

Teacher education for diversity

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This research reports the findings from three Queensland universities regarding preservice teachers' attitudes towards people with disabilities. The Interactions With Disabled Persons Scale (Gething, 1991) was administered to investigate the effect of personal attributes on preservice teachers' acceptance of and social interactions with people with disabilities. The findings indicate that only four percent of preservice teachers surveyed had undertaken any compulsory courses and only 18 percent had taken elective units in teaching children with special needs. Preservice teachers who had at least weekly contact with people with disabilities perceived less discomfort with such interactions than did those who had less contact. Additionally, postgraduate students experienced greater discomfort than undergraduates did. The implications of these findings for the development of compulsory preservice courses that focus on diversity and for subsequent changes in content at the participating universities are discussed.

The first major attempt in Australia to promote greater acceptance and integration of people with disabilities on a large scale occurred during the International Year of Disabled Persons (IYDP) in 1981. During the IYDP, there was a concerted effort to change the status of people with disabilities by educating public attitudes towards them. The campaign via media and a range of other means set out to provide accurate and non-mythical information about disabilities. This was the first step towards full public awareness, acceptance and integration of people with disabilities in Australia (Gething, 1986). Since the IYDP there has been an increasing momentum towards including people with disabilities into the mainstream of society. There have been many closures of institutions that previously catered for people with disabilities in completely segregated environments. Many of these people have been reintegrated into their local communities, living in family homes with minimal support. Similarly, the focus on educating children with disabilities has changed from placement in segregated special schools to greater inclusion in regular classes.

Australia has been following a rather slow although progressive movement towards inclusion for the past 20 years (Forlin, 1997). As the movement towards educating children with disabilities in regular classrooms, rather than segregated classes, has gained momentum, more teachers have become involved with inclusive educational practices, and this is likely to increase in the future. Teachers' attitudes towards people with disabilities are therefore one critical aspect for this movement is to be successful.

TEACHER ATTITUDES TOWARDS PEOPLE WITH DISABILITIES

While policy in Australia supports the inclusion of children with disabilities in regular classrooms with their peers, the attitudes of teachers and other school personnel to inclusion have been identified as having a significant impact on the outcome (Ashman & Elkins, 1998; Casey, 1994; Forlin, 1997; Forlin, Douglas & Hattie, 1996). Teachers have been shown to have a range of fears and apprehension about including children with disabilities in their classrooms (Center & Ward, 1987; Foreman, 1996). While agreeing with the principles of inclusion, teachers are uncertain about the consequences (Center & Ward, 1987; Zigler & Hodapp 1986) and raise many personal concerns about including children with disabilities in their classrooms (Forlin, 1998).

The assumption that contacts between those with and without disabilities alone would result in positive attitudes conducive to inclusion has been challenged (Ainscow, 1997; Clark, Dyson, Millward & Skidmore, 1997). Moreover, it would seem that when teachers are required to have close relationships with children with disabilities in their classrooms, they tend to show more negative attitudes towards them (Jamieson, 1984).

Negative attitudes have been found to lead to low expectations of a person with a disability (Buell, Hallam, Gamel-McCormick & Scheer, 1999; Zigler & Hodapp, 1986), whereas, positive attitudes can lead to higher expectations, increased learning opportunities and increased performance of learners (Gold, 1980, cited in Beckwith & Mathews, 1995). Wilczenski (1993) believes that these attitudes and stressors have their origin in preservice teacher education. Teachers who have greater knowledge about inclusion have also been found to have stronger beliefs that they can influence students during inclusion (Buell et al., 1999).

One possible consequence of low expectations by teachers is that reduced learning opportunities could result for a child. Reduced opportunities could further impair performance that in turn could lead to even lower expectations. The outcomes for the child are likely then to confirm the child's own low opinion of themselves and their abilities and a deficit cycle may develop (Westwood, 1995). Alternatively, positive attitudes usually produce increased opportunities and creative practice in classrooms to enhance individual student performances and feelings of competence (Tesser & Shaffer, 1990).

