

CHAPTER 5

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CHAPTER 5

TROUBLESOME CLASSROOM BEHAVIOUR

IN

NEW SOUTH WALES SECONDARY CLASSROOMS:

PART III – DISCUSSION

5.1 Overview

This chapter presents a discussion of the results of the study described in the preceding two chapters. In order to aid in the interpretation of the data, some results presented in the previous chapter will be revisited. The discussion will address the nine research questions posed in Chapter 3. In this study, the work of Houghton et al. (1988) in the United Kingdom dealing with the extent and type of troublesome classroom behaviour reported by secondary teachers in the UK has been extended in an Australian context. The data presented adds to the extant literature dealing with troublesome classroom behaviour, most of which has been conducted at the primary school level. Moreover, the published data at the secondary school level in relation to the Australian context is particularly sparse. The findings of the present study are compared to the extant research literature in Australia and overseas, with particular reference to Houghton et al. In order to aid in the comparison of the findings of the present study and the UK study on which this research is based, an exploration of the patterns of responses is necessary even where no statistically significant differences were found between the variables under study.

5.2 The Proportion of the Class Considered Behaviourally Troublesome

In order to determine the extent of troublesome classroom behaviour in New South Wales secondary classrooms, teachers were asked to nominate the number of students in their class they considered to be behaviourally troublesome. In an average class of 21.1 ($SD = 5.85$) students, teachers nominated 4.04 of their students as being behaviourally troublesome, on average. To allow for more direct comparability across studies, the proportion of the class considered troublesome was also expressed as a percentage; troublesome students representing 20% of the class in the present study. These findings bear a remarkable resemblance to those of Houghton et al. (1988) where the mean number of students nominated as behaviourally troublesome by their teachers was almost exactly the same as in New South Wales classrooms. In the UK study teachers nominated, on average, 4.1 students from a class of 21.1 students as being troublesome, only fractionally more than their colleagues in New South Wales. When expressed as a percentage, the reported prevalence in the UK study was also 20%. [As an aside, it is interesting to note that not only was the average class size precisely the same in the two studies (21.1 students), so too was the standard deviation of the class size ($SD = 5.85$)].

While the findings from the present study replicate closely those of the UK study of Houghton et al. (1988) in relation to the proportion of the class considered troublesome, they should also be considered in relation to other relevant data dealing with the prevalence of troublesome classroom behaviour. In Chapter 2, research reporting the prevalence of behaviour problems more generally throughout childhood and adolescence was discussed. In addition, studies detailing the prevalence of disruptive or troublesome classroom behaviour were also reported. It is fair to say that there have been more studies describing the prevalence of classroom behaviour problems in the early years of schooling and in the primary years (see e.g., Chazan &

Jackson, 1971, 1974; Leung & Ho, 2001; McGee et al., 1984; Merrett & Taylor, 1994; Merrett & Wheldall, 1984; Oswald, 1995; Stephenson et al., 2000; Wheldall & Beaman, 1994; Whitmore & Bax, 1984) than in the secondary years of schooling.

While estimates of the number of children in the general population with emotional and/or behavioural problems are generally regarded to be around 10% (Mertin & Wasyluk, 1994), less is known about the proportion of children in classrooms who present as behaviourally difficult, particularly at the secondary level. It could reasonably be expected that the prevalence of troublesome classroom behaviour is higher than the incidence of diagnosed emotional or behavioural disorders given that a larger number of difficult to manage students in classrooms would either not display behaviour that was sufficiently serious to meet the criteria for a diagnosis of emotional/behavioural disorder, or may not have been diagnosed. Notwithstanding this, these students still cause disruption to the classroom.

In an unpublished study by Nicholls et al. (1991) involving 86 secondary teachers in Western Australia, teachers indicated that 13% of the class was considered behaviourally troublesome, a somewhat lower figure from that found in both the present study and in the UK study by Houghton et al. (1988). On the other hand, in an unpublished study conducted by Crawford (1993) involving five secondary schools and 212 teachers in an inner-west suburban area of Sydney, New South Wales, teachers cited, on average, 31% of the class as behaviourally troublesome. This, however, was not unexpected as the schools involved were initially identified as being more likely to have problems in terms of classroom behaviour management. This was borne out when the responses of these teachers to the question "In general terms, do you think that you spend more time on problems of order and control than you ought?" were analysed. Crawford reported an unusually high affirmative response to this question, with 76% of teachers indicating that they thought they spent more time than they ought on problems

of order and control (see below for responses in similar studies). Given the findings from the present research, and those of Houghton et al. in the UK (also see below), it would suggest that the sample in the Crawford study was particularly problematic. The findings from the present study appear to locate somewhere in the middle of these two extremes proposed by Nicholls et al. (1991) (13%) and Crawford (1993) (31%).

What is clear from the work at the primary school level and in the early years is that there is both more, and more consistent, data in relation to the proportion of the class teachers could expect to find troublesome. The studies of Merrett and Taylor (1994) and Wheldall and Merrett (1988a) in the UK, Wheldall and Beaman (1994) in New South Wales, and Oswald (1995) in South Australia in relation to the early years and primary years of schooling show that the prevalence of students perceived as troublesome in the UK (15% and 16% respectively), New South Wales (15%) and South Australia (16% by the end of primary school) is relatively consistent. The same proportion of students perceived as troublesome (15%) was also found at the primary level of schooling in Hong Kong (Leung & Ho, 2001).

The parallel secondary school work of Houghton et al. (1988) and the findings of the present study indicate that the prevalence of students perceived as troublesome in the secondary years is a little higher (20%) than in the primary years, although Ho and Leung (2002) found that the proportion of the class considered troublesome was the same at secondary school level as at primary school level in their Hong Kong study (15%). The apparent general increase in students perceived as troublesome in the secondary years could be influenced by the likely increase in antisocial behaviours of adolescents (Kazdin, 1995), most of whom will be accommodated within the regular classroom environment (Chazan, 1994; Harris et al., 1993). The presence of a sizeable minority of troublesome students in teachers' classes must surely impact on classroom teaching and the classroom environment more generally.

5.3 The Proportion of Teachers Who Think They Spend More Time Than They Ought on Problems of Classroom Order and Control

Another way of looking at the impact of having behaviourally troublesome students in the class is to ascertain whether teachers consider that they spend more time than they ought on problems of classroom order and control in the course of their classroom teaching. Logically, if teachers indicate that they do not have difficulties in this area, then we could reasonably draw the conclusion that the prevalence of classroom behaviour problems is sufficiently low as not to affect the quality of their teaching (as they perceive it). To find out if this was the case, teachers in the present study were asked to respond to the question, "In general terms, do you think that you spend more time on problems of order and control than you ought?" (referred to throughout this and the previous two chapters as Question 1). Of the 143 teachers who responded to this question in the present study, 76 or 53% answered "yes".

This figure is very similar to that found by Houghton et al. (1988) in their UK study where 55% of secondary teachers indicated that they spent more time than they thought they should on problems of order and control, and represents (in both samples) a significant proportion of teachers whose classroom teaching (according to their own assessment) is adversely affected by having to deal with the troublesome behaviour of students. In consideration of this point, it is a given that anything that distracts the teacher from the task of teaching is an adverse effect, reiterating the basic principle proposed by many educationists that classroom order and control is a necessary (but not sufficient) condition for effective learning to take place (Brophy, 1985; Rosenshine, 1971; Wheldall, 1991; Wheldall & Glynn, 1989). It is fair to say, then, given that more than one in two teachers admits to having difficulties in this area, it is clearly a state of affairs in need of amelioration.

Looking beyond the results of the present study and the work of Houghton et al. (1988), Langdon (1997) reported the results of a national survey of teachers in the

United States of America, which found that 58% of respondents overall said their lessons were regularly disrupted by student misbehaviour. When the responses of high school teachers were isolated within this larger data set, 45% indicated that their classes were disrupted as a result of problem behaviour. While not strictly seeking the same information, this finding presents a very similar view to that found by Houghton et al. (55%) and the findings of the present study (53%) where teachers were asked, "Do you consider you spend more time than you ought on problems of order and control in the classroom?". In the unpublished Australian study by Crawford (1993), and as already noted, an even higher affirmative response rate was found to the question (76%), although it was noted that the five schools in his Sydney study were targeted for investigation because of the more serious classroom behaviour management issues evident in the schools. In Victoria, Australia, in a partial replication of Houghton et al. (1988), Little (2005) also found a relatively high percentage of the 148 secondary teachers (68%) in her study considered they spent more time than they ought on problems of order and control in the classroom. The data from these two Australian studies are arguably more similar to each other than to the data from the present study and that found by Houghton et al. in the UK.

In terms of how primary teachers compare to their secondary colleagues in relation to this question, Wheldall and Merrett (1988a) found that 51% of teachers in primary classrooms thought they spent more time than they ought on problems of order and control in the classroom. Similarly, Merrett and Wheldall (1984) found in the UK that 62% of junior primary teachers said the same, as did 48% of UK pre-school (or nursery) teachers (Merrett & Taylor, 1994). Moreover, Wheldall and Beaman (1994) confirmed the earlier UK findings in an Australian study when they found 48% of primary teachers considered they spent more time than they ought on problems of order and control. Only in the small Atlantic island of St Helena was a noticeable difference

found, where only 28% of teachers thought they spent more time on problems of order and control than they ought (Jones et al., 1995). Other data from this island (e.g., Charlton, Lovemore, Essex, & Crowie, 1995), suggest that St Helena does experience a different, and less troubled, situation in terms of classroom behaviour issues (see Chapter 7).

It would appear that in the same way as secondary teachers report a larger proportion of the class as troublesome than their primary colleagues, more of them may also consider they spend more time than they ought on problems of order and control. In Hong Kong, however, secondary teachers reported that they spent less time than their primary school colleagues on classroom management (Leung & Ho, 2001). Clearly there are variations across studies.

5.4 Gender Differences in Troublesome Students

Gender differences are clearly evident in troublesome classroom behaviour, with boys accounting for a much higher proportion of troublesome students than girls. Of the 4.04 students in the present study who were considered by their teachers to be troublesome, 2.8 were boys, representing about 70% of all troublesome students. There was a high level of replication in the present study with the findings of Houghton et al. (1988) who reported that of the 4.1 students considered troublesome, 2.7 were boys (about 66%). Similarly, in secondary classes in Victoria, Australia, Little (2005) found that of the 5.3 troublesome students in class, 3.5 or 66% were boys, on average.

Moreover, in the present study, when teachers were asked to nominate the sex of the most troublesome student, teachers nominated a boy 88% of the time, a higher percentage than that found in the parallel UK study (71%). A boy was also considered the next most troublesome individual student by teachers in both the present study (70%) and by British teachers (66%) (Houghton et al., 1988). These data confirm the

prevalent view among many researchers that teachers find a boy to be the most difficult individual student in the class.

There is overwhelming agreement across the research literature that boys are the students teachers find difficult to manage (Chazan & Jackson, 1971, 1974; Crawford, 1993; Fields, 1986; Hartley, 1979, Ho & Leung, 2002; Johnson et al., 1993; McGee et al., 1984; Merrett & Wheldall, 1984, 1988; Nicholls et al., 1991; Oswald, 1995; Stevenson et al., 1985). The findings from the present study add even more weight to the proposition that boys are perceived by teachers to be the “trouble-makers” in class.

The pattern of responses found in the present secondary study is very similar to data relating to primary and early years teachers’ views of who are the most troublesome individual students in the class. In their study on nursery (or pre-school) behaviour problems, Merrett and Taylor (1994) found that 76% of teachers nominated a boy as the most troublesome student in the class, with 60% also nominating a boy as the next most troublesome student in the class. Similarly, Merrett and Wheldall (1984) found that boys were over-represented in the “especially disruptive” group of students identified by teachers in their study of the classroom behaviour problems, which junior school teachers in the UK find most troublesome. In that study, 281 boys were described as especially disruptive compared to only 111 girls. Moreover, boys tended to be higher on the lists of disruptive students indicating that teachers’ first and second (at least) choices of the most difficult students were usually boys. Again, when Wheldall and Merrett (1988a) conducted a similar study with primary school teachers, of the 4.29 children who were regarded as troublesome in a class of 27 students, 2.97 (69%) of these students were boys. In the primary school study, Wheldall and Merrett (1988a) also found boys to be the most troublesome individual students in the class. Boys were selected as the most troublesome student by 76% of teachers, and as the next most

troublesome student by 77% of teachers. These are very similar findings to those found at the secondary level and outlined above.

In their primary school study in New South Wales, Wheldall and Beaman (1994) found 91% of teachers nominated a boy as the most troublesome student in the class. Similarly, in a recent study in Hong Kong, Ho and Leung (2002) found 93% of primary teachers nominated a boy as the most disruptive student. Moreover, at the secondary school level in the same study in Hong Kong, Ho and Leung also found 71% of teachers (like Houghton et al., 1988) nominated a boy as the most troublesome individual student. The findings of the present New South Wales study were more similar to those found in the unpublished Sydney study by Crawford (1993), where 84% of the 212 secondary teachers involved nominated a boy as the most troublesome individual student.

