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Jennifer Stephenson
Macquarie University, jennifer.stephenson@mq.edu.au

Sue O'Neill
Macquarie University, sue.oneill@unsw.edu.au

Mark Carter
Macquarie University, mark.carter@mq.edu.au

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Teaching Students with Disabilities: A Web-based Examination of Preparation of Preservice Primary School Teachers

Jennifer Stephenson
Sue O'Neill
Mark Carter
Macquarie University

Abstract: With increasing expectations that preservice teachers will be prepared to teach students with special needs in regular classrooms, it is timely to review relevant units in teacher education courses. Units relevant to special education/inclusion in primary undergraduate teacher preparation courses in Australian tertiary institutions, delivered in 2009, were examined. Information was gathered through a series of Google searches, and available information was very limited for some units. Sixty-one units in 34 courses met criteria for inclusion. Units typically ran for one semester with 30-40 hours of instruction. Just under half the instructors for whom relevant information was available had an active interest in special education/inclusion of students with disabilities. The most commonly included content was on instructional strategies, with few units aimed at promoting positive attitudes to people with disabilities and only 10% stating that the content was evidence or research-based.

Although traditionally students with more significant disabilities have been educated in separate special education settings, inclusive education approaches are increasingly supported and even mandated by education systems (Forlin, Loreman, Sharma, & Earle, 2009; European Agency for Development in Special Needs Education [EADSNE], 2010). In Australia, the Disability Discrimination Act (Australian Government Publishing Service, 1992) and the Standards for Education (Commonwealth of Australia, 2005) uphold the rights of all students to access education with appropriate accommodations and adjustments. The inclusion of students with disabilities in regular classrooms is thus seen as desirable and their presence in classrooms is a fact of life for teachers (Jobling & Moni, 2004). This has clear implications for the preparation of teachers and for institutions that offer preservice education for the teaching profession (Forlin & Chambers, 2011). Although it is debatable whether the inclusion movement has greatly increased the number of students with disabilities enrolled in regular education settings (Dempsey, Foreman, & Jenkinson, 2002), or whether it has simply lead to the identification of many more students with high-incidence disabilities who were already in regular classrooms but unlabelled (Graham & Jahnukainen, 2011; Westwood & Graham, 2000), there are expectations that graduating teachers will be able to meet the needs of all students in their classes (EADSNE, 2010; New South Wales Institute of Teachers [NSWIT], 2007).

Despite the acceptance of inclusive philosophies, a number of reviews have found that preservice and practicing teachers believe they are not fully prepared to meet the needs of students with disabilities (Forlin & Chambers, 2011). For example, Louden et al. (2005) found that fewer than half the beginning teachers they surveyed were satisfied with the preparation they received to teach students with disabilities. Senior teachers were even less impressed, with fewer than 20% believing beginning teachers were adequately prepared.

Similar findings have been reported nationally and internationally. For example, Forlin (2001) reported that 89% of teachers thought they lacked suitable training to teach students with moderate to severe intellectual disability. Jobling and Moni (2004) found that preservice secondary teachers in Queensland had "limited understanding" (p. 13) of inclusion and its implications, and did not think they were prepared to teach students with special needs. De Boer, Pijl, and Minneart (2011), who reviewed international research on teacher attitudes to inclusion, found that generally teachers did not regard themselves as competent and confident in relation to teaching students with special needs.

Despite the concerns about teacher preparation, there has been little exploration in Australia of what is offered to trainee teachers to prepare them to meet the needs of all learners, including students with disabilities. Dempsey (1994) surveyed university campuses in 1993 to collect information on compulsory special education units and found only 59% of the 53 campuses from 39 universities offering teacher education courses had a compulsory unit in special education. Across states, the percentages ranged from 88.9% for New South Wales (NSW) (where a special education component was a mandatory element in preservice education) to 0% for the Northern Territory. Ten years later the situation was little better. Loreman (2002) surveyed 16 universities across all states and territories and of the 73 teacher education courses examined, 34 had compulsory special education units and nine had elective units only, meaning that 30 courses (41%) had no units specifically addressing the teaching of students with disabilities. Loreman also noted that all NSW universities surveyed had a compulsory unit because of the NSW requirement that all teachers complete a special education unit. More recently there has been some improvement as Louden et al. (2005) reported that their audit of university websites indicated that 63% of teacher preparation courses had a compulsory special needs component. Sharma, Forlin, Loreman, and Earle et al. (2006) noted that not all universities in Victoria offering undergraduate teacher education had mandatory special education/inclusion units, while all three Western Australian universities offering undergraduate teacher education had compulsory units.

