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Canadian and Australian pre-service teachers' use, confidence and success in various behaviour management strategies

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Canadian and Australian pre-service teachers' use, confidence and success in various behaviour management strategies.

Abstract

The purpose of this study was twofold; first, to identify Australian and Canadian pre-service teachers' use, confidence and success in various behaviour management strategies, and second, to identify significant differences between the two cohorts. Pooled data indicated that pre-service teachers most frequently employ low level corrective strategies, such as non-verbal body language, rather than strategies that serve to prevent student misbehaviour. The strategies pre-service teachers report most frequently employing were also those they felt most confident in. Australian pre-service teachers employ rewards significantly more, whilst Canadian pre-service teachers utilise preventative and differentiation strategies significantly more. Differences might be accounted for by the timing of pre-service teachers' school practicum. Implications for teacher education programs and future research conclude the paper.

Key words: behaviour management; pre-service teachers; Canada; Australia

1. Introduction

Student misbehaviour in schools continues to dominate as an educational issue in Western countries and in the developing world. In North America, students' lack of discipline was ranked within two of the most serious problems in the Annual Phi Delta Kappa Polls of the public's attitudes towards public schools (Lowell & Gallop, 2002). Although the evidence base is limited, there is also a growing body of research on student misbehaviour, especially in the form of bullying and violence, in Africa, Latin America and Asia (Jones, Moore, Villar-Marquez & Broadbent, 2008). Accordingly, pre-service teachers' (sometimes known as student-teachers, or trainee teachers) main concerns when teaching during practicum were around classroom management, in North America (Moore, 2003), Australia (Green & Reid, 2004; Woodcock & Reupert, in press), England (McNally, I'anson, Whewell & Wilson, 2005), Turkey (Atici, 2007), and Norway (Stephens, Kyriacou & Tønnessen, 2005). This paper aims to identify the behaviour management strategies that Australian and Canadian pre-service teachers employ, how confident they feel in using these strategies, and how successful they find these same strategies, as well as significant differences between the two cohorts. Such data can be used to inform the practicum experiences and subjects offered by teacher education institutions.

While the terms discipline, classroom management and behaviour management are often used interchangeably in the literature, here we employ the term 'classroom management' to include teachers' actions that contribute to achieving an optimal teaching and learning environment (Edwards & Watts, 2008). Classroom management includes establishing order (Emmer & Stough, 2001), building positive relationships with students (Burden, 2003), and

acknowledges the relationship between good teaching practice and behaviour management, through an active and engaging curriculum (Charles & Senter, 2008).

A considerable body of evidence demonstrates that student misbehaviour impairs students' learning, achievement and development, and impacts on teacher wellbeing and stress, in primary as well as secondary settings (Cornell & Mayer, 2010; Hastings & Bham, 2003; Ormrod, 2003). Thus, classroom management is an essential skill for pre-service and beginning teachers to acquire. Simultaneously, various studies show that pre-service teachers consider themselves inadequately trained in managing student misbehaviour. Giallo and Little (2003), in a survey based study of 54 primary teachers with less than three years experience, and 25 pre-service teachers in their final year, found that both groups felt only moderately prepared in classroom management and requested additional training in this area, a finding confirmed by other studies (Atici, 2007; Houston & Williamson, 1993; Maskan, 2007).

There are various studies that have identified the types of classroom management strategies that pre-service teachers employ, or as the case might have it, do not employ. In a small scale study, Atici (2007) interviewed nine pre-service Turkish teachers and found that most reported using less intrusive methods, such as non-verbal messages and warnings, to manage student behaviour. In North America, Tulley and Chiu (1995) analysed the written narratives of 135 pre-service primary and secondary teachers that described one effectively managed and one ineffectively managed incident involving a discipline problem. Content analysis revealed seven different strategies with the most effective being the more humanistic strategies, such as praise and approval, and the least effective being the most authoritarian, including the use of threats and warnings (Tulley & Chiu, 1995).

There are also some studies that have compared the cohorts of pre-service teachers from different countries. Stephens, Kyriacou and Tønnessen (2005) examined how 86 Norwegian and 100 English secondary pre-service teachers perceived student misbehaviour and found that overall, the Norwegian cohort was more tolerant of student misbehaviours. They conclude by suggesting that in Norway an informal approach to discipline problem based on praise and negotiation is the norm, whilst in England, pre-service teachers tend to employ formal sanctions such as detention or setting extra work. Both cohorts regarded aggressive, delinquent and anti-social behaviour as totally unacceptable.

