
Title	A Comparison of Australian and Singaporean Pre-Service Teachers' Attitudes and Concerns About Inclusive Education.
Author(s)	Umesh Sharma, Jessie Ee & Ishwar Desai
Source	<i>Teaching and Learning</i> , 24(2), 207-217
Published by	Institute of Education (Singapore)

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A Comparison of Australian and Singaporean Pre-Service Teachers' Attitudes and Concerns About Inclusive Education

Umesh Sharma, Jessie Ee & Ishwar Desai

Abstract

A survey of 91 pre-service teachers from Australia and Singapore was conducted to investigate their attitudes and concerns about implementing inclusive education in regular schools. Results indicated that Australian pre-service teachers were more in favour of including students with disabilities into the regular school compared to their Singaporean counterparts. The findings suggested that the pre-service teachers' beliefs may be significantly influenced by prevailing policies in the country.

Schools worldwide are increasingly moving towards the inclusion of students with disabilities in the regular classroom. While some countries have legislations, other countries have formulated policies supporting inclusion. Australia and Singapore are among the latter category.

Although the importance of legislation and policies have been and continue to be stressed for the successful implementation of inclusion reforms, equally important are the positive attitudes of in-service and pre-service teachers. Jones (1984) has stated:

It should not be surprising to any informed observer that meaningful implementation of legislative acts will require that we give as much attention to attitudinal barriers as we have given to the elimination of barriers of physical access, barriers of employment access and barriers of educational access. (p. vii)

Several authors have emphasised that teacher training programmes should prepare pre-service teachers to accept the responsibility of providing quality educational services to students with disabilities in inclusive classrooms (Hodge & Jansma, 2000; Moberg, Zumberg & Reinmaa, 1997). Research has shown that better prepared teachers are more likely to have positive attitudes towards students with disabilities and would be more willing to include them in their classrooms. Also Shade and Stewart (2001) have emphasised that teachers' attitudes need to be continuously monitored to determine their feelings about implementing educational

reforms like inclusive education, if such reforms are to be successfully implemented. In this regard, the United Nations (UN) were particularly concerned about the lack of progress in including persons with disabilities into their communities in the Asia–Pacific Region (United Nations, 1994):

The opportunities for full participation and equality for people with disabilities, especially in the field of rehabilitation, education and employment continue to be far less than their non-disabled peers. This is largely because negative social attitudes exclude persons with disabilities from an equal share in their entitlements as citizens. (p. 5)

To increase public awareness, especially in the education sector, the UN have recommended that further research needs to be conducted on issues such as educators' attitudes towards persons with disabilities and their integration in society. The UN also emphasised the need to develop programmes that would foster positive attitudes among non-disabled persons in the educational system (e.g. school authorities, teachers and students).

In Victoria, Australia has implemented inclusive education since 1984 as a result of the release of the policy document "Integration in Victorian Education: Report of the Ministerial Review of Educational Services for the Disabled" (Ministry of Education, 1984). A cornerstone of this policy was the notion that every child was entitled to a right to be educated in a regular school. In anticipating that regular classroom teachers would have a critical role in assuming new roles and responsibilities in this changed educational scenario, recommendations were made to reform teacher training programmes. In response to this recommendation, Victorian universities, such as Monash and Melbourne, started teaching at least one subject on Education of Children with Special Needs in their teacher training programmes.

Since the release of the policy document in 1984, an increasingly large number of students with disabilities are being included into regular classes in Victoria. For example, in 1984 there were only 214 students with disabilities enrolled into regular classes and 5300 in special schools. In 1991, the number of students included into the regular schools rose to 4987 compared with 4912 students in special schools (Tar, 2001). A significant increase in student enrolment into inclusive education took place in subsequent years. Most recent estimates suggest that the number of students with disabilities in inclusive schools (10900) is almost double the number of students receiving their education in specialist settings (5900) (Tar, 2001). Some attribute it to the passage of the Commonwealth legislation: the Disability Discrimination Act (DDA), 1992 (e.g. Dempsey, 2001). The act prohibits school authorities from refusing to admit a child with a disability as a student. It also prohibits school authorities from denying access to any benefits that a school may provide. School authorities, however, can refuse to admit a child with a disability if they can prove that they would suffer "unjustifiable hardship" in accepting the child (Commonwealth of Australia, 1992). "Unjustifiable hardship" can include expenses involved in modifying building structure or educating a child with a disability and teacher stress.

