institute of Early Childhood reported that staff selection was viewed as the most important element in ensuring high-quality programs and nominated the qualities of enthusiasm about technology, innovative approach, willingness to learn new things, ability to take risks, ability to work collaboratively across departments, willingness to make use of resources outside the department, along with a proven background in lecturing as the qualities used for selection.

  Providers reported an increasing casualisation of the workforce, but the larger providers currently report a balance of permanent and casual online lecturers.

  Some programs are delivered primarily by sessional staff who had little or no experience with on-campus lecturing. These personnel are generally teachers or school principals (sometimes recently retired) who have practical teaching knowledge. In these cases induction courses are held and ongoing support is available.

- **Professional development**

  Providers are conscious of the need to provide training for their staff to ensure they have the requisite technology skills and that their teaching methods are tailored for the online environment. Providers are also aware that differences in staff commitment, skills, training and experience with online course delivery lead to variations in quality between program units.

  All providers reported that they had professional development programs in place to support the delivery of online learning. These varied from staff meeting discussions characteristic of smaller providers through to a combination of course work and individual tuition for teacher educators characteristic of the larger providers.

  A professional development resource used by a number of providers is freely available through the College of Fine Arts (COFA) at the University of NSW. COFA received an Australian Learning and Teaching Council grant to produce a series of 10 modules designed to assist tertiary educators to deliver high-quality online courses. Entitled *Learning to Teach Online*, the resource aims to develop an understanding of online pedagogies and practice, and to provide flexible learning options for students. Each of the modules has a video and written text addressing a pedagogical issue related to planning, teaching and evaluating online units/courses. Each video presents observations, comments, advice and experiences of teachers and experts in the field. Case studies explain examples of best practice and the related issues, successes and failures. Technical support episodes explain how to get started with specific online technologies. A forum for discussion is incorporated.

Providers report differing levels of enthusiasm for participating in professional development in online program delivery among their teacher educators.

- **Technology**

  The larger providers have invested heavily in technology and facilities. For example UNE has sophisticated technology and facilities, for example recording studios at its main campus in Armidale, but has also established its 'Future Campus' in Parramatta. It is equipped with the latest communication technology including Telepresence studios to host high-quality real-time video-conferencing sessions as required. Here students can also access all the technological facilities they need to complete their programs.

  The smaller providers have adequate technology to run online programs but are unable to purchase the high-end technology or facilities characteristic of the larger providers.

- **Support staff**

  The larger providers have teams to support the development and operation of their online units. Personnel include multimedia and design personnel, IT personnel and personnel to support the coordination of course quality processes (eg at UNE teacher educators are supported by multimedia personnel both from their faculty and from a central learning hub). SCU employs an Accreditation and eLearning Officer who has the dual roles of assisting with unit design and ensuring standardisation. In the larger organisations design and production of online units is often a team effort.

  The smaller providers rely on individuals to ensure the design and production of courses. Teacher educators generally design and write the units and IT specialists support their delivery.

- **Monitoring and evaluation**

  CSU has an Associate Dean of Curriculum Learning and Teaching who oversees the standards and quality assurance processes in units. All courses are reviewed by a Course Director. UNE has monitoring and evaluation procedures and has just received a grant to establish a Higher Education Research Centre to research and evaluate courses with the aim of continuous improvement.

  The smaller providers use student surveys, course review panels and feedback from professional experience schools and employers to monitor and evaluate their programs.

  It should be noted that the small colleges who are also providers of the least sophisticated online programs, that is Morling College, Wesley Institute, Alphacrucis College, have processes which, to some extent, compensate for the lack of resources and personnel. The small numbers in their programs mean they are able to 'get to know' each of their students and to provide individualised support. Each of these providers requires students to attend on-campus schools, varying in length from one week for every unit (Alphacrucis College), to one day at the beginning of the program (Morling College). These providers also offer the most flexibility for students in that they can enrol at any time, and can undertake professional experience when it suits their lifestyles.

  Deans/Heads of Education reported that their online learning delivery is continuously improving as the internal processes of their institutions and faculties are refined and staff become more familiar with online pedagogy.

- **Challenges**

  Providers reported facing the following challenges in endeavouring to provide quality programs:

  - costs involved in establishing and maintaining high-quality online programs
  - difficulties with availability of schools for student professional experience placements
  - keeping abreast of technological and software developments
  - managing the process of change with staff
  - supporting students who enter with extra needs, for example in language proficiency
  - ways to deliver practical subjects, for example music, physical education
  - knowing that the online student is the person completing the work
  - limitations of current technology, for example network speeds and home computers
  - need for research in many aspects of online delivery.

The student experience CEQ

Each year Graduate Careers Australia administers a national survey, the CEQ, which assesses student satisfaction with their university experience approximately four months after completing their course. The CEQ aims to collect aspects of the student experience which indicate the quality of teaching and courses. Its aim is to compare the responses of different groups of students. The CEQ consists of attitudinal statements, each with a corresponding five-point scale, with 'strongly disagree' at one end and 'strongly agree' at the other. Respondents record their agreement or disagreement with each item.

Eleven facets of the student experience are measured by the CEQ. With the exception of the Overall Satisfaction Indicator, which is a single-item scale, each statement in the CEQ has at least two other accompanying items, and together these constitute a 'scale' that measures an underlying construct. While three 'core' scales appear in the CEQ distributed to graduates from every institution (ie Overall Satisfaction, Generic Skills and Good Teaching), each institution is also able to choose from a range of additional scales to measure different pedagogical constructs. The three core scales on which respondents indicate their level of satisfaction are described below. Graduates' responses to these items are tabulated and the results are expressed as the proportion of responses in the 'agree' and 'strongly agree' categories.

The **Overall Satisfaction** scale targets overall satisfaction with course quality and requires students to respond to one item, 'overall I was satisfied with the quality of this course'.

The **Good Teaching** scale targets the nature of teaching experience during a course and requires responses to six items which address whether teacher educators: gave helpful feedback on how a student was going, put a lot of time into commenting on work, worked hard to make the subject interesting, motivated the student to do his/her best, were extremely good at explaining things, made an effort to understand the difficulties the student might have with his/her work.

The **Generic Skills** scale targets the enhancement of selected generic skills and requires responses to six items which address: the sharpening of analytic skills, improved written communication, developing the ability to plan work, developing problem-solving skills, tackling unfamiliar problems and the ability to work as a team member.

In 2013 for all education courses throughout the country (post graduate and undergraduate), among 9412 responses results were similar in **Overall Satisfaction**: internal (on campus) (80%), external (distance) (81%) and mixed (internal and external) (81%) modes of attendance. The responses were similar for NSW which reported the following figures for 3153 graduates: 82% for internal, 82% for external and 83% for multi-mode.

For all education courses throughout the country the results on the **Good Teaching** scale from 9404 returns showed the proportion of responses in the agreed or strongly agreed categories for internal courses was 68%, for external courses 65% and multi-mode 67%. For NSW the results on the **Good Teaching** scale from 3153 responses were also marginally but not significantly lower for external students, that is internal 68%, external 64% and multi-mode 68%.

For all education courses nationally (9384 responses) and for NSW courses (3174 responses) graduates from external courses less often expressed agreement in relation to **Generic Skills**. Nationally responses were internal (75%), external (70%) and multi-mode (74%). In NSW, responses were internal (78%), external (72%) or multi-mode (78%) courses.

There are eight other scales addressing Appropriate Assessment, Appropriate Workload, Clear Goals and Standards, Graduate Qualities, Intellectual Motivation, Learning Community, Learning Resources and Student Support. It is optional for participants to respond to these scales so return numbers are lower. However it is possible to note some trends.

Graduates from external courses less often agreed or strongly agreed in relation to **Student Support** than graduates from internal courses (ie able to access IT resources when needed, library resources readily accessible, relevant resources were accessible when needed, was satisfied with the course and careers advice provided, health welfare and counselling services met my requirements). The results nationally (from 2343 responses) were internal 71%, external 66%, multi-mode 71%, and in NSW (from 865 respondents) internal 72.4%, and external 65.0%, with returns too few to report for multi-mode.

On the other hand graduates from external courses responded with marginally but not significantly more agreement on the **Learning Resources** scale than graduates in multi-mode and internal courses (ie relevant up-to-date course materials, use of IT, clarity about available resources, clear concise study materials, appropriate library resources) both nationally and in NSW. Nationally (from 1600 respondents) results were: internal 72.1%, external 76.0% and multi-mode 76.1%. In NSW (from 939 respondents) results were: internal 71.7% externally 76.4% and multi-mode 74.8%.

Both at the national and state level graduates from external courses clearly expressed less agreement with the establishment of **Learning Community** (ie exploring ideas with other people, feeling part of a group, exploring interests with staff and students, belonging to the university community,

having ideas and suggestions used during the course) in external courses and multi-mode courses than in internal courses. Nationally the results for 1366 respondents were: internal 72%, external 49%, multi-mode 54%, and in NSW the results for 359 respondents were: internal 79%, external 58% and multi-mode 69%.

There was insufficient data to report state differences on all other scales. Nationally small but not significant differences were recorded on the **Intellectual Motivation** scale (ie worthwhile university experience, intellectually stimulating, stimulation of interest in field, course motivating). From 771 respondents the results were: internal 83%, external 85% and multi-mode 82%; on the **Graduate Qualities** scale from 5559 respondents (internal 80%, external 82% and multi-mode 78%); and there was little difference on the **Clear Goals and Standards Scale** (from 1658 respondents) (internal 62%, external 61% and multi-mode 60% respectively).

External graduates significantly more often agreed on the **Appropriate Assessment** scale. This scale is negatively framed with: 'too many staff asked questions just about facts', 'staff seemed more interested in testing than what I understood', 'to do well in the course all you needed was a good memory'. Nationally scores on these items (which were converted by GCA to the same form as all other scales) for 1297 respondents were: internal 43%, external 63% and multi-mode 51%.

Nationally graduates from external and multi-mode courses more often agreed on the **Appropriate Workload** scale (time to understand, workload too heavy, volume, pressure). From 1297 responses results were: internal 35%, external 40% and multi-mode 52%.

The student experience – BOSTES teacher survey

While the CEQ provides useful information about the relative quality of teacher education courses and satisfaction with online versus on-campus learning, the questionnaire reports data for all teacher education programs, and while it is possible to separate post-graduate from undergraduate data it is not possible to extract data for ITE programs. There are also limitations of the data relating to NSW programs

A new survey was therefore designed to ascertain NSW teacher satisfaction with ITE programs. The survey comprised 39 questions (attached) and sought background information about teachers, as well as their mode of study, reasons for mode of study, satisfaction with their overall program and individual units, and practices associated with professional experience placements. The survey identified teachers who had studied in different modes, that is external/online, multi-mode and internal/on-campus, and sought their perspectives about those modes.

In NSW teachers are required to register with the BOSTES prior to commencing teaching. It was therefore possible to circulate the survey to all teachers who registered in the 2013 calendar year having completed their teacher education program with an online learning provider, and, wherever it was possible to identify, had completed their program of study in 2013. The group included teachers who had graduated from NSW and interstate universities.

The survey was sent by email to 836 teachers. The teachers had studied with at least 13 different providers. Of these, seven were from NSW and six were interstate. Thirty-five per cent of teachers (ie 294) returned completed surveys.

The returns were anonymous unless teachers chose to provide identification. Forty-six participants chose not to provide the name of their university or nominate a university where they had undertaken post-graduate studies. Of those who did nominate the university where they studied their ITE qualification, 70% had attended either UNE or CSU, the largest providers of online ITE in NSW.

Survey results

Characteristics of online students

Teachers who had studied online were predominantly female (82%), and were a larger proportion than those who had studied on campus (75%).

Online respondents generally were **mature aged**. Eighty three per cent of online respondents had completed their degree in 2013 and but in August 2014 only 4% were under 25 years of age and 36% were between 25 and 35 years of age.

Over 40% of teachers responded that their main reason for studying online was family commitments, 35% indicated work was their main reason, 10% cited distance from campus and the remainder cited a preference for online study, the availability of the course and cost as the reasons.

Perception of program quality

Over 95% of teachers who had studied online found the quality of the course satisfactory, good or very good, with 78% rating it good or very good. Ninety-four per cent of on-campus students found the quality of the course satisfactory, good or very good, with 71% rating it as good or very good.

Program delivery

One-third of respondents were required to attend on-campus schools.

Effectiveness of programs

- **Responses to teachers re the overall program (course)**

  Ninety-one per cent of online respondents felt that the course enabled them to meet the Graduate Teacher Standards, a marginally higher response than on-campus respondents (87%).

  Nearly 90% of online respondents agreed or strongly agreed that the course was intellectually stimulating, and 75% of on-campus students agreed or strongly agreed with this statement. The results were not significantly different when subjected to a Test of Proportions.

  Approximately 80% of online respondents indicated both that there was good administrative support, and good technical support to assist them to complete their courses. These results were similar to on-campus respondents (approximately 75%).

  Seventy per cent of online respondents felt the course had prepared them for classroom teaching. The same result was recorded for on-campus students.

  Only 65% of online respondents felt that the course had prepared them with strategies to adjust to a diverse range of students in schools, and only 55% of on-campus felt prepared.

  Teacher respondents surveyed perceived that, overall, online programs are delivering similar or better outcomes to on-campus programs. However, there needs to be further investigation of the reasons, as 30% cent of online and on-campus respondents indicated they were unprepared for classroom teaching. There also needs to be further investigation of the response to 'preparation with the strategies to adjust to a diverse range of students in schools'.

  When responding to the **most effective unit**, over 90% of teachers agreed or strongly agreed that the aims of the unit were clear, and the content was well prepared and presented clearly. Over 85% agreed that the assessment tasks were clear and relevant, the unit assisted them to think analytically, the workload was appropriate and that the unit helped make them enthusiastic about being a teacher. Over 75% agreed or strongly agreed that the unit made a major contribution to their preparation as a teacher, the lecturer provided timely responses and the lecturer provided informative responses. Seventy per cent agreed or strongly agreed that the unit helped them to adjust their teaching to ongoing circumstances. Sixty-five per cent of online students agreed or strongly agreed that the lecturer was readily accessible to them.

  However in the most effective units only 40% of online respondents felt they knew the lecturer by the end of the course, only 35% felt the lecturer knew them and understood the extent of their knowledge in his or her subject area, 65% agreed that the unit provided them with the opportunity for collaboration with other students and only 44% felt they knew some of the other students by the end of the unit.

