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Pre-service teachers' views of inclusive education: A content analysis

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Abstract
Survey-based research was conducted with pre-service teachers, from a large regional Australian university, to explore their views about inclusion and their readiness to teach in inclusive classrooms. Open-ended questions were included in the survey to glean information on the respondents' feelings and concerns about inclusion and inclusive practices. In addition, questions were framed to allow the respondents to discuss ways that the University could better prepare them as practising teachers. The responses to each of these questions were content analysed to delineate categories, and frequencies were calculated on the most salient categories. The results of this analysis are reported and comparisons are made of the views expressed by the respondents before they experience an inclusive education subject and a related practicum with those expressed after. The implications of the results for teacher education programs are considered.

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Survey-based research was conducted with pre-service teachers, from a large regional Australian university, to explore their views about inclusion and their readiness to teach in inclusive classrooms. Open-ended questions were included in the survey to glean information on the respondents' feelings and concerns about inclusion and inclusive practices. In addition, questions were framed to allow the respondents to discuss ways that the University could better prepare them as practising teachers. The responses to each of these questions were content analysed to delineate categories, and frequencies were calculated on the most salient categories. The results of this analysis are reported and comparisons are made of the views expressed by the respondents before they experience an inclusive education subject and a related practicum with those expressed after. The implications of the results for teacher education programs are considered.

As classrooms become more inclusive, major adjustments have been necessary to prepare teachers for more diverse student populations. Research findings suggest that universities (or other teacher training institutions) and their students will become pivotal in ensuring the success of inclusion (Sharma, Forlin, Loreman, & Earle, 2006; Van Laarhoven, Munk, Lynch, Bosma, & Rouse, 2007). Consequently, many universities have undergone a major pedagogical shift in recent years. One such shift is that universities are including more inclusive education content areas within their courses (Forlin, Loreman, Sharma, & Earle, 2007). However, there is a growing concern internationally about whether the preparation pre-service teachers receive for inclusion is adequate (Lancaster & Bain, 2007).

Although professional development remains a prominent approach to prepare in-service teachers for inclusive education, a greater focus has been placed on university lecturers and course designers to prepare new teachers for teaching in inclusive classrooms (Van Laarhoven, Munk, Lynch, Bosma, & Rouse, 2007). According to Nes (2000), the way in which pre-service teachers are trained though their initial course seems to play a critical role in how they employ inclusive education strategies when teaching full-time in schools. Similarly, Haugh (2003) argues that if pre-service teachers develop inclusive practices at university, then these practices will be maintained throughout their teaching careers.

Given the above argument, it is surprising that some teacher education courses offer little in the form of inclusive education and/or even fail to address key aspects of inclusion. To elaborate, many new teachers express apprehension in regards to their ability to teach students with diverse needs in mainstream classrooms and apportion blame on their preparation for inclusion (Hemmings & Weaven, 2005; Jones, 2002; Schumm & Vaughn, 1995; Scruggs & Mastropieri, 1996; Winter, 2006).

For many pre-service teachers their only exposure to the area of inclusive education is an introductory inclusive education subject included in their teacher education course (Carroll, Forlin, & Jobling, 2003). Research has shown that these introductory inclusive education subjects can have a positive influence on the attitudes and confidence of those studying these subjects (Campbell, Gilmore, & Cuskelly, 2003; Loreman & Earle, 2007; Sharma et al., 2006; Stella, Forlin & Lan, 2007). For example, Carroll et al. (2003) and Lancaster and Bain (2007) found that participation in short compulsory subjects dealing with inclusive education impacted favourably on discomfort levels, sympathy, uncertainty, fear, coping, and confidence.

Although the inclusion of compulsory inclusive education subjects has been shown to have a positive effect on the preparation of pre-service teachers, research has also shown that these findings may be limited. To exemplify, Nagata (2005) claims that a single university subject on inclusion or special education cannot adequately prepare teachers to successfully implement the various aspects of inclusion and its associated practices. Similarly, Tait and Purdie (2000) concluded that a one-year postgraduate teacher training course had very little impact on participants' feelings about disabilities specifically and inclusion more generally. Their findings support the work of Hasting and colleagues (1996) who reported that an information-based course did little to change the perceptions of pre-service teachers over a nine-week period. Two main reasons have been acknowledged for why change has not been readily forthcoming. First, some researchers claim that there is a specific body of knowledge and skills for working within inclusive classrooms and that the pre-service teacher training courses do not adequately cover these (Hodkinson, 2005; Jones, 2006). And second, newly qualified teachers do not have the necessary knowledge, skills, and attitudes to execute tasks in inclusive settings