In Singapore, the daily management of the special schools are executed by Voluntary Welfare Organisations (VWOs). However, the financial management of the special schools consists of a tripartite arrangement involving the government, National Council of Social Services (NCSS) and the VWOs. To date, only some students with disabilities like those with a single disability of physical, hearing or visual impairment who are deemed fit for entrance into mainstream curriculum are admitted. The government assists by providing extra resources to support these special students in the mainstream. Although there have been various interested organisations who advocate for more inclusion practices, inclusion practices in Singapore will take some time to take root.

In this study an attempt is made to examine attitudes and concerns of pre-service teachers in Victoria, Australia and Singapore regarding the inclusion of students with disabilities into regular schools. The specific purposes of the study are:

- to compare Australian and Singaporean pre-service teachers' attitudes towards inclusive education;
- to compare Australian and Singaporean pre-service teachers' concerns about implementing inclusive education;
- to determine if a significant relationship exists between background variables and the pre-service teachers' attitudes towards inclusive education;
- to determine if a significant relationship exists between background variables and the pre-service teachers' concerns about implementing inclusive education.

There seems to be a lack of similar studies comparing attitudes in cross-cultural contexts. In one such study, Moberg, Zumberg & Reinmaa (1997) compared perception and beliefs of 125 pre-service teachers in Estonia, Finland and the United states about inclusive education. They found that while Estonian pre-service teachers were most negative, the Finland teachers were most positive. In another study, Cornoldi *et al.* (1998) investigated 523 Italian teachers' attitudes towards inclusion. They later compared the attitudes of Italian teachers with the attitudes of teachers in the USA based on similar surveys. They found that the Italian teachers responded far less positively on practical items which dealt with their satisfaction with time, training, personnel assistance and resources for implementing inclusion.

Participants

The subjects for this study were pre-service teachers enrolled in an introductory subject dealing with the nature and needs of students with disabilities. These teachers were pursuing their studies at the Universities of Melbourne and Monash in Australia ($n = 25$) and at the Nanyang Technological University in Singapore ($n = 66$) (see Table 1). A large majority of the participants were females ($n = 72$).

Table 1.
Demographics of Australian and Singaporean pre-service teachers.

	Australian teachers (<i>n</i> = 25)	Singaporean teachers (<i>n</i> = 66)	Total sample (<i>n</i> = 91)
<i>Gender</i>			
Male	4 (16)	12 (18)	16 (18)
Female	21 (84)	51 (77)	72 (79)
No Response		3 (5)	3 (3)
<i>Age</i>			
Below 20		1 (2)	1 (1)
21–30	15 (60)	42 (64)	57 (63)
31–40	4 (16)	16 (24)	20 (22)
41–50	5 (20)	3 (6)	8 (8)
Above 50	1 (4)		1 (1)
<i>Qualifications</i>			
Up to Yr 10 or 'O' Levels		36 (55)	36 (40)
Up to Yr 12 or 'A' Levels	1 (4)	13 (20)	14 (15)
Undergraduates	14 (56)	1 (2)	15 (16)
Postgraduates	10 (40)	13 (20)	23 (25)
<i>Disability in family</i>			
No	17 (68)	56 (85)	73 (80)
Yes	8 (32)	5 (8)	13 (14)
<i>Disability in close friendship</i>			
No	12 (48)	57 (86)	69 (76)
Yes	9 (36)	4 (6)	13 (14)
<i>Training in special education</i>			
No	16 (64)	37 (56)	53 (58)
Yes	9 (36)	27 (41)	36 (40)
<i>Confidence in teaching students</i>			
Very high		1 (2)	1 (1)
High	8 (32)	12 (18)	20 (22)
Average	8 (32)	34 (52)	42 (46)
Low	7 (28)	11 (17)	18 (20)
Very low	2 (8)	6 (9)	8 (9)
<i>Experience in teaching special students</i>			
No	6 (24)	22 (33)	28 (31)
Yes	19 (76)	41 (62)	60 (66)