- **Online and on-campus responses to the most and least effective units**

  Comparisons between on-campus and online students in response to items about the most effective units and least effective units of study revealed that online teacher respondents were more often or equally in agreement that: the aims of the units were clear; the content was well prepared and presented clearly; the content of the unit was presented in a variety of ways which helped maintain student interest; the workload was appropriate; the assessment tasks were clear and relevant; the lecturer was readily accessible to them; the lecturer provided informative responses (eg with enquiries and assessment tasks); the lecturer provided timely responses (eg with enquires and assessment tasks); the unit helped to make them enthusiastic about being a teacher; the unit assisted them to think analytically and seek deeper understanding of content; the

unit assisted them to adjust their teaching to ongoing circumstances; and the unit made a major contribution to their preparation for classroom teaching.

However, online respondents gave less positive responses than on-campus students in both the most effective and least effective units. For the most effective units the results were: 'I felt I knew the lecturer by the end of the course' (40% of online students felt they knew the lecturer as opposed to 70% of on-campus students); 'I felt the lecturer knew me and understood the extent of my knowledge in his or her subject area' (35% of online respondents and 59% of on-campus respondents); 'the unit provided me with the opportunity for collaboration with other students' (65% of online respondents and 84% of on-campus respondents); and 'I felt I knew some of the other students by the end of the unit' (44% of online respondents and 90% of on-campus respondents).

- **Responses of teachers who studied both online and on campus**

  Teachers who studied both online and on campus (80% by completing two qualifications) found the **programs** equally satisfactory with 96% indicating that their online program was satisfactory, good or very good, and 95% indicating that their on-campus program was satisfactory, good or very good. This finding accords with the majority of other research comparing student satisfaction with online and on-campus study.

  When these teachers were asked if they found **one method** more satisfactory than another, 55% of the 128 respondents replied yes. Of these students 21% preferred online, 46% preferred on campus and 32% felt that neither method was more satisfactory than the other. This means that of the entire group who studied both online and on campus, 12% **preferred** online study, 25% preferred on-campus study and 62% felt neither mode was more satisfactory than the other. Student comments indicated that they felt different modes of study suited different student life circumstances.

- **Teacher educator perspectives-BOSTES survey**

  A survey comprised of 31 items was compiled to gauge the views of teacher educators (unit lecturers) about online learning. The survey aimed to address those factors identified as essential for the provision of high-quality online education. The survey recorded, inter alia, the characteristics of the teacher educators and the nature of the units they deliver, teacher educator professional development in the delivery of online learning, comparisons of online and on-campus unit delivery, and teacher educator perspectives on the effectiveness of online learning.

  The link to the survey was distributed to online teacher educators by the seven Heads of Education Departments/Faculties in NSW who are providers of online learning in ITE. The survey gave teacher educators the option to identify themselves and/or their university or to complete the survey anonymously.

  The survey was completed by 103 lecturers and of these 27 chose not to provide the names of their employer. Of the remaining 76 lecturers, 58% were from UNE and CSU, the major providers of online ITE in NSW.

  Of the respondents, 67% (65) were full-time permanent staff members, 6% (6) were permanent part-time, 3% (3) were temporary full-time, 9% (9) were temporary part-time and 15% (15) were casual staff members. Of the respondents, 56% (57) had been employed for five years or more, 11% (41) for one to two years and 3% (3) for less than one year. Of the entire group, 72% (70) respondents lectured in both on-campus and online units, with only 28% (28) teaching solely online. Of the entire group, 56% (57) had undertaken training to teach online units but 44% (46) had not.

  Of the 98 teacher educators who responded to the statement 'my distance unit/course is delivered entirely online or using a combination of online and on-campus learning', 71% (70) indicated they taught at least one unit solely online and 44% (43) indicated they taught using a combination of online and on-campus learning.

  All courses were hosted on an online LMS, for example Moodle or Blackboard.

- **Responses of teacher educators**

  Almost all teacher educators felt they were able to fulfil the aims of their unit through online learning (98%), to motivate and inspire online students using online methods (98%), to provide timely feedback (98%), and to assist teachers to think analytically and acquire deep understanding (96%). Most reported there were interactions between the students in their units (94%), that the students regularly interacted with them (92%), and that they were able to get to know how well each student understands the subject area (89%). A smaller majority (77%) felt they were able to get to know their students through online delivery and 73% reported that their online units require students to engage in collaborative learning.

  The majority of teacher educators reported good technical support delivery (95%), and good design

support (87%) for their online delivery. Eighty-five per cent regarded some aspects of their delivery as exceptional. The majority (91%) conducted evaluations of their units.

While over a quarter of teacher educators indicated that their online units were different from on-campus units, the majority of comments explained that this was in assessment tasks and delivery style. Differences were also evident in the amount of **preparation time** (of 43% who indicated it was different the majority said it took more). In response to the statement 'my distance/online unit/s require the same **time in delivery** as on-campus' units, 95% responded yes but 44% responded no, that is some responded both yes and no. Comments on this item were that 'it depends on the style of delivery'. Differences were also recorded for **time spent in response to students** (46% indicated the time was different and the majority indicated it was more).

The following comment reflects the perspective of many respondents, 'I spend more time in delivery of the off-campus course. This is because it is more essential to actively ensure the off-campus student feels connected to a learning community. So I spend much more time giving direct and highly personalised answers, checking in daily and stimulating discussions, providing feedback etc. I don't let a comment go unanswered. We actively encourage a very interactive culture of peer support online amongst the students too. So where my on-campus course takes me one day per week (lecture, tutorials and student interaction), my online course involves various times all throughout the week depending on the students' own schedules, rather than a set university-determined plan.

Approximately half of the teacher educators indicated that the student to teacher ratios were different in online units. Those who indicated they were higher were employed by the larger providers.

When teacher educators were asked if they thought online learning was as effective as on-campus learning 79% said yes and 21% said no. However of those who said no 75% added qualifications such as depending on the students, the subjects being taught, the design of the unit and whether the unit has an on-campus component

- **Teacher educator responses compared with teacher responses**

While is not possible to directly compare the proportions of responses to the teacher educator survey with those on the teacher survey, there are some indications about similarities and differences in the way the two groups perceive their online units.

The majority of teacher educators felt their online units were able to prepare students to meet the relevant teacher standards (90%) and the same proportion of teachers felt their online units had prepared them to meet Teacher Standards.

Ninety-six per cent of teacher educators responded that they were able to assist teachers to think analytically and acquire deep understanding in their units, and 86% of teachers responded that their most effective unit assisted them to think analytically and seek deeper understanding of content.

The perspectives of teacher educators and teachers about the interpersonal communication in their online programs differ considerably. While it is not possible to directly compare responses for most items, teachers generally felt they had less interaction with the teacher educator and with other students than was reported by teacher educators. For example, 73% of teacher educators said they require their students to engage in collaborative learning, while only 65% of teacher respondents reported engaging in collaborative activities in their most effective units and 30% reported engaging in collaborative units in their least effective units.

It is possible that some of the differences in perception about the extent of interpersonal communication could relate to the increasing amount of interaction teacher educators have incorporated into their units since students completed their programs, but given that the majority of the respondents graduated in 2013, it would be unlikely that all the difference could be attributed to changing methodology.

The reports of teacher educators that approximately one-quarter of students were not given the opportunity to engage in collaborative learning activities with peers is in itself sufficient cause for further investigation.

While almost all teacher educators responded that they were able to provide timely feedback to students, only approximately three-quarters of teachers responded that the lecturer provided timely responses in their most effective units, and a third in the least effective units.

Teacher educators also reported more diversity in the methodologies they adopt for program delivery, for example forums, blogs, wikis, chat, videos, than those indicated by teachers. Once again there could be some influence of timing on this result, in that teacher educators are reported to be continually improving their practices and learning new ways of delivering content.

PART E – PROFESSIONAL EXPERIENCE

Models

It is clear that professional experience models differ on at least the following dimensions: the extent of provider and student-located professional experience placements, partnerships between schools, provider levels of student supervision and the selection and training of in-school supervising teachers. Differences were reported to be most evident when comparing professional experience undertaken by students who live in close proximity to the university/college campus and those who live some distance from the major cities or regional centres where universities/colleges are located.

In general, providers establish informal or formal partnerships with the schools in reasonable proximity to their institutions. As a result these providers may be involved in the training of in-school supervising teachers. They may also visit schools regularly to ensure professional experience runs smoothly, and to provide overall supervision for students. The close relationship between provider and schools affords better integration of professional experience and course content. The provider may organise the placements for students and manage the different types of schools/classes where the student is placed. Providers differ in the extent of the above activities. On-campus students are most often the beneficiaries of this approach.

However online providers find that the disparate and often very distant locations of external students make the establishment of partnerships with schools difficult and generally financially unviable. Nicholson, Barbousas and Smith (2010) reported an institution that found the cost of supervising regional and rural students to be, on average, three times higher than city students. Close supervision by providers, particularly those with large enrolments scattered across the state, or perhaps the country, is not possible without major change to the way professional experience is managed.

Online providers reported that it is not possible to locate placements for all their students given the numbers of schools involved, the residential addresses of their students and the limited resources available to find the placements. To date, some providers have not found student-located professional experience a major concern because there are advantages in students being able to select placements near their homes. Some providers advise students to approach schools where they would like ultimately to work, in the hope that their competence during professional experience might lead to employment. Indeed a number of providers expressed clear preference for student-located placements.

An example of this perspective is Swinburne Online where professional experience is underpinned by the belief that it is important for students to develop skills in seeking and finding placements. Swinburne holds the view that skills relevant to the workplace, such as presenting for an interview and showcasing student experience, are important graduate attributes, thus it is beneficial for students to approach schools themselves not only because of their residential location, but also because it helps them get practical experience engaging with the workplace. A placement team supports the students by providing resources and practical advice in preparing for and approaching schools to organise their placements. Since Swinburne students choose to study online and to stay in their community, this is seen as an opportunity to help them obtain work locally.

However the disadvantages associated with student-located placements are: the limited control by providers over the nature and diversity of placements for each student, the pressure on available placements (which may result in students having difficulty in securing a placement, or schools taking a student but being unable to provide the level of supervision needed), the lack of quality control by the provider in selecting the placement and the loss of the benefits of partnership arrangements between providers and schools.

Professional experience models for online students may or may not include in-school supervision by university/college personnel, and where supervision is provided it varies in frequency. It appears that many NSW online students are visited by providers only if difficulties are encountered. The following two models illustrate two providers who have endeavoured to ensure provider supervision of students.

SCU requires all students to undertake pre-professional experience activities, provides very clear documentation for student and school, including sets of tasks to be completed while on professional experience, assigns a lecturer to each student and employs local personnel to support students. The primary program also uses a School-University-Liaison-Officer (SULO) model to provide additional support for students, in-school supervisors and university advisers. SULOs are recently retired primary principals who each oversee the work of three to five university advisers and who can immediately step in to assist and advise when a student is deemed to be at risk of failing a professional experience. In addition, the primary program has a Lead SULO on each of its three campuses to provide support for the SULOs on that campus.

Curtin University prepares its students with clear written guidelines about how to approach schools and how to present themselves prior to and during professional experience.

Curtin students complete their teacher preparation with a 10-week internship. The university pays both the in-school supervising teacher and a local supervisor. The appointed supervisor can be an experienced teacher or a principal. The supervisor visits the student between one and three times in the last professional experience/internship. In around week 7 or 8 of the internship there is a three- or four-way Skype or Google Plus call between the student, the classroom mentor/teacher, the supervisor and one or two university personnel (course coordinator and lecturer). This meeting, which includes comments from the student and supervisor, gives a good indication of student progress. The university is aiming to establish new types of partnerships with schools, in particular the desire is to replicate their internal 'coaching' model', that is a staff member coaches the interns and their in-school supervisors before they embark on their internship.

Teacher responses

Teacher responses in the BOSTES study confirm the differences in the way professional experience is organised and conducted for online and on-campus teacher education students. Of teacher educators who studied online, responses indicated that 89% organised their own professional experience as opposed to 20% of teachers who studied on campus.

Additionally only 47% of teachers who studied online reported that they were supervised by university/college personnel, whereas 83% of teachers who studied on campus reported being supervised by university/college personnel. Of those who were supervised by university/college personnel, fewer online student teachers received visits than on-campus student teachers (18% and 37% respectively). These findings should be viewed with caution, as online students who were supervised by personnel contracted to universities or colleges may not have categorised them as university personnel. More teachers who studied online (36%) reported experiencing difficulties with their professional experience placement than teachers who studied on campus (24%).

Reconceptualising professional experience

All providers, but particularly those who provide online learning, recognise the current difficulties associated with professional experience both in student placement and supervision. This is leading to 'rethinking' ways professional experience can be organised.

Each of the following models for professional experience was raised as an option by the Deans/Heads of Department and/or their academic staff.

- **Collaborative supervision**

  The ALTC funded a project entitled 'Pre-service teacher education partnerships: Creating an effective practicum model for rural and regional pre-service teachers' (Ryan et al., 2012) This collaborative project between Australian Catholic University (ACU) Ballarat and La Trobe University in Shepparton tried to create a 'sustainable' cost-effective model for professional experience for teacher education students located across a wide geographical area. It involved collaboratively developing professional development protocols, a shared information and communications technology (ICT) platform and sharing student teacher supervision. They established inter-university regional clusters of student teachers, led by a lecturer, to engage students in cooperative learning using a range of IT. These clusters were led by an assigned lecturer who worked with them on interactive curriculum activities during the practicum. They found that in-school supervising teachers were interested in new methods of communicating with the universities during practicum (email, phone, Skype) if they saw it as improving supervision.

Teachers were open to inter-university supervision and preferred meaningful communication about student teachers using available media to cursory on-campus visits. Teachers were willing to be involved with short-term professional development to ensure they could support pre-service teachers.

A similar model is being developed between USQ and UNE. Being close to the NSW/Queensland border, USQ has many students undertaking professional experience in NSW and, similarly, UNE has students on the southern coast of Queensland. Under this model the universities would share a set of protocols, share information about student placements on a joint website, and conduct reciprocal student liaison on a quid pro quo basis to provide more student and school contact during professional experience than is currently being provided in cross-border placements.

CSU and UNE are also reported to be in discussions about forming such a partnership.

- **Technology options for bridging the divide**

  As reported above, the integration of technology into professional experience can bridge the communication gap between providers and schools, between teacher educators and schools, and between teacher educators and their students. Both synchronous and asynchronous communication can be used to support relationships (eg email, phone, Skype) and for direct professional experience supervision (using video capture of teacher education lessons which can be observed in real time or post hoc).

