

5-2012

## Crossing the Primary and Secondary School Divide in Teacher Preparation

Sally Knipe

Charles Sturt University, s.knipe@latrobe.edu.au

Follow this and additional works at: <https://ro.ecu.edu.au/ajte>



Part of the [Teacher Education and Professional Development Commons](#)

---

### Recommended Citation

Knipe, S. (2012). Crossing the Primary and Secondary School Divide in Teacher Preparation. *Australian Journal of Teacher Education*, 37(5).

<http://dx.doi.org/10.14221/ajte.2012v37n5.6>

This Journal Article is posted at Research Online.  
<https://ro.ecu.edu.au/ajte/vol37/iss5/7>

# Crossing the Primary and Secondary School Divide in Teacher Preparation

Sally Knipe  
Charles Sturt University

*Abstract: Teacher education courses at universities qualify graduates to teach in age-related contexts of primary/early childhood/secondary that reflect the organisational structure of schools. In terms of teacher employment, for some considerable time, these longstanding organisational divisions have been by-passed whereby a shortage of teachers in particular areas (for example a perennial shortage of science and mathematics teachers) has resulted in schools employing teachers in subjects and grade levels for which they are not qualified. More recently, the development of middle schooling, P/K to 10 and P/K to 12 colleges, has created demand for teachers with generic skills able to teach across a wide age range. As universities design teacher education courses that are required to meet the demands of teacher registration organizations, flexibility can be compromised. The intent of this article is to challenge the restrictions of early childhood/primary/secondary divisions and to advocate for more flexibility in the design of teacher education courses. An example of a K-12 Bachelor of Education degree course that produces graduates who meet teacher registration requirements for all three divisions, providing the option to teach across all years of school, is presented. A graduate from this program has enhanced employment opportunities as well as a more flexible career pathway.*

## Introduction

The design and accreditation of programs for teacher preparation in universities has been constrained by longstanding divisions in the organisation of public schools based on the age and grade level of children: divisions that reflect the evolution of public education. The organisational structure of schools has changed, and the way that staff are employed to schools, and allocated to teaching tasks, does not always reflect their qualifications. It may be time to challenge the divisions within teacher preparation programs that reflect traditional school structures and develop different models that are flexible and more responsive to the complex staffing needs of contemporary schooling systems.

Public education began with the provision of primary education for children up to grade six (later to grade eight), and teacher preparation programs were established to provide training for teachers considered to be appropriate for this group. As secondary education developed, teacher preparation programs were designed to qualify teachers to teach older children. The primary school was further divided into “infants” or preparation grade (which was the forerunner of early childhood) and primary grades, with special training offered to infant teachers and the establishment of infant teachers’ colleges. Teachers were organised administratively according to their teacher training preparation program and were confined to teaching employment in either a primary or secondary school, or in the infants department of a primary school (Hyams, 1979). As public education expanded in the early 20th century, the majority of schools were organised as either primary or secondary schools, with primary schools having designated early childhood grades.

The longstanding divisions of primary and secondary are being challenged by changes in school structures and the need for greater flexibility in the deployment of staff to and within a school. The development of different school structures, such as middle schools, P/K-10 or P/K-12 colleges, which enrol students from preparatory grades to Year 10 or Year 12, and senior colleges for Year 11 and Year 12, has blurred the early childhood/primary/secondary distinction in classroom practice. Principals face perennial difficulties in deploying teaching resources appropriate to a particular school from a pool of teachers with qualifications that are age-based and are not necessarily congruent with the staffing requirements of the school. Recent changes in some states to move Year 7 from the primary sector into secondary school sector further illustrates the changing nature of school structures. Teachers with generic teaching skills and knowledge of primary and secondary would be a welcomed addition.

More recently, universities are experiencing unprecedented pressure from professional teacher registration organisations regarding specific requirements expected of graduates. It may auger well for universities to seek to develop more flexible structures and designs for teacher preparation programs that serve to remove divisions where possible and to provide graduates who meet the staffing needs of schools more effectively. This paper provides an example of a Bachelor of Education K-12 program offered at Charles Sturt University that has been designed to meet the changing needs of teacher recruitment and provide greater flexibility in employment options for graduates.