Dempsey (1994) also collected information on the qualifications of unit convenors, the content of the units and the time allocated to them but there seems to have been very little work since then. He reported that units ran for a mean of 2.8 hours a week for a mean of 12.1 weeks. Common content areas were curriculum modification, available support services, information on disabilities, monitoring, instructional objectives, classroom and behaviour management and government policies. He found the majority (90%) of teaching staff had a special education qualification and 87% had experience teaching in a special education setting. There appears to be no more recent information on the detail of teacher preparation in the area of disability and special needs. The lack of interest in preparation of teachers to work with students with disabilities and special needs is confirmed by Murray, Nuttall, and Mitchell (2008), who surveyed the literature on initial teacher education in Australia and located 215 papers reporting empirical research. Only four of those papers reported on preparing teachers to work with students with special needs. Similarly, Shaddock, Smyth King, and Giorcelli (2007), in their report on inclusion, noted that research on content in preservice teacher education courses was limited and cited only Loreman (2002).

The aim of this study was to examine what provisions were made in undergraduate primary teacher education courses in Australia in 2009 to prepare graduates to teach students with disabilities and special needs. Specifically, the kinds of units (core or elective), their placement in the course, the contact hours, the incorporation of a practicum component, the qualifications, interests and research record of unit convenors and course content were of interest.

Method

Australian tertiary institutions that offered an undergraduate primary education course were located by conducting a Google search during July 2009, limited to Australian websites.

As terminology varies across institutions, we have used the term *course* to refer to a program of study and the term *unit* to refer to a single subject within a course. Search terms used to locate institutions included 'primary teaching course', 'teacher training colleges', and 'undergraduate primary education course'. Websites that included descriptions of teaching programs at Australian institutions were noted. Further searches for undergraduate primary education courses were conducted for each tertiary institution identified. If an institution did not have a stand-alone program for primary education (teaching children 5-12 years old), combined courses or those with overlapping programs (e.g. early childhood and primary) were included.

For each institution a listing was compiled of units offered during 2009 within the primary program. The lists included both core and elective units, but excluded units that were offered by departments or faculties outside education and units that were only available to bachelor (honours) students. Separate searches were made by the first author and a research assistant to locate units that were likely to be relevant to the preparation of preservice teachers to work with students with special education needs. Units were selected for further examination if the title of the unit contained any of the following terms: all learners; atypical; disability or disabilities; diverse or diversity; exceptional or exceptionality; inclusion or inclusive; individual needs; learning difficulties or learning disabilities or special education; special needs. Units that dealt with behaviour and/or classroom management were excluded, unless they specifically focused on students with special needs. Units that focused on a single specific disability such as moderate and high support needs, autism spectrum disorders, communication or language disorders, mental health problems or emotional and behavioural difficulties were excluded. Units that focused on teaching students with special education needs in one specific curriculum area, such as literacy or physical education were also excluded, as were units that had a focus on preschool settings. Units that provided professional experience only, with no face-to-face component, were excluded. The aim was to examine units that provided a generalist preparation for teaching students with special needs, rather than more specialised units.

Once the initial identification was made, the results were checked against searches carried out as part of an earlier study (O'Neill & Stephenson, 2011) that used a similar search strategy (see O'Neill & Stephenson for details), but also drew on unit descriptions as well as unit titles, to locate units relevant to the preparation of primary teachers in classroom and behaviour management. As part of this search, units that addressed disability, inclusion, and special education needs were identified.

Once a unit had been identified as relevant to the inclusion of students with disabilities and/or special needs, further searches were done within the institution's website and also by a general Google search using the unit code to locate further relevant information relating to unit descriptions, unit guides, text book information, information about teaching staff, information about practicum and unit timetables. Information was collected and coded to include, where possible, whether the unit was a core or elective, time allocated to the unit, place of the unit in the course, time allocated to face-to-face teaching of the unit, prescribed texts, presence of a professional experience placement and teaching staff responsible. When data on teaching staff were extracted, only data on the designated unit convenor or person responsible for the course was coded. Where it was not possible to ascertain which instructor had that role, data was extracted on all instructors. Inter-coder reliability for this data extraction was completed for 17 units. There were no disagreements for classification as core or elective; the year in which the course was offered, the textbook used, and whether or not there was linked professional experience. There were two disagreements about the total hours and two disagreements about the instructor where there had been different instructors in 2009 and 2010.