Extending this study, some of the same researchers (Kyriacou, Avramidis, Høie, Stephens & Hultgren, 2007) compared the views of secondary, pre-service teachers from Norway and England regarding the cause and frequency of student misbehaviour, and the types of strategies commonly employed when dealing with student misbehaviour. Pooled results indicated that, from the perspectives of pre-service teachers, the major factor accounting for student misbehaviour was due to parents not instilling pro-school values in their children. In that study, pre-service teachers reported that the most frequently encountered behaviour problem to be students talking out of turn, while the most frequently employed strategy was to establish clear and consistent rules. Compared to their Norwegian counterparts, English secondary pre-service teachers at the end of their course perceived student misbehaviour as a result of poor teaching (e.g. teachers who are not skilful at keeping pupils engaged in their work) and more strongly endorsed the item "try to get the pupil engaged in doing their schoolwork with as little fuss as possible" (Kyriacou, Avramidis, Høie, Stephens & Hultgren, 2007, p. 303), indicating a major difference in philosophy.

Another important variable in classroom management is that of teacher efficacy. Teacher efficacy includes beliefs about whether an individual teacher can make a difference with students (personal teacher efficacy) and whether teachers collectively can make a difference (general teacher efficacy) (Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998). Several studies have found that pre-service teachers from different countries vary to the degree in which they believe that they are effective in their teaching, and that teacher efficacy is strongly influenced by uniquely cultural variables (as summarised by Lin, Gorrell & Taylor, 2002). For example, a survey based study found that US pre-service teachers scored significantly higher on an efficacy scale, than Taiwanese pre-service teachers, which the researchers suggest might be accounted for by cultural beliefs, such as the American emphasis on innate ability compared to the Chinese focus on persistence and effort (Lin, Gorrell & Taylor, 2002).

Thus, drawing together the research presented here, it would appear that while there are commonalities across countries there are also specific differences in the way that teachers and pre-service teachers view student misbehaviour, themselves as classroom managers, and the types of strategies that they employ. However, research to date has been limited and exists mostly in secondary settings.

This study will compare the views and self-reported behaviours of primary (elementary) pre-service teachers in Australia and Canada. Given the international context of the study, this study is informed by Alexander's (2000) concept of 'comparative pedagogy' which aims to differentiate what is universal in education from what is country specific. We draw on this notion to examine two groups of pre-service teachers, and their self-reported behaviours regarding managing student behaviour. Both Canada and Australia are geographically large

with high-density central sites and sparse rural and remote areas. Both Canada and Australia are former British controlled territories that are now fully independent and both have their own Indigenous peoples. On the other hand, Canada has a sizable French speaking population and given its locale, is perhaps more strongly influenced by the USA, than Australia. In terms of the school system, teachers in both countries work with students who have behavioural and/or emotional problems and need to accommodate their teaching to students of diverse abilities, including students who are gifted learners and others with learning difficulties (Foreman, 2008).

The comparison between two countries potentially provides cross-cultural and national understandings about the way in which different behaviour management strategies might be valued or promoted differently in two societies. If commonalities can be found, such a study will assist in making statements about behaviour management issues that are valid in more than one country, with particular implications for teacher education programs and educators. Moreover, research examining pre-service teachers' perceptions about behaviour management within an international context may also shed light on the role of factors that are context specific (for example, based on culture or teacher education institutions), with further implications for teacher educators and policy makers.

1.1 Research aims

This study aims to explore one year postgraduate primary pre-service teachers' use, confidence, and success, in various behaviour management strategies, from Canada and Australia. Specific research questions are:

i. Across both cohorts, what are the use, confidence, and success of various behaviour management strategies, or in other words:
    - What are the behaviour management strategies pre-service teachers report using?
    - How confident are pre-service teachers in using various behaviour management strategies?
    - What strategies do pre-service teachers find the most successful?

ii. What are the similarities and significant differences between the Australian and the Canadian cohorts, in terms of frequency, confidence, and success in various behaviour management strategies?

2. Method

Two cohorts of pre-service teachers from Canada and Australia were surveyed regarding their self-reported use, confidence, and success in various behaviour management strategies.