  Following is an example of the way technology can be used to support provider-school relationships. In 2010 a partnership between the NSW Department of Education and Training (now the NSW Department of Education and Communities) and UNE used the Connected Classroom to trial 'virtual supervision' to provide real-time observation of professional experience, including feedback to student teachers. Video-conferencing was also used to enable students to observe and engage with experienced teachers delivering demonstration lessons.

  With the combination of the two methods UNE was attempting to break down the geographic barriers faced by many pre-service teachers in rural and remote areas, connecting them with both with academic and support staff at the university, and experienced teachers in the field. This meant that student teachers could complete their placements at their local school, and supervision could be delivered to multiple locations simultaneously at a fraction of the cost of visiting students.

  It has been reported that the USQ will soon commence real-time video-conferencing as a method of professional experience supervision. This is possible in Connected Schools where one classroom will already be set up with the requisite technology.

  Technology can also be used to train in-school supervising teachers in mentoring and assessment skills. One senior academic suggested that universities should have a greater role to play in ensuring that the supervising teachers receive high-quality training in mentoring which can be provided either in online or on-campus courses. Synchronous online training where classroom teachers can interact with university lecturers, asking questions and raising issues particular to their schools, is considered an excellent way to reach widely dispersed learners. BOSTES provides incentives for teachers to undertake the AITSL mentoring online course by providing credit for the module for teachers who are required to complete accredited professional experience training to maintain their registration. Universities already provide some mentoring programs, for example Mentoring for Effective Teaching program which is a 10-hour on-campus course already accessed by 25 providers (mostly from Queensland but also including some from NSW).

- **Models of teaching**

  Given the large number of students currently undertaking professional experience, and the cost of supervision, universities/colleges are considering alternate ways of ensuring all their students find placements and of providing the highest quality experiences at minimum cost. When reviewing professional experience models the following options, each of which has been used in some context by providers, can be considered:

  Observation. Teacher education students observe expert teachers and focus on examining particular aspects of their practice. This can be done on campus or through use of technology. Students can observe school environments, individual sessions, small group sessions or whole of class teaching. Using this model students have the capacity to question and discuss practice with the teacher, and their university lecturer. This can take place at the beginning of a program but also during programs as particular methods/issues need to be taught and reinforced. This practice would be the modern equivalent of the 'demonstration lessons' (see later).

Clinical teaching. A number of academics spoke about the value of having teacher education students undertaking intensive sessions with one student to ensure that concepts of assessment, planning, teaching and evaluation are understood, and pre-service teachers can begin to understand individualised learning. These experiences can be supervised face-to-face observation. However, relatively commonplace technology, for example laptops, tablets, smart phones, make it possible for these lessons to be observed in real time or they can be video captured and sent by the student teacher to their supervisor.

Unsupervised experiences. Several school personnel expressed the view that teacher education students should have 'whole of school' experiences other than just teaching on classes. It has been suggested that, in addition to their supervised teaching experience, students should be required to undertake a period of additional activities in the school to provide the time to learn about the school community and the unique school culture. Such activities may include attendance at staff development days (eg the model being adopted by SCU where students attend the end-of-year staff development sessions), assisting with the organising and running of sports days, bands, debating groups etc.

Small group teaching. The teaching of small groups is a more achievable task for a student teacher than whole class teaching. This enables student teachers to practise their classroom teaching skills in a more manageable environment where they can focus more on their teaching than classroom management skills.

Whole of class teaching. Experience in teaching a whole class of students enables the student to integrate the full range of theory and teaching skills they have acquired into practice.

Internships. Many educators consider that an important component of student teacher preparation is to provide a sustained period of time in schools. This provides the opportunity for student teachers to witness the outcomes of their teaching over time and to be independent of teachers while support remains available. It also enables student teachers to become part of a school community. The LTEWS study reports that 'both graduates and principals valued extended practicums including internships, citing that the extended length of practice allowed deeper connections to schools and classrooms (Mayer et al., 2014: 12).

More than one student teacher per class. Where students are engaging in their early professional experience placements or undertaking individual or small group teaching, placing more than one student per class can provide the benefits of peer-to-peer support for students and can reduce the number of in-school supervisors required.

Discussion

There was a time in NSW when teacher education programs were linked with local 'demonstration' schools. Teacher education students would visit these schools regularly to observe demonstration lessons. Providers would specify the lessons to ensure students were exposed to a range of lesson types and that lecture content was being applied. Lessons were delivered by experienced teachers who had been 'approved' by the teacher training organisation. Demonstration lessons were followed by in-class discussions and student teacher reports.

Student teachers would undertake professional experience in a range of schools and would be regularly visited by representatives from the university/college during their professional practice period. This ensured close relationships between the schools and with university/college supervisors. This model was possible in the days when students studied on campus, students resided locally and student numbers could be accommodated by such a model.

With many students now remote from the universities, and some universities having very large numbers of students, this model is no longer possible as the sole dominant model. The principles of good professional experience do however remain the same. Student teachers need to be exposed to/observe high-quality lessons being delivered. They need to be prepared developmentally over time to become competent independent teachers. They need to be mentored and supervised by competent personnel, and they need to have a variety of school experiences.

Systems being established must be equitable for students whether they are studying online or on campus and irrespective of where they live. The partnership processes currently

being proposed at provider level and at state level should be mindful that a rethinking and replanning of professional experience is the opportunity to make equitable what has become inequitable, depending on student study method and residential address.

It may be that new systems differentiate activities that require the establishment of long-term partnerships (eg ongoing exchange of information between providers and schools leading to provider programs that maintain currency with teaching practice), and those that can be effectively conducted either in long-term or shorter-term partnerships (eg school and classroom observation and professional experience). Where short-term partnerships are the only practical solution they should be characterised by ready access to appropriate placements, close communication between provider and school, and effective student supervision both by school and provider personnel.

An example of the way student placement and the establishment of short-term relationships can be established is an extension of the model adopted by UTAS. It has implemented a system where student teachers are required to nominate three schools where they wish to undertake professional experience and to register these preferences on the UTAS professional experience database. This enables the university to analyse all options, to find suitable local schools for all their students and to contact schools directly to organise placements. The initial organisation of placement could be extended to a further short- or longer-term relationship with the school.

While new systems are being devised and implemented, focus should be placed on professional development for supervising teachers. The majority of teachers consulted during the period of this report agreed that the supervising teacher is the key to a successful or unsuccessful professional experience. Modern technology makes it possible to reach all NSW teachers, no matter where they live. Their skills can be developed through online learning (preferably synchronously to enable teachers to interact with personnel from the university/college online), irrespective of whether or not their school is in a long-term or short-term partnership arrangement with a provider.

PART F – CONCLUSIONS

Extent of online learning

There has been significant growth in online ITE over the past few years as a result of the change to demand-driven funding. National enrolments in 2012 were 8% higher than enrolments in 2011, and most of the growth was attributed to online learning. This dramatic increase appears to have been followed by a stabilisation of online ITE commencements in the context of declining enrolments, that is online commencements now account for a similar number but greater proportion of all ITE commencements. There has been some redistribution of enrolments with the establishment of Swinburne Online in 2012 which has over 1000 ITE students residing in NSW.

All NSW providers of ITE incorporate some online learning into their programs. The majority are offering what is termed a 'blended' approach. Additionally, some providers, intent on offering flexible study options to their students, enable them to take some online and some on-campus learning (multi-mode).

There are however only seven NSW providers who enrol their students in online/distance programs, that is where the majority of content is delivered online. Across Australia there are at least 20 universities/colleges providing ITE online. Many NSW students choose to enrol in interstate programs.

In July 2014 there were at least 7260 ITE students from NSW studying by online/distance education. Of those approximately 4804 were from NSW and 2460 were from interstate.

Teacher preparation is currently the subject of scrutiny largely due the significant oversupply of teachers in NSW, particularly primary teachers, and a perception that teacher training is not sufficiently effective.

There is a perception that some universities/colleges capitalise on teacher education programs to increase their student numbers and that, in some cases, their interests are financial. The establishment of new online programs and the rapid uptake of online teacher education immediately following deregulation was fodder for that perspective. Online providers are also among those with the least rigorous admission criteria. Given its rapid growth and the large number of students now undertaking online/distance teacher education, regulators have been prompted to ask whether online learning is delivering quality ITE.

The quality of online learning

Programs labelled as online/distance/external vary on many dimensions, not the least of which is campus attendance. The extent of the variables makes it very difficult to compare programs. However, taken as a whole, research demonstrates that, when pedagogy is appropriately adapted to suit the online environment, online programs can be as effective as on-campus programs in preparing teachers in most subject areas. This result has been widely reported both for measures of academic outcome and for student satisfaction.

Principals report anecdotally that they are unable to differentiate between professional experience students who have studied online and those who have studied on campus. The national CEQ survey and the BOSTES study reported in this review confirm that students are equally satisfied with online as on-campus programs.

Nature of students

University/college staff believe that one reason for equivalent academic outcomes and student satisfaction with online compared to on-campus learning is the characteristics of students. Online students are generally mature-aged women who are seeking to change careers or return to the workforce after a period of absence. They are often part-time students fitting their studies around family life and/or work. These students may reside in the city or in regional towns where on-campus programs are available, or may be from other parts of NSW. For most students, it is not the distance from campus that initiates their enrolment in online rather than on-campus learning; rather it is the demands of their family and working lives. Some commence studying but are unable to complete their programs, thus making attrition rates in online programs higher than in on-campus programs. Academics report that those students who continue with their programs are highly motivated and often have practical experience of child development. Despite the type of admission criteria for some of these students (eg those studying through the Open University where English proficiency and successful completion of one online unit is required), their teacher educators find those who complete their courses to be committed students who achieve results that are as least as good as their on-campus counterparts.

Perceptions of teachers and teacher educators

The two studies used to examine student views about online learning (CEQ national study and BOSTES study) demonstrated that while graduates were equally satisfied with their online/external and on-campus/internal programs their responses varied when aspects of course delivery were examined. The CEQ data showed that online/external graduates as often or more often agreed with positive statements about the provision of learning resources, appropriate assessment, appropriate workload, graduate qualities, intellectual motivation and clear goals and standards than on-campus/internal students. However, they were less often agreed with statements relating to generic skills and student support. The most notable result was the very large difference in response on the learning communities scale (ie exploring ideas with other people, feeling part of a group, exploring interests with students and staff, belonging to the university community, having ideas and suggestions used during the course). Where 72% of students nationally and 79% of NSW students who studied by on-campus/internal mode agreed or strongly agreed on this scale, only 49% nationally and 58% of online/external graduates in NSW expressed agreement.

The BOSTES study, which was confined to a cohort of NSW graduates, found student satisfaction with online/external programs to be equal to or higher than on-campus/internal programs in most aspects. The notable exception was the areas relating to interpersonal communication; the results for the most effective were responses to the statement, 'I felt I knew the lecturer by the end of the course' (40% for online respondents and 72% for on-campus respondents), 'I felt the lecturer knew me and the extent of my knowledge in his her subject' (35% online and 59% on campus), 'the unit provided me with the opportunity for collaboration with other students' (65% online and 84% on campus), and 'I felt I knew some of the other students by the end of the unit' (44% online and 90% on campus).

The perception of lecturers about interpersonal communication in their programs was more positive. Approximately 90% of teacher educators responded that there is regular interaction between students in their unit, that students regularly interacted with them and that they felt they were able to learn about how well each student really understands the subject. Seventy-seven per cent indicated that they were able to get to know their students through online delivery, and 73% reported that their online units require students to engage in collaborative learning.

While teacher educators were more positive than teachers to the interpersonal elements of online learning, their comments revealed that they felt that the opportunities to get to know their students and how well each student understands the subject were reduced in the online environment compared to on campus. Graduate teachers comments were similar.

Approximately 40% of lecturers found online programs required more time in delivery, preparation and in responding to students than on-campus programs.

Of the sample, one-third of students had attended on-campus schools which provided them with the opportunity to interact with and learn from lecturers and fellow students. When examining the online units of the seven NSW providers and from the BOSTES research it was evident that the main methods of communication between teacher educators and students are via email and online forums. When synchronous activity is used it is often via chat rooms. The larger universities have some highly interactive units, with a range of synchronous and asynchronous activities. The larger providers have the infrastructure to continue to develop such units, but it will take time to convert all existing units to high-quality formats. The limiting factors within institutions are most often the extent of resources required and the up-skilling of staff. Externally the limiting factor is the technology available to students and the capacity of their internet connections.

In the BOSTES study the majority of teacher educators felt they could offer effective online ITE programs, but 5% did not believe that online education can be equally as effective as on-campus education. While responding 'no' to the statement 'online learning can be equally as effective as on-campus learning in preparing teachers', a further 16% qualified their statements to indicate their views depended on circumstances (eg whether courses had some on-campus component, depending on the subject).

While teachers in the BOSTES study were equally satisfied with online and on-campus study, of those who had studied in both modes, 25% would still prefer to study on campus, 12% would prefer to study online and 62% felt neither method was more satisfactory, but each was suited to different circumstances.

Variability of programs

An examination of the literature and conversations with Deans/Heads of Education provided insight into the factors that underpin the delivery of quality programs. They are: clearly defined policies; selection of staff; professional development for staff; investment in high-quality technology and suitable software; availability of personnel for course design, production of multimedia materials and technology support; and program evaluation. Additionally, providers should incorporate training in the programs in the use of technology for students. Providers of online/distance ITE vary greatly in relation to these factors and therefore in the sophistication of their online programs. This sometimes reflects the size and capacity of the institution, but can also reflect the stage of development of online learning in the organisation.

The least sophisticated programs are generally run asynchronously but have the benefit of providing flexibility of time and place of study for students. On-campus schools and small student numbers enable an increased knowledge of, and support for, students in these programs.

The larger providers have been able to dedicate resources to incorporating a range of synchronous and asynchronous activities. For example, the design and delivery of SCU's online courses aim to build a learning community for students. Throughout the course there is an online social, cognitive and teaching presence to support student learning. Web-conferencing software, such as Blackboard Collaborate, enables staff to bring students together for whole group work, small group activities using 'break out rooms' and student presentations. Staff can schedule guest presentations and students can join these sessions live or view the recordings. Students are also given the opportunity to use the technology to set up their own self-managed study groups. SCU staff also run tutor-led Q&A sessions during the teaching period, particularly around assessment.

All programs have quality assurance processes in place but these vary. The larger providers have employed academics whose role is to oversee the quality of programs.

Programs vary in their admission criteria, the way they market their courses and the amount of flexibility they offer to students in time for entry to the program (eg from annual admission to anytime admission).