(Forlin, 2001; Florian & Rouse, 2009). Some researchers, including Hastings et al. (1996), Kurz and Paul (2005), Nagata (2005), and Tait and Purdie (2000), have claimed that there is a need to develop a well-planned program of subjects and experiences where pre-service teachers have opportunities for collaborative endeavours that reflect what occurs in authentic school situations e.g., forging links with stakeholders such as support teachers and teacher aides.

As intimated earlier, lacking the necessary skills and understanding of inclusive classrooms can result in concerns for pre-service and newly qualified teachers. One significant concern relates to the availability of resources. To illustrate, Sharma, Forlin, and Loreman (2007), in their study of 603 pre-service teachers within Australia, Canada, Hong Kong, and Singapore, found that a lack of resources emerged as the most highly ranked concern for participants. This supports previous research in the USA by Heflin and Bullock (1999) and in Northern Ireland undertaken by Lambe and Bones (2006). All of these researchers concluded that information about resources that support inclusion needs to be prioritised and then properly covered during teacher training. Concerns about lack of resources can also be alleviated by incorporating visits to schools where inclusive classroom teachers are successfully implementing inclusive practices (Sharma et al., 2007). These visits serve a second purpose in that they allow pre-service teachers more contact with those with disabilities (Leatherman & Niemeyer, 2005). Avramidis and Norwich (2002) and Leatherman and Niemeyer (2005) emphasise that pre-service teachers need to have an early and continuous hands-on exposure to students with diverse needs. This, they argue, results in more accepting attitudes and fewer concerns when starting teaching.

Lambe and Bones (2006), who surveyed 125, and held focus group sessions with 41, pre-service teachers, nominated that one of the most concerning aspects about inclusion was classroom congestion. The pre-service teachers participating in this study felt that successful inclusion could only take place if class sizes were reduced. These same participants commented that that successful inclusion is reliant on the support of a classroom assistant. However, the pre-service teachers stated that not only do the class assistants need training, but they needed training so that they could make better use of the classroom assistants.

Chhabra, Srivastava, and Srivastava (2010) reported that a lack of prepared teaching materials was a major issue that surfaced in their study of 103 practising teachers in Botswana. Inflexible timetabling, inadequate time for planning and meetings, and a lack of specialist support were also factors reported to negatively impact on the success of inclusion.

Jordan, Schwartz, and McGhie-Richmond (2009) noted that one of the most pressing concerns towards successful inclusion is that the time available for students without a disability is taken up by those with disabilities. This supports the contention by Lambe and Bones (2006) that providing adequate attention and time management are key challenges faced by teachers.

The review of the pertinent literature suggests the need to investigate in greater depth the way in which pre-service teachers respond to the ever-evolving inclusive education milieu. In order to undertake this investigation, the current study endeavours to identify how effectively, from the eyes of pre-service teachers, a university equips them to work within an inclusive education environment. This is achieved through surveys administered at two points of time, namely, before the study of an introductory inclusive education subject and its related practicum, and

subsequent to these experiences. The pre-service teachers were asked to: (1) identify how their training could be enhanced and supported to more fully prepare them for teaching within an inclusive classroom; (2) express their views on what factors are important for inclusion to succeed and what are the most significant barriers to that success; and, (3) to identify their concerns, and preparedness, in teaching children with diverse needs.

It could be argued that inclusive education has not given much prominence within pre-service teacher education courses in Australia. In fact, one subject, in a typical four-year course (comprising 32 subjects), is the norm. Given this situation and the existence of very few recent Australian-based studies that have explored the effect of an inclusive education subject (including a practicum) on teacher trainees and attitudinal change in relation to inclusive practice, it is timely that a study is proposed.

Method

Participants

Pre-service teachers enrolled in the third year of a four-year primary teacher education course at a large Australian regional university participated in the study. These students were studying on one of two campuses, with an overall cohort size of 138. Responses to a survey were obtained from 97 students in the first phase of the study. The survey was re-administered to the same cohort four and a half months later. Useable responses from 101 students were gained during this second (and follow-up) round of data collection.