2.1 Contextual information

The Canadian cohort of this study was drawn from a one year program which prepares candidates to teach in primary-junior (JK-6) classrooms in Ontario. In the one year program, pre-service teachers spend two days a week in schools, and two days a week at the university in addition to extended teaching blocks in each semester (three to four weeks). This intensive practice teaching experience allows pre-service teachers, who are grouped in schools in teams of four-six, to make a significant contribution to, as well as learning from, the school community. The practicum provides professional opportunities to learn about and apply the range of theoretical, conceptual and procedural knowledge developed in the other courses of

the program. Importantly, pre-service teachers complete the block practicum with the same class they visit during the weekly program. This opportunity adds to the depth of the practicum, and allows pre-service teachers to develop a strong rapport with children over an extended period of time. At the start of practicum, pre-service teachers observe the class and the classroom teacher. During the third and fourth weeks, pre-service teachers begin team teaching and taking the whole class for parts of lessons. By the fifth week, pre-service teachers are expected to teach single lessons alone. The time spent teaching a whole class increases gradually. The aim of these arrangements is that when the pre-service teachers begin their block placements, they are then expected to be teaching the class for complete days and complete units of work.

Of the ten subjects offered to pre-service teachers in the Canadian cohort, all must pass a subject tilted '*Child Development and Classroom Management*' which introduces students to the main concepts of human development, learning and behaviour, within the context of individual differences and socio-cultural influences. Preventative and corrective behaviour management strategies are actively taught, as pertains to understanding and managing children's behaviour at different age levels, and according to various theoretical approaches.

The Australian cohort of this study is drawn from a one year program which prepares candidates to teach in primary schools (K-6) in New South Wales. In the one year, pre-service teachers spend an initial two weeks in schools at the beginning of their course, and then a five week block at the end of each of the two semesters. The aim of the initial two week placement in schools is to observe and gain an initial insight into the running of the schools and teaching. At the end of the first semester, the first week of the five week block practicum is spent observing lessons, the second week team teaching and taking classes as a

whole for small parts of lessons. By the third week, pre-service teachers begin teaching complete lessons to the whole class. In the last two weeks of the practicum, pre-service teachers are expected to take the whole classes for two thirds of each day. The second semester practicum five week block is similar to the first but extended in that pre-service teachers are expected to be teaching whole units of work to a class (including assessment and report writing).

The structure of the program seeks to engage students in professional aspects of teaching, including curriculum methods and classroom practice. Of the 14 subjects offered to pre-service teachers, all must pass a subject tilted '*Learning and Behaviour*' which focuses on the psychology of learners, within a developmental framework, and an emphasis on effective teaching and classroom management strategies, across a spectrum of theoretical approaches.

The behaviour management subjects offered to the Canadian and the Australian cohorts are very similar in terms of philosophy and content (based on the experience of one of the authors, who had previously taught both subjects).

2.2 Participants

Participants included a total of 309 pre-service primary teachers enrolled in a one year teacher education program at a university in a large central province of Canada, and an Australian university in a large central state of Australia. Seventeen percent of participants were male and 83% female, a similar ratio of male and female primary teachers in Canada (2006 Census) and Australia (Callan, 2004). The cohort consisted of 169 Canadian pre-service teachers at the end of their teacher training course and 140 Australian pre-service

teachers, also at the end of their teacher training course. In both courses, pre-service teachers commence their teaching program after the completion of a general undergraduate degree course.

2.3 Questionnaire

A questionnaire was developed for the purposes of this study, based on a review of the EBSCOHOST data bases, of literature between 1990 to July, 2008 (see Reupert & Woodcock, 2010, for more information). Search terms included 'behaviour/behavior management' 'school' 'teacher' 'classroom' in primary/elementary as well as secondary/high school settings. Behaviour management textbooks commonly read by pre-service teachers were also reviewed that incorporated various theoretical approaches, such as Glasser's '*Choice theory*' (Dotson & Glasser, 1998) and Canter and Canter's (1992) '*Assertive discipline*' as well as generalist texts such as Edwards and Watts' '*Classroom discipline & management*' (2008). Instructional strategies were identified when they were specifically related to behaviour management principles (e.g. Sugai, Horner & Gresham, 2002). Thus, a range of management practices, located in either primary schools, or secondary schools, or both, were identified. Given the study focus on pre-service teachers in a generalist teaching program, strategies identified from specialised institutions, such as special schools, were excluded.

On the basis of this literature review, the Survey Of Behaviour Management Practices (SOBMP) was developed by the authors to assess pre-service teachers' frequency, confidence, and success regarding various behaviour management strategies. The instrument was reviewed and pilot tested in two stages prior to the study, in order to refine and validate

the instrument. First, a group of expert colleagues in the area of classroom and behaviour management reviewed the instrument. After incorporating their feedback, the instrument was piloted on 42 Australian pre-service teachers who were invited to comment on the clarity of the strategies listed on the questionnaire and highlight any problems associated with wording.