The mean age of the participants was 28.9 years. A small number of respondents (*n* = 13) indicated having a family member with a disability. Some respondents (*n* = 36) had had some training in special education. The Singapore participants were younger with 55% having "O" levels whilst the Australian participants were much older with 56% undergraduates and 40% postgraduates.

Instrumentation

A three-part survey instrument was used to collect the data for this study. The first part of the survey elicited background information from the participants across five areas, namely, gender, age, previous contact with a person with a disability, confidence in teaching a student with a disability and previous training in special education/inclusion. Australian teachers were asked to respond to one additional item that dealt with their knowledge of the Disability Discrimination Act (1992).

The second part of the survey, entitled *Attitudes Toward Inclusive Education Scale* (ATIES) (Wilczenski, 1992), consisted of 16 items designed to ascertain the attitudes of the participants regarding the inclusion of students with disabilities into regular schools. The participants were required to rate each item of ATIES on a six-point Likert type classification with their responses ranging from Strongly agree (6) to Strongly disagree (1). The scale yields a total score which could range from 16 to 96, with higher scores indicating more favourable attitudes towards inclusion. The scale also yields four factor scores reflecting participants' attitudes towards students requiring social, physical, academic or behavioural accommodations in the classroom (Wilczenski, 1992). Evidence from a number of sources (Pasierb, 1994; Wilczenski, 1995) has supported the use of ATIES as a valid and reliable instrument to measure teachers' attitudes towards inclusive education.

The third part of the survey utilized the *Concerns About Inclusive Education Scale* (CIES) (Sharma & Desai, 2002). The CIES consists of 21 items allowing the participants to reflect their intensity of concern which can range from Extremely Concerned (4), Very Concerned (3), A Little Concerned (2), and Not at all Concerned (1). The scale yields a total score which can vary from 21 to 84 with higher scores indicating a higher degree of concern about implementing inclusive education. The scale also yields scores on four factors (Concerns about resources, Concerns about acceptance, Concerns about academic standards and Concerns about workloads). The internal consistency of the four concern factors and the total CIE scale has been reported to be adequate (Sharma & Desai, 2002). They were 0.82, 0.70, 0.84 and 0.74 for Concerns about resources (Factor I), Concerns about acceptance (Factor II), Concerns about academic standards (Factor III) and Concerns about work load (Factor IV), respectively. The coefficient alpha for the entire scale with the three parts taken in totality was 0.91.

Procedure

The survey instrument was distributed to the participants at the commencement of the subject at each of the three universities. The lecturer responsible for teaching the subject distributed the survey instrument, advising the students that their participation was completely voluntary. All students in attendance were invited to complete the survey. No time limit was given. The respondents completed the survey within 12–15 min.

Results and Discussion

Pre-Service Teachers' Attitudes Towards Inclusive Education

In order to compare Australian and Singaporean teachers' attitudes toward inclusive education, independent sample *t*-tests were computed. The results of *t*-test analysis are presented in Table 2.

A comparison of the pre-service teachers' attitudes clearly suggested that Australian teachers were significantly more in favour of including students with disabilities into regular classrooms compared to their Singaporean counterparts. A closer examination of the attitude scores revealed that Australian teachers were more positively disposed to include students with disabilities who required physical (Factor III) and social accommodation (Factor IV). A similar trend of lower degree of concern about including students with disabilities into regular schools was observed among Australian pre-service teachers. They were significantly less concerned about including students with disabilities into regular classrooms compared to the Singapore sample. The differences between Australian and Singaporean teachers' concerns were significant for all four factors (except the first factor) as well as for the total mean score.