The findings at the early years and primary stages of schooling, as well as the work at the secondary level (including the findings of the present study), confirm the widely held perception (and the extant research literature) that boys are the most problematic students throughout all stages of schooling.

5.5 The Most Troublesome and Most Frequent Troublesome Classroom Behaviours

5.5.1 *Most Troublesome Behaviour*

Turning to the *types* of classroom behaviour that New South Wales secondary teachers find troublesome, the present study confirmed that it was the trivial but persistent misbehaviours that were the main cause of disruption. This finding adds further weight to the consistent findings of other researchers in the UK, the USA, Australia, and elsewhere (including Conway et al., 1990; Crawford, 1993; Fields, 1986, 2000; Ho & Leung, 2002; Houghton et al., 1988; Johnson et al., 1993; Langdon, 1997; Leung & Ho, 2001; Little, 2005; McNamara, 1987; Merrett & Wheldall, 1984; Wheldall & Merrett, 1988), that the behaviours most disruptive of classroom order are

not the serious but low-frequency acts like physical aggression and verbal abuse, but the more innocuous, repetitive behaviours.

In the present study, clearly the most troublesome classroom behaviour for secondary teachers when the class as a whole was considered, was *talking out of turn* or TOOT (with 40% of teachers selecting this category). TOOT was followed by *idleness/slowness* (22%) and *disobedience* (11%) as the most troublesome behaviour of the class as a whole. No other categories of behaviour exceeded 10%. The next most troublesome classroom behaviour in secondary classrooms in New South Wales was *hindering other children* or HOC (23%), followed equally by *talking out of turn* and *idleness/slowness* (both 21%).

While there is overall agreement between the findings in the present study and Houghton et al. (1988) regarding the most troublesome behaviour for the class as a whole (*talking out of turn* being chosen first by 40% and 50% of teachers respectively), minor differences are evident in other respects. In the UK study, *hindering other children* or HOC was the most troublesome behaviour after TOOT (chosen by 17% of teachers), followed by *idleness/slowness*. In the present study, however, *idleness/slowness* followed TOOT as the second most (as opposed to *next most*) troublesome behaviour for the class as a whole, with a relatively higher rate of response at 22% compared to UK teachers who selected this category only 13% of the time. Whereas UK teachers selected *idleness/slowness* as the third most troublesome behaviour for the class as a whole, the teachers in the present study nominated *disobedience*, selected by 11% of teachers, compared to only 4% of teachers in the UK study. These differences may indicate that while there is broad agreement about the fact that *talking out of turn* is the clear choice of teachers as the most troublesome behaviour for the class as a whole, both in the UK and in the present Australian study there appear to be some minor differences about what teachers perceive as being problematic

behaviour after this particular behaviour has been taken into account. Australian students, from the results of the present study, would appear to be more of a problem in terms of being idle or slow to respond to the teacher's instructions and disobedient rather than being like their UK peers who tend to be more overtly disruptive, hindering other children in their class.

It may be unwise, however, to draw too many conclusions from the present study given that in a parallel but unpublished study of 86 Western Australian secondary school teachers by Nicholls et al. (1991), closer similarities to the UK data were found than to these New South Wales data. In the Western Australian study, *talking out of turn* was most frequently reported by teachers as the most troublesome behaviour for the class as a whole (58%), followed by *hindering other children* (11%). Similarly, in the unpublished study of 212 secondary teachers from inner western areas of Sydney (1993), Crawford found *talking out of turn* (46%) to be the most frequently cited troublesome behaviour for the class as a whole followed (equally) by *hindering other children* (11%), *disobedience* (11%), and *making unnecessary noise* (11%). Crawford did find, however, that *idleness/slowness* to respond became an increasing problem with students in Years 10, 11 and 12.

In the recent Victorian secondary school study, Little (2005) found a similar pattern to that found in the present study, with *talking out of turn* as the most troublesome behaviour of the class as a whole (35%), followed by *idleness* (22%), the latter figure being the same for *idleness* as in the present study. While *hindering others* (17%) ranked as the third most troublesome behaviour for the class as a whole in Little's study, *disobedience* was the third most troublesome behaviour for the class as a whole in the present study. Little also explored the differences across year level by asking teachers to consider the classroom behaviours that troubled them over junior secondary (Years 7 & 8); middle secondary (Years 9 & 10); and, upper secondary

(Years 11 & 12). While *talking out of turn* was the most troublesome classroom behaviour in Years 7 and 8 (48%) and Years 9 and 10 (33%), by Years 11 and 12 *idleness* was the most troublesome behaviour (41%). This confirms Crawford's earlier finding that *idleness* becomes an increasing problem as secondary students get older. The findings from the present study are in line with these results (to be discussed further), but tests of statistical significance showed no differences in the reporting of the most troublesome behaviour when the age of the students was taken into account. [While Crawford (1993), Houghton et al. (1988) and Little (2005) reported percentages for each of the behaviour categories used in the questionnaire they did not employ statistical tests to determine whether variations in the teacher reports across years were significantly different from each other. This may account for minor differences in conclusions being drawn from these studies.]

Having explored these minor differences, and noting that *idleness/slowness* does feature in the repertoire of behaviours that UK teachers also find problematic, these differences are probably just a matter of degree. The overwhelming agreement across all of these studies is that *talking out of turn* was, by a large margin, the most troublesome or disruptive of classroom misbehaviours for the class as a whole, and consequently the main finding to be taken from these data.

Although not cited in Houghton et al. (1988), reference to Houghton's doctoral dissertation (1988) indicates that the findings from the UK study and the present study are strikingly similar in respect of the next most troublesome classroom behaviour. *Hindering other children* was nominated 23% of the time as the first choice of teachers in both studies. In the present study, *talking out of turn* and *idleness/slowness* both followed *hindering other children* equally at 21% each. Similarly, in the UK, *talking out of turn* and *idleness/slowness* both followed *hindering other children* equally at 20% each. In summary, as far as the next most troublesome behaviour for the class as a

whole is concerned, there appear to be no differences between the present Australian study and the UK findings.

Interestingly, and in contradistinction, Crawford's (1993) unpublished study found that in Sydney inner-west schools *talking out of turn* was also the first choice of the next most troublesome behaviour for the class as a whole. Clearly, in that particular sample TOOT was a significant problem. It was also in that study (as noted earlier) that teachers recorded unusually high (76%) affirmative responses to the question, "In general terms, do you consider that you spend more time on problems of order and control than you ought?" Clearly, this group of teachers experienced a more difficult situation in terms of disruptive classroom behaviour, characterised by excessive calling out behaviour.

5.5.2 Most Frequent Troublesome Classroom Behaviour

As was the case with the most troublesome behaviour, *talking out of turn* was also the most frequent troublesome behaviour of the class as a whole, a finding common to both the UK and Australian data (49% and 47% respectively). Similarly, in both the UK and the present Australian study, *idleness/slowness* was the next most popular choice for most frequent troublesome behaviour for the class as a whole (18% and 21% respectively). While *hindering other children* also appeared to be a frequent troublesome behaviour in the UK (cited by 13% of teachers and the third most popular choice after *talking out of turn* and *idleness/slowness*), this does not appear to be the case in the present study where no other categories of behaviour were nominated at a rate of more than 10%. *Hindering other children* was regarded as a frequent troublesome classroom behaviour by only 8% of teachers in the present study. The recent Victorian study by Little (2005) provides a very similar pattern of teacher responses for the most frequent troublesome behaviours. *Talking out of turn* (37%) was the most frequent troublesome behaviour, followed by *idleness* (21%), being the same

percentage for teachers in the present study. As was the case in the Houghton et al. study (1988), Little found *hindering others* (13%) to be the third most frequent misbehaviour (also being the same percentage as found in the UK study).

In the Western Australian (unpublished) study (Nicholls et al., 1991), *hindering other children* (16%) followed *talking out of turn* (56%) as the most frequent troublesome behaviour. *Idleness/slowness* was the third choice for the most frequent troublesome classroom behaviour, being 12% of all responses. While the inner-west of Sydney (unpublished) study of Crawford (1993) confirmed that *talking out of turn* was also the most frequent troublesome classroom behaviour at the similar (to Nicholls et al. study) rate of 57%, neither *hindering other children* or *idleness/slowness* were reported by teachers in more than 10% of cases. Rather, in this case, *disobedience* (10%) followed *talking out of turn* as the most frequent troublesome classroom behaviour.

Returning to the findings of the present study, not unexpectedly, *idleness/slowness* was indicated as the next most frequent troublesome behaviour for the class as a whole by teachers overall (24%), followed by *talking out of turn* (19%) and *hindering other children* (17%). These same three behaviours were reported by UK teachers as the next most frequent behaviour, but in a slightly different order (*hindering other children*; *talking out of turn*; *idleness/slowness*), and in roughly equal proportions (around 20% each). This was also the case in the inner-west Sydney study (Crawford, 1993) where these same three behaviours were cited in the same order found by Houghton et al. (1988) and in similar frequencies (21%; 21%; 20% respectively).

5.5.3 *The Most Troublesome Behaviours of the Most Troublesome Students*

The most troublesome behaviours of the most troublesome individuals, who, as already discussed, were overwhelmingly reported to be boys, followed a similar pattern for the troublesome behaviour for the class as a whole. *Talking out of turn* was the most problematic behaviour (41%), followed by *hindering other children* (18%), and *idleness/slowness* (13%). The next most troublesome behaviour of the most troublesome student was indicated as *hindering other children*, which was selected most frequently by teachers 21% of the time, and which was the same choice teachers made for the next most troublesome behaviour of the class as a whole. It would appear that even the most difficult students present with the same problematic behaviours as their classrooms peers.

Teachers in the Houghton et al. (1988) study also found that the same behaviours, *talking out of turn* (48%), *hindering other children* (18%) and *idleness/slowness* (16%), were the most troublesome behaviours of the most troublesome individual students. In addition, Crawford's unpublished study (1993) also found that *talking out of turn* (46%) was the most troublesome behaviour of the most troublesome individual students, followed by *hindering other children* (14%). The replication of these results in the present study serves to confirm that the behaviours that teachers find both most troublesome and most frequent with the class as a whole are the same behaviours that are displayed by their most difficult students.

While the large degree of repetition of the same behaviours in response to Questions 2, 3, and 4 of the questionnaire tends to become rather tedious, there is a very clear message in the data. The three major disruptive behaviours in the secondary classroom have been identified: students *talking out of turn*; students *hindering other children*; and students being *idle or slow to respond* to the teacher's instructions. If we can assist teachers to reduce these irritating (high frequency but not particularly serious)

behaviours, then the toll on teachers in the course of their daily work would be greatly reduced. In addition, and more importantly, the opportunities for attention to instructional tasks for students would be greatly enhanced.

While the results of the present study, in relation to the UK study it has sought to replicate (Houghton et al., 1988) and to other relevant Australian work (Crawford, 1993; Little, 2005; Nicholls et al., 1991), have been examined, a broader view of the research literature demonstrates that these data confirm the findings of other researchers as well as the more extensive work that has been done at the primary school level. Ho and Leung (2002) reported studies at both the primary and secondary levels in Hong Kong based on the work of Wheldall, Merrett, and Houghton. They found that *talking out of turn* was both the most disruptive and the most frequent classroom behaviour at both primary and secondary school levels. Specifically at the primary level, TOOT was selected as the most disruptive (or troublesome) behaviour by 42% of teachers, followed by *non-attentiveness* (14%) and *forgetfulness* (10%). (Ho and Leung used many of Wheldall and Merrett's behavioural categories with additional items included – there were 15 behavioural categories in all). The same three categories were also considered to be the most frequent misbehaviours, with TOOT being the first choice of teachers (54%), followed by *non-attentiveness* (13%) and *forgetfulness*. A similar pattern emerged at the secondary level, with TOOT being both the most disruptive (30%) and the most frequent (39%) misbehaviour, followed by *non-attentiveness* (19% for both most disruptive and most frequent) and *forgetfulness* (11% and 15% for most disruptive and most frequent behaviour respectively). No other behavioural categories scored above 10%, but for secondary classes *idleness/slowness* approached 10% for both the most disruptive and most frequent behaviour. *Verbal abuse* also approached the 10% level for most disruptive behaviour at the secondary level in Hong Kong. It is clear from these data that very similar behavioural issues are evident in Hong Kong

schools, notably the pre-eminence of TOOT as a major cause of classroom disruption, adding to the weight of international literature attesting to this fact.