The importance of investigating attitudes towards people with disabilities has long been recognised (Antonak, 1982). Beckwith and Mathews (1995) believe the attitudes held by professionals are critical to their client's quality of life. When considering the profession of teaching, attitudes are particularly relevant given the importance of the interactional nature of the teacher-student relationship in learning (Westwood, 1995). Stewart (1990) considers that the attitudes of teachers to children with disabilities is an integral component in the success or failure of including them in regular classrooms.

For universities involved in teacher education, it would, therefore, seem prudent to develop within preservice education courses the opportunity to become effective teachers for all children. This may enable preservice teachers to articulate and subsequently, overcome their own discomfort (Baker, 1997). While not every challenge that teachers will face in the future can be covered in teacher education, there is, however, a need for preservice courses to endeavour to encourage teachers to be receptive to the idea of diversity and practice in regular classroom settings (Wilczenski, 1993). One area of this receptiveness is in attitudes toward individuals with disabilities.

Since the initial attitudes of preservice teachers may be crucial to the ultimate success of inclusion for children with disabilities (Wilczenski, 1993), it would seem to be important that these attitudes be identified early. As discussed by Nel (1992) with regard to multi-cultural education, 'negative attitudes acquired early in one's career are difficult to change when subsequent experiences are filtered through a negative bias' (p. 23). Murphy (1996), who attested that negative attitudes contributed to the failure of the inclusion of children with disabilities in regular programs, supported this view.

A limited number of recent studies have been conducted regarding the effect of university education courses on preservice teachers' attitudes towards people with special needs. Several international reviews have examined whether or not information-based approaches (that is, courses involving lectures and seminars) to teaching about special educational needs have had any impact on preservice teachers' perceptions (Gardner, 1996; Hastings, Hewes, Lock & Witting, 1996; Johnston, 1990; Moio, 1994; Murphy, 1996). The general outcome of these reviews seems to be that attempts to improve preservice teacher attitudes towards people with disabilities have had little or no effect.

A number of other studies have identified how various techniques other than an information-based approaches have been implemented in order to improve preservice teachers' perceptions of children with special needs. For instance, methods such as the use of computer simulations (Wood, 1986), satellite distance courses (Lombardi, 1991), collaborative consultation and problem solving techniques (Bergen, 1997; Villa, Thousand & Chapple, 1996), site-based transdisciplinary education (Mayhew, 1994), simulation activities (Cossairt & Shade, 1995), and practice situations (Stewart, 1990) have all been attempted in order to prepare teachers for the inclusive classroom. The varying success rates of such approaches have implications for further course development in the area of teacher education in Australia.

A review of the literature on Australian research on changes in teachers' attitudes as a result of their university courses produces only a smattering of studies (e.g., Westwood, 1984; Tait & Purdie, in press). Nevertheless, Carrington, Tait and Brownlee (1997) conducted one study worthy of note. These researchers attempted an innovative approach by introducing a teaching assistant who had severe cerebral palsy to a class of university preservice teachers undertaking an undergraduate elective unit on disabilities. Positive changes in preservice teachers' attitudes towards people with disabilities were noted over a semester period using qualitative research methods.

While research that investigates the attitudes of new and experienced teachers is growing (Bender, Vail & Scott, 1995; Billingsley & Tomchin, 1992), limited Australian research has been undertaken on the effectiveness of university courses in assisting the development of positive attitudes towards children with disabilities.

TEACHER EDUCATION FOR INCLUSIVE EDUCATION

Teacher education in Australia has focused traditionally on either general or specialised education courses. In recent years almost all training institutions in Australia have begun to include units of work on children with special needs into their core curricula for general teachers but these are only just becoming formalised as a requirement for teacher registration in some states. The attitudes of teachers towards people with a disability are of the utmost importance if equitable access is to be ensured for all children. There is little doubt that

teachers are going to be required to cater for the needs of children with many diverse abilities and in particular of children with disabilities in their regular classrooms. Consequently, there is an urgent need to ensure that education courses at universities consider the existing attitudes of preservice teachers and identify ways to make teachers as positive as possible towards people with disabilities.