The SOBMP included 31 five-point Likert-scale items on management strategies and participants were invited to rate their frequency use, confidence, and success of each strategy. The Likert-scale included five points ranging from 5 (extremely) through to 1 (not at all). Thus, the higher the participants' score, the more frequent/confident/successful pre-service teachers scored on a certain behaviour management strategy.

Table One here

As indicated in Table One, items were categorised into five sub-scale variables through factor analysis using principal components extraction and Varimax rotation and consisted of: (i) preventive strategies, (ii) rewards, (iii) differentiated strategies, (iv) initial corrective and (v) later corrective strategies. Preventative strategies consisted of strategies acknowledged to prevent behavioural issues from arising, such as 'establishing routines' or 'verbally acknowledged positive behaviour'. The reward subscale included items such as 'provide rewards such as stickers'. Strategies related to ways in which the curriculum could be adapted or modified to the needs of students were grouped into a subscale entitled 'differentiated strategies' for example, 'adapted the curriculum to meet a student's needs'. Strategies involved with correcting misbehaviour collapsed into two subscales, the first we entitled 'initial corrective' which involved mild or low intrusive corrective strategies such as 'moving closer to students', or 'used non-verbal language'. The other corrective subscale,

‘later corrective’, involved relatively more intrusive behavioural strategies such as ‘time-out’ and ‘behavioural contracts’. Internal reliability analyses (Cronbach’s alpha) resulted in acceptable (>.7) alpha coefficient scores of reliability for frequency, confidence, and success (see Table Two). Of the initial 31 strategies six items did not load substantially onto either of the dimensions and were deleted from subsequent analysis.

Table Two here

2.4 Procedure

After approval was provided by the relevant university committees of ethics in research, potential participants were invited to complete the survey at the end of their teacher training course (same stage of the course for both cohorts).

3. Results

Means, standard deviations, paired, and independent samples t-tests were carried out to examine overall pre-service teachers’ frequency use, confidence, and success in various management practices (see Figure 1 for a summary). Firstly, the overall paired samples t-test results will be presented followed by the independent t-test comparisons between the Canadian and Australian data sets (see Figure 2 for a summary).

3.1 Canadian and Australian data sets combined

Data relating to the overall frequency, confidence, and success across the two cohorts are summarised in Figure 1. Specific differences regarding frequency, confidence, and success, within and across each of the five groups of strategies, is also presented in this section.

Figure One here

3.1.1 Frequency

As Figure 1 indicates, the most commonly reported behaviour management strategies were initial correction strategies (M = 3.75). Initial correction strategies were reportedly used significantly more than prevention strategies ($M^1 – M^2 = .290$, $t = 7.370$, $p<. 005$), rewards ($M^1 – M^2 = .730$, $t = 11.964$, $p<. 005$), differentiation ($M^1 – M^2 = .670$, $t = 9.646$, $p<. 005$), and later correction strategies ($M^1 – M^2 = 1.930$, $t = 36.794$, $p<. 005$). More specifically, it was 'use of non-verbal body language' (M = 4.29), 'saying the student's name as a warning' (M = 4.24), and 'moved yourself closer to the student' (M = 4.23), that were most commonly reported strategies by pre-service teachers in this study. The use of reward strategies were in the lowest half of all strategies with 'providing educational rewards such as extra computer time' (M = 2.90) and 'used a school based merit system' (M = 2.97) of the least frequent items in the reward strategy sub-group. The least frequently reported strategies overall were those grouped in the later correction subscale, with the least commonly reported strategies including 'referral of student to other professionals' (M = 1.55), 'contacted the student's parents' (M = 1.55), and, 'implemented time out outside of the classroom' (M = 1.73).