In the United States of America, the results of the Fourth Phi Delta Kappa Poll of Teachers' Attitudes Toward the Public Schools conducted in 1997 (Langdon, 1997), showed that the more dramatic, news-making incidences of violence and crime in schools were relatively uncommon and tended to be isolated to urban, disadvantaged schools, where incidents were also prevalent in the broader community (Fields, 2000). While not seeking to diminish the seriousness of the violence that does occur in schools from time to time [173 students have been violently killed in schools across America since 1993 (Fields, 2000)], the findings from the USA show that *talking out of turn* behaviours are very common. Teachers in the poll were asked to indicate, "About how often do each of the problems listed occur at the school where you teach?" Selecting from 18 different descriptions of misbehaviour, high school teachers indicated that *talking back to/disobeying teachers* occurred at a rate of 43%. (*Talk back to* is a sub-set only of TOOT). In contrast, teachers reported the frequency of *physical attacks on teachers or staff* only 2% of the time. Moreover, this low prevalence of the more violent misbehaviours had not increased since 1989 (Langdon, 1997). The incidence of *talking back* had also remained relatively stable over the years, with secondary teachers in 1989 indicating this behaviour occurred at the rate of 44%, and in 1984 at 43%. This would suggest that inappropriate student talk has been a consistent and considerable problem for teachers in the USA. Interestingly, elementary (primary) school teachers in that study said that students *talk back* behaviour had actually *increased* since 1984 (from 42% in 1984, to 45% in 1989, and increased to 54% in 1997) (Langdon, 1997).

Notwithstanding the media "hype" about violence in schools, teachers in the Phi Delta Kappa Poll actually reported a decrease in many of the areas of serious misbehaviour that were a cause of concern to parents and teachers (Fields, 2000). The

level of truancy, vandalism, theft of school property, sexual activity, and alcohol consumption has *dropped* since 1984, as has the theft of personal property and the selling of drugs, which had also dropped since 1989 (Langdon, 1997). It should be borne in mind, however, that the majority of these serious behaviours are likely to have occurred outside the classroom. As Fields (2000) pointed out, these findings from the United States confirmed the findings of the so-called Elton report (DES, 1989) in the UK, which concluded that:

.....while there was evidence of widespread concern among teachers about disruptive student behaviour, and instances of violent and otherwise criminal behaviour were reported, the problems which confronted most teachers were relatively minor in nature. It was the continuous nature and cumulative effect of these problems, rather than their magnitude, which irritated, frustrated, and ultimately exhausted teachers. (DES, 1989, p. 11)

Further evidence of the situation in the Australian context was provided by Conway et al. (1990) in their study of 58 randomly selected secondary schools from around New South Wales, representing all areas of the state. They also concluded that, contrary to popular opinion and political perception, the main problems faced by teachers on a daily basis were predominantly minor in nature, such as students distracting others, talking to others, inattentiveness and throwing materials. The findings from the present study add further weight to this proposition and confirm that the situation in New South Wales secondary classrooms is very similar to that which is occurring in classrooms around the western world.

While there has been more work done in this area at the primary school level (Burke et al., 1994; Fields, 1986; Johnson et al., 1993; Jones et al., 1995; Merrett & Wheldall, 1984; Wheldall & Merrett, 1988), there appears to be little or no reason to

believe that the situation in secondary schools is very different to what is occurring at the primary level. Although data from the present study suggest that there is a slightly increased prevalence in troublesome classroom behaviour in secondary classrooms, the same *types* of behaviours, their severity and frequency appear to be much the same. For example, in their parallel primary study, Wheldall and Merrett (1988a) found that *talking out of turn* was identified as both the most troublesome (47%) and the most frequent (55%) misbehaviour of the class as a whole, followed by *hindering other children* (25% and 21% respectively). In addition, *talking out of turn* was the most troublesome behaviour of the most troublesome individual student in the class (33%), again followed by *hindering other children* (27%). It is clear that the high frequency and relatively trivial misbehaviours, most notably *talking out of turn*, account for the vast majority of classroom behaviour problems faced by both primary and secondary teachers, both overseas and in Australia.

5.6 Teacher Sex and Perceptions of Troublesome Classroom Behaviour

5.6.1 *The Proportion of the Class Considered Troublesome and Teacher Sex*

When the proportion of the class considered troublesome was analysed according to the sex of the teacher, there were no statistically significant differences in the way male and female teachers reported the prevalence of troublesome classroom behaviour in their classes. Similarly, there were no differences based on teacher gender in Houghton et al. (1988) in terms of reporting the prevalence of troublesome classroom behaviour.

In order to explore similarities and differences between Houghton et al. (1988) and the present study, the detail of male and female teachers' reporting of troublesome behaviour follows. Male teachers in the present study indicated, on average, that 3.7 students in a class of 21.1 were troublesome (18.8%), whereas their female colleagues reported a slighter larger (but not statistically significant) number of 4.3 (21.7%)

troublesome students per class. While not reported in Houghton et al., reference to Houghton's doctoral dissertation (1988) indicates that in the UK study it was male teachers who nominated slightly more troublesome students (4.2) than their female peers (4.0), the converse of the case in the present study. No other studies citing prevalence data for troublesome classroom behaviour reported differences based on teacher gender. A notable variation in the present study based on the gender of the teacher (although not a statistically significant finding) was the percentage of male teachers (31%) who indicated that they actually had no troublesome students in the class at all compared with female teachers (10%).

5.6.2 Response to Question 1 and Teacher Sex

Similarly, no statistically significant sex differences were evident in the way teachers responded to Question 1 of the questionnaire in the present study. One interesting difference between the present study and Houghton et al. (1988) was the way male and female teachers responded to this key question, with more males (57%) than females (48%) responding "yes" to Question 1 in the present study. By contrast, in the UK study, more females (61%) than males (50%) answered "yes", notwithstanding the fact that male teachers nominated a slighter higher number of troublesome students in the class than their female colleagues.

5.6.3 Teacher Sex and the Sex of Troublesome Students

There were no differences between male and female teachers in terms of reporting the sex of the most troublesome student, with 88% of all female and 88% of all male teachers indicating that a boy was their most troublesome student. These findings replicate those found by Houghton et al. (1988), but teachers in the present study were even more consistent in their nomination of a boy as the most troublesome student in the class than their British counterparts who nominated a boy 71% of the

time. In both studies, boys were regarded as markedly more troublesome than girls by male and female teachers alike.

5.6.4 *Teacher Sex and the Most Troublesome and Most Frequent Behaviours of the Class as a Whole*

Talking out of turn was the most troublesome behaviour of the class as a whole for both male and female teachers. For the *next most* troublesome behaviour for the class as a whole, male teachers selected *hindering other children*, while female teachers again selected *talking out of turn* (30%). (This choice was probably made by those teachers who had not made this selection in relation to the *most* troublesome behaviour in Question 2a of the questionnaire). As was the case with the most troublesome behaviour, *talking out of turn* was the first choice of both male and female teachers in terms of the *most frequent* troublesome classroom behaviour for the class as a whole.

These findings reflect those found in the UK (Houghton et al., 1988) where both male and female teachers chose *talking out of turn* as the most troublesome and the most frequent troublesome behaviour of the class as a whole, with clearly more females than males selecting TOOT in both instances.

5.7 Teacher Age and Experience and Perceptions of Troublesome Classroom Behaviour

5.7.1 *Teacher Age and Experience and the Proportion of the Class Considered Troublesome*

There were no statistically significant differences in the number of students (or percentage of the class) teachers reported as being behaviourally troublesome when teacher age or experience was taken into account in the present study. [These variables had not been explored by Houghton et al. (1988).] Minor differences in the way teachers reported troublesome behaviour were found for teachers in the 40-49 years group who reported the highest percentage of the class as troublesome, with one quarter of the class considered troublesome (25%). Similarly, it was teachers with over ten years' experience who reported the highest percentage of the class as troublesome

(most probably the same teachers as in the 40-49 years group), notwithstanding the fact that the (small) group of teachers aged 50-59 years recorded the lowest percentage of the class considered troublesome (18%). Borg (1998) found that secondary teachers' experience was a mediating factor in the *seriousness* with which certain behaviours were viewed. As had been found by Borg and Falzon (1990), Borg (1998) argued that length of teaching experience was an important source of influence on the perceptions of seriousness of behaviour, with the more experienced teachers becoming progressively more tolerant of undesirable behaviours. The findings from the present study do not support differences in reporting in terms of prevalence (as opposed to severity) when experience is taken into account, however.

5.7.2 Response to Question 1 and Teacher Age and Experience

Bearing in mind that chi-square analysis found no statistically significant differences between teacher responses to Question 1 of the questionnaire and the age or experience of the teacher (see Chapter 4), another observation from the present study was that the more experienced teachers (those with over 10 years' experience) had a relatively higher affirmative response to Question 1 than their peers, on average. For teachers with more than 10 years' experience, 61% of teachers considered they spent too much time on problems of classroom order and control. Similarly, in terms of the impact of teacher age on the way teachers responded, it was the teachers in the two age ranges of 30-39 years and 40-49 years who had the highest levels of affirmative responses of 58% and 64% respectively.

A possible reason for the higher rates of affirmative responses for teachers aged between 30 and 49 years, and for those with over 10 years' experience (in most instances likely to be the same teachers), is that these teachers may have an expectation that, as experienced practitioners confident in their teaching skills, they just want to get on with the job of teaching and find the constant interruption to their work frustrating.

Another view may be that teachers with more experience (and of older age) may respond to classroom misbehaviour less tolerantly. Younger teachers may view the trivial misbehaviour of their students more favourably, given their memory of their own more recent experience in the classroom as students. They may not see the disruption as a threat to their authority in the same way older teachers might. This, of course, is speculation. Borg (1998) and Borg and Falzon (1990), however, argued that in their large Maltese sample of secondary teachers, it was the more experienced teachers who were *more* tolerant of behavioural misdemeanours, as already noted.

No further comparisons are possible between the UK (Houghton et al., 1988) and these Australian data as to teacher responses to Question 1 in terms of teacher age and experience. Houghton et al. do not present any analysis of teacher responses in terms of teacher age (even though they present descriptive data on the age of teachers in the description of their sample) and they did not collect separate data on teacher experience (quite reasonably as the two are highly correlated).

5.7.3 Teacher Age and Experience and the Gender of Troublesome Students

Clearly, there is little doubt that boys were consistently nominated as the most troublesome, and to a slightly lesser extent, the second most troublesome, student in the class irrespective of the age or experience of the teacher.

5.7.4 Teacher Age and Experience and the Most Troublesome and Most Frequent Behaviours of the Class as a Whole

Talking out of turn was consistently selected by teachers in the present study as the most troublesome behaviour of the class as a whole regardless of their age. While TOOT was the first choice of all teachers with both less than 5 years' experience (with these particular teachers selecting TOOT at an atypically high rate of 65%) and between 5 and 10 years' experience, for teachers with more than 10 years' experience, *idleness/slowness* to respond was cited as the most troublesome behaviour of the class

as a whole. *Talking out of turn* was, however, the first choice of teachers as the *most frequent* troublesome classroom behaviour in the present study irrespective of the age or experience of the teacher.

5.8 Subject and Year Taught and Teacher Perceptions of Troublesome Classroom Behaviour

5.8.1 *Proportion of the Class Considered Troublesome and Subject and Year Taught*

In Chapter 4, the proportion of the class considered troublesome was analysed according to the subject taught by the teacher, as well as the age of the students (classified as year taught). There were no statistically significant differences across subject or year taught in the present study in terms of the number of troublesome students in the class or the proportion of the class teachers considered troublesome.

5.8.1.1 *Subject Taught*

While there were no statistically significant relationships evident in the present study between the proportion of the class considered troublesome and the subject taught, Science teachers reported the lowest percentage of the class as troublesome at 13% (or 3.2 students) while teachers of Art/Design reported the highest, reporting 24% (or 4.7 students) of the classroom as troublesome. Teachers of English also reported relatively higher levels of troublesome behaviour with 22% of the class being troublesome (representing 5.1 students). (The smaller class size for Art/Design teachers produced the higher percentage of the class considered troublesome notwithstanding the smaller *number* of troublesome students evident in the group.)

Direct comparisons with the findings of Houghton et al. (1988) regarding subject taught are a little difficult as different subject categories were used in the two studies. For instance, foreign language teachers experienced the most difficulty in terms of the number of troublesome students in the class in the UK study where 6.3 students or 23% of the class were considered troublesome (Houghton et al.). In the present

study, given the small number of foreign language classes in the sample, these were subsumed in the cluster of subjects designated as “Other”. Further, no patterns were apparent in the two data sets in terms of what subjects accounted for both the highest and least number of troublesome students. For example, whereas New South Wales Science teachers reported the lowest numbers of troublesome students in the class, Science teachers in the UK sample reported close to the average number of troublesome students in their classes (4.3 students or 19%). No other studies reporting prevalence of troublesome classroom behaviour reported differences based on the subject being taught.

5.8.1.2 Year Taught

In terms of the relative percentages of troublesome students, when the data were analysed according to the year taught (or age of the students), the range of reported troublesome behaviour in the present study was lowest in Years 11 and 12 where teachers reported, respectively, only 14% and 12% (or 2.7 and 1.9 students respectively) of the class as troublesome and highest in Year 8 where teachers considered that 26% (or 5.1 students) of the class was troublesome. Again, these differences were not statistically significant. Perhaps troublesome behaviour is more evident in Year 8 after students have had a year to become accustomed to the mores and expectations of secondary school, remains relatively high in Year 9, and then starts a steady decline in Year 10 and thereafter. As expected, teachers of students in Year 11 and 12 reported the lowest percentages of 14% and 12% respectively. The data in the present study suggest that once settled into secondary school, students become more behaviourally troublesome in the middle years, with their more turbulent behaviour subsiding as they mature into the senior years of schooling.