If positive attitudes are to be developed, teacher skills and competencies need consideration and support in education courses (Hasting, Hughes & Witting, 1996). Teacher education programs need to refer to the development and role of attitudes, identify and analyse the variables that lead to positive attitudes, and provide preservice teachers with a range of opportunities to develop positive attitudes. The effectiveness of this process requires careful monitoring and evaluative research.

METHOD

The purpose of this study was to identify the attitudes of university preservice teachers towards people with disabilities prior to developing teacher education courses that reflect the current emphasis on inclusive education. At the time of the study the preservice teachers were all enrolled in education courses at one of three Queensland universities: Queensland University of Technology (QUT); the University of Queensland (UQ) and the University of Southern Queensland (USQ). All were studying to become regular classroom teachers.

While the course structures vary, all courses have to meet the requirements for teacher registration in Queensland through the Board of Teacher Registration. At QUT, preservice teachers undertake either a four-year Bachelor of Education degree or a four semester graduate entry program (BEd or MT); no core units are offered in special education but special education is available as an elective. At UQ a one-semester course in special education is offered as an elective within both the four year 'dual degree' program (BA/BEd; BSc/BEd; BCom/BEd; etc.) and the four semester graduate entry program (BEd). At USQ, special education is offered as a compulsory course in the final (fourth) year of the Bachelor of Education (primary) degree which is entered either as an undergraduate student in Year 1 or as a graduate entry student in Year 3.

INSTRUMENT

In 1998, all preservice teachers at each of the three universities were asked to complete the *Interactions with Disabled Persons Scale* (IDP) (Gething, 1994) and 12 accompanying items on a range of personal details. The IDP scale was selected as it was developed to 'measure emotions, motivations and reactions which underlie negative attitudes associated with discomfort that some people experience in actual or anticipated social interaction with a person with a disability' (Gething, 1992, p. 26). Participation was voluntary and time was allocated during lectures to complete the questionnaire.

The IDP scale is a 20-item six point Likert scale designed to measure attitudes towards people with disabilities by assessing levels of discomfort in social interactions as a central factor underlying negative attitudes (Gething, 1992). Responses for each item range from *I agree very much* (6) to *I disagree very much* (1). Higher scores indicate greater discomfort in social interactions with people with disabilities. The scale contains items relating to various aspects of interaction focusing on discomfort in social interactions (*e.g., I feel uncomfortable and I find it hard to relax*), coping when meeting people with disabilities (*e.g., I feel*

frustrated because I don't know how to help), information about disability (*e.g., I feel ignorant about disabled people*), and a person's vulnerability (*e.g., I dread the thought that I could eventually end up like them*).

A detailed psychometric analysis of the IDP scale was undertaken using this data set and this is reported elsewhere (Forlin, Fogarty & Carroll, 1997). The findings using a Total Scale Score of 17 items, with an alpha co-efficient of .78, are reported here. The scale has also been found to contain six factors (discomfort, sympathy, uncertainty, fear, coping, vulnerability), and further analysis of the data based on the six factors can be found in Forlin et al. (1997).

RESULTS

The findings of the analysis will be reported in two parts. First, the demographic details of the sample will be reported for four clusters of variables: personal details; level of education; contact; and occupation. Second, between group differences on the four clusters of variables for all preservice teachers will be addressed. A total of 2375 preservice teachers participated in this study. Due to missing data not all results will include the total data set. Where this occurs, actual numbers will be reported.

DEMOGRAPHIC DETAILS

Personal details

Age was reduced to two levels: 29 years or less and 30 years or more, as done previously by Gething (1993), by combining the two lowest and two highest categories. Most of the preservice teachers ($n=2122$) were less than 30 years old (90%). Most (80%) were females ($n=1877$) and most (96%) had English as their first language ($n=2273$).

Level of education

Level of education of the preservice teachers was determined by four categories: highest level of education completed; year of study in their current university course; number of compulsory units completed in special education; and number of elective units completed in special education. Categories of compulsory and elective units were combined to produce two categories: completed no units, and completed one or more units.