Once instructors had been identified, we used unit information, staff profile and/or research pages, Google scholar and ERIC searches to collect additional information about

instructor qualifications, research interests and academic publications. The Education Theses Database compiled by the Australian Council for Educational Research Cunningham Library was searched to identify the topics of masters and doctoral theses of identified instructors. Instructors were rated as having an *active interest* relevant to special education if they indicated on university profile or research pages that they had an interest in the education of students with disabilities, inclusion of students with special education needs or an interest in preparing teachers to teach students with special education needs, and also had a named qualification in special education, a master's or doctoral thesis relevant to inclusion of students with special needs or special education or publications relevant to inclusion of students with special needs or special education. Research interests related to diversity or inclusion more generally were excluded unless there was specific mention of disability or special education needs.

Relevant publications in Google scholar or ERIC were book chapters, refereed journal articles or conference presentations published between 2005 and 2010, where the title and/or descriptors included the words or phrases all learners, atypical, disability/ies, diverse/diversity, exceptional/exceptionality, inclusion/inclusive, individual needs, integration/integrated education, mainstreaming, learning difficulties/disabilities, reading difficulties, special education, special needs or struggling learners. Papers that were specific to a particular disability were included, as were those that researched teachers and preservice teacher behaviour and attitudes to inclusion of students with special needs and/or disabilities. Papers where diversity referred to gender or culture only were excluded, as were any papers where additional words in the title indicated that the paper did not refer to schools, education or school-aged children. Theses that reported research on young children with disabilities and/or their families were included.

Instructors were rated as having an *interest only* if they reported an interest in special education and/or inclusion, but did not have a relevant qualification, publications or a relevant thesis. Instructors who had no special education qualifications and no relevant publications or theses were rated as having no apparent interest.

Inter-coder reliability for data extraction for 11 convenors showed no disagreements on highest qualification, presence of a special education qualification, and relevant research interests. There were four disagreements over the number of relevant Google Scholar results and one disagreement on relevant ERIC results. Overall reliability for this data extraction was 90.9%. The relevance of 14 theses was checked, with two disagreements. The rating of the interest level was checked for 23 instructors, with two disagreements (91.3%).

Unit descriptions and guides for each unit were located on university websites and downloaded. The content covered in each unit was examined and coded as to whether or not it included information on government policies relevant to disability and/or anti-discrimination legislation; the supports available for regular classroom teachers; instructional strategies; assessment; program planning (and in particular individual planning); communication, consultation and/or collaboration with other teachers and/or families; and strategies for inclusion such as adaptations and accommodations. Additional codes indicated whether or not the unit aimed to develop positive attitudes towards people with a disability or special needs and whether or not it specifically noted that the content presented was evidence or research based. The descriptions of the learners targeted in the unit were also collected. Where both a unit guide and a summary were available, they were coded separately. Inter-coder reliability for a sample of 20 units (four guides and 20 summaries) was 91.3%.

In addition to the searches for courses and units, a Google search using the descriptor "special education courses" was carried out to locate universities offering specialist undergraduate or post-graduate special education courses.

Results

Thirty-five institutions offering a four-year bachelor program were identified, and 34 courses in 34 institutions were identified across all Australian States and Territories that included a relevant unit taught in 2009. The first author and a research assistant identified 56 units that they both agreed met the inclusion criteria. There were two units that were identified by only one person and after discussion it was agreed that both units should be included. The comparison with coding from the O'Neill and Stephenson (2011) study resulted in identification of a further four units. Thus, there were 62 units that met initial criteria for inclusion. One unit was excluded when all authors agreed that the content clearly did not relate to disability or special needs. Thus, there were 61 units that were examined in detail.

All except three courses included a core unit on inclusion/special needs and there were 41 core units across the 31 courses. Twenty electives were offered, with 18 (30%) courses not offering any electives. Nineteen courses (31%) contained only one unit (17 core and two elective), eight (13%) contained two units, three (5%) contained three units, three (5%) contained four units and one contained five units. The distribution of units across the year of the course is summarised in Table 1. Half the units were offered in the third year. One elective unit was offered in more than one year.