Materials

The development of the survey was informed by a literature review and an expert panel review. The survey was divided into a number of parts and used a variety of question formats e.g., Likert scales and open-ended questions. Even though the main focus of this article is the analysis of the open-ended questions, it needs to be emphasised that other sections of the survey were used in a more extensive project relating to student self-efficacy.

Open-ended questions allow for individual responses and are seen as a valid way of studying opinions and attitudes (see e.g., de Vaus 2002; Fraenkel & Wallen, 2006). As highlighted by Creswell (2002), this type of questioning is useful when the response possibilities are not always known to the researcher(s). The pertinent questions posed to the participants were:

1. How could educational preparation or training be enhanced to more fully prepare pre-service teachers for an inclusive classroom?
2. What type of support would be helpful to you as a teacher in an inclusive classroom?
3. What do you think are the most important factors for inclusion to succeed?
4. What do you think are the most significant existing barriers to inclusion succeeding?
5. What concerns do you have in regards to teaching in an inclusive classroom?
6. Do you feel you have had sufficient preparation to teach children with special needs in your classroom?

Procedure

As Rowan (1994) has emphasised, learning to teach is a complex task in which issues and concerns are progressively faced and new ones emerge over time. For this reason,

the participants were invited to complete the same survey twice to assess if the same issues and concerns emerged and if new experiences, across a five-month period, impacted on their responses. The first administration (round 1) was carried out in a lecture held at the beginning of their sixth session of study. This lecture formed part of an inclusive education subject which ran for the entire session (15 weeks) and incorporated a four-week teaching practicum in a K-6 setting. The second administration (round 2) of the survey occurred at the conclusion of the session in the final lecture of the same subject. The surveys were matched using a coding system thus maintaining the anonymity of the participants. With a few exceptions, the same students responded to both surveys. It needs to be noted that participation in both survey rounds was voluntary and the study was approved by the Human Research Ethics Committee of the participating University.

The responses to the six open-ended questions, at round 1 and round 2, were subjected to a content analysis. This form of analysis enables a researcher to "sift through large volumes of data with relative ease in a systematic fashion" (Stemler, 2001, p. 1). In this study, the categories were allowed to emerge as the analysis was conducted and is standard practice these categories were mutually exclusive (Fraenkel & Wallen, 2006). Guided by a technique reported by Hemmings (2008), a second person independently coded a random sample of about 15% of the responses to each question and across the two rounds of data collection. The level of agreement, or inter-rater reliability (or reproducibility), between the two raters was .88. An additional procedure was adopted to test the first rater's intra-rater reliability (or stability). Drawing on the same randomly selected dataset, the level of agreement was calculated to be .94.

Results of content analyses are usually presented question by question as is the case with this study. However, a secondary analysis designed to identify trends and issues between the two rounds of data collection was also conducted.

Results

The results of the content analysis are presented in a table which gives the percentage of responses fitting within a category for the two rounds of surveying. Examples of comments provided by the participants, as well as analytical commentary, follow each table.

The content analysis of the round 1 responses to the first question about how to better prepare teacher trainees for inclusive classrooms revealed six categories. This was based on 123 individual responses. The identical six categories emerged from the round 2 analysis of the responses (n=109). These categories and the respective percentages based on the round 1 and 2 total responses for each category are presented in Table 1.

Table 1
Summary analysis of responses to question 1

Category	% of round 1 total	% of round 2 total
1 Experience in schools	34.9%	48.6%
2 Studying more inclusive education subjects	18.7%	12.8%
3 Strategy training	17.1%	14.7%
4 Engaging with resources on campus	13.0%	11.0%
5 Information dissemination	11.4%	5.5%
6 Lesson planning	4.9%	7.3%

Over a third of the participants, at round 1, emphasised that their training needed to offer more experience in school-based settings. Not only were settings in

K-6 schools mentioned as valuable places to gain skills and knowledge, but many participants noted the potential value of visiting a range of school environments as a way of preparing them for inclusive teaching. The following quotations exemplify these points:

> *Each student teacher [should be] given time during their course to spend a day/week in an inclusive classroom. (Participant 107W1)*
>
> *More contact with disability classes/units on practicum. (Participant 143B1)*

Notwithstanding the number of responses about the worth of experience accrued beyond the grounds of the University, almost 20% of the participants commented that they would have liked to have studied more subjects in their course with an inclusive education focus. Moreover, about 17% identified that strategy training needed to be given greater attention in their teaching preparation. Although the bulk of these comments considered the merits of behavioural management strategies, some emphasis was placed on the merits of other strategies such as cognitive strategy instruction. A further 13% reported that they wanted to engage more with various resources in their classes on campus. Apart from participants describing how specific physical resources could be used instructively in tutorials e.g., reading machines and state-of-the-art software, some praised the significance of having professionals visit their campus and present lectures and workshops.