The trends in these data arguably confirm perceptions of the stages when secondary students are likely to be both less, and more, troublesome. These trends

notwithstanding, one-way analyses of variance indicated that there were no statistically significant differences in the number of troublesome students (or percentage of the class considered troublesome) across year taught. Moreover, what these figures do not take into account is the fact that the most behaviourally troublesome students may well have left the school system by Year 9 or 10 and, as a result, are not represented in these figures. As these data are cross-sectional in nature (not longitudinal), care should be exercised in attributing any diminution in behaviourally troublesome student numbers naturally over time (except by virtue of natural attrition), due perhaps to a general maturation process. While this *may* be the case, these results should not be used to support such a view.

Once again, there were some differences in the pattern of troublesome students when analysed according to year taught across the UK (Houghton et al., 1988) and the present Australian data. While teachers in New South Wales classrooms reported a relatively low level of troublesome classroom behaviour in the first year of secondary school (16% and second lowest only to students in Years 11 and 12), UK teachers reported the highest rates in this first year (4.9 students or 23%). There is no evidence of an increase in troublesome behaviour in the final year of schooling in the present study as there was in the UK study (in the case of boys) (Houghton et al., 1988). No other studies reporting prevalence for troublesome classroom behaviour reported differences on the basis of the age of the students being taught.

5.8.2 Response to Question 1 and Subject and Year Taught

As was the case with teacher gender, age and experience, there were no statistically significant differences evident in the way teachers responded to Question 1 of the questionnaire in terms of the year they taught or the subject they taught.

5.8.2.1 *Subject Taught*

Notwithstanding the absence of any statistically significant differences across subjects in terms of teachers' response to Question 1, teachers of Mathematics had the lowest affirmative response rate to Question 1 (45%). This suggests that these teachers may have experienced slightly fewer classroom behaviour management problems than their colleagues, particularly the teachers of Art/Design (62%) who had the highest affirmative response rate. One may speculate as to why this may be so. Mathematics lessons (particularly at the secondary school level), by nature of the subject matter are, arguably, more structured and systematic than the creative process involved in Art/Design lessons, thereby allowing fewer opportunities for student misbehaviour. Interestingly, teachers of Mathematics also reported one of the lowest percentages of the class as troublesome (14%) and, conversely, it was teachers of Art/Design who reported the highest percentage of the class as troublesome (24%). There appears to be, not unexpectedly, some relationship between the number of students in the class (and percentage of the class) considered troublesome and whether or not teachers consider they spend more time than they should on problems of order and control. It may be that subject matter and presentation were operating as an antecedent to more appropriate classroom behaviour in the present study. Students may have found fewer opportunities to engage in troublesome classroom behaviour where lesson structure and content demanded their full attention. But, as noted above, this is speculation.

Care should also be exercised in drawing any conclusions from these data as we know that in terms of the comparability of the group, for subject taught, there was a highly significant difference between male and female respondents. Teacher gender is clearly confounded with subject taught in the present study, with many more males than females teaching maths (and science). This difference should be borne in mind when interpreting some of the results of this study. Moreover (and in converse relation to the

Australian data), Mathematics teachers in the UK study (Houghton et al., 1988) had relatively *high* levels of affirmative responses to Question 1 (66%) with Craft/Design Technology (43%) teachers and Physical Education teachers (44%) having the *lowest* rates of affirmative responses. [As already stated, comparisons with the findings of the Houghton et al. (1988) study are less useful in respect of these findings as the subject classifications in the present study varied from those used in the UK study.] Art teachers in the UK study had a rate of responding affirmatively to Question 1 which was a little lower (53%) than the average for the whole sample (55%), clearly a difference with the present study where Art teachers achieved the highest affirmative rate of responding overall (62%). As already discussed, in the UK study it was teachers of foreign languages who had the highest rate of affirmative responses to Question 1.

It would appear, therefore, as far as comparisons can be made, that there may be some differences in the way British and Australian teachers respond to the question of whether they consider they spend more time than they ought on problems of order and control when the subject they teach is taken into account. There may, in fact, be real differences in how subjects are taught in the two countries, or it may be a result of a possible gender confound as described above, resulting in the differences in rates of affirmative responding. These issues are not able to be resolved, however, in the present context as we do not have the relevant data to either confirm or refute such claims.

It was not possible to explore any similarities or differences in terms of teacher responses to Question 1 analysed by year taught with Houghton et al. (1988) as these data were not reported, which suggests (as per the convention specified in their study) that no differences in terms of this particular variable were found. Similarly, in the present study (and as previously mentioned), there were no statistically significant differences in terms of teachers' responses to Question 1 and the year they taught, but

relatively higher than average (53%) affirmative responses were evident for teachers of Year 8 and Year 10 (64% and 65% respectively) students.

5.8.3 Sex of Troublesome Students and Subject and Year Taught

Consistent with the examination of all other teacher variables in this study, boys were overwhelmingly found to be the most troublesome students in the class irrespective of the subject or year taught. In order to compare the findings in the present study with the findings from Houghton et al. (1988) and other studies that have considered these variables, patterns in the data are described below.

5.8.3.1 Subject Taught

When the data were analysed according to the subject teachers taught, generally teachers in the science/maths cluster reported lower numbers of both male and female troublesome students, but *all* teachers consistently nominated more boys than girls as troublesome across all subject areas. In summary, troublesome boys accounted for between 11% and 16% of all students in the class depending on the subject being taught, while troublesome girls accounted for only 2% to 8% of all students in the class. Houghton et al. (1988) reported the mean number of troublesome students per class according to subject taught broken down by sex of the student. While troublesome boys generally exceeded the number of troublesome girls in the class there is a degree of variability. For instance, in Science and Physical Education classes there were virtually the same mean number (or the precisely the same mean number in the case of P.E.) of troublesome girls as troublesome boys in the classes; 2.1 troublesome girls compared to 2.2 troublesome boys for Science classes and 2.1 troublesome girls and 2.1 troublesome boys in Physical Education classes. In terms of percentages across all faculty areas troublesome girls accounted for between 4% and 10% of the class, whereas troublesome boys accounted for between 8% and 18% of the class in the UK study (these figures have been deduced from the data presented in Houghton et al., 1988).

The data from the present study is even more compelling than that found in the UK study in terms of boys being the most troublesome students in the class when analysed according to subject taught. In the Australian data presented earlier in Chapter 4 there is not one instance where girls were considered equally troublesome as boys in any subject area.

5.8.3.2 *Year Taught*

Similarly, when the data were analysed according to the age of the students (or year taught) the same pattern emerged. Boys were consistently nominated in larger proportions than girls as the most troublesome students in the class from Year 7 (first year of secondary school in New South Wales) onwards. Troublesome classroom behaviour appears to peak for both boys and girls in Year 8, with steady declines commencing in Year 9 for girls and in Year 10 for boys. As reported in Chapter 4, by the time students in this sample reached Year 12, the troublesome student in the class was just as likely to be a girl as a boy. So while boys, were nominated more frequently than girls throughout most of the secondary years there does appear to be some alleviation to this pattern (unlike the analysis of subject taught) by the end of schooling. Once again, cautions about sample size and the cross-sectional nature of this study should limit any conclusions being drawn here. Ho and Leung (2002) did, however, present data relating to the rising incidence in problematic behaviours in girls in Hong Kong as secondary schooling advanced which may reflect a similar trend to that occurring in the present study.

5.8.4 Most Troublesome and Most Frequent Troublesome Behaviour of the Class as a Whole and the Subject and Year Taught

Variations in teacher reporting of most troublesome and most frequent misbehaviours were not sufficiently large to produce a statistically significant difference between the years taught or between subjects taught in the present study. Detail on fluctuations in the data (as opposed to true differences) is included here to aid the comparative discussion with other studies.

All teachers (except Mathematics teachers) indicated that *talking out of turn* was the most troublesome behaviour of the class as a whole, but Mathematics teachers found *idleness/slowness* to respond to be the most troublesome behaviour when considering the class as a whole. In similar vein, *talking out of turn* was the prominent misbehaviour reported by teachers across all years taught, with the exception of teachers of Year 11 and 12 students (analysed together for the purposes of chi-square analysis), who indicated that *idleness/slowness* was more problematic than TOOT.

Talking out of turn was the first choice of teachers as the *most frequent* troublesome classroom behaviour regardless of whether the data were analysed according to the subject they taught or the year they taught. The only minor exception to this was for teachers of Year 11 and 12 students (again analysed together for the purposes of chi-square analysis) who indicated that *idleness/slowness* was an equally frequent misbehaviour as *talking out of turn*.

As mentioned earlier in this chapter, Crawford (1993) also found that *idleness/slowness* to respond became an increasing problem with students in Years 10, 11 and 12, as did Little (2005) when she explored the differences across year levels for junior, middle and upper secondary school student misbehaviours. In the latter study, while *talking out of turn* was the most troublesome classroom behaviour in Years 7 and 8 (48%) and Years 9 and 10 (33%), by Years 11 and 12, *idleness* was the most

troublesome behaviour (41%). This confirms the trends in both the present study and in Crawford's study that *idleness* becomes an increasing problem in the senior years of schooling (although there were no statistically significant differences across years in the present study), taking over from *talking out of turn* as the most troublesome classroom behaviour.

5.9 Differential Reporting of Troublesome Students

This part of the discussion deals with the issue of whether there were any measurable variations in the perceptions of teachers who said they spent more time than they ought on problems of order and control, or who reported a higher proportion of troublesome students in the class. As would be expected, there was a highly statistically significant difference between the *low incidence* and *moderate-high* incidence groups in terms of the number of students in the class considered troublesome (and the corresponding percentage). On average, teachers in the low incidence group indicated that fewer than one student (0.71 or 3%) in the class was troublesome, whereas this figure rose dramatically to 6 students (or 30% of the class) for the moderate-high incidence group. This confirms that the dichotomous variable identified a major difference between groups.

Similarly, if one considers whether there were variations evident between those teachers who answered "yes" to Question 1 as opposed to those who answered "no" in terms of the percentage of the class they consider troublesome, a highly significant difference was found between the two groups, with approximately 10% of the class being considered problematic for the group who answered "no" compared to 30% of the class for teachers who responded "yes". Moreover, 87% of the teachers who responded "yes" to Question 1 also reported having moderate-high incidence troublesome behaviour. While it may seem rather self-evident that teachers who say they spend more time than they ought on matters of order and control also nominate a higher percentage

of the class as being troublesome, it is worth noting that by posing this simple question (Question 1 of the questionnaire) to teachers, those teachers who experience more difficulties in terms of classroom behaviour management are readily (self) identified. In terms of identifying those teachers who could benefit from being given more support in terms of professional development, for example, this simple question would appear to have a degree of validity and utility.

Reflecting the findings of the broader study presented to date, there were no differences in the way teachers reported troublesome classroom behaviour (prevalence or typology) when the sex of the teacher, their age and experience, the subject they taught or the year they taught were taken into account. These teacher variables have not been found to have an influence on the way teachers report troublesome classroom behaviour in the present study.

As was the case in the general analysis of the data, boys were consistently (and overwhelmingly) nominated as the most troublesome individual student in the class regardless of whether teachers were experiencing low incidence (89% selected a boy) or moderate-high incidence (88% selected a boy) troublesome classroom behaviour. Similarly, regardless of whether teachers experienced low incidence or moderate-high incidence troublesome classroom behaviour or responded “yes” or “no” to Question 1, the types of behaviours they found to be both most troublesome and most frequent were the same. *Talking out of turn* was the first choice of teachers regardless of whether they responded “yes” or “no” to Question 1 or whether they had low or moderate-high incidence troublesome classroom behaviour, followed by *idleness/slowness to respond* in all cases. This pattern of responses follows the findings from the general analysis of the data in the present study.

There are minor differences, however, if the findings are looked at in more detail. The more problematic behaviours such as *verbal abuse* and *physical aggression*

do appear in higher (but still low) percentages in the moderate-high incidence group. Teachers who reported a moderate-high incidence of troublesome classroom behaviour cited *verbal abuse* and *physical aggression* as the most troublesome behaviours 6% and 2% of the time respectively. In contrast, their colleagues who reported a low incidence of troublesome classroom behaviour indicated *no* cases of either *verbal abuse* or *physical aggression* at all. Moreover, 6% of teachers who experienced moderate-high incidence troublesome behaviour selected *verbal abuse* as the most *frequent* troublesome behaviour.