The majority of the preservice teachers (70%) had not completed any tertiary qualification. Some (22%) had completed an undergraduate degree or diploma (6%). Only 2 percent had completed a postgraduate degree.

Preservice teachers were in different years of their study with 42 percent in their first year, 23 percent in second year, 3 percent in third year and 14 percent in their fourth year. The considerably larger number of preservice teachers in first year reflects the overall increasing number of preservice teachers enrolled in education courses at these universities over the past four years, although some reduction in numbers is due to natural attrition.

A very small minority of preservice teachers had undertaken any units of study directly related to special education. Of the total sample, 96 percent had completed no compulsory units and only 15 percent had undertaken any elective units in special education. In addition,

any information that preservice teachers had received regarding educating children with special needs tended to have occurred during their final year of study.

Contact with people with disabilities

Frequency of contact for preservice teachers with people with disabilities ranged from 8 percent of respondents who recorded weekly contact to 30 percent who reported contact less than once every three months. Degree and type of contact varied considerably between universities. The distribution of education preservice teachers for degree and type of contact with people with disabilities is presented in table 1.

The majority of contact for preservice teachers was with either an adult friend (28%) or a child (26%); with 5 percent of respondents reporting multiple contacts and 34 percent having 'other' types of contact. Preservice teachers from QUT (39%) reported more multiple contacts with a range of different people with disabilities than did those at either of the other two universities. A further four percent of the total sample indicated that they had a parent with a disability and three percent had a sibling with a disability.

Direct contact with people with disabilities was limited to once every three months or less frequently for 41 percent of preservice teachers. This varied slightly between universities with 44 percent from USQ, 36 percent from UQ, and 41 percent from QUT having such limited contact. Although 48 percent of preservice teachers from UQ experienced daily or weekly contact, only 37 percent of those from USQ and 38 percent from QUT reported similar frequent contact. The higher levels of contact at UQ may be the result of the presence of the Schonell Special Education Research Centre within the Graduate School of Education and its provision of a variety of opportunities for students to interact with young people with disabilities.

Table 1: Preservice teachers' contact with people with disabilities

(see [Errata](#) for this table in QJER Vol. 16, No. 1. The version below is the corrected version)

Amount and Type of contact		USQ (~%)	QUT (~%)	UQ (~%)	Total (~%)
Amount of contact	daily	10	8	10	8
	weekly	28	31	39	31
	once a month	19	20	15	19
	once every 3 months	11	12	8	11
	Less than every 3 months	33	29	28	30
	Total responses (n)	481	1556	247	2284
Type of contact	sibling	3	3	1	3
	child	23	27	26	26
	adult friend	28	25	42	28
	parent	1	2	20	4
	multiple contacts	7	4	11	5
	other	38	39	-	34

	Total responses (n)	430	1335	219	2004
Note: 1. Students making no response have been omitted from this table. 2. In some cases, 'no response' may have meant 'no contact'. 3. 'Child' and 'parent' could be interpreted as implying 'a' or 'own'.					

Occupation

Occupation was determined by assessing the number of years that each preservice teacher surveyed had held a full-time job. Approximately 59 percent of the total cohort had never held a full-time job. In addition, the occupation of their partner, father and mother was also requested. Information regarding the occupation of their partner is not reported here due to missing data. This accounts for 70 percent of the sample, indicating that the majority of the preservice teachers were probably single.

The main occupation of father varied significantly across the three universities although at least 60 percent of all fathers were employed in professional, management, or trade positions. When interpreting these data it is important to note that 23 percent of preservice teachers did not provide information regarding the employment of their father. Consequently, the data reported here regarding occupation of father need to be interpreted with caution.

Similarly, for occupation of mother, 22 percent gave no response to this question. Of those that did respond approximately 50 percent of mothers were employed in professional, management or trade positions. Conversely, less than 18 percent of mothers were employed in domestic duties, unskilled works, on a pension or unemployed.