About one in nine of the comments highlighted the perceived importance that students give to information dissemination. Inclusive education is a very broad topic area and in a one-session subject, time constraints can sometimes mean that some topics are omitted or given little attention. Many of the responses in this category stressed the need to have more information supplied about the various forms of disability and how funding and aid support are linked with disability assessments. Responses typifying this view are presented below:

More information [needed] about different types of disabilities and how to work with the disability. (Participant 130B1)

Discuss models and scenarios. (Participant 123W1)

Information needed about how to work with a teacher's aide. (Participant 139W1)

Less than 10% of the responses made up the final category which concentrated on lesson planning techniques. Although lesson planning is nominated sometimes as a 'real chore' by students, a few of the participants underscored its worth particularly as a tool to be used when accommodating for the needs of particular students. The following response illustrates this view:

More hands on practical experience in implementing differentiated lessons. (Participant 125B1)

The ordering of these categories at round 2 followed a somewhat similar pattern to the round 1 analysis. Once again, school-based experience was recorded as the dominant response with nearly half of the comments.

Table 2 presents the results of the content analysis of the responses to the second question that dealt with the types of support viewed as helpful for inclusive teaching. Eight categories were identified in the analysis of 222 responses for round 1 and the same categories were identified in the subsequent analysis based on 172 responses.

Table 2
Summary analysis of responses to question 2

Category	% of round 1 total	% of round 2 total
1 Aide support	45.0%	32.8%
2 Support from other school colleagues	19.4%	24.4%
3 Physical resources	13.5%	22.1%
4 Programming support	6.8%	6.9%
5 Professional development programs	5.4%	11.0%

6 Parental assistance	4.5%	6.4%
7 Funding	3.2%	4.1%
8 Other	2.2%	1.2%

Support in the form of a teacher's aide was seen as the most desirable by the participants. Participant 132W1 reiterated the views of many of her colleagues when she noted 'an aide – someone who can provide the one on one time that a child with disabilities may need'. About one-fifth of the comments were recorded for the second category. And again, a human resource support was viewed as a critical part of an inclusive classroom. However, in this case, a range of different professionals were identified as valuable supports. These professionals are earmarked in the following quotations:

> *Support from other teachers in the school. (Participant 104W1)*
>
> *Principal's support. (Participant 120B1)*
>
> *Special education experts helping in the classroom. (Participant 124B1)*

A substantial number of comments about the need for physical resources were provided. However, these came, without exception, in the form of a very general remark and no specific resource or tool was mentioned. Even though the remaining five categories made up about 20% of the total comments recorded, supports such as programming assistance, professional development opportunities, parental help, and funding are worth highlighting.

Based on 172 responses, some changes were evident in the ranking given by participants of support types between rounds 1 and 2. The most prominent change was that aide support was no longer the main category and the percentage of comments had reduced by almost a half across survey rounds (45% to 23.8%). While most other categories did not change their ranking or varied in percentage terms,

support in the form of professional development was viewed in round 2 as a much more important support vehicle than it was in round 1.

A content analysis of the round 1 responses (n=152) to the third question about the factors behind the success of inclusion revealed five categories of response. Once again, as can be seen in Table 3 these same categories emerged from the round 2 analysis of a total of 174 responses.

Table 3
Summary analysis of responses to question 3

Category	% of round 1 total	% of round 2 total
1 Support, cooperation, and acceptance from others	48.0%	47.1%
2 Sound preparation and programming	26.3%	15.5%
3 Teacher qualities	16.4%	22.4
4 Adequate resources and facilities	5.3%	8.6%
5 Effective teacher training	3.9%	6.3%

Nearly half of the round 1 responses fell within the first category. The cooperation of other teachers, from parents, and even the classmates of the included students appear to be critical if inclusion is to succeed. And, this success is based on good communication and building strong relationships. The following block of comments exemplifies this category:

> *Cooperation from parents and other teachers. (Participant 119W1)*
>
> *An environment free of segregation or bias. (Participant 107W1)*
>
> *Students need to be treated as equals by the teachers so students feel they are the same. (Participant 112B1)*

Over 25% of the comments mentioned the importance that sound preparation and effective programming play in laying a foundation for successful inclusive

practice. Some of these comments emphasised the key role performed by in-service courses, especially those that concentrated on programming and evaluation skills.