The difference between these teachers' attitudes and concerns may be due to the prevailing level of implementation of inclusive schooling in the two countries. In Australia, inclusive education has been implemented since 1984 compared to Singapore. Lim and Nam (2000) state that there is no special education legislation in Singapore requiring inclusion of students with disabilities into inclusive classrooms. Thus, a large majority of students with disabilities predominantly receive

Table 2.
Comparison of Australian and Singaporean pre-service teachers' attitudes and concerns regarding inclusive education.

	Australian sample (<i>n</i> = 25)		Singaporean sample (<i>n</i> = 64)		Mean difference
	Mean	SD	Mean	SD	
ATIES	4.27	0.27	3.83	0.80	0.44*
ATIES-Factor I	4.19	0.88	3.82	0.96	-1.69
ATIES-Factor II	3.67	0.91	3.59	1.01	-0.33
ATIES-Factor III	4.30	0.89	3.66	1.20	-2.40*
ATIES-Factor IV	4.92	0.63	4.24	0.97	-3.25**
CIES	2.21	0.41	2.46	0.49	0.25*
CIES-Factor I	2.71	0.65	2.79	0.55	0.58
CIES-Factor II	2.30	0.56	2.63	0.63	2.26*
CIES-Factor III	1.97	0.62	2.26	0.60	2.09*
CIES-Factor IV	1.70	0.46	2.02	0.61	2.40*

p* < 0.05, *p* < 0.01.

their education in segregated settings. Few attempts, however, are made by non-governmental organisations (such as REACH ME and TEACH ME) (Lim & Nam, 2000) to include students with disabilities into regular classrooms at least for some part of the day. Thus, differences among the Australian and Singaporean teachers may partly be attributed to exposure to inclusion of the study participants. It may be possible that the Australian participants completed their studies in inclusive or "integrated" schools and this may have influenced their overall attitudes towards inclusion.

Relationship Between Background Variables and Pre-Service Teachers' Attitudes Towards Inclusive Education

In order to determine if any of the background variables may be significantly correlated with the participants' attitudes, Spearman's correlations were calculated. Only one variable "Knowledge of Disability Discrimination Act" was significantly correlated with Australian pre-service teachers' attitudes toward inclusive education (see Table 3).

In the case of Singaporean pre-service teachers, four variables were found to be significantly correlated to their attitudes towards inclusive education (see Table 3). A positive correlation between age and Singaporean pre-service teachers' attitudes suggested that the older teachers were more positive towards including students with disabilities. This finding is somewhat intriguing since a large number of studies have shown younger teachers to be more positive towards inclusion (Harasymiw & Horne, 1976; Heflin & Bullock, 1999; Miederhoff, 1995). Results in relation to the remaining three variables (disability in a close friend, training in special education and confidence in teaching students with disabilities) are easy to explain. Past research has also shown that those teachers who have close contact

Table 3.

Correlation between Australian and Singaporean pre-service teachers' mean ATIES scores and their background variables.

Variable	Australian sample (Spearman Correlation)	Singaporean sample (Spearman Correlation)
Sex	0.02	0.07
Age	0.18	0.44**
Highest educational qualification	0.32	0.17
Disability in family	0.38	0.02
Disability in close friendship	-0.25	0.35**
Training in special education	0.14	0.42**
Confidence in teaching students with disabilities	0.26	0.28*
Experience in teaching special students	0.22	0.23
Knowledge of the DDA	0.41*	Not measured

* $p < 0.05$, ** $p < 0.01$.

with persons with disabilities are more likely to have positive attitudes (Bender, Vail & Scott, 1995; Cox, 1994; Harvey & Green, 1984). Also, several studies have suggested that teachers trained in special education are more positively inclined to include students with disabilities into regular classes compared to their counterparts without any such training (Kelly, 1994; Stoler, 1992). In this study, a positive correlation was also found between training in special education and confidence in teaching students with disabilities. This suggested that such training not only has a positive impact on teachers' attitudes but it also significantly enhances their confidence in teaching in inclusive classrooms.