## **Historical Overview of Teacher Preparation**

To enhance a discussion of current tensions and constraints affecting the design of teacher preparation programs, it is salutatory to review briefly the historical evolution of teacher preparation programs and teacher preparation institutions in Australia to understand influences, changes, and controls over current program structure and content. To facilitate an understanding of the issues regarding the history of teacher preparation in Australia, and the impact on current teacher preparation program structures, this discussion will focus on one state, namely NSW, with recognition that parallel though not always congruent developments could be found in other states.

The earliest government assisted schools in NSW, established under Governor Macquarie and supervised by the clergy of the Church of England, provided reading and writing skills, religious instruction and domestic or industrial training, especially for destitute children. Schools for children of citizens (which excluded children of Indigenous peoples) were established in NSW in 1848 under a Board of National Education. These early schools were run by religious organisations or private academies with very little external control. Staff in these schools had little or no training in teaching. It was not until 1880 that the Public Schools Act replaced the National Board of Education and the Denominational School Board by a single Council of Education; the first six high schools were opened in 1883 (NSW Government State Records, 1997).

It is often overlooked that public schools are relatively new institutions, because the concept of universal education was not established until the late 19<sup>th</sup> century in response to growing requirements for a labour force as a result of the industrial revolution. For the first four decades, public schools were primary schools, and teacher preparation was provided by way of a pupil-teacher system of apprenticeship (Aspland, 2006).

The documented history of teacher preparation in Australia from the early 1900s to the 1970s depicts a controlled system with limited recruitment practices and training programs (Hyams, 1979). Teaching was content-based and the length and complexity of teacher training increased according to the age-group of the students. Up until 1905, teachers

employed in government schools in urban settings undertook a four-year 'on the job' training program as pupil-teachers, through instruction and observing; and most of these pupil teachers were between the ages of 13 to 16 years. In contrast, for teachers seeking appointment to a 'bush, or rural,' school, teacher preparation was also 'on-the-job' training that ranged from as little as several weeks to several months. In the early years of the 1900s, teachers' colleges replaced the pupil-teacher model of the 1800s providing a one-year program; by the 1950s this became two years (Aspland, 2006).

Teacher preparation for secondary teachers evolved in a number of ways. Early secondary teacher preparation provided multiple pathways, such as programs for primary teachers to acquire further training for secondary teaching, or offering employment to university graduates and providing some on-the-job assistance. Post-graduate one-year Diploma of Education programs for secondary teachers were not established until 1911, but these programs were confined to the disciplines offered at a university, for example, English, mathematics, science, history and geography. As the curriculum in secondary schools developed, subjects such as art, music, "domestic science", and "manual arts" were offered, but not as compulsory subjects. In the 1940s, teachers' colleges introduced specialist qualifications for teachers of these subjects, effectively expanding the teacher training program of teachers' colleges into the secondary area.

An increase in school retention rates in the 1950s resulted in a demand for qualified primary and secondary school teachers. The number of Graduate Diploma of Education programs offered at universities increased. As well, some teachers' colleges, for the first time, began to offer Graduate Diploma of Education programs for secondary teachers (Polesel & Teese, 1998). As a result, these teachers' colleges, that were already training secondary teachers in curriculum areas such as art, and domestic science and physical education, were able to expand their secondary teacher training programs to include subject areas previously offered at universities, such as mathematics, science and English. Tensions, however, emerged between primary and secondary divisions in education, and within the secondary area between subjects that reflected the earlier differences between teacher training in teachers' colleges and teacher training that took place in universities. Significantly, education departments controlled teachers' colleges, employed staff and determined program content, whereas program accreditation and staffing was internal to universities.