Additional benefits of online learning

The benefits of online learning for students have been well documented, with the main advantage being the flexibility in time and place of study. The advantages to universities in attracting students have also been well documented. During the course of this study the Deans/Heads of Education and key academics also articulated the following:

- Online learning has made staff reconsider their pedagogy, that is to rethink the aims of their units and reconsider ways to ensure students engage with, understand and can apply the content. This has also benefitted on-campus teaching.
- On-campus programs have been enriched by the multimedia resources designed for online programs.
- High-quality online programs require a team approach, moving them from individual academic control, which assists with quality and accountability.
- Online units are publications. This means they can be viewed and scrutinised by students, academic peers and managers. The main benefits are that lecturers are more aware of what their peers are delivering and that there is a new level of accountability not only for the course content but also for delivery. These benefits are valued highly by Deans, among their reasons are the way the transparency of programs has assisted them to ensure the quality of units taught by casual lecturers.
- Data that is readily available about each student on the LMS is being used to support those students who don't appear to be experiencing success and to track the activities of those who challenge results.
- Data can also be used to compare within and across programs.

Business models

Critics of online learning have questioned provider motives in establishing programs in their belief that much online teacher education has been established to attract students for financial benefits. The belief is that online learning can be provided more cheaply than on-campus learning, while attracting the same level of funding. The costs of online programs are dependent on the model being adopted, the staff, student to staff ratios and payment models.

- **Models of program delivery**

  At one end of a continuum of models of delivery are online courses where content is placed on an LMS and students are relatively independent in their study of materials. The programs usually incorporate forums where students are able to communicate with lecturers and peers. It must be noted that these courses, although to some extent replicating the traditional paper-based courses, have the added benefits of online access to resources, online activities and opportunities to participate in discussions via forums. These programs are relatively cheap to prepare and run. Some providers adopt a similar model but add content via multimedia presentations into their programs.

  At the other end of the continuum are programs where content is provided using a rich variety of asynchronous and synchronous methods, including opportunities for real-time interaction with staff and collaboration with fellow students. To establish content-rich, stimulating, interactive, online courses requires highly skilled academics, supported by multimedia and design personnel. Significant and ongoing investment in technology and infrastructure must also be provided.

- **Staff**

  The qualifications and duties of staff who prepare and deliver programs vary. Some programs are designed, written and delivered by university/college academics. Other programs are written by university/college academics, but are delivered by casual/sessional staff (usually teachers or school principals) who are engaged for the period of delivery the units. In the case of Swinburne Online the 'tutors' operating the programs are employed by a different organisation from the writers. The cost of staff therefore varies.

- **Student to lecturer ratios**

  Higher student to staff ratios generally help lower program costs. An issue of concern to education faculties in times of tightening budgets is the expectation that student to staff ratios are increasing despite the method of delivery. Lecturers reported that their student to staff ratios were higher in their online than in their on-campus programs.

- **Staff payment**

  The financial model for payment of staff varies, for example in some programs staff are allocated a subject/unit and are required to teach all students in the allocated group, whereas in other programs lecturers/tutors are paid per student.

Established NSW providers reported that their online programs are not cheaper to operate than on-campus programs. In 2013 UNE estimated that it cost about $20,000 to $30,000 to develop each quality online unit (Regional Universities Network, 2013). Once developed, units need to be constantly updated. Other NSW providers cited the major reasons for their high costs being the cost of establishment and maintaining the technological and support personnel to provide high-quality programs.

However there is no doubt that some providers can operate financial models that are cheaper than face-to-face models that require on-campus facilities. The cost pressures on the established organisations attempting to convert programs to online delivery (including those that have traditionally offered distance education programs) are different from those institutions establishing programs for the first time. Start-up providers, for example Swinburne Online, are able to determine their business models prior to the commencement of their programs.

Online learning is changing the business models of the established institutions that are embracing courses delivered via technology. It is hard for many providers to come to terms with how these models will work at a time of such significant change. While there are numerous reports containing predictions for the future of online learning, all agree that it is uncertain. In Australia there are multiple factors that determine the course of education, not the least of which are the political ideologies and economic policies of governments which could lead to entirely different funding models, and therefore different business models, for tertiary education.

Despite the uncertainty, current trends indicate that online and blended learning will continue to grow as students opt for more flexible study options. In establishing new models,

tertiary providers have been alerted to some practices that may impact on quality provision, that is:

- the potential that teacher to student ratios will become so large that the interpersonal communication between students and lecturers and lecturers and students, so critical to teacher education, is compromised
- the possibility that MOOCs will be incorporated into programs with the same consequence, that is compromise in the interpersonal interactive components of teaching, as well as 'one size fits all' programs.
- the potential that increased staff workloads will impact program quality
- the potential that staff roles will become differentiated to the extent that academics will become researchers and/or course writers and that less qualified staff will be employed to deliver programs. This can de-couple the interrelationship between research and practice which has been a feature of teacher education
- the potential for the large corporations, for example Pearsons which is currently dominating aspects of education in USA, to have a stronger presence and influence in Australian teacher education and perhaps introduce a limiting uniformity to programs
- there may be pressures to support students to complete courses irrespective of their skills due to the financial benefit to the institution of maintaining their enrolment
- rising costs may prevent suitable candidates from seeking admission.

Regulatory authorities also need to be alert to the possibility that programs that operate across state borders may not address knowledge that is specific to the state of origin of the student, for example the syllabus, systems and policy information.

Professional experience

The provision of consistent high-quality professional experience is a subject of concern for both on-campus and online students. Current issues are the numbers of teachers seeking placement in NSW schools and the provision of high-quality student supervision. The concerns are seen to have been exacerbated by the recent growth in online students, particularly from interstate providers.

The problems are greatest in the city. The BOSTES survey demonstrated that 89% of online students sought their own placements where 20% of on-campus students found their own placements.

Even the smallest online providers reported that it is not possible to locate placements for all their students given the numbers of schools involved, their students' residential addresses and the limited resources available to find the placements. To date, some providers have not found this a major concern because there are advantages to student-located placements because they can choose locations close to their homes. Some providers advise students to approach schools where they would ultimately like to work, in the hope that their competence during professional experience might lead to employment.

The larger providers report that they can assist to find student placements in some areas but that their student bodies are large and so disparately located that student-located professional experience is required.

The online respondents in the BOSTES study reported they are less often supervised by university personnel than on-campus students. Some providers reported that they did not see value in university supervisor visits to schools. These academics adopted the view that professional experience students are placed with competent teacher supervisors whose work and judgement should be respected.

However, all the Deans/Heads of Education agreed with the GTIL findings that professional experience needs to be redesigned. Teacher educators and policy-makers are currently attempting to address issues of professional experience in a number of ways, for example by creating partnerships between schools and providers, by forming cooperative processes between providers to share placements and supervision duties, and by providing mentoring courses for supervising teachers.

While the rationale for the establishment of partnerships between providers and schools is sound, concern has been expressed that these arrangements, unless considered collaboratively and state wide, will ultimately lead to differing quality in professional experiences for students who can access partnership schools and those who are unable to attend such schools because of their location. There are a number of reasons for establishing partnerships including exchange of information between providers and schools, student observation of schools and classes, and hosting and supervision of professional experience. The latter two can effectively be conducted using short-term partnership arrangements.

Policy-makers should consider the possibility that university education is changing and that less often students will reside near the universities where they are studying. New professional experience models should endeavour to ensure equity for all teacher education students.

Challenges

Apart from issues in professional experience, providers reported facing the following challenges in endeavouring to provide quality programs:

- costs involved in establishing and maintaining high-quality online programs
- keeping abreast of technological and software developments
- managing the process of change with staff
- supporting students with extra needs, for example in language proficiency
- ways to deliver practical subjects, for example music, physical education
- knowing that the online student is the person completing the work
- limitations of current technology, for example home computers
- inadequacy of signal transmission to support some online activities
- need for research in many aspects of online delivery.

The future of online learning

There are very few who would disagree with the proposition that online learning will continue to thrive in the coming years. There is also little doubt that on-campus programs increasingly will incorporate online learning opportunities for students.

It is clear that it is not the online environment that determines the quality of teacher education programs but the ability to match the pedagogy to the medium and to ensure course content is applied in professional experience.

The key to improving current online programs is providing more opportunities for interaction between lecturers and their students and students with their peers to promote the learning that will prepare graduates for the human services industry of teaching. This can be done tailoring the balance of asynchronous and synchronous opportunities for interaction with content and with student needs. While some providers may continue to run on-campus schools, others will take advantage of the rich range of existing and future online methods which support interactivity. Program quality will continue to improve as educators continue to rethink their pedagogy to suit technological delivery and as they become more skilled in using interactive online methodologies.

Equity for students

Approximately one-third of online ITE students live in regional areas of NSW. For the first time in Australian history, they can have access to online learning of the same quality as their on-campus peers. This will only be possible if providers can establish and maintain high-quality interactive online programs, and if the current reconceptualisation of professional experience leads to systems that provide the same opportunities for all students irrespective of their residential address.

PART G – RECOMMENDATIONS

- The BOSTES to establish specific evidentiary requirements that NSW providers of online programs need to address for their online programs to be accredited. These evidentiary requirements would address aspects that are unique to an online mode (eg facilitating interpersonal interaction via technology) to help ensure these programs achieve outcomes comparable to on-campus programs in terms of graduate quality.
- A certification process is developed to formally recognise those interstate online programs that clearly enable students, who are NSW residents who intend to teach in NSW, to address the general expectations of NSW schools and requirements for approved NSW programs and thereby satisfy NSW employer requirements.
- That the NSW evidentiary requirements for online programs in Recommendation 1 are adopted by the national accreditation system. If these requirements are not adopted by the national accreditation system, interstate providers must be certified by BOSTES that they meet the requirements for quality delivery of online programs, and where they do not comply they will be advised that their graduates will have limitations in employment in NSW, as above.
- Providers must be responsible for the placement of students in schools for the professional experience components of their programs. Where the only practical process is that students nominate schools for professional experience, providers should use technology to adopt a more systematic approach to the placement. In this case, students should lodge their schools of choice for professional experience into a provider-hosted centralised database. This will enable providers to take responsibility for negotiating individual student and small group placements. The negotiation of placements will facilitate the establishment of school/provider relationships.
- By way of supporting the implementation of the NSW Professional Experience Framework for all ITE students in their different circumstances, the concept of a short-term provider-school partnership is developed to accommodate professional experience in schools where long-term partnerships either do not exist or are not viable. Such partnerships should be formalised for their duration, however short, by an agreement/memorandum specifying the roles and responsibilities of each of the parties.
- In a bid to ensure a quality professional experience for all students, 'preparation for professional experience' requirements are developed for all students (eg evidence of having researched the school where they will be placed, preparation of a portfolio or standards passport to present to the school, knowledge of protocols for school access etc.).
- To ensure supervising teachers in schools are well prepared for their mentoring and supervisory roles (see Program Standard 5.5), providers are required to provide all supervising teachers with relevant BOSTES-endorsed professional development before placing students in their classrooms.
- Further consideration is given to using the qualitative research method adopted in this study (ie identifying large samples of graduates and seeking information directly from them and their employing principals about the quality of their preparation to teach) as a way of measuring the outcomes of teacher preparation programs.
- Further research is undertaken to gather evidence of the outcomes of teacher education programs (eg measures of teacher effectiveness) that, in particular, confirms or otherwise the efficacy of online modes of teacher education.

APPENDIX 1: PROVIDER SUMMARIES (ORGANISED ACCORDING TO ENROLMENTS)

University of New England (UNE) 2014

Online programs

The following programs are offered by distance:

- Bachelor of Education (Primary)
- Master of Teaching (Primary)
- Bachelor of Teaching Education (Early Childhood and Primary)
- Bachelor of Special Education (Primary)/Bachelor of Disability Studies
- Bachelor of Education (K–Year 12 Teaching)
- Bachelor of Arts/Bachelor of Teaching
- Bachelor of Business/Bachelor of Teaching
- Bachelor of Information Technology/Bachelor of Teaching
- Bachelor of Mathematics/Bachelor of Teaching
- Bachelor of Music/Bachelor of Teaching
- Bachelor of Science/Bachelor of Teaching
- Master of Teaching (Secondary)

Mode of delivery

UNE provides both distance and on-campus programs. Many of the distance programs have on-campus schools. It is expected that these will continue as they are highly valued by mature-aged students.

Programs are offered in three trimesters, with the third being conducted in the vacation periods from December to February.

Students

UNE has approximately 2800 ITE students studying by distance in NSW with another 450 studying by distance from interstate (410) or overseas (40). Student numbers grew at UNE in the three years to 2013 but have now plateaued. In total UNE has approximately 4000 teacher education students with the typical student being a mature-aged woman studying part time. Only approximately 8% of students live in northern NSW, with over 1500 residing in the greater Sydney area.

UNE has large numbers of students enrolled in some units (up to 600). In these cases online students are divided into groups of smaller sizes (eg 50) for unit delivery.

Staff

UNE has a mix of full-time and part-time permanent staff and casual staff to run its online teacher education courses. Staff aptitude and enthusiasm for the delivery of online content is part of the selection criteria.

Campuses

The university has its main campus at Armidale, but also has the *FutureCampus in Parramatta, staffed Regional Study Centres in Tamworth, Taree, and unstaffed Study Centres at Coonabarabran, Narrabri, Moree, Inverell, Tenterfield, Glen Innes, Gunnedah and Guyra. All of the above locations have facilities to support online learning and are available for access 24/7 with support from campus staff between the hours of 8 am and 5 pm weekdays via the internal phone. UNE students also have access to the Cooma Universities Centre, which is shared with other institutions.

Technology

UNE uses Moodle as its online platform, along with discussion boards, PowerPoint, YouTube clips, video, web links, blogs and social media, for example Facebook. High-quality real-time video-conferencing is used to deliver courses in two or more locations simultaneously when external students attend on-campus events.

All units are delivered via the Moodle platform to provide learning experiences to both internal and distance students. Here students can engage with course materials and resources provided in a range of formats and educational technologies – from topic notes and relevant readings, to video clips and lecture recordings, quizzes and online lessons, and virtual classroom sessions for direct, real-time lecturer interaction. Learners can submit assignments directly online, and engage with other learners through discussion boards, blogs, wikis and other collaborative online learning tools.

UNE's 10 Regional Study Centres across NSW, in addition to the Parramatta *FutureCampus, provide students with support services and access to computers, printing and internet access, as well as real-time, high-quality video-conferencing, to allow external students access to lectures, academic support services and on-campus events.