Another set of responses related to the personal qualities of the teacher. Attributes such as motivation, commitment, flexibility, and patience were viewed by the participants as central to a welcoming classroom and wider school environment.

Although the vast majority of the responses tended to focus on human qualities and human resource issues, a few of the participants mentioned the part played by physical resources. To illustrate, one respondent noted:

Having access to the necessary resources. (Participant 123W1)

A few responses were grouped under the category labelled 'Effective teacher training'. The quote that follows is indicative of this category:

The education of pre-service teachers is critical. (Participant 130B1)

The second round of responses to question three varied little from those obtained at round 1. The only exception was that the category labelled 'Teacher qualities' gained a higher percentage of comments and, as a result, the category referred to as 'Sound preparation and programming' shifted to the third most prominent category. The shift in responses here decreased from about one-quarter to one-sixth.

Table 4 presents an overview of the findings of the content analysis of the fourth question that considered the most significant barriers to successful inclusion. Eight categories emerged from an analysis 153 responses at round 1 and the same categories were evident in the follow-up analysis drawing on 157 responses.

Table 4
Summary analysis of responses to question 4

Category	% of round 1 total	% of round 2 total

1 Attitudinal barriers	33.3%	38.9%
2 Inadequate teacher training	18.9%	19.7%
3 Lack of teacher enthusiasm	11.1%	14.6%
4 Insufficient physical resources	9.8%	10.2%
5 Lack of funding	9.2%	7.6%
6 Teachers being time poor	8.5%	6.4%
7 Lack of aide support	6.5%	1.3%
8 Class sizes	2.6%	1.3%

A third of the comments at found 1 concentrated on the notion of attitude and how the attitude of others, including some colleagues, parents, and students, can impact negatively on the inclusion process. The ensuing comments are representative of this view:

> *The attitudes, views and prejudices of people towards those groups in society that are often excluded. (Participant 129W1)*
>
> *Lack of understanding of children with disabilities by able-bodied students and parents. (Participant 118W1)*

Almost a fifth of the responses emphasised that teacher training either at the pre- or in-service level was deficient in some way. Participants singled out how teachers were often poorly equipped in terms of knowledge and skills and that this deficit was training-related. Interestingly, about 10% of the responses stressed that teacher confidence and even, in some cases, apathy were obstacles to successful inclusion. This point is exemplified in the following two quotations:

> *Teachers do not feel confident when teaching these children. (Participant 106W1)*
>
> *Lack of interest or will [on the teacher's part] (Participant 102W1)*

A lack of both physical resources and funding were represented in Categories 4 and 5 and about 20% of the responses fell within these two categories. Obviously without particular resources and certain funds practice can be hampered but some of

the respondents (8.6%) also indicated that being time poor as a teacher was a real barrier to giving effective instruction and providing proper support. The excerpt that follows is an example of this point:

> *Unable to give equal attention and support to other students. (Participant 135B1)*

The order of the eight categories did not alter when the second round of analysis was inspected. Further, no discernable trends were apparent in the frequency of the responses within the individual categories.

Table 5 gives a summary of the content analysis of the round 1 and 2 responses to question 5. Four categories emerged from the analysis of the 116 responses to this question. Three of these clearly showed that the respondents had genuine concerns about teaching in an inclusive classroom.