In the early 1970s, teachers' colleges were absorbed into Colleges of Advanced Education (CAEs), which resulted in greater academic freedom and autonomy for teacher training programs with diminished influence and control from departments of education (Knight, Lingard & Bartlett, 1994). Primary and early childhood teacher preparation programs increased to three years, and by 1980 Tasmania CAE and Canberra CAE were offering a four-year degree for both primary teaching and secondary teaching (Auchmuty, 1980). In the mid-1990s, federal government policy resulted in greater involvement in school education effectively challenging the traditional responsibility of the states and territories.

When teachers' colleges were amalgamated with, or absorbed into CAEs, a number of staff were inadequately qualified holding a two-year teaching certificate that had been superseded by a three-year primary Diploma of Education or a four-year primary Bachelor of Education degree; further these people were mainly from the primary and early childhood area reflecting the longstanding differences between the divisions. Despite the development of university degree programs for teachers, the influence of the teachers' colleges remained. In the early 1990s, teachers (mostly primary and early childhood) with a two-year teaching certificate, from a former teachers college, were required to 'up-grade' to a three-year qualification, and from 2009 all teachers were required to have a four-year qualification, but the timeline for this requirement varied between states/territories.

A significant difference between universities and CAEs was the process for the accreditation of programs. Approval for programs offered at universities was given by the academic board within the institution, but accreditation of programs at CAEs was undertaken

by an external accreditation panel according to national accreditation guidelines, with teacher preparation programs required to also meet state education guidelines (Auchmuty, 1980). Subsequent government policy resulted in most CAEs being absorbed into existing universities and, since the late 1980s and early 1990s, teacher preparation programs have become the responsibility of the university sector, along with the constraints of divisions and differences between the teaching sectors (Sinclair-Jones, 1996).

### **Recent Developments Impacting on Teacher Preparation**

The structure, duration and award nomenclature for teaching degrees has undergone significant change from earlier models, which were largely practitioner based, particularly for early childhood and primary (Williams, Deer, Meyenn & Taylor, 1995). Teacher preparation programs are required to contain specific knowledge including theory underpinning curriculum areas, teaching and learning theories and strategies, classroom management, as well as mandatory study in areas such as literacy, teaching students from a non-English speaking background, Indigenous education, and inclusive education, together with a specific number of teacher practicum days. Undergraduate programs are considered as 'concurrent' in that the program contains both teacher preparation content and non-teacher 'discipline' studies provided across faculties within the university. Post-graduate programs contain teacher preparation content and are provided within a faculty of education only.

Despite the expansion in post-graduate pathways for teacher preparation, enrolments reflect the longstanding differences between training pathways for secondary and primary/early childhood in that there are greater numbers of primary/early childhood candidates enrolled in undergraduate programs than in undergraduate programs. Conversely, a greater number of secondary school candidates are enrolled in post-graduate programs than in secondary undergraduate programs (Department of Education, Employment & Workplace Relations, 2009).

This pattern of enrolment has contributed to the view that secondary teaching is content-based and primary teaching is pedagogy-based (Deer, Meyenn, Taylor & Williams, 1995). One-year and two-year graduate programs, such as graduate diplomas, have been criticised for the lack of time devoted to understanding and developing pedagogical skills, whereas undergraduate degree programs are acknowledged for developing sound pedagogical skills, but considered to be wanting in areas of in-depth discipline and subject knowledge (Williams, Deer, Meyenn & Taylor, 1995). Concerns regarding the adequacy of the literacy and numeracy skills of primary and early childhood teachers, and a national requirement of an Australian Tertiary Admission Rank of seventy and above for Year 12 in English and Mathematics for entry to early childhood and primary teacher preparation programs, have added support to this perception (Hamlett, 2007; Hamlett, 2010).

The debate concerning program design and program content, and teacher preparation requirements for different school divisions, has been influenced by teacher registration authorities, the development of national guidelines and the establishment of state requirements for teacher certification and registration, supported by education departments as employing authorities. Guidelines for the accreditation of programs have placed demands upon the configuration of teacher preparation degrees, as program designers are required to structure programs that satisfy the requirements of state teacher registration institutes.