Quality

In the quest to ensure quality outcomes UNE's units are underpinned by a 'signature pedagogy' which defines a quality teaching method for staff.

UNE expects that external courses will be essentially the same as internal courses but there may be some modifications to adapt content and teaching methods for online learning. This provides flexibility for students who can switch from on-campus to off-campus study and vice versa at any time. Interestingly some students now live on campus, work during the day and study online.

Teacher educators are supported by multimedia designers both in their faculty and centrally (at the Learning Innovation Hub), that is hub and spoke model. Senior staff monitor content, discussion boards, feedback and any complaints. The university both trains and supports its staff to provide quality online programs.

UNE provides an online course to assist students in using this online learning environment prior to commencement of their programs, with ongoing support provided both at a unit and university-wide level for students.

The university recently received a $1.2 million grant to set up a Higher Education Research Centre to research and evaluate courses with the aim of continuous improvement. The Centre will employ digital enhancement experts to ensure students have high-quality and appropriate access to content, for example mobile platforms.

Course evaluations demonstrate that online students perform as well as face-to-face students (indeed in some units online students are performing better, although this may relate in part to the differences in maturity in students).

UNE is creatively recruiting online teachers to bring relevant content to students via technology directly from their workplace.

Professional experience

UNE offers two modes of study which include professional experience placements, on campus and off campus. Depending on the selected mode, students will either be placed by Professional Experience Office staff or negotiate their own placements with schools and placement centres. UNE employs Professional Experience Liaison Officers who are generally ex-principals and teachers recommended to UNE because of their sound teaching and supervisory abilities. The quality of professional experience is underpinned by the documentation, the provision of support when needed and the follow up to professional experience. The Head of School monitors professional experience and liaises with relevant staff concerning possible improvements. UNE and CSU are exploring an alliance to assist in the management of professional experience and supervision of students through the use of liaison personnel. Potentially the two universities will share an online registry of schools and their availability for professional experience.

Of interest

Future Campus

Each year UNE has approximately 2000 to 2500 teacher education students studying in the Greater Sydney area. To support these students the university has established a campus in the heart of Parramatta. The campus, which is open to students seven days a week until 9 pm, is staffed by administrative personnel, tutors and technology support personnel. It houses a range of the latest communication technologies including computers, scanners, photocopiers, printers, iPads and five large video-conferencing points (including two CISCO telepresence rooms).

The centre is used for:

- face-to-face tutorials and lectures (quite often in holidays and lecture breaks) (eg the 22 high achieving students who are being trained in the National Disadvantages Students program to teach in disadvantage schools)
- lectures beamed in from other locations and lectures beamed to other locations
- student study centre
- student resource centre (including computers, scanning, printing)
- information centre.

Charles Sturt University (CSU)

Programs

CSU currently offers the following teacher preparation programs to distance education students online:

- Bachelor of Teaching (Primary)
- Bachelor of Teaching (Secondary)

In 2015 the programs will be expanded to include a Master of Teaching (Primary) and (Secondary).

Mode of delivery

The mode of teaching and learning for the Bachelor of Teaching degrees in Primary and Secondary teaching is completely online. A number of the assessment tasks in the various subjects have students engaging with schools, teachers and school students, as well as children and youth in community settings. Each course also has the required supervised professional experience in schools or other approved educational settings.

A number of subjects in these courses are also available in on-campus and blended mode, as they are shared with a range of other undergraduate CSU degrees that are predominantly on-campus courses. Hence in a number of these subjects the online students may be studying components of subjects with on-campus students.

Students

CSU has 1200 graduate students studying online in these ITE programs. The majority of these students are studying part time while holding down full-time work; that is they are mainly mature adults working towards a career change. About 1050 of these students reside in NSW and the remainder are from interstate. Most students reside between Sydney and northern Victoria, and there are significant numbers of students in the Sydney metropolitan area. The overall numbers are fairly stable, with between 80–100 graduates each year from the Primary program and about 120-150 from the Secondary program.

Staff

The permanent staff in the Faculty of Education at CSU are experienced teachers in online/distance education. Of the 8000 students in the faculty over 5500 are studying in online/distance modes. The university and the faculty continually provide professional development programs to ensure quality and currency of content, teaching and learning strategies. There is compulsory induction/training for all new academics at CSU and this includes a significant orientation to online/distance education and related CSU systems. All staff are supported by professional educational designers and multimedia production teams. Selection criteria for new academic staff include a commitment to and capacity for online learning and teaching. CSU reports that it has a balance of continuing and sessional staff teaching across its courses. Continuing staff play the lead role in the design of teaching, learning and assessment, and in the moderation of marking of assessment items. Sessional staff generally are very experienced teachers with current/recent teaching experience and are employed for the duration of a teaching session.

Campuses

CSU delivers teacher education courses at campuses in Albury, Wagga, Bathurst, Dubbo, Ontario and from 2015, at Port Macquarie. Staff at all these campuses teach online courses.

Technology

CSU has been using SAKAI, an open source learning and management platform branded as CSU *Interact*. From 2015 students will work in Interact 2 which will be based on BLACKBOARD. In both the current and future platforms staff and students use a range of synchronous and asynchronous tools such as forums, chatrooms, Second Life, blogs, wikis, resource repositories, ADOBE Connect (for synchronous activities), Echo 360 for recording and creating lectures, and online submission and return of assignments. CSU has also developed Smart Learning, a tailored curriculum information system designed to support staff to collaboratively develop courses/subjects where assessment and learning modules are clearly aligned with graduate outcomes. One benefit of Smart Learning is that the cohesive structure of the course is transparent and stable, down to the level of assessment tasks and marking criteria. This is a particularly valuable support as it maintains the integrity of the course content, as sessional staff (and continuing staff) tailor the teaching to their expertise and the needs of particular student cohorts.

Quality

CSU has a clear and evident commitment to quality service delivery. Several key features underpin the quest for quality. First and foremost, policy underpins all delivery. For example, the faculty has an 'online commitment' document which clearly sets out the commitment to the provision of quality online learning. It also articulates a commitment to improvement, and nominates areas and improvement is to be made. The document also (inter alia) addresses the availability of specially developed online resources, and specifies that every subject must have regular and well-designed synchronous activities that address the learning outcomes of the subject. It specifies expectations of teacher educators, including response times to students and the nature and quality of assessment feedback. Impressively, the student course outlines provide links to policies and expectations of staff and students.

An Associate Dean of Curriculum, Learning and Teaching oversees standards and quality assurance processes for course design and delivery. Subjects (whether online or on campus) are scrutinised by examining subject outlines, the Interact site, student results, and student and staff evaluations. In particular assessment tasks and marking criteria are scrutinised each session by an academic external to the teaching team prior to the commencement of each session, and during the session subject leaders ensure moderation of standards against the marking criteria.

All courses are reviewed every five years in a process led by course directors. Timing is generally aligned to accreditation requirements.

A CSU course, whether online, blended or on campus must address the same graduate learning outcomes/standards for all students. This is especially so for the suite of CSU pre-service teacher education courses which are accredited by BOSTES against the same professional standards or have the same Australian Qualifications Framework (AQF) level. The quality assurance mechanisms provided by the Smart Learning (assessment tasks aligned with graduate outcomes) and its Assessment and Moderation Policy (ensuring that all students taking a subject whether in online, blended or on-campus mode meet the agreed standards) enable CSU to demonstrate consistency of outcomes across modes of delivery. Where students from different campuses, modes, courses are undertaking the same subject, particular attention is paid to outcomes and standards and to student evaluations of these cohorts. Teaching and learning experiences do vary, however, across modes, cohorts, campuses, and expertise and background of teaching staff. This is essential to address the needs/backgrounds of particular cohorts. Importantly, in the case of these online courses, the Bachelor of Teaching (Primary) and (Secondary) cohorts already have a first degree and are generally career changers while the on-campus cohorts are generally school leavers or recent school leavers.

Professional experience

Currently CSU B. Teach (Primary) and (Secondary) students locate their own professional experience placements at approved schools where principals appoint an appropriate supervising teacher. From 2015, this will change in line with the GTIL framework and students will select from a pool of schools that have Professional Experience Agreements in place with CSU. At the start of each placement, a Faculty Liaison Officer contacts the student and the school to ensure that the placement has commenced without difficulty. The Faculty Liaison Officer stays in contact with the student/school but only visits the school if there are significant difficulties and arranges for the 'at risk' process to be put in place. This process provides close liaison/visits as required to support the student and the associate teacher. The associate teacher continues to supervise the student and makes the final recommendation about the placement outcome.

Of interest

UNE and CSU are exploring an alliance to assist in the management of professional experience, particularly in metropolitan Sydney where both have a significant number of students. Potentially the two universities could share an online registry of schools and their availability for professional experience. It is possible that they will also share liaison personnel.

Southern Cross University (SCU)

Online programs

In 2014 Southern Cross University offered the following program by distance:

- Bachelor of Technology Education

In 2015 students will be able to complete the following programs online

- Bachelor of Arts/Bachelor of Education (Secondary)
- Bachelor of Arts/Bachelor of Education (Primary and Early Childhood)
- Bachelor of Arts/Bachelor of Education (Primary and Secondary)
- Bachelor of Arts/Bachelor of Education (Primary)
- Graduate-entry Bachelor of Education (Secondary) *[all specialisations]*

Mode of delivery

The Bachelor of Education (Secondary) and the Graduate Diploma of Education have a fully online delivery option with mandatory face-to-face workshops each session for Professional Experience units and some Curriculum Specialisation units.

The Bachelor of Technology Education requires students to complete TAFE certificates for parts of some specialisations (eg Food Technology, Textiles Technology) and also mandatory on-campus schools in Coffs Harbour and/or Sydney.

In 2015, the Primary and Secondary courses will also be offered entirely by distance but will have on-campus workshops. [Students can still choose to study core units internally at Lismore, Coffs Harbour or Gold Coast.]

Students

In 2014 there are 523 online students at SCU.

Staff

Both permanent and casual staff are involved in the delivery of the distance programs.

Campuses

SCU has campuses in Lismore, Coffs Harbour and on the Gold Coast.

Technology

SCU uses Blackboard as its LMS, which has tools such blogs (which are accessible to all students), journals (which are accessible only to the student and their tutor), wikis, discussion boards etc. Blackboard Collaborate is used for synchronous activities (eg for real-time video/audio of the lecturer/students with capacity to use a whiteboard, presentation tools, application sharing and 'breakout' tutorial groups/spaces running simultaneously in the one session). It is used for weekly tutorials in some units, fortnightly in others, and twice a session in others.

SCU has been video-conferencing (and recording) lectures between campuses in real time, but the technology does not always afford reliable signal so prerecording of lecture content is on the increase. The videos are then loaded to the Blackboard learning site.

Quality

SCU has a Guiding Principles document which underpins the way online courses are delivered.

An Accreditation and eLearning Officer assists with unit design and ensures standardisation of units. She also assists with design for access to different devices, for example mobile technology. She is supported by other personnel including a multimedia designer. Course design is a team effort. SCU tries to ensure quality of outcomes by designing units to engage and challenge students, for example through the use of activities that have students working collaboratively, building resources together through wikis.

Staff are provided with professional development in group workshops, but are also given the opportunity for one-on-one training as this is sometimes a more appropriate method to meet the needs of the individual teacher educators. The student data available on the Blackboard LMS is used to monitor student progress and assist students where the need is indicated. The transparency of all units is seen as an excellent way to manage quality and accountability.

The Blackboard LMS navigation structure is consistent for all courses and is clearly and simply organised to make access easy for students.

Professional experience

SCU has endeavoured to ensure high-quality professional experience for students by: requiring all students undertake pre-professional experience activities, providing very clear documentation and sets of tasks to be completed while on professional experience, by assigning a lecturer to each student and by employing local personnel to support students. The Primary program also uses a SULO model which SCU devised to provide additional support for students, school mentors and university advisers. SULOs are recently retired, highly regarded primary principals (with the exception of one SULO who was a senior primary teacher) who each oversee the work of three to five University Advisers and who can immediately step in to assist and advise when a student is deemed to be 'at risk' of failing a professional experience. In addition, the Primary program has a Lead SULO on each of its three campuses to provide support for the SULOs on that campus.

Of interest

The delivery of the online units has provided on-campus students with the options of either attending lectures face to face or watching online. This has led to a reduction in on-campus attendance. Students are also opting to take some on-campus and some online units to complete their programs. These trends are changing the nature of university campuses.

SCU is aware that technology limits some of the techniques available to online providers. Students are aware that good technology is needed to access the course but some students still have slow links (some still have dial ups) or slow computers.

Wesley Institute

Online programs

Wesley Institute currently offers:

- Graduate Diploma in Education (Secondary) to be replaced by Master of Teaching (Secondary)
- Master of Teaching (Primary)

Model of delivery

While the majority of course work is conducted online, both programs have a three-day compulsory on-campus course introduction. The content for the introduction includes: literacy workshops, child protections workshop, an introduction to the first unit of the course 'Foundations of Teaching and Learning', an introduction to the online Moodle platform, workshops in classroom management, professionalism, Professional Experience, immersion into a school community, what is a worldview and what a Christian worldview looks like. Naplan testing in Literacy (Year 9) and Numeracy (Year 7) is also conducted for teacher education students (TES).

Other on-campus workshops include four days for the KLAs (Creative Arts, Numeracy, PDHPE, Science and Technology) for the Primary Master of Teaching program, and two days to provide safety training and skills in the delivery of the Technology Studies course in Design and Technology.

On-campus Study Skills Workshops are offered every semester to those students who are identified from Naplan testing at the course introduction and during the interviews on application. Any student is welcome to attend these workshops. They are also made available online.

Students

Wesley Institute currently enrols 210 students in the Graduate Diploma program and 32 in the Master of Teaching program.

Staff

Wesley Institute employs three full-time academic staff, the remainder of teacher educators are employed on contract and are located in their own homes/work environments. These teacher educators are generally experienced teachers or school principals. All new teacher educators undergo a period of training and are paired with a more experienced teacher educator for support.

Campuses

Wesley Institute is currently based in a large ex-secondary school building at Gladesville but, given its impending merger with Indiana Wesleyan University, will soon be relocated.

Technology

Wesley Institute is using the Moodle platform, with Alfresco as its information repository, along with the use of Study books/discussion forums/ forums/webinar/Vimeo/YouTube/ Dropbox/PDF and communication with students via email/phone/ IMS/ Paradigm/forums.