Similarly, for teachers who responded “yes” to Question 1, *verbal abuse* and *physical aggression* were cited by teachers as the most troublesome behaviour at the rate of 7% and 3% respectively, whereas there were *no* instances reported for teachers who responded “no” to Question 1. *Verbal abuse* was also cited as the most *frequent* troublesome behaviour by 7% of teachers who answered “yes” to Question 1, while no teachers who responded to this question negatively selected this category of behaviour. While these minor differences should not be over-stated, it is worth noting that more serious misbehaviours were reported by the teachers who were experiencing more problems with classroom order and control, thereby suggesting, in this sample at least, that there may well be some differences in the characteristics of students or in the interactions between teachers and students in the classes of these teachers.

When the behaviour of the most troublesome *individual* student (most typically a boy as previously discussed) was examined in relation to low/moderate-high incidence troublesome behaviour, *talking out of turn* was again the most frequently selected behaviour for *both* groups (52% and 41% respectively). A very similar pattern of responses was evident for teachers who responded “yes” to Question 1 (41%) and those who answered “no” (42%), both groups having selected TOOT as the most troublesome behaviour of the most troublesome student. Again there were some subtle

differences here between the two groups. *Verbal abuse* was selected by 11% of teachers who experienced moderate-high incidence troublesome behaviour. Similarly, teachers who responded “yes” to Question 1 reported *verbal abuse* as being the most troublesome behaviour of the most troublesome student 13% of the time (being the third highest category of behaviour selected after TOOT and HOC). Again, their peers who responded “no” to Question 1 did not cite *verbal abuse* as a problematic behaviour at all. Five per cent (5%) of teachers in the moderate-high incidence group also reported *physical aggression* as a troublesome behaviour of the most troublesome student, as did teachers who responded “yes” to Question 1. Neither of the groups who answered “no” to Question 1 or who had low incidence troublesome behaviour reported a single instance of *physical aggression* as being a troublesome behaviour of the most troublesome student.

It would seem from these data that *verbal abuse*, and to a lesser extent, *physical aggression* were behaviours that were evident (to a limited extent at least) in the classrooms of those teachers who, by their own reporting, were having more problems with order and control in the classroom. Caution in drawing conclusions should be exercised, however, as these results may simply be due to an idiosyncratic mix of students, with the more difficult students in the sample being in these particular classes. It must also be remembered that these differences are relatively minor as *talking out of turn* was consistently indicated as the main offender in terms of classroom behaviour problems across the board. It could further be argued that *verbal abuse* is a more extreme form of *talking out of turn* for some of the most troublesome students in the class. It is clear, then, that if teachers can learn to manage TOOT behaviour, to stop students from interfering with other students (HOC), and get them to get on with what they are meant to be doing more quickly, they would be more effective, their jobs would be made much easier and, as a consequence, less stressful.

5.10 Troublesome Classroom Behaviour and Teacher Stress

Turning specifically to the question of teacher stress, the results of the present study indicated a close relationship between an elevated stress score and those teachers who experienced more difficulties managing classroom behaviour. Overall teachers reported a mean stress score falling in the range between a mild level (30 points) and a moderate level (45 points) of stress but is clearly closer to moderate. There were no differences between the stress levels reported by male and female teachers in the present study, nor were there any differences when the variables of teacher age or experience, the subject they taught or the year they taught were taken into account.

Differences in stress levels experienced by teachers were evident, however, when the data were analysed according to the teachers' responses to Question 1. Those teachers who considered that they spent more time than they ought on problems of order and control experienced statistically significant higher stress scores, on average, than their colleagues who responded in the negative. More highly significant differences were evident when the data were analysed by the low incidence/moderate-high incidence troublesome classroom behaviour variable. Teachers who reported a low incidence of troublesome behaviour had a significantly lower mean stress than their colleagues who reported more than 10% of the class as being troublesome.

The key finding of the present study that teachers who experience more difficulties in terms of classroom behaviour management also report statistically significant higher stress levels confirms the view of many researchers (Boyle et al., 1995; Brenner et al., 1985; Greene et al., 1997; Kyriacou, 1987; Kyriacou, 2001) that classroom behaviour problems are a key stressor for teachers. In the early work in the teacher stress research literature, Kyriacou identified four orthogonal factors as sources of teacher stress, one of which was "pupil misbehaviour". Subsequent studies emphasised only two: student behaviour and workload/time pressure being the key

factors in the teacher stress cycle (Abel & Sewell, 1999; Boyle et al., 1995). Others (Greene et al., 1997) went further and argued that interaction problems with students were “the most significant and universal of teaching stressors” (p. 240). The results of the present study certainly confirm that troublesome classroom behaviour has a differential effect on the stress levels of teachers. Moreover, the large proportion of teachers in this and other studies who think they spend more time than they should on problems of order and control in the classroom is further evidence of the frustration of teachers who, while dealing with the constant disruption of relatively trivial but high frequency student misbehaviour, cannot get on with their principal instructional function. Elevated stress levels in teachers appear to be the result.

5.11 Conclusion

In conclusion, secondary teachers in New South Wales who participated in this study found 20% of the class to be behaviourally troublesome, on average. Just over half of the teachers involved in the study (53%) indicated that they thought they spent more time than they ought on problems of order and control in the classroom. The vast majority of teachers nominated a boy as being the most troublesome *individual* student in the class, and boys generally were nominated much more frequently than girls as being the most troublesome students in the class. *Talking out of turn* was consistently nominated as the *most troublesome* and the *most frequent* troublesome classroom behaviour of both the class as a whole and of the most troublesome *individual* students. *Hindering other children* and *idleness/slowness* to respond were other commonly nominated misbehaviours.

These findings replicate closely those found by Houghton et al. (1988) and highlight the fact that if teachers can learn to manage these high frequency but relatively trivial misbehaviours, the classroom environment would become both more effective and less stressful.

Teachers who indicated that they spent more time than they thought they should on problems of order experienced larger numbers of troublesome students in their classes, with 87% of these teachers indicating that more than 10% of the class was behaviourally troublesome. Teachers of the more behaviourally challenging groups (indicated by larger numbers of troublesome students) still found the same behaviours (i.e., TOOT, HOC, and *idleness/slowness*) to be the problematic ones and the same students, that is, boys, being the main offenders.

Notwithstanding the fact that teachers who experienced more difficulty with classroom behaviour reported more instances of the more serious behaviours like *verbal abuse* and *physical aggression*, there would appear to be few *major* differences (in terms of reported behaviour problems) in the perceptions of teachers who perceive themselves as having more problems with order and control, and those who do not. In general, teachers in the present study experienced mild to moderate stress associated with their classroom teaching. Significantly higher stress scores were, however, reported by teachers who indicated that they thought they spent more time than they ought on matters of order and control, and by those who nominated more than 10% of the class as being behaviourally troublesome. Further investigations into any variations in the perceptions of teachers who have more difficulties with classroom behaviour compared to those who do not are explored in Chapter 11. In that chapter, the inter-relationships between the teacher report data presented here, the classroom environment data presented in Chapter 6, and the observational data relating to natural rates of teacher approval and disapproval and student on-task behaviour presented in Chapter 8, are analysed and discussed further.

In closing, it is timely to consider the effect of daily disruption in classrooms as a result of troublesome classroom behaviour. Student engagement (particularly that of boys) and the problems of retention of teachers in the teaching profession are frequently

raised in the media and elsewhere as issues of concern. Teachers cite problems of student discipline as being one reason they leave the profession and pursue other employment. Jensen et al. (2004) stated that:

behavioural excesses of students with externalising disorders are a major factor in poor retention rates for new teachers while the students themselves have the highest school drop out rates and experience some of the most restrictive educational settings of any disability.

(p. 67)

Similarly, in the Sydney Morning Herald weekend edition newspaper in December 2005, the president of the New South Wales Teachers' Federation, Maree O'Halloran, was reported as having stated that:

almost one third of qualified teachers work in other industries, with many having left after just three to five years fronting a class. The most common reason for itchy feet is 'difficulties with classroom discipline'. (Thompson, 2005, p. 18)

The economic cost of losing students to learning and teachers to the profession represent serious impacts of current approaches to classroom behaviour management.

CHAPTER 6

STUDENT PERCEPTIONS OF THE CLASSROOM ENVIRONMENT IN NEW SOUTH WALES SECONDARY CLASSROOMS

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CHAPTER 6

STUDENT PERCEPTIONS OF THE CLASSROOM ENVIRONMENT

IN

NEW SOUTH WALES SECONDARY CLASSROOMS

6.1 Overview

In this chapter, a study of student perceptions of the classroom environment in 79 New South Wales secondary classes is presented. The sample comprises a sub-set of the classes of teachers who participated in the larger troublesome classroom behaviour study reported in Chapters 3-5. The data in both the current study and the study presented in the preceding chapters are self-report data, and can therefore be seen as providing *perceptions* of aspects of the same classrooms: for the students these related to the classroom environment; for the teachers these related to the extent of troublesome classroom behaviour in their classes, as well as the stress associated with managing student behaviour. Following a description of the findings according to teacher variables, relationships between the perceptions of teachers and students are explored.

6.2 Background

In this thesis so far, various teacher perceptions of student classroom behaviour have been explored, including the possible stress experienced by teachers in managing student behaviour. Up to this point, however, little or no consideration has been given to the perceptions of the students themselves, and how they view their teachers and the classroom environments they inhabit. In this chapter, the focus is on student perceptions of the classroom environment and how these perceptions relate to the expressed views of their teachers.

While it is outside the scope of this thesis to present a systematic review of the extensive literature relating to the classroom environment, it is important to provide a context for the findings of the present study and how it relates to the general thrust of the thesis as a whole. Student perceptions of the classroom environment refer to the ways in which students view the emotional or psychological 'climate' of the classroom, whether they find it supportive or repressive, stimulating or stultifying, encouraging or aversive, and so on. There is a wealth of research into, and academic commentary on, the role of the classroom environment in student learning, and its measurement.

Much of the extensive work on classroom environment research has been influenced by the early work of Moos and his colleagues (see e.g., 1974, 1979). Described by Trickett, Leone, Fink, and Braaten (1993) as one of the most productive research initiatives in environmental assessment, the social ecological approach conceptualised by Moos and his colleagues was developed in a variety of environments including hospital wards, school classrooms, prisons, military companies, university residences, residential settings for the elderly, and work milieus (Fisher & Kent, 1998; Trickett et al., 1993). Moos (as cited by Fisher & Kent, 1998) found that the same three general categories can be used in conceptualising diverse psychosocial environments. These are: (a) *Relationship Dimensions*, which identify the nature and intensity of personal relationships within the environment, and assess the extent to which they support and help each other; (b) *Personal Development Dimensions*, which assess the basic directions along which personal growth and self enhancement occur; and (c) *System Maintenance and Change Dimensions*, which involve the extent to which the environment is orderly, clear in expectations, maintains control and is responsive to change (Fisher & Kent, 1998; Fraser, 1990).

Fraser (1998) argued that the variety of scales embedded within a range of instruments to measure the classroom environment can all be categorised into one of the

three dimensions of Moos' schema. As such, Fraser suggested that there is a commonality of conceptual frameworks underpinning the assessment of the classroom environment. He argued that his own measure, the *Individualised Classroom Environment Questionnaire (ICEQ)*, the instrument used in the present study, covers the three general categories of dimensions identified by Moos for conceptualising all human environments (Fraser, 1990).

In a review of the literature relating to classroom environment, MacAulay (1990) presented an adapted model of Moos' earlier conceptual framework. The model incorporated four interacting domains representing the determinants of classroom environment, namely (a) *Structure and Organisation*, (b) *Cognitive Processes*, (c) *Student Characteristics*, and (d) *Teacher Characteristics*.

Taking these four domains in turn, and commencing with *Structure and Organisation*, MacAulay (1990) argued for the importance of classrooms high in order and organisation leading to better student outcomes, especially for boys. Clear and structured rules, those that are "announced, demonstrated, enforced and routinized" (MacAuley, 1990, p. 242), as well as appropriate classroom seating arrangements and active participation in the learning process were identified as important contributors to the quality of the classroom environment in terms of *Structure and Organisation*. In similar vein, Ridley and Walther (1995) found that clearly defined rules and structure are common desires of students and teachers alike. Moreover, MacAuley asserted:

The significance of a classroom climate which emphasises structure, order, rule clarity and organization cannot be underestimated in school systems which are increasingly burdened with students' inability to conform to socially acceptable norms of behavior. (1990, p. 243)

In terms of *Cognitive Processes* (as opposed to cognitive outcomes), MacAulay (1990) focused on the role of student attention and highlighted the evidence for the

effectiveness of self-management strategies for students with attention problems. As she pointed out, much of what has emerged from the research literature as being effective for students with attention deficit problems is considered effective for implementation in all classroom environments. Structured classrooms, but those with a degree of flexibility so that students can manage their own tasks and behaviour, small group instruction (or on a one-to-one basis), self-contained classrooms with few extraneous distractions, and cognitive programs teaching self management or monitoring strategies, were all seen as important factors in the development of self-control and task engagement.