Prior to 2010, several state governments had introduced professional teaching standards as a tool for assessing teacher preparation programs. Following the establishment of the Australian Institute for Teaching and School Leadership a national system for accrediting teacher preparation programs has been proposed, due for implementation during 2012.

The number of teacher preparation programs that qualify a candidate to teach across the primary and secondary school sectors has gradually increased over the past decade, challenging the traditional divisions of secondary/primary/early childhood. Of the 37 universities that offered teacher preparation programs in Australia, in 2005, approximately 15 universities offered a teacher degree program that had “middle schooling” or “middle years” in the nomenclature (Pendergast & Bahr, 2005), and several universities offered programs that qualified a candidate to teach from the first year of school through to Year 9 or Year 10. Since 2005, some universities have closed down their middle schooling programs, such as Edith Cowan University (de Jong & Chadbourne 2005), and other universities have introduced middle schooling, programs such as La Trobe University establishing a Graduate Diploma of Education (Middle Years) and more recently a K-12 Master of Teaching.

Currently, in Australia, 37 universities offer an assortment of over 450 different initial teacher preparation programs that constitute initial teacher preparation. The number of degree programs across Australia that qualify a candidate to teach from K/P to Year 12, is small; for example, there are 161 accredited teacher preparation programs from NSW Universities registered with the New South Wales Institute of Teachers, of which there is only one program, at Charles Sturt University, that qualifies a candidate to teach from the first year of school to Year 12 (NSW Institute of Teachers, 2011). By comparison, there are 97 teacher preparation programs from Victorian Universities registered with the Victorian Institute of Teachers, of which five programs qualify a candidate to teach from the first year of school to Year 12; two programs qualify a candidate to teach from the first year of school to Year 10, and one program has a middle schooling emphasis and nomenclature (Victorian Institute of Teachers, 2011). In Queensland, there are 90 teacher preparation programs from Queensland Universities registered with the Queensland College of Teachers, of which 17 programs have ‘middle school’ or ‘middle phase’ in their nomenclature, but no programs qualify a candidate to teach from the first year of school to Year 12 (Queensland College of Teachers 2011).

An undergraduate teacher preparation degree that qualifies a candidate to teach from the first year of school through to Year 12 blurs the distinctions between the traditional early childhood/primary/ secondary school sectors and facilitates more flexible teacher employment in schools. The advantage of this type of teacher preparation program to a range of stakeholders, such as potential candidates and employers, lies in the flexibility of employment pathways for those interested in teaching as a profession, and the options for a graduate to expand their teaching experience within a school.

### **The CSU Bachelor of Education (K-12) Degree**

For the past nine years, Charles Sturt University (CSU) has offered a Bachelor of Education (K-12) degree that is increasing in popularity compared with other undergraduate teaching programs offered at CSU. Evidence of the success of the program is reflected in the strong demand for the program in that first preference numbers have doubled since the original intake in 2004, as well as feedback from principals of schools indicating that graduates are well regarded. Results from Graduate Destination Surveys (2011) indicate that, of those who completed the survey, the majority are in full time employment.

In 2008 and 2009, graduates from the first two graduating cohorts from this degree were tracked through their first year of employment in order to provide data for a review of the program. Data from this evaluation found that these graduate teachers, who were employed in a variety of schools, considered that they were well prepared for their particular teaching assignment and they attributed this preparation to their experiences within the K-12 degree program (2009, Internal Report to CSU).

Candidates graduating from the Bachelor of Education (K-12) are qualified to teach in a range of school settings, namely, primary schools (kindergarten/preparation year to Year six), central schools (year K/P to Year 10/12) and secondary schools (Year 7 to Year 12), not only in NSW but also in other states/territories in Australia. These graduates are flexible as potential employees because they exceed the existing employment categories of 'primary' and 'secondary', and are accredited to teach across both categories.