3.1.2 Confidence

As can be seen in Figure 1, pre-service teachers were most confident in using initial correction strategies (M = 3.81) and prevention strategies (M = 3.80). Pre-service teachers were significantly more confident in using both initial correction strategies and prevention strategies than they were using rewards ($M^1 – M^2 = .484$, $t = 7.898$, $p<. 005$; $M^1 – M^2 = .476$, $t = 7.429$, $p<. 005$ respectively), differentiation strategies ($M^1 – M^2 = .630$, $t = 9.164$, $p<. 005$; $M^1 – M^2 = .620$, $t = 11.204$, $p<. 005$ respectively), and, later correction strategies ($M^1 – M^2 = 1.507$, $t = 26.176$, $p<. 005$; $M^1 – M^2 = 1.499$, $t = 27.073$, $p<. 005$ respectively). More specifically, it was the 'moved yourself closer to the student' (M = 4.31), 'use of non-verbal body language' (M = 4.26), 'establishing a regular routine' (M = 4.19), and, 'saying the student's name as a warning' (M = 4.18) that pre-service teachers were most confident using. The use of rewards were in the lowest half of all of the strategies with 'using a school based merit system' (M = 3.19) being the item in the reward sub-scale that pre-service teachers were least confident in. Overall, pre-service teachers were least confident in using later correction strategies, in particular, 'referral of student to other professionals' (M = 2.08), 'Implemented time out outside of the classroom' (M = 2.11), and, 'contact student's parents' (M = 2.13).

3.1.3 Success

Overall, pre-service teachers reported that preventative strategies were the most successful of all strategies when managing student behaviour (M = 3.79), as seen in Figure 1. Pre-service teachers were significantly more successful in using preventative strategies than they were in using initial corrective strategies ($M^1 – M^2 = .125$, $t = 3.555$, $p<. 005$), rewards ($M^1 – M^2 = .490$, $t = 8.173$, $p<. 005$), differentiation ($M^1 – M^2 = .274$, $t = 5.406$, $p<. 005$), and later correction strategies ($M^1 – M^2 = 1.301$, $t = 21.531$, $p<. 005$). More specifically, it was the

‘established a regular routine’ (M = 4.17), ‘verbally acknowledge positive behaviour’ (M = 4.04), ‘taught appropriate behaviour as part of a lesson’ (M = 3.93), and, ‘implemented a regular system to deal with transition’ (M = 3.84) that were the most successful strategies. The least successful strategies were those grouped as later correction strategies, with the least successful strategy being ‘Implemented timeout within the classroom’ (M = 2.19), and, ‘Implemented time out outside of the classroom’ (M = 2.31).

3.1.4 Overall frequency, confidence, and success of strategies

In regards to preventative strategies and reward strategies overall, pre-service teachers reported significantly higher success scores than they did frequency of use scores ($M^1 – M^2$ = .338, t = 8.597, p<. 01; $M^1 – M^2$ = .288, t = 6.079, p<. 01 respectively). Moreover, they reported significantly higher confidence scores than they did frequency of use scores ($M^1 – M^2$ = .346 t = 11.817, p<. 01; $M^1 – M^2$ = .310, t = 7.280, p<. 01 respectively). There was no significant difference between their confidence and success scores for preventative strategies or reward strategies. Thus, although pre-service teachers’ confidence and success scores were higher, the frequency for prevention and reward strategies was lower.

In regards to differentiated strategies pre-service teachers reported significantly higher success scores than they did frequency of use scores ($M^1 – M^2$ = .439, t = 6.104, p<. 01), and confidence scores ($M^1 – M^2$ = .333, t = 6.614, p<. 01). There was no significant difference between their confidence and frequency scores for differentiated strategies. Thus, pre-service teachers’ success of strategies was greater than their confidence and frequency of use towards differentiated strategies.

Relating to the initial correction strategies, pre-service teachers reported significantly lower success scores than they did frequency scores ($M^1 – M^2 = .106$, $t = 3.754$, $p<. 01$). Furthermore, they reported a higher confidence score than they did success score ($M^1 – M^2 = .147$, $t = 5.901$, $p<. 01$). There was no significant difference between their confidence and frequency of use scores. Thus, although pre-service teachers' confidence and frequency scores were higher, their success scores were lower.

In regards to later correction strategies, pre-service teachers reported significantly higher confidence scores than they did frequency scores ($M^1 – M^2 = .480$, $t = 9.785$, $p<. 01$). Moreover, they reported a higher success score than they did frequency score ($M^1 – M^2 = .670$, $t = 11.084$, $p<. 01$). They also reported a higher success score than confidence score ($M^1 – M^2 = .190$, $t = 4.218$, $p<. 01$). Thus, pre-service teachers reported a higher success score than confidence score, and an even lower frequency score.