BETWEEN GROUP DIFFERENCES

Because of the large data set, effect sizes were used to provide a measure of the degree to which the means differed in terms of standard deviations of the total population (Schmidt, 1996). The effect size was calculated by determining the difference between the means and then dividing the result by the standard deviation of the scale (Howell, 1992). This provided a measure of the degree to which the means differed in terms of the standard deviation of the total population. The standard deviation for the *General Discomfort Scale* was 10.19 and this was used in calculating the effect size for each variable. According to Cohen (1988, cited in Howell, 1992), an effect size of .20 can be considered small, .50 is medium, and .80 is large. Effect sizes in this study are interpreted to be negligible if below .20; small if between .20 and .49; medium if between .50 and .79; and large if .80 or greater.

Personal details

When considering the effect of the demographic variables of age, gender, and language, negligible differences were found for the three variables. There was a tendency for preservice teachers in the 19-29 age range (n=1771) to report a higher level of discomfort (mean=62.35) than preservice teachers over 30 years (n=202, mean=61.22). Female preservice teachers (n=1574) reported higher levels of discomfort (mean=62.36) when compared to their male counterparts (n=403, mean=61.70). Preservice teachers with English as a first language (n=1910) also reported lower levels of discomfort (mean=62.17) than preservice teachers with English as their second language (n=65, mean=63.29). In all instances the effect sizes of these differences were less than .11, indicating that the differences between preservice

teachers according to age, gender, or language were too small to warrant further consideration.

Level of education

In regard to the level of education of preservice teachers in Queensland, there was a small effect size (.21) for previous education attainment. Preservice teachers who had completed postgraduate studies had higher levels of discomfort than those who had only completed Year 12. As shown in table 2, there were negligible effects for the variables of year of study (.11), compulsory units (.03), and elective units (.12). In comparing the means, however, preservice teachers (n=287) who had completed their final year of study (mean=61.59) and those who had completed one or more elective units (n=313, mean=61.17) indicated the lowest levels of discomfort. There were no differences for compulsory units. It appears that preservice teachers who were either in their last year of study or who had gained some knowledge or experience through previous courses perceived less discomfort in interactions with persons with disabilities. Regarding taking elective units, though, this could be a reflection of the type of people who select to take such units. These may already be disposed to lower levels of discomfort, which is why they nominated to take such units of study in the first place.

Table 2: Effect size for General Discomfort Scale for level of education

Independent Variable		N	Mean	Effect Size
Education	Year 12	1389	62.38	.21**
	P/Grad degree	47	64.55	
Year of Study	1st year	856	62.66	.11*
	4th year	287	61.59	
Compulsory Units	No units	1895	62.23	.03*
	1+ units	81	62.53	
Elective Units	No units	1663	62.44	.12*
	1+ units	313	61.17	

Note. SD = 10.19 * negligible ** small

Contact with people with a disability

When consideration was given to contact with people with disabilities, there was a medium effect size (.63). Relatively low levels of discomfort were reported by preservice teachers who had daily contact with people with disabilities when compared to preservice teachers who had contact less than every three months. Negligible differences were found for the type of contact (.12), with contact with a sibling associated with only slightly lower levels of discomfort than all other types of contact (e.g., child, adult, multiple). The means and effect sizes are reported in table 3.

Table 3: Effect Size for General Discomfort Scale for Contact with People with Disabilities

Independent Variable		N	Mean	Effect Size
Contact	Daily	170	58.57	.63**

	< Every 3 months	552	64.97	
Person	Sibling	53	60.58	.12*
	Other	1644	61.81	
Note. SD = 10.19 * negligible ** medium				

Occupations

There was a small effect size (.21) between preservice teachers who had been in the workforce and those who had not. Preservice teachers who had held a job for more than one year (n=796) reported lower levels of discomfort (mean=60.94) than those (n=1161) who had never held a full-time job (mean=63.07). Negligible differences were found to exist for mothers and father's occupations.