Quality

Wesley sets out its expectations for its online courses in its handbook. This document articulates staff responsibilities and expectations for the design of courses and the processes for course delivery.

Wesley regards the face-to-face components of its programs as important in ensuring the quality of its courses. The face-to-face workshops enable key staff to learn about their students and students can meet each other. Student and staff photos are a compulsory component of online content. These processes provide the foundation for ongoing support and pastoral care for students.

Course content is delivered in a highly stylised, consistent and fast process via Moodle. Teacher educators receive training and accountability is ensured by oversight of the courses, including the ongoing examination of groups and individual student data by the Course Coordinator. Every endeavour is made to ensure teacher educators have the same expectations, for example teacher educators must respond to students on instant messenger or email within two days.

Student grades are closely monitored. The assessment tasks of students who appear to be failing or those appearing to be at the high distinction level are double-marked by the teacher educators. Moderation of marks occurs within the university and across universities. Wesley also looks closely at the outcomes of the final professional experience reports for all students.

Wesley Institute has an IT officer to support the online delivery of content.

Professional experience model

Wesley organises all professional experience placements. Students are able to nominate three schools where they would like to undertake their experience. Wesley encounters some difficulties locating placements.

Wesley has established relationships with schools, the majority in the independent sector, but also in departmental schools. In preparation for professional experience all students are referred to The Project, a professional experience information site. All students must attend a pre-professional experience interview at their school, taking the Wesley Institute Handbook with them.

Wesley supervising staff recruits are required to attend a day seminar to ensure they understand the standards and the processes of supervision. They visit each student at least once but sometimes twice during their professional experience placement. There are two professional experience placements, one of four weeks and the other of five weeks for the current Graduate Diploma, and three periods of 20 days For M. Teach (Primary).

Student evaluations are conducted each semester, and Wesley monitors the employment rates of its graduates.

Of interest

This year Wesley Institute will amalgamate with Indiana Wesleyan University which is based in the USA. It will be renamed and relocated.

In 2015 Graduate Diploma courses will be phased out and will be replaced by the Master of Teaching (Primary and Secondary). The Moodle platform will be updated with extra opportunities for webinars for student interaction. There will be more use of Vimeo with recorded introductions to sessions by lecturers.

Wesley may broaden its teacher base as it is considering the international training of teachers.

Wesley operates on a different staffing model from all other NSW providers in that it has only a few full-time staff, and the remainder are sessional and are paid per student both for delivery of units and for professional experience. These staff operate from their homes/ work environments.

Wesley is very supportive of students in the job recruitment process, keeping them well informed of their options and of job opportunities. Some schools also approach Wesley to help them recruit employees.Macquarie University

Macquarie University

Programs online

Macquarie University currently offers only one program fully online through the Institute of Early Childhood:

- Bachelor of Education (Early Childhood) (Birth to 12 Years).

The geeral education units, that is Bachelor of Education (Primary) and a Bachelor of Arts with a Bachelor of Education Primary, have some online components but are not yet fully online.

Mode of delivery

The majority of units in the online Bachelor of Education (Early Childhood) Birth to 12 Years have some on-campus components. Generally the core units have on-campus sessions which are sometimes held in the mid-session breaks and sometimes on weekends. Some units have pre-professional experience and post-professional experience meetings.

In the Bachelor of Education (Primary and Bachelor of Arts with a Bachelor of Education Primary, which are not yet entirely online, all on-campus lectures are posted online and students tend to choose whether they will attend lectures or access them online.

Students

The Bachelor of Education (Early Childhood) (Birth to 12 years) has a current enrolment of 141 distance/ online students. Initially most online students were mature aged but in Early Childhood this has changed over the past few years and younger students are looking for more flexibility. The increase in younger students may also be because this is one of the few external Bachelor of Education (Early Childhood) (Birth to 12 years) programs available to students. A substantial number of external students live locally.

Staff

The Institute of Early Childhood has a combination of permanent full-time, part-time and sessional teacher educators to deliver the program.

Technology

All students undertaking the B Ed Early Childhood Birth to 12 years, whether internal or external, have access to the Moodle platform. The units in the programs are delivered using discussion forums, blogs, wikis, ebooks, grade marking along with broadcasting lectures and PowerPoints. Students engage in collaborative tasks and peer assessment.

Quality

Macquarie views online learning as a highly valued mode of learning and equally legitimate as face-to-face learning. The concept that underpins programs is 'equivalency', that is online and face-to-face courses must deliver equivalent content and outcomes. The Institute of Early Childhood endeavours to maintain the same group sizes in its on-campus and online courses for tutorials, however this is not always possible.

In developing units, the Institute of Early Childhood perceives the aims, content and outcomes to be the focus and the delivery methods to be supportive. Online learning methods are tailored accordingly. Unit delivery is student centred, in a model that assists students to understand how to be child centred. There is a focus on finding highly interactive and interesting activities for students. There is also emphasis on trying to demonstrate authentic education environments, for example taking a video from a child's height to demonstrate how the child sees the world and accessing regular classroom teachers.

The quality of the programs is controlled by the selection of staff to run online units. These staff must be enthusiastic about technology, innovative in their approach, willing to learn new things, able to take risks, able to work collaboratively across departments and willing to make use of resources outside the department. They must already know their content and have a proven background in lecturing to students.

Macquarie University has an internal competitive funding process to assist lecturers to develop units through its Learning and Teaching Centre, which is staffed with multimedia, design and IT personnel.

Individual teacher educators use the student data available on Moodle as the catalyst to provide additional support to students at risk, or to assist when students contest their results. Student surveys are conducted. Student results are monitored and compared.

Professional experience model

Macquarie University staff assist students in locating professional experience placements and endeavour to ensure they are placed within 90 km of where they live. The university has close relationships with some schools but, due to the large number of school involved in placements, not with others. Every student is supervised by contracted supervisors. Supervision occurs in every professional experience. Contracted supervisors are selected carefully and must undergo a day of training in each semester before commencing their supervision. These supervisors are expected to provide two visits to each student along with a half an hour debriefing subsequent to the professional experience.

The role of the supervisor is to: ensure the requirements of the student teacher are understood by the school and can be met by placement, advise the teacher on planning and organising experiences to meet requirements, observe the students teaching and provide written and oral feedback, help students adjust to school expectations, encourage students to reflect on their experience and evaluate their teaching, counsel student teachers concerning difficulties and anxieties, discuss student work with the cooperating teacher, attend discussions with student teachers and cooperating teachers, undertake appropriate procedures if the student is at risk, and complete the required documents.

Students are given opportunity to provide feedback about their supervisors.

Of interest

The Institute of Early Childhood is developing a library of small video clips of examples of what children and teachers do in classrooms and the ways that children learn. The clips are linked to program and unit goals and can be sourced by all lecturers to illustrate concepts to students.

Alphacrucis College

Online programs

Alphacrucis College offers:

- Master of Teaching (Primary)
- Graduate Diploma (Primary).

Delivery mode

The program is delivered online, but each unit has a five-day residential school. The College calls its model blended learning.

Student numbers

There are currently 35 students studying at Alphacrucis College. New enrolments range between 8 and 16 students each year. This means class sizes are also small, affording excellent lecturer/student ratios.

Staff

Alphacrucis College has 1.2 full-time academic staff running its teacher education programs along with sessional staff who are experienced teachers and principals. Alphacrucis is a small college offering programs in Business and Theology in addition to teacher education.

Campus

AC operates from a commercial building in the heart of Parramatta. The building has been renovated to create a 'purpose-specific', modern, well-equipped, attractive environment.

Technology

The basic learning platform being used is Moodle along with Echo 360 for recording seminars and lectures. The extent of the use of various features depends on individual lecturers.

All face-to-face content is captured and placed on Moodle to provide a cross-section of synchronous and asynchronous activities (ie forums).

The sophistication of use of technology relates to the skills and interests of the lecturer. The College has four IT support staff.

Quality

Alphacrucis College regards the intensive on-campus seminars and lectures as critical to the provision of quality programs in teacher education. It regards getting to know the students well and providing them with ongoing personal interaction and support as important.

Alphacrucis College endeavours to ensure that students are fully engaged with the program. Staff ensure that engagement relies on the religious nature of courses (eg every lecture starts with prayer). Typically units commence with an introduction, which has student biographies based around structured questions. Units are designed to engage students with the content throughout the semester, for example through assessment tasks and to engage with each other, for example an assessment must include a YouTube clip by three students who are remote from each other. Alphacrucis College endeavours to promote deeper understanding of content through its course design and especially the way assessment tasks are worded and conducted. Assessment tasks are changed each semester to ensure they are up to date and responses cannot be replicated.

Student and course data which is readily available on Moodle is used to monitor student engagement and performance, with the aim of further supporting students.

In the endeavour to ensure staff remain well informed about developments in online learning, the College conducts regular staff meetings of all full-time staff where they exchange information about their latest innovations, successes and challenges with their colleagues. Alphacrucis College has an IT officer to support staff.

Students complete surveys at the completion of units.

Professional experience model

Alphacrucis College organises all professional experience placements. The Dean of Education visits every student in the second and third professional experience to ensure consistency in grading. Casual staff members are appointed to supervise interstate students.

Of interest

Alphacrucis College has commenced trialling the enrolment of students at any time during the year, rather than at the commencement of a semester. This will provide much more flexibility for students. It is also intending to expand its programs by offering a Bachelor of Education (Primary) nationally, starting in Queensland. While Alphacrucis College has always been committed to its blended model, staff are of the view that quality programs can be operated fully online even in some of the more practical subjects, for example music.

Morling College

Program

Morling College offers the following program:

- Master of Teaching (Secondary).

Mode of delivery

Morling College provides the program primarily online. Students attend a one-day orientation prior to the commencement of the course where Professional Experience protocols are the main focus.

Students

Morling currently has 15 students undertaking the course, two of whom are co-enrolled in teaching methods at Wesley Institute because Science and Design and Technology are not offered at Morling College.

Staff

Morling College employs 1.3 faculty in education, a number of adjunct tutors and a one full-time administrator.

Campus

The Morling College campus is at Macquarie Park adjacent to the Macquarie University campus.

Technology

Morling College uses the Moodle Platform and each unit is available in its entirety to the student. The program is set up so that it can be undertaken on a mobile device. Video content and hyperlinks to readings and websites are embedded in the units. The platform incorporates forums to foster a sense of community among students. All content delivery is currently asynchronous. This enables maximum flexibility for students, who can complete their studies at any time. Some students find it more convenient to download and print the entire units.

Quality

Students at Morling are generally very motivated mature women and men who are undertaking a career change. The small numbers enable Morling staff to get to know them well and to provide personalised support for their learning.

Program expectations are clearly presented in the Education Handbook. Permanent staff meet weekly, and focus on program quality, for example by examining literature relating to online practice.

Evaluation forms are sent to each student at the end of the unit but low completion rates are prompting a trial to send the surveys while students are still engaged in the units as well as sending them at the end of the unit. A Course Experience survey is sent to all graduands.

The Education Faculty at Morling College has three committees involved with quality control of the program: an Educational Advisory Committee comprised of the stakeholders including high-level external and internal personnel, staff and a student representative meets four times each year to provide advice and input into the program; an Academic Board comprised of external and internal high-level academics which oversees program content and meets six times each year; and an Educational Review Committee comprised primarily of academic staff with external teacher representation and external academics which is involved with the review and rewriting of units to ensure content and delivery is up to date.

Professional experience

The majority of students undertake their professional experience in Sydney. Morling has partnership agreements with six schools: Pacific Hills Christian School, Toongabbie Christian School, Hunter Christian School, St Philips Christian School, Covenant Christian School and Green Point Christian School, however other placement options are needed for students who do not live near these schools.

There are no set professional experience periods, enabling students to undertake their practicums at times convenient to their work/lifestyles. Students are encouraged to select three schools where they would ultimately like to teach as their professional experience schools to cater for the possibility that professional experience might ultimately lead to ongoing employment. Morling students have good employment outcomes. All students are supervised in school by experienced and qualified teachers and the Morling teacher educator visits the schools to observe students on professional experience.

Of interest

The Morling program offers flexibility for students in terms of when they commence the course, which can be in Semester 1 or 2, the pace at which they complete modules, and the timing of their professional experience. It is ideally suited to career changers who need to fit their studies around other aspects of their life. Interstate providers

Curtin University

Curtin University provides two four-year online programs, a Bachelor of Education (Early Childhood) (0 to 8 years) and a Bachelor of Education (Primary). These programs are also offered internally. The courses are accredited in Western Australia.

The online programs are offered through the Open University and thus have different admission criteria from on-campus programs. Online students must successfully complete the first two units of the program for which they sought entry (with evidence of proficiency in English), or four units of the program (if there is no evidence of English proficiency).

The academic results for internal and external students have been compared and the results are similar. The programs have two intakes each year. There is a high attrition rate in the first year for external students.

Professional experience is not offered in the first year of the program. This ensures the students who commence professional experience have a sufficient knowledge before they enter a classroom, and that professional experience issues are not faced by first-year students who discontinue their enrolment.

Curtin has found that online students, subsequent to the first year, are generally more motivated than internal students, as they are often mature-aged women who enter the program with purpose and frequently with experience in child development.

While there was a large increase in numbers immediately after deregulation, enrolments have now stabilised.

Given Curtin has 190 Early Childhood students and 753 Primary students from NSW as well as students from all other states, their courses are tailored to familiarise students with their own state curricula by undertaking comparative exercises and by tailoring their assessment responses.

Curtin has developed its online learning methods significantly over its five years of operation, as this has been a priority for the university. On-campus staff write the units, which are run by sessional staff, all of whom have Master's degrees or PhDs. These staff are trained specifically to provide online learning, and to understand the expectation for quality program delivery. Unit coordinators supervise the design and delivery units and a Director of Teaching and Learning who oversees the operation of the programs. The Head and the coordinators have access to all Blackboard sites and can tune in any time for monitoring purposes. A team of specialists manage the Blackboard site and further specialist video-conferencing and multimedia staff are engaged when required. Collaborate is used for synchronous activities.

Curtin has developed a responsive 24-hour student support service.

The limiting factor on their course development is the technology being used by students, that is older and slow technology which prevents the presentation of many new multimedia materials.

Students organise their own professional experience placements. They have clear written guidelines about how to approach schools and how to present themselves prior to, and during professional experience. Curtin students complete their teacher preparation with a 10-week internship. The university pays both the mentor teacher and a supervisor. The appointed supervisor can be an experienced teacher or a principal.