3.2 Comparison data between Canadian and Australian pre-service teachers

Figure two here

Figure two shows the mean score differences between the Australian and Canadian pre-service teachers with regards to the sub-scale variables. The horizontal line shows a zero which would mean that the results did not show any differences between the Australian and Canadian pre-service teachers. Scores above the line represent higher means score for Australians over their Canadian counterparts. Below the line represents higher means for Canadians over Australian counterparts.

3.2.1 Rewards

As Figure 2 indicates, Australian pre-service teachers (M = 3.33) report using rewards more frequently than their Canadian counterparts (M = 2.82), t = 4.852, p< .001. Moreover, it is especially the whole school merit systems that Australian pre-service teachers (M = 3.41) report using more frequently than their Canadian counterparts (M = 2.46), t = 6.481, p< .001. Australian pre-service teachers (M = 3.67) are also more confident in using rewards than Canadian pre-service teachers (M = 3.08), t = 5.100, p< .001. Furthermore, again, it is the whole school merit systems that Australian pre-service teachers (M = 3.75) are more confident in using than Canadian pre-service teachers (M = 2.75), t = 5.959, p< .001. In regards to the success of using rewards as a classroom management strategy Australian pre-service teachers (M = 3.58) report being more successful in using them than Canadian pre-service teachers (M = 3.09), t = 5.000, p< .001. Again, it is particularly the whole school merit system that Australian pre-service teachers (M = 3.65) report being more successful in implementing than Canadian pre-service teachers (M = 2.75), t = 6.216, p< .001.

3.2.2 Preventative Strategies

As can be seen in Figure 2, Canadian pre-service teachers (M = 3.68) report using preventative strategies considerably more frequently than their Australian counterparts (M = 3.04), t = -6.526, p< .001. In particular Canadian pre-service teachers report that they would teach appropriate behaviour ($M^1 – M^2$ = 1.00, t = -6.263, p< .001), incorporate regular routine ($M^1 – M^2$ = .060, t = -5.012, p< .001), implemented a regular system to deal with transition ($M^1 – M^2$ = 1.00, t = -6.066, p< .001), change the seating positions of targeted students ($M^1 – M^2$ = .77, t = -4.697 p< .001) and change the whole class seating positions ($M^1 – M^2$ = 1.04, t

= -5.546, p< .001) more frequently than their Australian counterparts. Furthermore, Canadian pre-service teachers (M = 3.95) felt more confident in using preventative strategies than Australian pre-service teachers (M = 3.53), t = -5.181, p< .001. More specifically Canadian pre-service teachers were more confident in teaching appropriate behaviour ($M^1 – M^2$ = .62, t = -5.672, p< .001) and implementing transitions ($M^1 – M^2$ = .66, t = -4.740, p< .001) than the Australian pre-service teachers. In regards to the success of using preventative strategies Canadian pre-service teachers (M = 3.88) reported being more successful at implementing preventative strategies than their Australian counterparts (M = 3.62), t = -4.151, p< .001. Furthermore, it was particularly the teaching of appropriate behaviour ($M^1 – M^2$ = .49, t = -4.543, p< .001), and implementing transitions ($M^1 – M^2$ = .61, t = -4.146, p< .001) that Canadian pre-service teachers reported being more successful at.

3.2.3 Differentiation Strategies

As Figure 2 indicates, Canadian pre-service teachers (M = 3.35) report using differentiated strategies more frequently than Australian pre-service teachers (M = 2.57), t = -5.682, p< .001. Canadians particularly adapted the curriculum ($M^1 – M^2$ = .51, t = -5.253, p< .001) and differentiated the curriculum ($M^1 – M^2$ = 1.15, t = -7.784, p< .001) significantly more frequently than Australian pre-service teachers. The Canadian pre-service teachers were more confident (M = 3.35) using differentiated strategies than their counterparts (M = 2.90), t = -4.692, p< .001. In particular, Canadian pre-service teachers were more confident in differentiating the curriculum than their Australian counterparts ($M^1 – M^2$ = .73, t = -4.547, p< .001. In regards to the success of using differentiated strategies, Canadian pre-service teachers (M = 3.60) reported being more successful than Australian pre-service teachers (M = 3.29), t = -4.245, p< .001. Moreover, the Canadian pre-service teachers reported being more

successful at differentiating the curriculum than Australian pre-service teachers ($M^1 - M^2 = .74$, $t = -4.677$, $p < .001$).