DISCUSSION

Of the 2375 preservice teachers completing teacher education courses at these three universities the majority were female and very few were older than 30 years. The highest level of education achieved for most of these preservice teachers was Year 12 or equivalent, although approximately one fifth of the cohort held an undergraduate or post-graduate degree. By the time the preservice teachers had reached the start of their final year of study only 4 percent had undertaken any compulsory courses in teaching children with special needs, and 18 percent had taken any elective units in special education. Direct contact for preservice teachers with people with disabilities varied, but overall 45 percent reported frequent contact of at least weekly, 21 percent indicated contact monthly and the remainder did not have contact more frequently than once every three months. This is noticeably higher contact than the 25 percent reported in previous studies that assessed amount of contact for the general public (Gething, 1991; 1994). Fifty-nine percent of preservice teachers had never held a full-time job prior to commencing their studies. The majority came from a family background where their parents were employed in professional, management, or trade work.

By employing the IDP Scale, it was possible to identify the effect that a range of demographic variables had on preservice teachers' levels of discomfort for interactions with people with disabilities. Small effect sizes were found for previous educational attainment and for preservice teachers who had held a job. Preservice teachers who had already completed a previous postgraduate degree in another field of study exhibited slightly higher levels of discomfort than did those who had not undertaken any other study since leaving school. Conversely, those who had taken an elective unit in special education as part of their preservice course indicated less discomfort than those who had not done so. At this stage only 81 of the preservice teachers in this cohort had undertaken any compulsory units on teaching children with special needs. This is too small a number to consider any differences in means to be predictive of the effect of compulsory education on preservice teachers' attitudes towards children with special needs. It should be noted, however, that for those who had completed a compulsory unit their levels of discomfort as measured by the General Discomfort Scale were minimally greater than the levels indicated by preservice teachers who had not undertaken any compulsory units. The development of compulsory units for preservice teachers should, therefore, be undertaken cautiously to ensure that the outcome is

not an increase in perceived levels of discomfort when interacting with people with disabilities.

Similar to all previous findings reported by using the IDP scale (Beckwith & Matthews, 1994; Gething, 1991, 1994; MacLean & Gannon, 1995), the results of this study indicate that preservice teachers who had more frequent contact with people with disabilities attributed less discomfort during interactions with them than did those who experienced little contact.

These findings have major implications for structuring appropriate preservice courses to ensure that teachers are able to cater for children with disabilities in inclusive classrooms. Similar to the findings of Buell et al. (1999), that increased knowledge about inclusion is associated with stronger beliefs that teachers can influence students during inclusion, there seems little doubt that increased contact with people with disabilities also helps preservice teachers to overcome feelings of discomfort when interacting with them. According to Gething (1992), feelings of discomfort can be linked closely to negative attitudes, which in turn have been seen to be associated with low educational expectations of people with disabilities (Gold, 1980, cited in Beckwith & Mathews, 1995). In an attempt to raise teachers' expectations for children with disabilities, and ameliorate negative attitudes towards them, it is proposed that compulsory preservice courses should be developed to include direct contact on a regular basis with people with disabilities. This could be in the format of guest lectures or tutorial interactions at universities or more involvement with people with disabilities in the community. Care needs to be taken to ensure that compulsory units do not exacerbate levels of discomfort for preservice teachers and that contact is frequent and undertaken with a range of different people. In addition, information about diversity needs to be better integrated into preservice programs from the first year of study and not left to the final year. Inclusive educational practices have been recommended in Australia since the early 1980s. Clearly, preservice courses should give teachers adequate opportunities to interact with people with disabilities. This will provide one way of helping teachers to be better prepared to assist all children in their classes.

An outcome of this research has been greater emphasis in the three participating universities on providing various opportunities for preservice teachers to interact with people with disabilities. Changes in content vary between the three sites but altogether these have included a number of the following: compulsory visits to special schools or centres; incursions by people with disabilities; opportunities to undertake extended professional experiences in special schools; arrangements to visit one of the Queensland Disability Awareness Centres; guest lectures by staff from Education Queensland who support children with special needs in schools; and the development of a video entitled 'From the Inside Looking Out' (Forlin, 1999) to help people to become more comfortable when interacting with people with disabilities.

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