Table 5
Summary analysis of responses to question 5

Category	% of round 1 total	% of round 2 total
1 Managing time and energy	43.1%	53.9%
2 Lack of expertise	25.9%	18.3%
3 Support and resources	25.9%	26.1%
4 No concerns	5.2%	1.7%

Approximately 43% of the responses fell in category one which focused on the difficulty of managing teaching time to concerns about having enough energy. The following statements encapsulate this category:

> *Being able to provide support to every single student academically. (Participant 132W1)*
>
> *Giving all students the time and attention they require. (Participant 129W1)*
>
> *I want to be able to give all my students the attention they deserve. (Participant 126B1)*

A ‘lack of expertise’ surfaced in about a quarter of the comments pertaining to question five. It was evident from these responses that particular pre-service teachers were anxious about the skills and knowledge they brought to a classroom and, as such, were really questioning their overall competency at this relatively early stage in their teacher training. The following two quotations typify this apprehension:

> *Not confident with situations involving disabled students. (Participant 103B1)*
>
> *My abilities are not great enough to include and cater for these students. (Participant 135W1)*

The third category labelled ‘support and resources’ accounted for the same percentage of the responses to the previous category. Some of the participants expressed concerns that a lack of physical resources would create problems for them as practitioners; whereas, others commented how their nervousness would grow if they did not find adequate supports. The ensuing comments are representative of this category:

> *Lack of supports or aids. (Participant 157B1)*
>
> *Support from other teachers and access to resources. (Participant102 W1)*
>
> *Child suffering due to lack of support. (Participant 115B1)*

As a contrast, the fourth and final category ‘No concerns’ accounted for just over 5% of the responses. The clear message relayed here was that a number of the participants did not have any actual concerns about teaching in an inclusive classroom. In fact, some expressed real optimism for the challenge that lay ahead.

Table 5 also presents the results of the second round of analysis which was based on 115 responses. Several substantive changes were evident when comparing the results between the two rounds and across the same set of categories: first, the percentage of responses for Category 1 ‘Managing time and energy’ increased

considerably; and second, the category termed ‘Lack of expertise’ was less prominent.

The content analysis of the round 1 responses to the sixth and final question about preparedness to teach in inclusive classrooms revealed three categories. This was based on 95 individual responses. The identical categories emerged from the round 2 analysis drawing on 87 responses. These categories and the respective percentages based on the round 1 and 2 total responses for each category are presented in Table 6.

Table 6
Summary analysis of responses to question 6

Category	% of round 1 total	% of round 2 total
1 No	64.2%	42.5%
2 Partly	20.0%	26.4%
3 Yes	15.8%	31.0%

At the beginning of the teaching session, almost two-thirds of the participants indicated that they did not feel adequately prepared to teach children with special needs. An additional 20% only felt partly ready for this challenge. The ensuing remarks are typical of these viewpoints:

> *No, I think a lot is learnt in the classroom. (Participant 139B1)*
>
> *No, not yet. I need both practical and theoretical preparation before I will be able to do so effectively. (Participant 129W1)*
>
> *To some degree. But still a great deal of room for growth and development. (Participant 156B1)*

The analysis of the second round of responses to the final question showed that more of the participants having studied an inclusive education subject thought that they were now better prepared for teaching students with diverse needs.

Discussion

Significant numbers of the pre-service teachers surveyed in this study reported that they felt poorly prepared to teach students with diverse needs. This is not surprising on at least two fronts: (1) the pre-service teachers when primary and secondary school students would have had little experience of inclusive education; and, (2) the demands of effective teaching have increased (see, for example, Fullan, Hill, & Crévola, 2006). This means that pre-service teachers are likely to become more aware of the realities of inclusive practice after certain experiences and subsequent reflection on what this means for them.

Although the overall preparedness of the pre-service teachers increased from round 1 to round 2, by the end of their third year of university study about 70% of those surveyed indicated that they were either only partly prepared or not sufficiently prepared to teach in inclusive settings. This finding, alongside some of the other results from the data analysed, has several implications for those designing teacher education courses. First, courses need to provide an increased exposure to a range of educational settings (e.g., regular classrooms and support classes) so that pre-service teachers are better prepared for an inclusive classroom. Support for this call can be found in the work of Tait and Purdue (2000), Kurz and Paul (2005), and Sharma et al. (2007) who point out the advantages gained by working with school students particularly in mainstream classrooms. A significant challenge of having students visit school classrooms is the time and cost involved. Perhaps a way of reducing cost but allowing for the ‘visitation’ experience is to have the school classroom connected to the university tutorial or lecture room via video-conferencing. Such an experience brings together cutting-edge technologies and permits a real-time exchange between

those at both locations. The results of the study conducted by Knight, Pedersen, and Peters (2004), for example, point to how pre-service teachers' attitudes can be influenced positively through such an experience. Second, subjects dealing with inclusive education issues need to be added to course structures to permit greater exploration of content, more hands on exposure with key resources, and the development of further strategic knowledge and skills. This recommendation is in accord with the suggestion made by writers such as Nagata (2005).