3.2.4 Correction Strategies

There were no significant differences in the reported frequency use of initial or later correction strategies between Australian or Canadian pre-service teachers. Furthermore, there were no significant differences between the confidence or success in using initial or later correction strategies between the Australian pre-service teachers and their Canadian counterparts. Thus, Australian and Canadian pre-service teachers report using the correction strategies as frequently as each other, were just as confident as one another in using the corrective strategies, and were just as successful as one another in implementing the corrective strategies.

4. Discussion

In this study, the Australian and Canadian pre-service teachers most frequently report using initial corrective strategies, such as saying a student's name as a warning, or using non verbal body language. This result is aligned with other studies that have demonstrated pre-service teachers' preference from Turkey, the UK and Canada, to use corrective as opposed to preventative strategies (Atici, 2007; Bromfield, 2006; Reupert & Woodcock, 2010; Stough, Palmer & Leyva's, 1998, as cited in Emmer & Stough, 2001). However, the result extends previous work in that the pre-service teachers sampled here are not necessarily being reactive per se, because later or more intrusive corrective strategies were the least frequently

employed strategies overall. Instead, the pre-service teachers report employing more subtle forms of dealing with student misbehaviour, even if, as a whole, the frequency of employing strategies to prevent misbehaviour from occurring in the first place was significantly lower.

It is perhaps not surprising that pre-service teachers do not employ later or relatively more intrusive strategies such as 'contacting a student's parents', given their role within the classroom, as teachers in training. However, it is concerning that pre-service teachers on the whole, report using low level intrusive strategies more often than those strategies that serve to prevent students from misbehaving in the first place. Several reviews have clearly demonstrated the efficacy of prevention as opposed to correction approaches, when dealing with misbehaviour (see Bambara & Kern, 2005; De Jong, 2005; Simonsen, Fairbanks, Briesch & Sugai, 2008). The efficacy of a preventative approach is also supported by the data from pre-service teachers in this study, who found such strategies to be the most successful of all sampled strategies. Thus, even though they find preventative approaches to be most successful, they do not employ these as much as they do initial, corrective strategies. Similarly, pre-service teachers found differentiation strategies to be successful but do not employ them as frequently as initial corrective strategies. Once again, arguments have repeatedly been made that if students are provided with engaging and meaningful curriculum, behavioural issues will be minimized (Charles & Senter, 2008).

There are various possible reasons why pre-service teachers react to, rather than prevent student misbehaviour or utilise various instructional techniques to manage different learning needs. It has been argued that schools are predominately reactive and control orientated and not conducive to reflective practice (Furlong, Morrison, & Pavelski, 2000). Accordingly, pre-service teachers may not necessarily see the importance of preventative, planned practice

during practicum. Other research has shown that pre-service teachers want a step-by-step recipe like approach for dealing with student misbehaviour (Bromfield, 2006) and thus are perhaps less inclined to consider ways that they might pre-empt problems from arising, in a holistic, conceptual manner.

The data also demonstrate that the strategies that pre-service teachers report most frequently employing are also those they feel most confident in. Accordingly, they report being most confident in using low level, initial corrective strategies and least confident in employing relatively more intrusive strategies. It has been found that confidence (or lack thereof) of a certain teaching strategy is related to how often it is subsequently employed (Atay, 2007); thus further underscoring the need to prime pre-service teachers regarding the importance of prevention and differentiation as classroom management strategies and giving them opportunities to practice them effectively.

Significant differences were found between the two cohorts of teachers. The Australian pre-service teachers report using rewards more than their Canadian counterparts and subsequently found them to be more successful in managing behaviour and were more confident in their use. In comparison, the Canadian pre-service teachers report employing more preventative strategies, such as 'implementing a system to deal with transitions', and 'changing seating arrangements', than the Australian pre-service teachers. It is interesting to speculate why the Australian pre-service teachers are employing rewards more, while instead, the Canadians are using preventative approaches. It has been argued that teachers are more likely to use rewards when they believe students need to be controlled and are not to be trusted (Woolfolk, Rosoff & Hoy, 1990). Interviews with pre-service teachers regarding their perceptions towards students and the role of rewards would be necessary to clarify this result.

Additionally, Canadian pre-service teachers used more differentiation strategies, such as adapting and modifying the curriculum, and were more confident in, and report finding these strategies more successful, than their Australian counterparts. In sum then, the Canadian cohort of pre-service teachers report employing more differentiated and preventative strategies than their Australian counterparts, who instead provide reward systems in their classrooms and/or utilise the school merit system. The provision of rewards, determined by an authority figure is typically employed in teacher-centered classrooms. On the other hand, responding to student individual learning needs, and working proactively to manage an environment, is indicative of a belief that behaviour is a function of person-environment and is not the sole responsibility of a particular student (Evans, Evans & Schmid, 1989), an approach that is usually considered student-centered. Both philosophical approaches have their detractors and supporters and underline key philosophical differences regarding children's behaviour and the role of the teacher (Ellis, 2005). Such a finding is important because it potentially highlights key differences in the way that Canadian and Australian pre-service teachers view student motivation and achievement and their role as classroom managers.