	1st	2nd	3rd	4th
Total units	4	13	32	12
Core units	3	7	23	8
Elective units	1	6	9	4

Table 1. Year of course in which units were offered

The hours of face-to-face teaching varied from 18 hours in a unit that also contained professional experience to more than 40, although hours for two units could not be determined. There were five units that were offered only online and one that combined online and face-to face. The distribution of hours of teaching is presented in Table 2. Most commonly, students received between 36 and 40 hours of face-to-face instruction. Only 10 units (16%), all core units, included a related professional experience placement.

Less than 20	20-29	30-35	36-40	More than 40	Not determined
2	16	5	26	3	2

Table 2. Hours of instruction offered in each unit

Information about the prescribed text was located for 26 units (43%) and for the remainder there was either no set text, or information could not be located. Ashman and Elkins (2008) was the most popular text, used by 10 courses (seven core and three elective). Foreman (2007) was used by five (all core) and Westwood (2007) was used by two (both elective). Nine other books were used by only one unit each. One unit had two texts, including Ashman and Elkins.

Instructors were identified for 44 (72%) units (30 core units and 14 elective units). One instructor was responsible for three units, one was responsible for two units, three units had two instructors and one unit had three instructors. There were thus 46 instructors identified. Information on the highest qualification was available for 36 (78%) instructors, information on research interests was available for 29 (63%) instructors and information was available about seven master's theses and 16 doctoral theses (for three instructors, information was available about both a masters and a doctoral thesis). Twenty-eight (61%) instructors had a doctoral qualification (three EdD and 25 PhD) and eight had a master's level qualification, with no information about qualifications available for 10 instructors. Of the theses, eight (one EdD and seven PhDs) were considered relevant to special education. Only 14 (30%) instructors had a named qualification in special education and of these, five had a

doctorate relevant to special education as well. No information about other qualifications was available for 15 instructors. Fifteen instructors stated on publicly available profile or research pages that they had a research interest in special education/inclusion and 14 had research interests other than special education/inclusion, with no information available for 15 instructors. Information about publications is summarised in Table 3. The majority of instructors had no relevant publications, while six had three or more.

Number of publications	Google Scholar	ERIC
None	32	35
1	3	7
2	5	2
3	1	0
More than 3	5	2

Table 3. Publications in Google Scholar and ERIC for 43 identified instructors (2005-2010)

Overall, 22 (48%) of the convenors, for whom relevant information was available, were coded as having an active interest in special education/inclusion/disability. Four stated an interest, but had no relevant qualifications; theses or publications and 21 did not have a stated interest, relevant publications or theses.

A full unit guide was available for 18 units (30%). The summary descriptions for a further eight units (13%) contained a listing of aims, objectives or outcomes. Some summaries were very brief and for 28 (46%) units the summaries contained fewer than 100 words; for eight units, fewer than 50 words. Some of these brief descriptions did, however, include information about the elements we examined. For the 12 units where both a summary and unit guide were available, a comparison was made of the two sets of codes. There was a 70% agreement between the two sources, which suggests the summaries provide a reasonable reflection of unit content as described by unit guides. Table 4 presents a summary of the number of units that addressed each content area, according to information contained in the unit description and/or the unit guide. Of the 18 units that addressed programming, eight specifically mentioned individual educational plans (IEPs) or a similar strategy.

Content area	Number (%) of units
Government policies, legislation and/or disability standards	21 (34%)
Supports available to teachers	13 (21%)
Instructional strategies	40 (66%)
Assessment strategies	27 (44%)
Skills in planning programs	18 (30%)
Communication/consultation/collaboration with teachers, other professionals and/or families	19 (31%)
Inclusion strategies (adaptations and accommodations)	36 (59%)
Developing positive attitudes towards people with disabilities and special needs	8 (13%)
Behaviour support and/or behaviour management	18 (30%)
Evidence-based or research-based content	6 (10%)