Relationship Between Background Variables and Pre-Service Teachers' Concerns About Inclusive Education

Results of the Spearman correlation analysis for the Australian sample revealed four variables that were significantly correlated with their concerns (see Table 4). A very high degree of negative correlation between knowledge of the Disability Discrimination Act and pre-service teachers' concerns about inclusive education was found. It suggested that those respondents who were knowledgeable of the DDA were significantly less concerned about including students with disabilities into regular schools. This could be attributed to the fact that they were also aware of all the resources that would accompany a student with a disability in the regular classroom. This finding has implications for policy makers as well as university lecturers. Both in-service and pre-service teachers should be informed about the legal basis of including students with disabilities. Such training should also inform participants about the resources that would be provided to implement inclusive education practices. Two other variables that were found to correlate significantly with Australian pre-service teachers' attitudes were the level of confidence in teaching students with

Table 4.

Correlation between Australian and Singaporean pre-service teachers' mean CIES scores and their background variables.

Variable	Australian sample (Spearman Correlation)	Singaporean sample (Spearman Correlation)
Sex	0.08	0.09
Age	-0.50**	-0.30**
Highest educational qualification	-0.075	-0.99
Disability in family	-0.21	0.16
Disability in close friendship	0.16	
Training in special education	-0.28	-0.35**
Confidence in teaching students with disabilities	0.51**	-0.22
Experience in teaching students with disabilities	-0.40*	-0.27*
Knowledge of the DDA	-0.57**	Not measured

* $p < 0.05$, ** $p < 0.01$.

disabilities and prior experience in teaching students with disabilities. This suggests that teachers who had some experience of teaching students with disabilities in school settings were less concerned about including students with disabilities into regular classrooms. It may, therefore, be useful to include a practical component in pre-service programmes where teachers are exposed to teaching students with disabilities in inclusive classrooms. This would not only enhance their confidence in teaching students with disabilities but it will also reduce their concerns about including students with a range of disabilities into inclusive classrooms since a high correlation was noted between training and confidence ($\beta = 0.70$).

In the case of Singaporean teachers, three variables were found to correlate significantly with their concerns about inclusive education (see Table 4). They were age, training in special education and experience of teaching students with disabilities. Experience of teaching students with disabilities also had a positive effect on Singaporean teachers' concerns. It seems that such exposure or teaching experience may be a useful strategy to systematically address teachers' concerns. Older pre-service teachers in both countries appeared to be less concerned about including students with disabilities into inclusive classrooms. It is difficult to explain these results. A more in-depth study needs to be conducted to explore this issue. As reported earlier, training in special education had a favourable impact on Singaporean pre-service teachers' attitudes towards inclusive education. This variable was also found to have a similar effect on these teachers' concerns about inclusive education.

This study investigated the attitudes and concerns of pre-service teachers in Australia and Singapore. It appears that the implementation of inclusion policies in both countries was somewhat reflected by the attitudes and concerns of the teachers who participated in the study. The study also identified some variables that may be relevant for policy makers and university educators in both countries when designing effective pre-service training programmes. Such programmes should not only include information about practical strategies, but also provide information about the latest legal and policy issues related to inclusive education. A longitudinal research study needs to be conducted to compare pre-service teachers' attitudes, concerns and teaching practices in cross-cultural contexts. Such research should determine if change in legal and policy framework in a country impacts on teachers' perceived attitudes and concerns about inclusive education.

Dr Umesh Sharma is a lecturer at Monash University, Melbourne, Australia. His area of research interest include inclusive education, applied behaviour analysis and cross-cultural comparisons.

Dr Jessie Ee is an Assistant Professor in the Specialised Education Academic Group at the National Institute of Education, Nanyang Technological University, Singapore. Her area of research interest include motivation, strategy instruction, learning disabilities and inclusion practices.

Dr Ishwar Desai is a lecturer at the University of Melbourne, Australia. His area of research interest include inclusive education in developing countries, curriculum modification and teacher training.

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