The key differences found between the two cohorts might be influenced by government policies and school systems. For example, Australian pre-service teachers reported using whole school rewards systems significantly more so than their Canadian counterparts; the school wide system of rewards may not exist in Canadian schools or to a lesser extent than in Australia. An analysis of the respective school systems and educational policies, both areas outside of the boundaries of this paper, could potentially provide a more thorough rationale about some of the differences raised in this study.

Differences between the two groups might also or instead, be accounted for by the type of teacher education pre-service teachers are exposed to. The two behaviour management subjects, offered to the pre-service teachers in this study, are very similar in terms of content and both cover a broad range of theoretical approaches, including humanistic as well as behavioural. Both cohorts of students would also have completed an 'Inclusive Education' subject, before undertaking the survey. The main differences in respect to training, relates to the timing and placement of pre-service teachers' practicum. The Canadian pre-service teachers spend two days per week in schools, and two days per week at university throughout the semester, whilst the practicum for Australian pre-service teachers is in block mode, at the start of the first semester (two weeks) and at the end of each of the two semesters (five weeks). For the Australians, the block practicum experience might well serve to disjoint school and university learnings, while instead, the Canadians are encouraged to bring their school experiences back to the university, and vice-versa, reflect on theory and practice and how they two might interrelate. It has been said that schools are orientated towards immediate effectiveness whilst universities favour (and therefore assess) reflective thinking (Gravani, 2008; Mandzuk, 1997). Thus, the school-university interface inherent in the practicum for Canadian pre-service teachers might provide an opportunity to bridge the theory-practice divide, unlike the practicum experienced by Australian pre-service teachers'.

Theoretically, the comparison between Canadian and Australian pre-service teachers provides an opportunity to investigate the ways in which behaviour management might be located within two different countries. The specific differences were found, particularly in relation to Australian pre-service teachers' use of rewards, and the Canadian pre-service teachers preference for differentiation, is striking in terms of how teachers from different countries

view students and themselves as classroom managers and warrants further investigation. That both cohorts employ corrective strategies, albeit less low level corrective strategies, more so than preventative approaches confirms previous research (Atici, 2007; Bromfield, 2006; Reupert & Woodcock, 2010; Stough, Palmer & Leyva, 1998, as cited in Emmer & Stough, 2001).

The results have implications for university educators and school administrators, especially given the sampled pre-service teachers are towards the end of their teaching degree. Discussions about the efficacy of preventative and differentiation strategies need to commence earlier in a pre-service teachers university studies and/or to a greater extent. Additionally, school supervisors that explicitly model such techniques, for pre-service teachers when on practicum, need to be actively sought. Such opportunities might serve to provide opportunities for reflection and encourage pre-service teachers to work more proactively when addressing behavioural issues in classrooms. The theory-practice gap, identified as possibly contributing to the preference for Canadian pre-service teachers to use differentiation and preventative techniques more than the Australian pre-service teachers, also needs to be addressed, especially when the practicum is experienced in block mode. Links between practicum experiences and the learning undertaken at university needs to be actively fostered. In addition, school administrators need to reinforce preventative approaches in beginning teachers' induction and professional development programs and well as whole school policy documents. At the same time, given the low confidence amongst pre-service teachers in regard to later corrective strategies, administrators need to ensure that beginning teachers understand procedures such as how they might contact a student's parents or ask a student to exit their room.

Future studies might consider interviewing teachers to ascertain the reasons for why certain strategies are preferred over others. Given the reliance in the present study on self-reporting, research might also involve observing pre-service teachers in class. Further contextual information is required that compares Australian and Canadian government and school policies in terms of behaviour management. At the same time, this study did show that Canadian pre-service teachers are employing relatively more differentiation and preventative strategies than their Australian counterparts who instead favour the use of rewards. A preference across both cohorts of pre-service teachers for corrective strategies, notwithstanding low level ones, was found, with resulting implications for the need to provide meaningful learning opportunities for pre-service teachers in preventative classroom management approaches.

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