Table 4. Number and % of units addressing content in specified area

Overall, unit content was provided about many kinds of learners. The labels used for different learners included students with disabilities/impairments (16 units) and more specifically, students with Attention Deficit Hyperactivity Disorder (two), autism/Autism Spectrum Disorder/Asperger's syndrome (five), at risk behaviour (one), behavioural and/or emotional difficulties (12), brain injury (one), conduct disorder (one), developmental delay (two), intellectual disability (12), hearing impairment (seven), learning difficulties/disabilities (16), multiple disabilities (one), physical disability (11), sensory impairment (three), speech/language/communication difficulties (nine), and vision impairment (seven). Many units also covered other aspects of diversity, including students from differing cultural backgrounds including indigenous students (eight), gender (three), students from different language backgrounds (five), gifted and talented students (13), under-performing students (one), students from impoverished backgrounds (one), students from different social classes (two), students with chronic health problems (three), students of differing religious backgrounds (one), and of differing sexual orientation (one). Some units gave blanket descriptions only (19) such as students/children with special education needs/special needs/special learning needs with nothing to indicate how these terms were defined. Descriptions of a few units simply indicated they were aimed at meeting the needs of "all" (four), or of diverse or different learners (five) without providing more specific information. Two units provided no description of learners at all. Overall, the content descriptions of 17 units (28%) clearly indicated that they covered other learners besides students with disabilities.

Nineteen post-graduate and eight undergraduate special education courses were identified, and of these 18 were at universities offering the courses included in the current study. Ten of these universities had staff with an active interest in special education teaching undergraduate special education units. Of the 22 convenors identified as having an active interest in special education, 13 were from universities with special education courses. Four universities with special education courses used staff without special education interests as well. There was insufficient information about conveners for four universities with special education courses and four were using only staff without special education interests.

Discussion

There were only three courses (two in Victoria and one in Western Australia) that did not offer a core unit related to teaching students with special needs. This represents considerable progress since 1994, when Dempsey reported only 59% of campuses offered a core special education unit, and even since Loreman's (2002) finding of 47% of teacher education courses with a core special education unit, and Louden et al.'s (2005) report of 63%

of courses with a compulsory special needs unit. This increase has likely been driven, at least in part, by the emphasis on inclusion and by teacher registration requirements. The NSWIT requires courses to include a mandatory special education unit (NSWIT, 2007). A special education component has been mandatory in NSW since 1991 (Hickson & Smith, 1996). Other state standards require knowledge of practices relevant for students with disabilities, learning difficulties and/or special needs but do not specify a mandatory unit (Queensland College of Teachers, 2006; Victorian Institute of Teaching, 2007). This pressure from regulatory bodies will likely continue as the new Australian Institute of Teaching and School Leadership standards for graduate teachers require them to "Demonstrate broad knowledge and understanding of legislative requirements and teaching strategies that support participation and learning of students with disability" (Education Services Australia, 2011, p.5).

Units followed a typical pattern of being one semester in length, with classes of three hours per week and were mostly offered in the third year of the course. Although information about the texts used was limited to less than half the units surveyed, it seems Australian texts are most popular, with Ashman and Elkins (2008) most often used. Instruction in most units was confined to theory as only 10 units had a related professional experience placement. It would be expected, however, given current patterns of inclusion, that preservice teachers would encounter students with special needs in most professional experience placements.

The lack of relevant qualifications of those convening the units is of some concern. Information on convenors was available for 72% of the units and just under half of these were convened by an academic with qualifications in special education or demonstrated expertise in special education (through a relevant higher degree or recent publications). This is a considerable decrease since 1993, when Dempsey (1994) reported that the majority of teaching staff had special education qualifications. One reason may be that many units addressed inclusion more generally and students with disabilities were only one of a number of aspects of diversity that were covered. These units may have been convened by academics with a broader interest in inclusion, and not in the instruction of students with disabilities. It is also possible that the increase in the number of units offered has outstripped the supply of academics with relevant qualifications and interests. There were only 11-14 (26% -33%) (depending on whether the count is taken of papers in Google Scholar or ERIC) convenors who were actively publishing in special education and related areas. This suggests that most preservice teachers will be taught by someone who is teaching outside their immediate field of expertise. Since a sound grasp of discipline content is a component of quality instruction (Koster, Brekelmans, Korthagen, & Wubbels, 2005), there should perhaps be some concern about the quality of instruction provided in the units.