The supervisor visits the student between one and three times in the last professional experience/internship. In around week 7 or 8 of the internship there is a three- or four-way Skype or Google Plus call between the student, the classroom mentor/teacher, the supervisor and one or two university personnel (course coordinator and lecturer). This meeting, which includes comments from the student and supervisor, gives a good indication of student progress.

The university is aiming to establish new types of partnerships with schools In particular the desire is to replicate their internal 'coaching' model, that is a staff member coaches the interns and their mentors before they embark on their internship.

Curtin once had small centres throughout Western Australia where they offered on-campus schools but they have now ceased due to lack of student interest.

Charles Darwin University

Charles Darwin University offers four-year degrees online in Early Childhood, Primary and Secondary Education. Its relevant campuses are located in Darwin, Alice Springs, Sydney and Melbourne, with Adelaide soon to be added. The university strategically embraced online learning approximately eight years ago. It subsequently invested heavily in infrastructure and established relevant quality assurance processes. It is aiming to be at 'the cutting edge' in online learning and to be an international institution. Approximately 70% of its students study online.

Charles Darwin University teacher education students are generally females over 35 years of age who are seeking a life change. They are usually managing multiple commitments and find online learning appropriate for their circumstances. Charles Darwin considers their training an excellent way to supply teachers to regional and rural areas.

Teacher education programs are designed around AITSL standards and are accredited by the Northern Territory Board of Teacher Registration. The university perceives that its infrastructure for the design and delivery of lectures is excellent. Each school in the university has its own technical support along with assigned staff from an Office of Teaching and Learning (OTL). The OTL has responsibility for accreditation, service and the professional development of staff. The technology and design support available both at the school level and centrally enables customisation relevant to the curriculum content while ensuring a consistent university-wide approach.

The central LMS is Blackboard and synchronous activities are provided through Collaborate. Each semester, units, once loaded onto Blackboard, are reviewed by the OLT before access is available to students. Units are altered each semester. Specific quality assurance processes have been designed in relation to marking of assignments. The CEQ score and employment rates for graduates are reported to be good.

Charles Darwin students are required to undertake 100 days of professional experience (ie 20 more than is required nationally). All professional experience arrangements are available on a website. The university has good partnerships with both Northern Territory Department of Education and Training and Catholic Schools to support Northern Territory students. The professional experience model in the Northern Territory involves the professional experience office, an in-schools coordinator employed by the Department but working at the university, who has trained principle learning leaders in 52 Northern Territory schools. These leaders train the professional experience mentoring teachers.

Charles Darwin University agrees that the quality for professional experience varies greatly and depends on the type of school, school culture and school leadership.

Swinburne Online

Swinburne Online offers the programs: Bachelor of Education (Primary), Bachelor of Education (Early Childhood), Graduate Diploma (Primary), Master of Education (Primary). There are currently 1027 NSW students enrolled. Swinburne Online reports that these students intend to teach there when qualified.

All course work is delivered online.

Swinburne Online is an independent company that works in partnership with Swinburne University to develop a wide range of degrees including Teacher Education. Education programs at Swinburne University can only be taken through Swinburne Online.

Academics employed by the university work with learning designers and technologists who are employed by Swinburne Online to develop the units. The units are presented online and supported by online tutors who are specifically trained by Swinburne Online and who take part in continuous professional development. All education program staff are qualified and experienced classroom teachers, many with post-graduate qualifications. Student to tutor relationships are 25 to 1. Tutors are supported by Swinburne Online coaches who monitor performance.

All Teacher Education programs are managed by a Program Director at Swinburne Online who works very closely with the Deputy Director of Teacher Education from Swinburne University who manages a team of university-based academics. This is reported to be a very strong partnership, where both parties strive to ensure the quality and continuous improvement of overall programs and individual units within those programs.

Programs are accredited through the Victorian Institute of Teaching. Swinburne Online works closely with Swinburne University to ensure all quality assurance processes are aligned and implemented.

Swinburne Online students are required to set up their own teaching placements. Professional experience at Swinburne Online is underpinned by the belief that it is important for students to develop skills in seeking and finding placements. A placement team supports the students by providing resources and practical advice in preparing for and approaching schools to organise their placements. Developing professional skills relevant to the workplace, such as presenting for an interview and showcasing student experience, are considered important graduate attributes. With a predominantly mature cohort (the average age of Swinburne Online students is 32) from across Australia, this strategy is reported to be effective. One in every four education students is from a regional or remote area of Australia. Swinburne Online believes that it is beneficial for students to approach schools themselves not only because of their residential location, but also because it helps them get practical experience engaging with the workplace. Many of the students choose to study online and to stay in their community, so this in turn is an opportunity for them to work where they live.

While on placement, students are also supported by their online tutor, their fellow students and have access to student support officers who are available seven days each week. A placement team deals with all student and school enquiries related to school placements. Any student difficulties during professional experience placements are referred to academic staff who then liaise with the school and/or the student. Swinburne Online reports that students understand the reasons for organising their own placements and reports very positive comments from students about professional experience and positive feedback from mentor teachers who supervise Swinburne students.

University of Southern Queensland (USQ)

University of Southern Queensland offers:

- Bachelor of Education (Early Childhood)
- Bachelor of Education (Primary)
- Bachelor of Education (Secondary)
- Bachelor of Education (Spec Ed)
- Bachelor of Education Sport, Health and PE (Primary)
- Bachelor of Education Sport Health and PE (Secondary).

USQ has a commitment to providing students the option of studying on campus, online or using a combination of both methods. Currently 185 NSW students are enrolled in online programs at USQ.

Programs are hosted on Moodle and are designed to provide a combination of synchronous and asynchronous delivery. There is a commitment to increasing synchronous program activities. Collaborate is used to host real-time interactions. Teacher educators endeavour to time their sessions to suit the majority of students in their units.

USQ considers that the online environment provides more opportunity for quality control of programs than the face-to face teaching and learning environment. This is because of the transparency of online units and because data is readily available for ascertaining student engagement with their online learning and for analysing course delivery within and between units.

USQ has a Health Program to ensure the quality of programs. This includes student evaluations, peer evaluations and moderation of courses by designated staff. Moderation involves a review and endorsement of course specification, review and endorsement of assessments instruments and grading of students, involvement with appeals where required and involvement in course evaluation.

A Learning and Teaching Services (LTS) section assists with unit design and production, for example with multimedia and pedagogy support, and also provides training for teacher educators who work in online environments. The LTS uses a specifically designed template to evaluate online programs. This includes the following items (all of which have sub-items): 'The course website is navigable and well organised', 'A course orientation is provided', 'Course information meets legal and institutional requirements', 'Course materials and activities are inclusive', 'Materials are relevant, sustainable and current', 'Learners have access to required resources and support'. It is of note that sub-items inter alia address: student collaboration, interaction and opportunities for questioning; ways in which the teacher educators establish a teaching presence; and staff to student response times. The LTS provides support at the faculty and program level as well as in the support of individual unit development and operation. A Deputy Vice Chancellor oversees the Learning Support Service, reflecting its importance in the university.

APPENDIX 2: BOSTES TEACHER SURVEY

The survey

While the CEQ provided useful information about student satisfaction in regard to online versus face-to-face learning, the numbers of returns from NSW were insufficient to gauge NSW graduate perspectives on some key aspects of online delivery. It was therefore determined to conduct an additional survey of NSW teachers.

A survey was designed to ascertain teacher satisfaction with their ITE programs. The survey comprised 39 questions (attached) and sought background information about teachers, as well as their mode of study, reasons for mode of study, satisfaction with their overall program and individual units, and practices associated with professional experience placements. The survey identified teachers who had studied in different modes, that is, external/online, multi-mode and internal/on campus, and sought their perspectives about those modes.

Teachers are required to register with the BOSTES prior to commencing teaching in NSW. It was therefore possible to circulate the survey to the teachers who registered in the 2013 calendar year having completed their teacher education program with an online learning provider. The group included teachers who had graduated from NSW and interstate universities.

The survey was sent by email to 836 teachers. The teachers had studied with at least 13 different providers. Of these, seven were from NSW and six were interstate. Thirty-five per cent of teachers (294) returned completed surveys.

The returns were anonymous unless teachers chose to provide identification. Forty-six participants chose not to name their university or nominated a university where they had undertaken post-graduate studies. Of those who did provide the name of the university where they studied their ITE qualification, 70% had attended either UNE or CSU which are the largest providers of online ITE in NSW.

Profile of sample

Respondents were generally mature aged, with 12% under 25, 35% between 25 and 35 and the remainder, that is 53%, over 35 in 2014. The majority were recent graduates, with 75% graduating in 2013, 18% graduating between 2008 and 2012, and the remainder between 2004 and 2008. Sixty per cent completed a Bachelor's degree and the remainder a Diploma of Education or Master's degree.

Of the respondents, 80% were female. The majority of respondents (70%) had completed their program externally/online, with 23% studying internally/on campus, and 8.84% studying by multi-mode. The majority (69%) of respondents had completed another tertiary course prior to their teacher preparation degree.

Comparison of online and on-campus respondents

Responses were examined to compare the groups of teachers who had studied online and those who had studied on campus.

Teachers who had studied in either mode were overwhelmingly female (online 82% and on campus 75%).

At the time of the study teachers who had studied online were more frequently mature aged than those who studied on campus. Of 203 online respondents, 97% were over 25 and 60% were over 35. Of 66 on-campus respondents 76% were over 25 and 38% were over 35.

Of the distance students, 34% were required to attend on-campus lectures/tutorials. The majority of these lectures/tutorials were between one and seven days per annum.

Respondents cited family (41%) and work (35%) as the main reason for studying online. However 10% cited distance from campus, 7% cited online as their preferred method of study, 8 people (4%) cited that this was the only mode available to them and four people (2%) cited cost as the primary reason for studying online.

Data was also collected from 23 teachers who had chosen to study in multi-mode, that is some units online and some on campus. Of these respondents 43% (10) said this was because the units were available to them only using this method, 43% (10) said because of lifestyle choices, that is work, family, and 13% (3) said because they chose a particular mode of delivery for particular units.

Professional experience

Of online students 96% had completed their professional experience placements in NSW and 12 students completed the placements in other states. Of on-campus students 37% (25) completed their professional experience in NSW, while 55% (37) completed the professional experience in Queensland and 16% (11) completed it in Victoria. The majority of the students who completed their professional experience interstate were enrolled in on-campus programs in Queensland and Victorian universities.

Of online respondents 89% organised their own professional experience, whereas only 20% of on-campus students organised their own placements.

When asked if they had encountered difficulties with their professional experience placements 36.5% (69) of online respondents said yes and 24% (11) of on-campus respondents said yes.

Asked if placements were supervised by personnel from the university, 47% of online respondents replied yes, whereas 83% of on-campus respondents replied yes.

Of on-campus respondents who were supervised by the university, 18% were not visited by them in school, and of online respondents 37% who reported being supervised by university personnel said their supervisor did not visit them in school This result should be viewed with caution, as some students may not have answered no to personnel who had been contracted by the teacher education provider to undertake professional experience supervision duties.

Overall program quality

When asked about the quality of their program, of the 203 respondents who had **studied online**, 39% found the quality very good, 39% found it good, 18% found it satisfactory, 3% (6) found the quality of the course poor and 1% (3) found the course very poor.

Of 62 **on-campus** respondents 24% found the course very good, 47% found it good, 24% found it satisfactory, 3 students (4.84%) found the course poor and one student 1.61% found the course very poor.

This means that of online respondents 96% found the program satisfactory, good or very good, and of on-campus respondents 95% found the program satisfactory, good or very good.

Respondents were asked to provide more detailed information about their satisfaction with their program by indicating whether they strongly agreed, agreed, were neutral about, disagreed or strongly disagreed with six statements. The results were tested for statistical significance using a proportions test. Results reported 95% confidence level.

More online than on-campus students agreed to the following statements, however the differences in the response rates were not significantly different:

- There was good support from the university administration to help with the course', 79% of online respondents and 73% of on-campus respondent strongly agreed or agreed. The differences in these results were not statistically significant. Fourteen (7%) online respondents and 14% (9) of on-campus respondents disagreed or strongly disagreed.
- 'There was good technical support from the university to assist me to complete the course', 80% (163) of online respondents and 75% (48) of on-campus respondents agreed or strongly agreed. Twelve (6%) online respondents and 8% (5) of on-campus respondents disagreed or strongly disagreed.
- 'The course enabled me to meet the Graduate Teacher Standards', 91% (185) of online respondents and 87% (55) of on-campus respondents strongly agreed or agreed. Nine (4%) online respondents and 6% (4) of on-campus respondents disagreed or strongly disagreed.
- 'The course prepared me for classroom teaching', 71% (144) of online respondents strongly agreed or agreed and 69% (44) of on-campus respondents strongly agreed or agreed. Twenty-two (11%) online respondents and 8% (5) of on-campus respondents disagreed or strongly disagreed.
- 'The course was intellectually stimulating', 87% (174) of online respondents and 76% (48) of on-campus respondents strongly agreed or agreed and only 3% (7) of online respondents and 1 on-campus respondent strongly disagreed or disagreed.
- 'The course prepared me with strategies to adjust to a diverse range of students in schools', 65% (133) of online respondents and 55% (35) of on-campus respondents strongly agreed or agreed. However 14% (29) of online respondents and 16% (10) of on-campus respondents disagreed or strongly disagreed.

Respondent preferences online or on campus

Of the 151 teachers who had completed two qualifications, one by distance and the other on campus, 106 provided comments about their preferences. Twenty-two teachers (21%) preferred online learning. The majority stated that this was because of the flexibility it provided for work and family but respondents also noted that they preferred to pace themselves, that there was less time wasted in online learning, that online forums give excellent feedback and ideas, and that ideas can be investigated in depth more readily when studying online.

Forty-nine respondents (46%) preferred on-campus learning, citing as their reasons that there was more interaction with fellow students and lecturers, that the frequent face-to-face interaction and discussion led to greater depth of understanding and that on-campus study is easier. Thirty-four respondents (32%) felt that neither method was more satisfactory than the other, but that each was suited to different stages of life and different lifestyles.

Online methodology

Of online students 67% participated in discussion boards and 56% used chat rooms. Surprisingly only 49% reported having video footage in their online courses and only 28% used real-time video-conferencing. Only 10% were engaged with social media for their course delivery and only 23% used ePortfolios.

Unit satisfaction

Teachers were provided with 16 statements about the unit of study they found the most effective in their teacher preparation, and the unit they found the least effective. They were given the opportunity to strongly agree, agree, remain neutral, disagree or strongly disagree with each statement.