Graduates with a primary curriculum background in addition to secondary discipline specialisations, are particularly valuable in difficult-to-staff schools such as, K/P-12 schools, central schools, or remote schools, where teachers are often required to teach outside the subject areas and year levels for which they are qualified. A survey conducted among 1351 beginning secondary teachers across states and Territories indicated that 27% of graduates were teaching outside their area of expertise (Australian Secondary Principals Association Beginning Teacher Survey, 2007). Two curriculum areas, English and Mathematics, where this had been most strongly evident, are central to the CSU K-12 degree.

### **Structure of the Bachelor of Education (K-12) Program**

The Bachelor of Education (K-12) degree at CSU is registered with the NSW Institute of Teachers, recognising a graduate from the program meets the registration requirements in different areas, namely as a:

K/P-12 teacher, and a

K/P-2 teacher qualified to teach kindergarten/preparation year to Year two, and a

Primary (K/P-6) teacher, and a

Secondary school specialist with one or two teaching discipline areas.

The program structure of the Bachelor of Education (K-12) contains four main strands; Professional Experience; Teaching and Learning: Young People; Specialist Secondary Curriculum Areas; and Primary Curriculum and Pedagogy. In the first year of the program, all candidates undertake studies in Early Years Literacy, Creative Arts (K/P-6), Personal Development/Health and Physical Education (K/P-6), early childhood and adolescent development, secondary discipline subjects and fifteen days in a K/P-2 classroom. The secondary discipline subjects are provided by other departments within the university. The concurrent study of primary and secondary discipline subjects, child development subjects, and in-school experience, provides a strong foundation for candidates aiming to qualify across a K-12 range.

To meet the registration requirements of the NSW Institute of Teachers, for both primary and secondary teachers, subject content was designed to include the early years, middle childhood and adolescent years, as well as the following NSW mandatory areas namely: "assessment and reporting"; "teaching Indigenous students"; "inclusive education"; and "managing the learning environment". The teaching/learning segment of the program is designed around the premise that a study of either young children or older students would require knowledge of the middle years. A focus on the 'middle years' age-group serves to build strong links across human development from the young child to the adolescent, that prepares a teacher with professional understanding to deal with individual differences in children, reflecting the reality of a classroom. To be able to teach a wide range of age groups and individual differences is important preparation for graduates who are eligible to take up a teaching appointment in either primary, secondary, or kindergarten to Year 2 areas.

### **Primary/Early Childhood Requirements**

To meet registration requirements as a K/P-2 and primary school teacher, all candidates complete fifteen curriculum and pedagogical studies subjects. The program designers were mindful to ensure that stages of learning appropriate to the primary curriculum area were specifically addressed. The B.Ed (K-12) program contains four subjects in primary English, (one of which is specifically concerned with the K/P-2 stage), three subjects in mathematics, two subjects in each of the following areas: Creative Arts, Personal Development/Health and Physical Education, Human Society and the Environment, and Science and Technology.

### **Secondary Requirements**

In order to meet accreditation requirements as a secondary teacher, all students undertake subjects in a discipline area, plus two teaching method subjects. Candidates select their first discipline area from one of English, Mathematics, History, or Business Studies. These discipline areas are offered because they have been identified as areas of teacher shortage within the teaching service. Candidates select their second discipline area from English, History, Geography, or Information and Communication Technology. A candidate who selected English or Mathematics as a major discipline for secondary may also elect to study an additional four units in English and Mathematics as part of a Graduate Certificate in Secondary Education offered at CSU (as post-graduate or concurrent program of study), providing the candidate with a total of 11 discipline subjects in English and Mathematics; and this compares favourably with other degrees in the secondary area that offer double English or double Mathematics as a qualification.

### **Professional Experience**

Professional experience involves 125 days throughout the degree. Students are required to undertake their teaching practice requirements in different school and community settings, including the opportunity for international placements, in order to broaden their experience. In-school experiences commence in the first year with observation days in Kindergarten (first year of school in NSW), Year 1 or Year 2 classrooms, as indicated in the program plan shown in Appendix 1. In second year, there is a one week 'introduction' to secondary schools offered concurrently with the first secondary teaching method subject.