The fostering and development of an internal locus of control in students, rather than control being imposed by authoritarian means or external force is seen as being critical in terms of creating favourable classroom environments (MacAulay, 1990). MacAulay argued that one reason for the effectiveness of self-monitoring programs (see, e.g., Wheldall & Panagopoulou-Stamatelatou, 1989) may be that they “change passive learners into active learners who view themselves as being in control of their attention” (1990, p. 244). As a consequence of the implementation of research-based approaches to student attendance and participation, a classroom environment focused on “autonomy, individual accountability and cooperation would thus emerge....” (MacAulay, 1990, p. 244).

Turning to the role of *Student Characteristics* in the model proposed by MacAulay, there is a good deal of research evidence that points to the (understandable) fact that students typically prefer positive environments. A considerable amount of the research in the classroom environment area has focused on the differences between *actual* and *preferred* classroom environments (Fraser, 1990; Fraser, 1998). A common finding is that relative to the classrooms they are in (*actual*), students express preferences for (*preferred*) more positive environments (see, e.g., Fraser, 1982, 1998;

Fisher & Fraser, 1983). Where there is greater congruence between actual and preferred environments, student outcomes are improved (MacAulay, 1990).

Students' behaviour clearly affects the classroom environment (MacAulay, 1990), particularly disruptive classroom behaviour. While this appears somewhat self-evident, it is important to recognise that student behaviour does not occur in a vacuum (Schwieso & Hastings, 1987). *Teacher Characteristics*, the fourth domain of MacAulay's model, are critical here. It is the professional responsibility of the teacher to be aware of, and implement strategically, what research has found to be effective in helping to manage student behaviour. Moreover, the quality and tone of teacher feedback contributes to the development of a positive classroom climate (MacAulay, 1990). Regarding the influence of *Teacher Characteristics*, MacAulay concluded that:

Students consistently show a preference for teachers who are warm, friendly, supportive and communicative while at the same time orderly and motivating. Those teacher qualities are found to increase learning outcomes and enhance the emotional climate of the classroom. The absence of a negative tone is considered necessary for a cohesive and positive emotional climate. (1990, p. 250)

MacAulay contended that it is the interaction between the four domains of *Structure and Organisation*, *Cognitive Processes*, *Student Characteristics*, and *Teacher Characteristics* that determines the quality of the classroom environment and the cognitive, affective and social outcomes for students, with *Teacher Characteristics* occupying "the heart of the model thereby highlighting the critical influence of the teacher's persona" (1990, p. 241).

Fraser (1986) also highlighted the critical influence of teacher characteristics on student outcomes. Moreover, in a study of 108 secondary teachers and their classes in Tasmania, Australia, Fisher and Kent (1998) found significant associations between

teacher personality type and perceptions of the classroom environment. For example, both teachers and students perceived greater student cohesiveness in the classes of extraverted teachers. Furthermore, students and teachers shared similar perceptions of the learning environment in association with the personality type of the teacher (Fisher & Kent, 1998). While such findings appear to suggest that little can be done about one of the key determinants of the classroom environment (i.e., the persona of the teacher), Fisher and Kent have argued that:

Good teaching requires a repertoire of appropriate interpersonal and pedagogical skills. Teacher personality cannot be given as a reason for exemption from these skills. Instead, awareness of teacher personality and classroom learning environment, particularly as perceived by students, can assist teachers to develop and monitor their own repertoire of classroom skills. (1998, p. 11)

The power of the quality of the classroom environment emerges early. In a study of teacher-student interaction in urban at-risk classrooms of African-American students in the United States, Baker (1999) found that perceptions of a caring, supportive relationship with a teacher and a positive classroom environment were related to school satisfaction by as early as the third grade of elementary school. Furthermore, Baker argued "that programs targeted at improving student-teacher relationships or at enhancing the classroom social climate during elementary school may be one means of early intervention for students at risk of poor school outcomes" (1999, p. 67). As Fraser (1991) has argued, perceptions of supportive, orderly, and positive classroom environments are strongly associated with students' academic achievement. Dorman (2002) concurred with Fraser's position and has commented that educational productivity cannot be optimised without "consideration of the crucial role of the psychosocial environment" (p. 112). Moreover, Burnett (2002) observed a

relationship between teacher-student relationship and students' perceptions of the classroom environment in his Australian study of 747 primary aged students. He found that students who reported positive relationships with their teachers were also found to perceive the classroom environment in a more positive way.

Bandura (1986) has emphasised the interactional nature of learning environments, asserting that behaviour can actually *create* environments. His concept of reciprocal determinism states that there is a constant interaction between the environment, the behaviour, and the person. In this way, people can influence the environment by behaving in certain ways; the resultant changed environment, in turn, influencing their subsequent behaviour (MacAulay, 1990). Wheldall and Glynn (1989) described a similar phenomenon as the behavioural interactionist perspective (BIP). Predicated on the basic principles of behavioural psychology, Wheldall and Glynn's BIP informs a model of learning that "focuses on the interactions between individuals.....[emphasising] that effective learning takes place in natural contexts, embedded in interactions between 'teachers' and 'students'" (Wheldall & Carter, 1996).

Perceptions of the classroom environment arguably have a generative function in creating environments. From the social ecological perspective on environmental assessment, a social environment (of which the classroom is one example) is defined by the *perceptions* of members of that environment. Within this perspective, Trickett et al. (1993), have asserted that the assumption is that people behave in terms of their perception of the situation they are in. According to Trickett et al.:

Evidence for the validity of this assumption is found in the research literature linking social climate to such outcome variables as dropout rates of psychiatric patients attending community treatment programs and such educational outcomes as student learning and absenteeism.

Variations in social climate, defined as the shared perceptions of people about the environment they are in, predict a variety of outcomes across several different types of settings. (p. 411-412)

Fraser (1990) thus argued for the validity of student perceptions for measuring classroom environments. Contrasting this approach with the other major approaches for studying classroom environments, being classroom interaction analysis and naturalistic inquiry and case study, Fraser advocated both the economy of paper-and-pencil perceptual measures and the fact that students' experiences are formed over many lessons (Fraser, 1990, 1998). Moreover, Fraser argued that perceptual measures are the pooled judgements of all the students in the class, whereas observational techniques typically have only a single observer. Perhaps most importantly, and drawing on the notion proposed by Trickett et al. (1993) outlined above, Fraser has asserted that "students' perceptions, because they determine student behaviour more than does the real situation, can be more important than observed behaviours" (1990, p. 18). In this way each classroom generates its own environment, a self-contained set of interactions, the quality of which is determined by the perceptions of its participants.

Early research in this area (Moos, 1979) found that the characteristics students bring to the environment do not account for much of the variance in classroom environment. Rather than reflecting the sum of the characteristics of individual members, the character of the classroom is largely determined by interactions *among* the participants. It can be argued, therefore, that the nature and quality of the classroom environment is highly dependent on teacher-student interaction and it is in this context that the following investigation was conducted. In this study student perceptions of the classroom environment were explored, and related to teacher perceptions of student behaviour. (The inter-relational aspects of *observed* teacher behaviour and student

perceptions of the classroom environment are subsequently explored in Section C of this thesis.)

The study reported in Chapters 3-5 involved self-report data from secondary school teachers from around New South Wales. The aim of this study was to ascertain the characteristics of secondary classrooms in terms of the nature and prevalence of troublesome classroom behaviour as perceived by teachers. In addition, teachers were asked to provide information about the stress they associated with managing disruptive student behaviour.

Following the collection of these data, a smaller sample of teachers was also involved in an observational study of behavioural interactions in the classroom (see Section B, Chapters 8 and 10). In addition to the observations of teacher/student interaction and student on-task behaviour (to be reported in Section B), student perceptions of the classroom environment of the teachers participating in this study were also elicited. As detailed in Chapter 1, student perceptions of the classroom environment are treated as a variable (only) in this thesis, as opposed to a major area of enquiry. In addition, some variables from the previous study into troublesome classroom behaviour presented in Chapters 3-5 have been included into the study detailed in this chapter. Specifically, teachers' response to Question 1 of the *Classroom Behaviour Problems Checklist and Questionnaire*, the proportion of the class considered to be behaviourally troublesome by the teacher, and the stress teachers report in relation to managing student behaviour are related to the findings from the present study to explore relationships between the perceptions of teachers and the perceptions of students.

6.3 The Purpose of the Study

In the present study the *Individualised Classroom Environment Questionnaire (ICEQ)* (Fraser, 1990), was used to assess the nature of the classroom learning environment (see *Method-Instrument* below for more detail) as perceived by the students of a subset of teachers included in the study presented in Chapters 3-5. Fraser (1990) claimed that the *ICEQ* covers the three general categories of dimensions identified by Moos. In the *ICEQ*, the *personalisation* and *participation* sub-scales are classifiable as *Relationship Dimensions* (the nature and intensity of personal relationships), *independence* and *investigation* are *Personal Development Dimensions* (basic directions along which personal growth and self-enhancement tend to occur), and *differentiation* is a *System Maintenance and Change Dimension* (extent to which the environment is orderly, clear in expectations, maintains control, and is responsive to change) (Fraser, 1990, p. 4).

One might expect that, in classes where teachers experience more problems with troublesome classroom behaviour, and where larger numbers of the students are reported by the teacher as being behaviourally troublesome, the *ICEQ* would be sensitive to differences in these environments. In particular, one might expect to see variations in terms of the sub-scales of *personalisation* and *participation* (the relationship dimensions) and *differentiation*. In terms of the *participation* sub-scale, in classes where there is a higher level of disruption, one might find lower levels of on-task behaviour and task engagement. In other words, meaningful participation in the classroom environment may be compromised. Similarly, where there are problems of order and control, teachers may be less inclined to express warmth, friendliness, and humour when they are struggling to maintain control in the classroom. A lower level of *personalisation* might conceivably ensue.

In terms of the dimension *differentiation*, reference to its parallel in Moos' schema (*System Maintenance and Change*) indicates that this sub-scale deals with classroom management issues, specifically "the extent to which the environment is orderly, clear in expectations, maintains control...." (Fraser, 1990, p. 4). One, therefore, might expect variations in the perceptions of students as measured by the *ICEQ* dimension *differentiation* where there are variations in classroom order and control.

Following the presentation of data describing the classroom environment in 79 secondary classes in New South Wales in relation to teacher demographic variables and other factors such as the year taught and subject taught, these specific research questions are addressed:

- 1) Are there differences in the classroom environment of classes whose teachers answer "yes" to the question, "In general terms, do you think you spend more time than you ought on problems of order and control in the classroom?"
- 2) Are there differences in the classroom environment of classes whose teachers report a higher percentage of the class as troublesome?
- 3) Is there any relationship between student perceptions of the classroom environment and the stress reported by teachers associated with having to manage student behaviour?

6.4 Method

6.4.1 Participants

The sample of 79 classes comprised a sub-set of the classes taught by the 145 teachers whose perceptions were reported in Chapters 3-5. Students in these classes were asked to complete the long form of the *Individualised Classroom Environment Questionnaire (ICEQ)* (Fraser, 1990), described below (see *Instrument*). For the purposes of this study the *class* has been used as the unit of analysis (see *Instrument* for

more detail). A description of the 79 teachers whose classes were involved in this study is therefore provided. Tables 6.1-6.5 provide the demographic details of these teachers, as well as other characteristics such as the year (or grade) and the subject they taught. For practical purposes, only schools in the Sydney metropolitan area were included in this study, although the schools represented in the sample constitute a range of socio-economic groups. Participating schools were located in three large school districts in the north, west, and south-west of the Sydney metropolitan area. Given the size and socio-economic diversity of Sydney, the schools included in this study arguably constitute a reasonably representative sample. The majority of classes (72%) were drawn from the south-western region of Sydney (where many of the classroom observations were also conducted).

There were roughly equal numbers of male and female teachers in the sample (see Table 6.1). While teachers' age ranged widely, there was a concentration of teachers in the 30-39 years age range (see Table 6.2). The majority of these teachers had over 10 years' experience in the classroom (see Table 6.3). The six broad subject areas employed throughout this thesis (English, Mathematics, Science, Social Science, Art/Design, Other) were represented in this sample, with roughly equal numbers of classes in each subject area (see Table 6.4). While all secondary years were represented, there were slightly more classes at the Year 9 level (see Table 6.5).

Table 6.1
Composition of the Sample According to Teacher Sex

Teacher sex	<i>n</i>	%
Male	38	52
Female	35	48

Note. 6 missing values

Table 6.2

Composition of the Sample According to Teacher Age

Teacher age	<i>n</i>	%
<30	19	28
30-39	35	52
40-49	11	16
50-59	3	4

Note. 11 missing values

Table 6.3

Composition of the Sample According to Teacher Experience

Teacher Experience in Years	<i>n</i>	%
First year	7	11
1-4	8	12
5-10	16	24
>10	35	53

Note. 13 missing values

Table 6.4

Composition of the Sample According to Subject Taught

Subject Taught	<i>n</i>	%
English	12	19
Mathematics	10	16
Science	10	16
Social Science	11	17
Art/Design	9	14
Other	12	19

Note. 15 missing values

Table 6.5

Composition of the Sample According to Year Taught

Year Taught	<i>n</i>	%
Year 7	14	18
Year 8	18	19
Year 9	21	27
Year 10	15	19
Year 11	10	13
Year 12	4	5

Note. No missing values

6.4.2 Instrument

The *Individualised Classroom Environment Questionnaire (ICEQ)* (Fraser, 1990), uses a paper and pencil approach to assess the nature of the classroom learning environment as perceived by secondary students (see Appendix K.). This measure provides information from students about their perception of their classroom environment in terms of dimensions described as *personalisation*, *participation*, *independence*, *investigation* and *differentiation*. Table 6.6 shows what each dimension assesses according to the designer of the scale.