The content covered in the units surveyed was quite variable. It should be noted here that we did not have the full unit guides for all units and some unit descriptions were very brief. At the same time, the coding of both full unit guides and unit summaries where both were available provided a 70% agreement, which suggests the summaries provided a reasonable reflection of unit content as described in the unit guide. At the very least, summaries appeared to provide a good indication of the major foci of units, although some were couched in very ambiguous terms. The content most commonly identified, but only in 60% of the units, was instructional strategies. If preservice teachers are being prepared to teach students with disabilities, the apparent lack of focus on teaching strategies, combined with lack of identified content on assessment (present in 44% of units), and program planning (present in 30% of units) is a concern. Only eight units mentioned any form of individual planning, the cornerstone of effective instruction for students with disabilities who are failing to learn from regular programs (Alberto & Troutman, 2009). Content on strategies for inclusion including adaptations, accommodations and differentiation was identified in 59% of units. This, combined with lack of indication of content addressing communication with others (in 31% of units), is a concern if preservice teachers are to have practical skills to

enable them to work with specialist educators, teacher assistants, other professionals and families to include all students. Despite the research interest in developing positive attitudes to people with disabilities, this was identified as a specific aim in only 13% of units. In a finding that may reflect the lack of research activity shown by unit convenors, only six units claimed to contain practices that were evidence or research-based. Only two of these, however, were convened by academics with a background of research in special education. There was no information available on the convenors of the other four units.

Of the universities surveyed, 18 also offered postgraduate and/or undergraduate special education courses. If it is assumed that these universities would have staff with qualifications and active research interests in special education, it could be expected that these qualified staff would contribute to undergraduate education in special education. Ten of these universities did have staff with an interest in special education teaching some of their undergraduate units and over half convenors with an active interest in special education (13 out of 22) were at universities with special education courses. It does appear possible that some universities who have staff with special education expertise are not drawing on this expertise in their undergraduate programs.

Based on this study, overall, it would seem possible that preservice teachers today are being less well prepared to teach students with disabilities and special needs than they were in 1993. Although more units are offered at more universities, many fewer units appear to be taught by academics with an active interest in special education, even when this is broadly defined as a named special education qualification, recent publications in special education and/or a thesis on a special education topic. There appears to be less coverage of teaching, assessment and programming strategies. Despite the Education Standards and Anti-Discrimination legislation, and the push to inclusion, effective strategies for inclusion are not identified as present in many units, and nor are the legal obligations of schools and teachers. Many units now include information on a wide range of students and this must limit coverage of established research-based practices that are effective for students with disabilities.

It seems that the movement towards inclusion and inclusive education, broadly defined has actually resulted in preservice teachers having less opportunity to learn about students with disability and special needs. Inclusive education, as defined by the United Nations Educational, Scientific and Cultural Organization (UNESCO) (2009), is:

> A process of addressing and responding to the diversity of needs of all children, youth and adults through increasing participation in learning, cultures and communities, and reducing and elimination exclusion within and from education. It involves changes and modifications in content, approaches, structures and strategies with a common vision that covers all children of appropriate age range and a conviction that it is the responsibility of the regular system to educate all children. (pp. 8-9)

The diversity of children referred to in this definition includes disadvantage and poverty, ethnic and cultural diversity, those who live in rural and remote areas, gender, and health status as well as those with disabilities or learning difficulties (UNESCO, 2009). Many of the units surveyed that provided detailed information on the nature of the learners the unit covered, included this broad range of learners. Such units may have had a focus more on the philosophy and ideals of inclusion than on actual practical strategies to bring it about.

These conclusions must be tempered by the fact that full unit guides and detailed information about unit convenors were not available for all units. The amount of information on units available for some institutions was very limited, comprising only a short paragraph from the institution's handbook. We have also not taken account of the fact that content in core units may be assumed knowledge in subsequent core or elective units. In addition this survey only identified units where the unit name clearly indicated the contents as relevant to inclusion or students with special needs. Relevant content may be infused into other units that

were not identified in this survey. If this is the case, however, it is unlikely that this content would be provided by academics with special education expertise, given these academics were not prominent in teaching dedicated special education units. Finally, it should be noted that only data located on the Internet was considered.

It might be hoped that with the increasing recognition of the rights of children with disabilities to access educational programs, that special education/inclusion units would address both philosophical issues and effective, research-based pedagogy for students with disabilities and special needs. Instead, many units do not appear to emphasise pedagogy and appear to be taught by academics with little active interest or expertise in special education. It seems that preservice teachers may continue to graduate without the skills and knowledge required to educate students with disabilities and special needs, and without the skills to collaborate with those who could provide effective support.

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