Within the 125 practicum days there is a one-week 'diverse' placement that involves working in a non-school setting where an organisation offers services for young people, such as Sport and Recreation centres, Local Government programs, and other community-based programs. Accreditation regulations require 80 days of placement, but the CSU program offers above the required number of professional experience days so that students can meet the requirements for the practicum experience, across all stages of primary and secondary schooling.

### **Conclusion**

The organization of public schooling into early childhood/primary/secondary divisions for students has been reflected in teacher training programs and the employment of teachers, for administrative rather than educational reasons. In the 30 year period since the responsibility of teacher preparation was transferred from teachers' colleges and CAEs to the university sector, teacher preparation programs have developed in line with demands placed by social and political interests and these developments have greatly improved the readiness of graduates to address diversity. Generally, programs qualified candidates to teach in one of three age groups, Early Childhood (P/K to Year 2), Primary (P/K to Year 6) or secondary



(Year 7 to Year 12), with secondary specialisations in one or two of around 10 -12 subject areas that approximately matched the subjects offered in a secondary school.

Since the mid-1990s, changes in school curriculum and the organisational structure of schools, such as middle schools and P/K to 12 colleges, and, in some states the move of Year 7 into secondary schools, generated a need for new and diverse undergraduate and post-graduate degree options, not only for new subjects not previously offered in schools but also for a supply of teachers qualified to teach across a wider age range. The longstanding age-based/ grade-based divisions in education have been challenged for some considerable time whereby shortages of teachers in particular areas (for example, in secondary specialist areas such as mathematics and science) have resulted in secondary schools employing teachers from primary schools to fill staffing gaps, and more recently by the development of middle schools that require staff with broad generic teaching skills.

Universities have responded to these changes with the development of degree programs that equip graduates to teach across different age sectors and to expand options for teachers to develop different career paths in education. More recently, universities have developed P/K to Year 12 degree programs that are appealing to graduate teachers who may not wish to be “locked in” to a particular age group. A K/P to Year 12 teaching qualification provides opportunities for teachers to move through the school system and increase their employment opportunities, as well as meet the diverse staffing needs of learners and schools. A teacher qualified to teach across the kindergarten/prep grade, primary and secondary sectors can be of great benefit to schools providing flexibility in terms of staffing, particularly in regional areas. In many high schools in regional and rural Australia, where fluctuating student enrolments place pressure on staffing for different subject areas, flexibility of staffing can be critical. The success of this degree illustrates how CSU has responded to the needs of regional communities it serves.

The establishment of teacher registration requirements at the state level, with plans to set-up national requirements, has placed added pressure on university program accreditation, and these requirements are largely driven by state departments of education. Coupled with the impact of a national curriculum, teacher preparation programs have, to some degree, returned to the control of the state through registration requirements. The development of K/P-Year 12 teacher preparation programs has, to some extent, reasserted the leadership of faculties of education in the education profession. Until recently, teacher registration authorities were predominately geared toward the traditional age-based divisions in education. Teacher registration authorities have responded favourably to initiatives emerging from the university sector that are an outcome of the changing needs of the profession, such as CSU Bachelor of Education (K-12) degree. Innovation in program design will not come from teacher registration institutes, so the leadership that universities can provide in collaboration with principals and professional teaching associations is of great importance.

The CSU Bachelor of Education (K-12) degree described in this paper presents an example of a program that provides graduates with a comprehensive undergraduate teacher preparation program that prepares candidates who have a clear sense of the school continuum from the first year of school through to the senior secondary years, for a career in school education across all age groups. The design of this degree is a significant contribution in the development of teacher preparation programs, especially in times of fluctuating teacher employment.