Table 6.6

Dimensions or Subtests of the ICEQ and Their Description

Dimension (subtest)	Classroom characteristic assessed by subtest
<i>personalisation (pe)</i>	The emphasis on opportunities for individual students to interact with the teacher and on concern for the personal welfare and social growth of the individual.
<i>participation (pa)</i>	The extent to which students are encouraged to participate rather than be passive listeners.
<i>independence (id)</i>	The extent to which students are allowed to make decisions and have control over their own learning and behaviour.
<i>investigation (v)</i>	The emphasis on the skills and processes of inquiry and their use in problem solving and investigation.
<i>differentiation (d)</i>	The emphasis on the selective treatment of students on the basis of ability, learning style, interests, and rate of working.

Note. Source of information in Table 6.1: Fraser, 1990.

Statistical data concerning the psychometric credentials of the scale are available in the test manual for the *ICEQ* (Fraser, 1990). These data suggest that the instrument is valid and generally reliable. The instrument has been developed over many years with validity and reliability data having been collected using large samples of Australian secondary students. (This factor added to the appeal of the measure for use in the present study.) In a review of the *ICEQ*, Beaman and Wheldall (1992) noted that the test/re-test reliability for the dimension *participation* (0.67) was a little low for complete confidence, but assessed that the test was psychometrically credible on the basis of Fraser's findings. Moreover, in a subsequent study, Wheldall and Beaman (1993) confirmed Fraser's original findings, including those relating to test/re-test reliability. They also found the test/re-test coefficient for *participation* to be relatively low (0.68), as had Fraser (Wheldall & Beaman, 1993).

Wheldall, Beaman, and Mok (1999) subsequently confirmed that the *ICEQ* is a valid measure of the classroom environment as a whole. A multilevel variance components model was employed to derive intraclass correlations in order to determine the degree to which *ICEQ* scores may be said to measure aspects of classroom climate as against individual student attitudes. Wheldall et al. found that the *class* variable accounted for “large and noteworthy proportions of overall variance in all five *ICEQ* scales” (1999, p. 847). These findings confirmed the suitability of using the class as the unit of analysis in this and other studies, as one may be confident that the *ICEQ* is a relatively good measure of the whole *classroom* environment, as against individual student factors or factors associated with the school as a whole.

In order to provide a point of reference for the findings to follow (see *Results*), Fraser’s findings from a sample of 1849 Australian secondary students in 150 classes (Fraser 1990, p. 13) are shown in Table 6.7.

Table 6.7

Fraser’s ICEQ Findings From a Sample of 150 Australian Secondary School Classes

Personalisation Mean (SD)	Participation Mean (SD)	Independence Mean (SD)	Investigation Mean (SD)	Differentiation Mean (SD)
32.7	33.9	27.8	30.1	23.5
(6.7)	(5.3)	(6.0)	(5.4)	(6.0)

6.4.3 Procedure

Trained research assistants, who also carried out the classroom observations reported in Section B of this thesis, administered the *ICEQ* to classes following the completion of the observations of their classroom. The long form of the questionnaire was used and the pencil and paper scale was administered to the class in one period (lesson) within the regular school timetable.

Following the administration instructions included in the *ICEQ* manual, research assistants outlined the instructions to the whole class at the commencement of the lesson, emphasising that students should be rating the class of which they were a member at the time of answering. It was important that students understood that their responses were in relation to that specific class and teacher. Similarly, it was made clear that students should complete the questionnaire in terms of the *actual* classroom environment, rather than the *preferred* classroom environment. (In this study, only responses relating to the *actual* classroom environment were elicited, whereas the instrument may be used to explore both scenarios.)

Student data were identified by the same code used to identify teacher questionnaire data and observations (reported in Chapter 4 and Chapter 8). No identifying individual student information was collected and all forms were completed anonymously. In retrospect, student gender data would have been useful.

6.4.4 Data Analysis

Descriptive statistics were produced for the five *ICEQ* dimensions analysed according to the teacher demographic variables of sex, age, experience, and the year and subject they taught. Pearson's product-moment correlations were also calculated between these variables. As multiple comparisons were performed the more conservative alpha level of 1% was adopted for all statistical tests. As sample sizes varied for the demographic and other variables the following r was required (or to be exceeded) in each case for the relationship to be deemed significant at the 1% level: teacher sex ($n = 73$), $r = .30$; teacher age ($n = 68$) $r = .31$; teacher experience ($n = 66$) $r = .315$; year taught ($n = 79$) $r = .287$; subject taught ($n = 64$) $r = .32$.

6.4.4.1 Troublesome Behaviour Variables

In the earlier chapters of this thesis (Chapters 3-5), the *Classroom Teaching and Behaviour Checklist and Questionnaire* included a question asking “In general terms, do you think that you spend more time on problems of order and control that you ought?” (Question 1 of the questionnaire). The response to this question was treated as a dichotomous variable used to explore other aspects of troublesome classroom behaviour (see Chapter 4). Teachers were also asked to state how many students in their respective target classes they would rate as troublesome. This figure was converted into a continuous variable known as “percentage troublesome”, taking into account class size, and was also expressed as a dichotomous variable: less than 10% of the class as troublesome or 10% and more (see Chapter 3). This dichotomised variable was then referred to as low incidence/moderate-high incidence troublesome behaviour respectively. The two groups were shown to be quite distinct ($p < .0001$), with the low incidence group having an average of 3% of the class as troublesome, whereas the moderate-high group incidence had an average of 30% of the class as troublesome. The purpose of using the dichotomised variable was to elicit information about these two distinct groups.

These three variables described above may be denoted as the three troublesome behaviour (TB) variables for the purposes of subsequent analysis within this data set. Pearson’s product-moment correlations were employed to determine any statistically significant relationships among continuous variables. Where the true dichotomous variable of response to Question 1 of the questionnaire (yes/no) was correlated with the continuous data (the scores on each dimension of the *ICEQ*), a point-biserial correlation (r_{pb}) was utilised. Effect size analysis was also employed here. Descriptive statistics detailing means and standard deviations of the two groups represented by the low/moderate-high incidence troublesome behaviour variable were produced to explore

possible differences between these groups. A *t*-test was conducted and effect sizes calculated using these dichotomised data.

As sample sizes varied, the required *r* for a relationship between one of the *ICEQ* dimensions and the continuous variable relating to the percentage of the class as troublesome (*n* = 58) to be deemed statistically significant was .337 or greater at the 1% level. The *r* required for a statistically significant finding between the *ICEQ* dimensions and the response to Question 1 (*n* = 63) was .323 at the 1% level.

6.4.4.2 *Teacher Stress and Classroom Environment*

A self-reported measure of teacher stress was also collected as part of the study described and reported in Chapters 3-5 (from the second questionnaire completed by teachers). A teacher stress score was available for 64 of the 79 teachers in the present study. A Pearson's product-moment correlation was calculated between the *ICEQ* dimensions and the teacher stress variable to explore whether any relationships between teacher stress and the classroom environment were evident. The *r* required for a relationship between the *ICEQ* dimensions and teacher stress to be deemed statistically significant (*n* = 64) was 0.320 or greater at the 1% level.

6.5 Results

6.5.1 *The Perceived Classroom Environment in Secondary Classes in New South Wales in Relation to Teacher Demographic Variables and Other Factors*

Means and standard deviations for each dimension of the *ICEQ* from the 79 classes included in this study are presented for the sample overall in Table 6.8. As can be seen by reference to Fraser's findings previously presented in Table 6.7, the findings in the present study are very similar to those found by Fraser (1990). The standard deviations in the present study are, however, lower for each dimension in this study than those found by Fraser, indicating less variability in the responses of the students in this sample.

Table 6.8

Means and Standard Deviations (SD) for the ICEQ Dimensions of the 79 Classes

<i>personalisation</i>	<i>participation</i>	<i>independence</i>	<i>investigation</i>	<i>differentiation</i>
Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
33.1 (4.1)	34.9 (2.9)	27.5 (3.6)	30.1 (2.7)	22.7 (2.8)

6.5.1.1 Scores on the ICEQ Analysed by Teacher Demographic and Other Variables

Tables 6.9-6.13 detail the means and standard deviations for the five *ICEQ* dimensions and the teacher demographic variables and other teacher characteristic variables (the class and year taught).

Table 6.9

Means and Standard Deviations (SD) for the ICEQ Dimensions and Teacher Sex

<i>ICEQ</i> Dimension	Male <i>n</i> = 38		Female <i>n</i> = 35	
	Mean	<i>SD</i>	Mean	<i>SD</i>
<i>personalisation (pe)</i>	32.66	4.43	33.62	4.10
<i>participation (pa)</i>	34.40	2.54	35.64	3.21
<i>independence (id)</i>	27.12	3.46	28.43	3.72
<i>investigation (v)</i>	30.08	2.80	30.08	2.58
<i>differentiation (d)</i>	22.71	2.70	22.31	2.76

Note. 6 missing values

Table 6.10

Means and Standard Deviations (SD) for the ICEQ Dimensions and Teacher Age

ICEQ Dimension	Teacher Age			
	Mean (SD)			
	<30 years	30-39 years	40-49 years	50-59 years
	<i>n</i> = 19	<i>n</i> = 35	<i>n</i> = 11	<i>n</i> = 3
<i>personalisation (pe)</i>	34.81 (3.03)	32.82 (4.30)	32.14 (4.46)	29.28 (9.05)
<i>participation (pa)</i>	35.39 (2.48)	35.01 (3.29)	34.19 (2.10)	35.07 (5.87)
<i>independence (id)</i>	28.35 (3.74)	28.01 (3.52)	26.61 (4.15)	26.88 (3.57)
<i>investigation (v)</i>	31.07 (2.02)	29.87 (2.81)	29.77 (2.16)	28.56 (6.79)
<i>differentiation (d)</i>	22.40 (2.51)	22.35 (2.68)	23.90 (3.22)	20.08 (3.41)

Note. 11 missing values

Table 6.11

Means and Standard Deviations (SD) for the ICEQ Dimensions and Teacher Experience

ICEQ Dimension	Teacher Experience			
	Mean (SD)			
	First year	1-4 years	5-10 years	>10 years
	<i>n</i> = 7	<i>n</i> = 8	<i>n</i> = 16	<i>n</i> = 35
<i>personalisation (pe)</i>	33.96 (2.48)	35.19 (2.38)	34.79 (4.53)	32.21 (4.04)
<i>participation (pa)</i>	35.69 (2.80)	35.07 (1.37)	35.29 (3.49)	35.99 (2.86)
<i>independence (id)</i>	28.48 (2.01)	25.38 (2.91)	29.52 (3.48)	27.56 (3.79)
<i>investigation (v)</i>	30.77 (2.15)	32.15 (1.92)	30.50 (2.73)	29.79 (2.58)
<i>differentiation (d)</i>	23.02 (2.50)	22.10 (2.40)	22.63 (2.54)	22.53 (3.12)

Note. 13 missing values

Table 6.12

Means and Standard Deviations (SD) for the ICEQ Dimensions and Year Taught

ICEQ Dimension	Year Taught					
	Mean (SD)					
	Year 7 <i>n</i> = 14	Year 8 <i>n</i> = 15	Year 9 <i>n</i> = 21	Year 10 <i>n</i> = 15	Year 11 <i>n</i> = 10	Year 12 <i>n</i> = 4
<i>personalisation</i> (<i>pe</i>)	34.59 (3.26)	32.56 (4.28)	32.46 (4.08)	34.06 (3.82)	31.33 (4.70)	33.50 (5.99)
<i>participation</i> (<i>pa</i>)	34.64 (1.59)	33.57 (3.49)	34.46 (2.73)	35.93 (2.56)	35.45 (3.61)	37.92 (1.46)
<i>independence</i> (<i>id</i>)	25.87 (2.74)	26.93 (3.35)	26.67 (2.90)	26.91 (3.39)	30.57 (2.79)	34.87 (1.26)
<i>investigation</i> (<i>v</i>)	31.84 (2.13)	29.15 (2.43)	29.34 (2.89)	30.24 (1.97)	29.95 (3.53)	30.46 (2.39)
<i>differentiation</i> (<i>d</i>)	23.57 (1.73)	23.64 (2.05)	22.60 (3.21)	22.81 (3.60)	20.65 (3.03)	21.08 (1.83)

Table 6.13

Means and Standard Deviations (SD) for the ICEQ Dimensions and Subject Taught

ICEQ Dimension	Subject Taught					
	Mean (SD)					
	English <i>n</i> = 12	Maths <i>n</i> = 10	Science <i>n</i> = 10	Soc Sc <i>n</i> = 11	Art/Des <i>n</i> = 9	Other <i>n</i> = 12
<i>personalisation (pe)</i>	32.93 (4.33)	33.15 (3.88)	33.55 (2.61)	30.35 (5.40)	34.75 (3.94)	35.21 (3.67)
<i>participation (pa)</i>	35.95 (3.33)	34.62 (2.41)	34.62 (2.09)	33.89 (2.96)	35.06 (2.60)	36.61 (3.12)
<i>independence (id)</i>	26.92 (3.94)	27.00 (4.41)	27.27 (3.31)	29.51 (3.14)	27.83 (3.81)	29.27 (2.71)
<i>investigation (v)</i>	30.83 (2.02)	29.94 (2.39)	32.51 (2.62)	29.40 (3.14)	29.41 (2.12)	30.28 (2.28)
<i>differentiation (d)</i>	23.75 (2.39)	21.25 (2.14)	21.25 (2.05)	21.92 (3.31)	24.71 (2.61)	21.96 (2.01)

Note. 15 missing values

Correlations between the *ICEQ* dimensions and teacher demographic and other teacher variables are shown in Table 6.14. As can be seen, there was only one substantial and statistically significant correlation, being the relationship between the dimension *independence* and school year taught. Reference to Table 6.12 shows that students in Years 11 and 12, the senior and post-compulsory years of schooling in New South Wales, have markedly higher scores for *independence* than their junior school (Years 7-10) peers. This difference would account for the significant correlation between year taught and *independence*. There were no other relationships apparent between the teacher demographic and other variables and the *ICEQ* dimensions.