Most effective unit

While online respondents more often provided strongly agreed and agreed responses to the following statements differences in responses were not significantly different:

- 'The assessment tasks were clear and relevant' (87% online and 79% on campus)
- 'The unit helped to make me enthusiastic about being a teacher' (85% online and 78% on campus)
- 'The lecturer provided informative responses (eg with enquiries and assessment tasks)' (76% online and 67% on campus)
- 'The lecturer provided timely responses (eg with enquiries and assessment tasks)' (77% online and 72% on campus)
- 'The content was well prepared and presented clearly' (91% online and 86% on campus)
- 'The unit assisted me to think analytically and seek deeper understanding of the content' (86% online and 83% on campus)
- 'The workload was appropriate' (89% online and 84% on campus).
- Results were similar for online and on-campus units for:
  - 'The content was presented in a variety of ways which helped maintain my interest' (78% online and 78% on campus)
  - 'The unit assisted me to adjust my teaching to ongoing circumstances' (70% online and 70% on campus)
  - 'The unit made a major contribution to my preparation for classroom teaching' (76% online and 78% on campus)
  - 'The lecturer was readily accessible to me' (65% online and 67% on campus).

Online students more often agreed that:

- 'The aims of the unit were clear' (95% online and 86% on campus). This result was statistically significant.

Highly significant statistical differences were found in the extent of agreement with the following statements by on-campus as opposed to online students:

- 'I felt I knew the lecturer by the end of the course' (40% online and 72% on campus)
- 'I felt the lecturer knew me and understood the extent of my knowledge in his or her subject area' (35% online and 59% on campus)
- 'The unit provided me with the opportunity for collaboration with other students' (65% online and 84% face to face)
- 'I felt I knew some of the other students by the end of the unit' (44% online and 90% on campus).

Least effective unit

When comparing online and on-campus results for the least effective unit, online respondents more frequently responded strongly agreed or agreed to the following statements. However the differences in the responses were not statistically significant.

- 'The aims of the unit were clear' (52% online and 38% on campus)
- 'The content of the unit was well prepared and presented clearly' (39% online and 28% on campus)
- 'The content of the unit was presented in a variety of ways which helped maintain my interest (30% online and 19% on campus)
- 'The workload was appropriate' (53% online and 45% on campus)
- 'The lecturer was readily accessible to me' (29% online and 23% on campus)
- 'The lecturer provided timely responses (eg with enquiries and assessment tasks)' (35% online and 28% on campus)
- 'The unit made a major contribution to my preparation for classroom teaching' (20% online and 11% on campus)
- 'The unit helped to make me enthusiastic about being a teacher' (17% online and 9% on campus)
- 'The unit assisted me to think analytically and seek deeper understanding of the content' (33% online and 23% on campus)
- 'The unit assisted me to adjust my teaching with changing circumstances' (20% online and 13% on campus).

Larger and statistically significant differences in results were recorded for online as opposed to on-campus graduates for:

- 'The assessment tasks were clear and relevant' (37% online and 20% on campus)
- 'The lecturer provided informative responses (eg with enquiries and assessment tasks)' (33% online and 15% on campus).

However on-campus students responded significantly more often with strongly agreed or agreed to the following statements:

- 'I felt I knew the lecturer by the end of the course' (14% online and 26% on campus)
- 'I felt the lecturer knew me and understood the extent of my knowledge in his/her subject area' (10% online and 17% on campus)
- 'The unit provided the opportunity to collaborate with other students' (30% online and 36% on campus)
- 'I felt I knew some of the other students by the end of the unit' (23% online and 57% on campus).

Respondents were asked whether they had participated in a group assessment task, and whether or not the task was valuable in both the most effective and least effective unit. In the most effective unit 45% of online students engaged in a group assessment task but only 52% of those found it valuable, whereas 73% of on-campus respondents engaged in a group assessment task in their most effective unit and of those 74% found it valuable.

In the least effective unit 18% of respondents were required to engage in a group assessment task and of those and only 26% found it effective, whereas 33% of on-campus respondents undertook a group assessment task and of those 40% found it valuable.

Respondents were asked whether they were involved in other collaborative tasks. In the most effective units 44% of online students and 75% of on-campus students engaged in collaborative tasks, whereas in the least effective unit 20% of online respondents engaged and 37% of on-campus students engaged in a collaborative group activity.

**Data has been rounded to the nearest percentage*

APPENDIX 3: BOSTES TEACHER EDUCATOR SURVEY

A survey comprised of 31 items was compiled to gauge the views of teacher educators (unit lecturers) about online learning. The survey content aimed to address those factors identified as essential for the provision of high-quality online education in the review of literature. The survey addressed inter alia the characteristics of the teacher educators and the nature of the units they deliver, teacher educator training in the delivery of online learning, comparisons of online and face-to-face unit delivery, and teacher educator perspectives on the effectiveness of online learning.

The seven Heads of Education Departments/Faculties in NSW who are providers of online learning in ITE sent the link to the survey to online teacher educators. The survey gave teacher educators the option to identify themselves and/or their university or to complete the survey anonymously.

The survey was completed by 103 lecturers and of these 27 chose not to provide the names of their employer. Of the remaining 76 lecturers 58% were from UNE and CSU which are the major providers of online ITE in NSW.

Of the respondents, 67% (65) were full-time permanent staff members, 6% (6) were permanent part time, 3% (3) were temporary full time, 9% (9) were temporary part time and 15% (15) were casual. (At least 13 of the respondents from the latter two groups were from Wesley Institute, Morling College or Alphacrucis College, all of which employ their staff and run courses in a different way from other institutions.)

Of the respondents, 56% (57) had been employed for five years or more, 11% (41) for one to two years and 3% (3) for less than one year.

Of the entire group, 72% (70) of respondents lectured in both face-to-face and online units, with only 28% (28) teaching solely online.

Of the entire group, 56% (57) had undertaken training to teach online units but 44% (46) had not.

Of the 98 teacher educators who responded to the statement 'my distance unit/course is delivered entirely online or using a combination of online and on-campus learning', 71% (70) indicated they taught at least one unit solely online and 44% (43) indicated they taught using a combination of online and on-campus methods.

All courses were completed using an online LMS, for example Moodle or Blackboard.

Results

Of the 98 teacher educators who responded to a statement about the methods they used, the majority responded that they used email (97%), discussion boards (96%), video presentation (75%), chat rooms (70%), and a minority were using real-time video-conferencing (33%), social networking sites (31%), and ePortfolios (30%).

Survey statements and responses are listed below:

- 'My distance/online unit is essentially the same as a face-to-face unit in content, time and assessments': 70 (76%) of respondents replied yes and 27% (25) replied no. Those who replied no generally referred to the alteration of assessment tasks to make them more appropriate for online learning and/or to the differences in their style of interactions with students.
- 'I am able to assist teachers to think analytically and acquire deep understanding in my units': 96% (85) responded yes and 4% (4) responded no. The respondents who answered yes most often cited their assessment tasks as the vehicle for analytic and deeper understanding but also included weekly tasks, synchronous activities, for example forums, emails and supply of resources and appropriate questioning of students. Of the respondents who said no, one teaches physical education and feels it is not suited to online delivery, one feels it is possible but not to the same extent, one feels there is not enough time and the other believes lack of immediate feedback prevents the development of analytic thinking and the development of deeper understanding.
- 'I am able to motive and inspire students using online methods': 98% (91) of teacher educators said yes.
- 'I am able to provide timely feedback to my students': 98% (91) said yes.
- 'I conduct evaluations at the end of my units': 90% (83) said yes and 10% (9) said no.
- 'There is good technical support for my teaching in distance/online units': 95% (86) said 'yes' and 5% (5) said 'no'.
- 'There is good design support for my teaching in the distance/online units': 84% (79) said yes and 16% (15) said no. Thirty-nine respondents made comments. Of these, 28 added comments to their yes responses, and 11 added comments to their no responses. The respondents who had replied no generally commented that they designed the units on their own or with only the support of IT personnel, although two respondents replied they hadn't sought support. The respondents who said yes generally commented on the ready availability and expertise of the design support personnel. In several cases, however, the respondents were commenting on IT support rather than unit designers.

- 'I am able to fulfil the aims of the units though distance/online learning': 97% (90) said yes and 3% (3) said no.
- 'I feel my distance/online unit satisfactorily prepares students to meet the relevant teacher standards': 90% (82) said yes and 14% (13) said no (some respondents answered yes and no). Thirty-eight people provided comments. Of the respondents who commented about a yes response, seven referred to a link with professional experience, four mentioned the linking of standards to assessment tasks and four mentioned good course design. Eleven people provided no comments and one person added comment to a 'yes and no' response. The comments relating to the no responses were varied, but several mentioned the relational aspects of teaching and learning.
- 'I regard some aspects of my online units as exceptionally effective in teacher preparation': 84% (76) replied yes and 16% (14) replied no. Of those who replied yes, a number of noted better use of multimedia in online units including videos, games, blogs, for example 'Able to provide links between support materials and learning particularly using current resources, for example documentaries, news reports, classroom videos etc.' One educator has a task that requires student to review resources, learn new ICT skills and develop activities that can be applied in the classroom requiring reflection and creative thinking. Others mentioned the detailed journals/portfolios and blogs which are seen as artifacts of student learning. Yet others mentioned the assessment tasks they had constructed for online students, for example 'The use of multimedia and assessment tasks that sequentially build on each other'. One provider mentioned the value of 'peer assessment and self-assessment in relation to assessment items which were strategies which seems to engage students in making the connection between learning an application'. Yet another mentioned the value of requiring students to work with colleagues online, which created a community of practice.
- 'I am able to get to know my students through online course delivery': 74% (71) responded yes and 26% (25) responded no. Of the 25 no responses, some reported that the ability to get to know students depended on the numbers of students in the units (some were teaching large units, eg 100 to 200 students), some said it related to the student and their desire to become involved and others said that online was impersonal. However, among the yes respondents, several commented that this depends on the students, others reported that it takes more time to establish relationships online, others reported that it depends on the size of the group and one reported that online learning with its associated activities can enable even better knowledge of students than on-campus learning.
- 'I am able to learn about how well each student really understands the subject area during my distance/online unit': 89% (83) said yes and 15% (14) said no. Of those who said no and provided comments, two said that this was very difficult with asynchronous communication, and several said it was not until they read the first assignment that they had any sense of how the student was faring. Of those who said yes, six reported learning about their students through assessment tasks, two through forums and three through particular tasks, for example ePortfolios and reflective practice journals. Several answered the question 'yes and no'.
- 'My online units require students to engage in a collaborative learning': 73% (68) said yes and 27% (25) said no. Fifty-one respondents provided comments. Of those, most referred to compulsory participation in forums and wikis, however 15 mentioned activities where students were required to work in pairs or in small groups.
- 'There is interaction between the students in my units': 93% (87) said yes and 7% (7) said no. Of the fifty-four respondents who made comments, 48 replied yes. Of these, the majority said the interaction took place through online forums. Only several staff from CSU, UNE and SCU mentioned more significant interaction, for example tasks requiring students to interact with each other, compulsory blogs and chat rooms.
- 'The students regularly interact with me': 90% (85) said yes and 10% (9) said no. Forty-eight respondents provided comments; all of these were respondents who answered yes. Of these 48 respondents, 20 indicated that the extent of interaction depended on the student, while others nominated the ways they interacted. It is clear that many/most teacher educators deliver their courses in ways that make it possible for students to interact as much or as little as they choose. It is also clear that some teacher educators from UNE, CSU and SCU engage their students in compulsory interactive activities, for example synchronous tutorials, weekly ADOBE connect sessions, live chat rooms.

APPENDIX 3:
BOSTES TEACHER EDUCATOR SURVEY

- 'My distance/online unit/s have the same pupil to teacher ratios as comparable face-to-face units': 51% (47) responded yes and 53% (49) responded no. Comments indicated that the larger providers, that is UNE, CSU, CSU and Macquarie sometimes have larger class groups online than on campus. However the smaller providers, Alphacrucis College, Morling and Wesley, often have very small cohorts in their online courses.
- 'My distance/online units require the same amount of preparation time as comparable face-to-face units': 58% (53) providers responded yes and 42% (38) of providers responded no. The majority of the no respondents indicated that online units take longer to prepare. Teacher educators find writing content, planning activities and assessment tasks, providing appropriate resources and establishing appropriate interactive opportunities time consuming. One respondent wrote that face to face her/she can answer queries spontaneously, 'Online I have to anticipate what students' reactions and needs might be and provide for these ahead of time. There is material I can use on campus that I cannot use online because of copyright restrictions, so developing alternatives takes more time. There are practical things I can do on campus that are more difficult to provide for online, and again it takes more time to prepare these.'
- 'My distance/online unit/s require the same time in delivery as comparable face-to-face units': 57% (52) respondents replied yes whereas 42% (39) said no. A few teacher educators said it takes less time, because they were essentially 'tutoring' in pre-written units, for example some at Wesley and some at CSU. On the other hand, many teacher educators said that it took more time to deliver the units.
- 'My distance/online unit/s require the same time spent in response to students as comparable face-to-face units': 55% (49) teacher educators said yes while 45% (40) teacher educators said no. Of the respondents who said no, 36 reported that more time was needed for responding to online students. The reasons for the responses were: the need to have off-campus students feel connected and part of the learning community, student expectations about receiving prompt online responses, the need to individualise many responses and the need to take more time when responding in writing.

In response to the statement 'I believe that distance/online learning can be equally as effective as face-to-face learning in preparing teachers', 79% (73) lecturers said yes and 21% (19) said no. Of the respondents who said yes, 30 made comments; 3 felt it could be more effective; 5 felt it could be just as effective because of the benefits to the students in being more flexible, more student-centred, self-paced, able to pause and revise, requiring students to be more considered in their responses; 3 felt it could be just as effective depending on the students; 5 felt it could be just as effective depending on the unit design and the capacity for interaction with students; 2 felt it could be just as effective for 'some subjects' but not others; 4 felt it was effective if combined with face-to-face learning (ie blended learning); 3 felt it could be effective only if combined with effective classroom experience; and 1 saw advantages for lecturers in requiring them to think through their responses.

Of the respondents who said no, 5 were clear that face-to face learning was better in preparing teachers generally, stating that face-to face interaction, including communication in groups, was needed to prepare teachers for the interaction skills and strategies they would need to use in classrooms; 3 felt it depended on the content, with 2 nominating some science units as not as well delivered online as face to face; 2 felt it depended on the students; and 6 felt online learning could be effective but only of combined with some face-to-face learning.

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