## References

Australian Institute for Teaching and School Leadership (2011). National Professional Standards for Teachers. Retrieved 30 April, 2011, from, <http://www.aitsl.edu.au/initial-teacher-education-program-accreditation.html>

- Aspland, T. (2006). Changing Patterns of Teacher Education in Australia. *Education Research and Perspectives*, 33(2), 140-162.
- Auchmuty, J. (Chair) (1980). *Report of the National Inquiry into Teacher Education* (Canberra AGPS).
- Australian Secondary Principals Association Inc. (2007). Survey - Beginning Teachers Retrieved 24 September, 2009, from <http://www.aspa.asn.au/images/surveys/2007beginningteachersreport.pdf>
- Charles Sturt University (2009). *Quality Teachers– How Will CSU Middle Schooling Graduates Fare?* Charles Sturt University Internal Report.
- Deer, C., Meyenn, R., Taylor, A., & Williams, D. (1995). Teacher Registration & Accreditation of Teacher Education Programs: Crucial Issues for the Professions & Australia. Paper presented at the *Annual Conference of the Australian Association for Research in Education* (25<sup>th</sup> Hobart Tasmania Australia November 26-30 1995).
- Department of Education, Employment & Workplace Relations (2009). Award Program Completions for All Students in Programs for initial registration as teachers Gender, 2001 to 2009 Retrieved 2 April, 2011, from <http://www.deewr.gov.au/HigherEducation/Publications/HEStatistics/Publications/Pages/Students.aspx>
- de Jong, Terry and Chadbourne, Rod (2005). "Are Middle Years Teacher Education Programs Justifiable?" [Electronic version] *Australian Journal of Teacher Education*: Vol. 30(2) Article 2. Available at: <http://ro.ecu.edu.au/ajte/vol30/iss2/2>
- Graduate Destination Survey: Author Retrieved 10<sup>th</sup> September, 2011, from <http://www.csu.edu.au/division/plandev/survey/gds/index.htm>
- Hamlett, B (2007). *Mathematics Content Knowledge of Pre-service Primary Teachers: Developing Confidence and Competence*. In Kuchemann Proceedings of the British Society for Research into Learning Mathematics 27(3), 195-205.
- Hamlett, B. (2010). Supporting pre-service primary teachers to improve their mathematics content knowledge. In *Educating for sustainability. Proceedings of the 19th Annual Teaching Learning Forum*, 28-29 January 2010. Perth: Edith Cowan University. <http://otl.curtin.edu.au/tlf/tlf2010/refereed/hamlett.html>
- Hyams, B. K. (1979). *Teacher Preparation in Australia: A History of its Development from 1850 to 1950*, Australian Council for Educational Research, Hawthorn, Vic.
- Knight, J., Lingard, B., & Bartlett, L. (1994). Reforming Teacher Education Policy under Labour Governments in Australia 1989-03. *British Journal of Sociology of Education*. 15(4) 451-466.
- NSW Institute of Teachers (2011). Initial teacher Education. Retrieved 24 March, 2011 from <http://www.nswteachers.nsw.edu.au/Initial-Teacher-Education/>
- NSW State Records (1997). Department of Public Instruction (1880-1915). State Records Archives Investigator. Retrieved 6 March, 2011 from <http://investigator.records.nsw.gov.au/Entity.aspx?Path=\Agence\88>
- Pendergast, D., & Bahr, N. (2005). *Teaching middle years; rethinking curriculum, pedagogy and assessment*. Crows Nest NSW; Allen & Unwin.
- Polesel, J., & Teese, R. (1998). *The 'Colleges' Growth & Diversity in the Non-university Tertiary Studies Sector (1965-74)*. Department of Education, Training & Youth Affairs. Commonwealth of Australia.
- Queensland College of Teachers (2011). Information for Higher Education Institutions. Retrieved 24 March, 2011, from <http://www.qct.edu.au/HigherEd.html>
- Sinclair-Jones, J. (1996). The idea of the university in Australia in the 1990s. Unpublished doctoral dissertation, Curtin University of Technology Australia Training and Development Agency for Schools (2011). *Training and Development Agency for Schools*. Retrieved 24 March 2011, from <http://www.tda.gov.uk/>

Williams, D., Deer, C., Meyenn, B., & Taylor, A. (1995). Reform, Restructuring & Innovation in Teacher Education Down Under. Paper Presented at the *Annual Meeting of the American Association of Colleges for Teacher education* (47<sup>th</sup> Washington, DC, February 12-15 1995).