The summary analysis of responses to question 5 (see Table 5) offers some insight into why there was a general lack of teaching preparedness noted by the respondents. Many of the pre-service teachers' responses during rounds 1 and 2 concentrated on how challenging it was to manage time and energy when aiming to best meet the needs of their charges. Interestingly, the round 2 comments, following a semester-long subject and an associated practicum, when compared to earlier comments indicated that such a challenge was seen as even more great. That is, the overall course experience at that time made the respondents more aware of, and clearly more concerned about, the difficulties that lay ahead for beginning teachers. This result is somewhat consistent with the findings produced by Chhabra et al. (2010) and Jordan et al. (2009).

Apart from nominating the management of time and effort as a primary concern, it was found that a substantial number of the pre-service teachers expressed concern about how they would cope if physical and human resources were not accessible. Once again, the round 2 responses, when compared with the round 1 responses, showed that being better informed about an issue (i.e, the need to draw on a range of key resources) meant that awareness heightened and more anxiety was created. Support for this line of thinking can be found in the percentage drop, across

the two rounds, for the category ‘Lack of expertise’. Put simply, the pre-service teachers felt that they had gained expertise by studying an inclusive education subject and undertaking a practicum, but that this growth in expertise led to greater tension.

It was obvious from the round 1 responses to question 2 that the pre-service teachers placed heavy reliance on the support of a teacher’s aide or assistant. However, at round 2 this reliance fell considerably. A possible reason for such a change could be that the pre-service teachers saw during their practicums how other human resource supports were integral to inclusive practice. Additionally, the worth of site-based professional development programs came more to the fore through the round 2 responses.

Given the weight of evidence from studies conducted in Australia by researchers such as Carroll et al. (2003) and Hemmings and Weaven (2005), it is not surprising that the pre-service teachers in this study reported that support, cooperation, and acceptance from others, including colleagues and parents, was clearly the most important factor for inclusion to succeed. This view and associated rating did not change from round 1 to 2. However, another factor that grew in importance across the two rounds was ‘teacher quality’. It was evident particularly in the round 2 responses that some of the respondents had experiences in schools and at university which helped them to appreciate the significant role played by the individual teacher, especially if he/she is committed to and supportive of inclusion.

Not surprisingly, a lengthy list of potential barriers to inclusion succeeding was evident in the responses tapped at rounds 1 and 2. Although most of these barriers were raised in the literature review (see, for example, Lambe and Bones, 2006; Jordan et al., 2009), it is worth noting that over 10% of the responses focused on a category labelled ‘Lack of teacher enthusiasm’. Even more striking was the finding

that approximately 20% of the comments made by the respondents pointed to an inadequacy in their teacher training as a hindrance to successful inclusion. Given that the respondents studied only one subject directly related to inclusive education, and that this was introductory in nature, an argument could be mounted that more intensive work in inclusive education at the University under investigation is required if pre-service teachers are to feel well prepared and more confident. Although only one university cohort was surveyed, the course structure for that cohort follows a very similar pattern to many other teacher education programs in Australia and therefore a question about the adequacy of preparation could be asked of those teaching these respective cohorts.

Clearly, more study is warranted to test this question or the generalisability of the results of the current study. However, some writers, including Tait and Purdie (2000), Forlin (2001), and Winter (2006) have suggested how other subjects and experiences could be linked to boost preparation and change attitudes. Even though course designers, for example, plan experiences that aim to build collaboration between pre-service teachers and school personnel, as was the case with the course at the focus of this study, the quality of the experience cannot always be assured. This was a fundamental challenge for the practicum in the course described here as many of the neophyte teachers were placed in rural sites where specialist supports were not readily visible or easily accessible. Future studies would profit from building on the results of the current study by 'tracking' pre-service teachers through an inclusive education subject and related practicum. This would allow researchers to gain a greater sense of what experiences are pivotal in pre-service teacher development. This tracking could involve interviewing at various points in time, as well as examining journal entries and blog postings, to delve into the reasons behind changes

to the attitudes and behaviour of pre-service teachers. The adoption of these tracking options would go a long way to help course designers determine how best to realise the elusive goal of adequately training pre-service teachers for inclusive education.

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