Victorian Institute of Teachers (2011). Number of Programs. Retrieved 24 March 2011 from <http://www.vit.vic.edu.au/finditfast/Teachereducationprograms/Pages/Approvedteachereducationprograms.aspx>

## Appendix 1 Bachelor of Education (K-12 Middle Schooling) Program Model

Session	Professional Experience	Teaching & Learning: Young People		High School Specialist Curriculum Area Select ONE Strand of Study			Primary Curriculum Content Pedagogy			
Session	Professional Experience	Teaching & Learning: Young People		High School Specialist Curriculum Area Select ONE Strand of Study			Primary Curriculum Content Pedagogy			
1A 30		EED114 Transition in Middle Schooling		ACC100 Accounting 1 Info for Business	MTH101 Computer Aided Mathematics 1: with applications	LIT107 English Literature 1	HST101 Contemporary World 1	ESL102 Foundations in Literacy Studies K-2 (8 days in primary)	EMA116 Creative Arts 1: Arts Experience	
1B 60		EED109 Learners & Learning (7 days primary)		MKT110 Marketing Principles	MTH102 Computer Aided Mathematics 2: with applications	LIT222 Contemporary Children's Text	HST102 Contemporary World 2	EMR205 PD/H/PE Health & Movement Studies		
				ACC240 Small Business Management	STA201 Scientific Statistics	WRT210 Writing for Publication	HST213 Australian Civics & Citizenship			
1C 90					MTH100 Foundation Mathematics	LIT101 Language and Text				
2A 30	EPT213 Middle Schooling Pedagogy in Practice: Primary			EMM441 Curriculum Method 1: Maths OR				EML110 Language as Social Practice	EMM108 Mathematics & Numeracy Studies	
				EML 441 Curriculum Method 1 English OR						
				EMH441 Curriculum Method 1: Society & Environment						
2B 60		EED214 Identity and Relationships		HRM210 Human Resource Management	MTH203 Numerical Methods	COM122 Australian Screen & Stage	HST204 Twentieth Century Australian	EMH204HSIE Curriculum Exploring Australian Identity	EMS108 Science & Technology Studies	
2C 90										
3A 30	EPT321 Middle Schooling Pedagogy in Practice: Junior Secondary	EEB 419 Education Studies: Indigenous Studies		MGT100 Organisations and Management	MTH219 Linear Algebra	LIT221 Creative Writing	HST201 Colonial Australian	EML210 Primary English Curriculum: Reading Process and Pedagogy		
3B 60		EAA305 The Teaching & Learning Environment	ESS304 The Inclusive Classroom	MKT220 Buyer Behaviour	MTH218 Multivariable Calculus	LIT301 Modernism	HST308 Australia & Asia	EMM209 MATHS Content & Pedagogy		
3C 90	EPT426 Middle Schooling Professional Experience							EMR302 Personal Development, Health and Physical Education Curriculum		
4A 30				INR210 International Relations in	MTH328 Complex Analysis	LIT316 Children's Fiction	HST311 Local History in Context	EML309 Primary English Curriculum: Text Construction, Pedagogy & Processes		
								EMH304 HSIE: Education for Sustainability		

Session	Professional Experience	Teaching & Learning: Young People	High School Specialist Curriculum Area Select ONE Strand of Study				Primary Curriculum Content Pedagogy	
Session	Professional Experience	Teaching & Learning: Young People	High School Specialist Curriculum Area Select ONE Strand of Study				Primary Curriculum Content Pedagogy	
			Australia				EMA303 Creative Arts 2: Content & Contexts of Creative Arts K-	
4B 60		EEE314 Assessment & Reporting	EMM442 Curriculum Method 2: Maths OR				EMS418 Curriculum Studies: Science & Technology	EMM310 Mathematics Curriculum
			EML 442 Curriculum Method 2 English OR					
			EMH442 Curriculum Method 2: Society & Environment					
4C 90	EPT427 Professional Experience K-12	EED405 Professional Transitions						