Table 6.14

Correlations Between ICEQ Dimensions and Teacher Demographic and Other Variables

	<i>ICEQ-pe</i>	<i>ICEQ-pa</i>	<i>ICEQ-id</i>	<i>ICEQ-v</i>	<i>ICEQ-d</i>
School year	-.107	.277	.478*	-.102	-.311
Experience	-.226	-.065	.002	-.233	-.017
Age	-.286	-.099	-.150	-.213	.019
Sex	.113	.212	.181	.000	-.086
Subject	-.038	-.185	-.002	-.140	.223

Note. * $p < .01$

6.5.2 Inter-relationships Among ICEQ Dimensions and Troublesome Behaviour (TB) and Teacher Stress Variables

Table 6.15 shows the correlations between the *ICEQ* dimensions and two of the TB and teacher stress variables. Two statistically significant correlations at the 1% level were evident, all relating to the dimension *differentiation*. Table 6.16 shows that there was also a statistically significant difference between the means for the low/moderate-high incidence groups.

6.5.2.1 Differences in the Classroom Environment of Classes Whose Teachers Consider they Spend More Time than they Ought on Problems of Order and Control

There was a significant relationship between teacher response to the question “In general terms, do you think you spend more time than you ought on problems of order and control?” and *differentiation*. (This is a negative correlation by virtue of the coding of the response: 1 for “yes” to Q1; 2 for “no” to Q1). Reference to the means shows higher scores for *differentiation* for teachers who thought they spent more time than they ought on problems of order and control in the classroom (“yes” to Q1) ($M = 23.92$, $SD = 2.43$), compared to those teachers who did not ($M = 21.56$, $SD = 2.47$). The effect size of this difference between groups was large ($d = 0.97$).

Table 6.15

Correlations Between ICEQ Dimensions and Troublesome Behaviour (TB) and Teacher Stress Variables

	<i>ICEQ-pe</i>	<i>ICEQ-pa</i>	<i>ICEQ-id</i>	<i>ICEQ-v</i>	<i>ICEQ-d</i>
Question 1	.020	.095	.186	.250	-.428*
% of class troublesome	-.123	-.160	.033	-.280	.435*
Teacher Stress	.003	-.018	-.108	-.076	-.012

Note. * $p < .01$

Table 6.16

*Two-sample *t* for ICEQ-d and Low/Moderate–High Troublesome Classroom Behaviour*

Incidence	<i>N</i>	Mean	<i>SD</i>	<i>t</i>	<i>p</i>
Mod-High	26	23.43	2.53	2.98	.0043*
Low	32	21.49	2.41		

Note. Mod-High = 10% or more of the class considered troublesome; Low = Less than 10% of the class considered troublesome; * $p < .01$.

6.5.2.2 Differences in the Classroom Environment of Classes Whose Teachers Report a Higher Percentage of the Class as Troublesome

There was a statistically significant correlation (shown in Table 6.15) indicating a relationship between the dimension *differentiation* and the percentage of the class considered by the teacher to be troublesome. This significant correlation represents a relationship between increased numbers of troublesome students in the class and higher *differentiation* mean scores. Similarly, there was a statistically significant difference between the groups for low and moderate-high incidence troublesome behaviour and

the sub-scale *differentiation*. Reference to the means (see Table 6.16) indicates that there were higher scores for *differentiation* in classes where more than 10% of the class was considered by the teacher to be troublesome ($M = 23.43$, $SD = 2.53$) compared to those where less than 10% of the class was considered troublesome ($M = 21.49$, $SD = 2.41$). The effect size of this difference between the two groups was large ($d = 0.80$).

6.5.2.3 Relationships Between Student Perceptions of the Classroom Environment and the Stress Reported by Teachers Associated with Having to Manage Student Behaviour

There were no relationships evident between any of the five *ICEQ* dimensions and the teacher reported stress score, as shown in Table 6.15.

6.6 Discussion

Throughout this chapter, a large number of results has been presented, notable perhaps by the absence of many statistically significant findings indicating relationships among the variables under study. Following a discussion of the descriptive data, the findings are discussed in relation to the research questions posed earlier in this chapter.

6.6.1 The Perceived Classroom Environment in Secondary Classes in New South Wales in Relation to Teacher Demographic Variables and Other Factors

The only statistically significant variation in the descriptive data presented in this study in relation to the teacher demographic and year and subject taught variables, was between the dimension *independence* and the year taught by the teacher. The relationship between these two variables suggests that in the senior years of schooling (Years 11 and 12), students perceive an environment marked by more *independence*. This dimension of the classroom environment measures the extent to which students are allowed to make decisions and have control over their own learning and behaviour (Fraser, 1990). This is a not unexpected finding. Fraser (1990) describes *independence* as being one of two of the dimensions of the *ICEQ* reflecting Moos' *Personal Development Dimensions*, the latter signified by the basic directions along which

personal growth and self enhancement tend to occur (1990, p. 4). The evidence of *independence* in the classrooms of these older students appears to be a positive feature of the classrooms in this study and developmentally appropriate.

Senior schooling (Years 11 and 12) is the post-compulsory phase of secondary schooling in New South Wales, with a different course of study from the preceding four years. Students arguably have more control over their learning choices, as well as enjoying increased privileges in the school community. A concomitant increase in *independence* could, therefore, be anticipated. It could also be argued that students who have little interest or engagement in school may have left the system (at the conclusion of Year 10 and the award of the New South Wales School Certificate), having completed the compulsory phase of schooling. Arguably, this could mean a more focused and engaged cohort of students, leading to greater levels of control being given to students by their teachers, reflecting Bandura's (1986) concept of reciprocal determinism and Wheldall and Glynn's behavioural interactionist perspective (1989). Increasing retention rates into post-compulsory schooling notwithstanding, students in the final two years of schooling may indeed be more able to exercise a higher degree of independence. There may well be some evidence for this proposition in this study as students in Years 11 and 12 in the current study reported that they experienced higher levels of *independence* in the classroom, as measured by the *ICEQ*.

6.6.2 Differences in the Classroom Environment of Classes Where Teachers Consider They Spend More Time on Problems of Order and Control Than They Ought

In response to the research question as to whether there were any differences in the classroom environment of teachers who answered "yes" to the question, "In general terms, do you think you spend more time than you ought on problems of order and control" (arguably indicating more problems with classroom behaviour management), there was a statistically significant relationship in terms of the sub-scale *differentiation*

($r = -.428$). In other words, 18.32% of the variance in *differentiation* may be attributable to the Question 1 variable (discussed further below). No other relationships were evident between the other four *ICEQ* dimensions and teacher response to Question 1, however.

It had been hypothesised earlier in this chapter that the relationship dimensions of *personalisation* and *participation* may have shown variations in classes where the teacher perceived more problems of order and control, but this was not the case in the present study. If teachers in the present study had classroom management problems, these did not alter the perceptions of students in terms of *personalisation* and *participation* in their classes. Crocker and Brooker (1986) have argued that positive emotional climate is linked to low incidence of disruptive behaviour and greater participation in classroom communications. While there is evidence for a variation in *differentiation* in the present study, there is, however, no evidence for decreased participation in classes where there is more teacher reported disruptive behaviour. This result, notwithstanding, the finding in relation to *differentiation* is clear and noteworthy.

6.6.3 Differences in the Classroom Environment of Classes Whose Teachers Report a Higher Percentage of the Class as Troublesome

In response to the research question asking if there were any differences in *ICEQ* dimensions in the classes of teachers who reported a higher percentage of the class as troublesome, there was one statistically significant relationship evident. Regardless of whether the continuous variable of percentage of the class considered troublesome, or the dichotomous variable of above or below 10% of the class considered troublesome was used, *differentiation* again was the only *ICEQ* dimension that varied according to the teacher reports of troublesome classroom behaviour. Where a higher percentage of the class was considered troublesome by the teacher, students perceived a higher degree of *differentiation* in the classroom environment

($r = .435$). In terms of variance attribution, nearly 20% (18.92%) of the variance in *differentiation* may be attributable to the percentage (%) of the class considered troublesome. Similarly, where 10% or more of the class was considered troublesome (moderate-high incidence), students also reported a statistically significantly higher level of *differentiation* ($t = 2.98, p < .01; d = 0.80$).

There is strong evidence from this study that *differentiation*, signifying the emphasis on the selective treatment of students on the basis of ability, learning style, interests, and rate of working (Fraser, 1990), is more pronounced in the classes of teachers who report having more problems with troublesome classroom behaviour. Where there is more problematic student behaviour, students appear to perceive that some students are treated differently from others (for good or ill).

The findings, that there is a higher degree of student perceived *differentiation* in classes where teachers both consider they spend more time on problems of order and control than they ought, and where they nominate a higher proportion of the class as behaviourally troublesome, have been clearly demonstrated and are unequivocal (and were hypothesised earlier in this chapter). (*Note.* As discussed in Chapter 3, the variables of response to Q1 and % troublesome are highly correlated. In this sub-sample the correlation between these two variables was .55.)

To reiterate, Fraser (1990) considers the *ICEQ* sub-scale *differentiation* to be classifiable in Moos' schema as System Maintenance and Change Dimensions, signifying the extent to which the environment is orderly, clear in expectation, maintains control and is responsive to change (Fraser, 1990, p. 4). It would appear from the current study that increased incidence of teacher perceived and reported troublesome classroom behaviour is detected, perceived and reported by students in relation to the classroom environment. In this respect, at least, there appears to be a match between the perceptions of teachers and students. Where there are more

behaviour problems in classrooms, the classroom climate or environment is perceived differently.

6.6.4 The Relationship Between Student Perceptions of the Classroom Environment and the Stress Reported by Teachers Associated with Managing Student Behaviour

The final research question asked if there was any relationship between student perceptions of the classroom environment and the stress teachers reported in relation to managing student behaviour. In contrast to the consistent findings in relation to the teacher reported troublesome behaviour variables and the *ICEQ* dimension *differentiation*, there was no relationship found in the present study between student perceptions of the classroom environment and the stress teachers reported to be associated with having to manage student behaviour.

There are two possible explanations for this result. First, the level of teacher reported stress in this sub-sample of teachers was not of sufficient intensity to have a deleterious impact on the classroom environment. There is some evidence for this proposition in the mean stress levels for teachers in this particular sample. Reference to the mean stress scores of teachers who had more problems with matters of order and control in the classroom (i.e., those who answered yes to Q1) ($M = 39.46$, $SD = 9.66$) were very similar to those teachers who did not ($M = 39.41$, $SD = 9.74$). [Moreover, the mean stress score for the whole sample was slightly lower ($M = 39.34$, $SD = 9.50$, than the larger sample in the study reported in Chapter 4 ($M = 41.62$, $SD = 9.18$)]. The dichotomous variable representing the response to Q1 failed to distinguish between the groups in terms of the stress they experienced as a result of managing classroom behaviour.

The second possible explanation for the absence of any relationship among the teacher stress score and the *ICEQ* dimensions is that if teachers consider having to deal with disruptive students causes them to be stressed, there is no evidence in this study

that this has an impact on the way students themselves perceive their classroom environment, as measured by the *ICEQ* at least. While there is broad agreement in the classroom environment literature regarding the importance of teacher characteristics in the dynamic which creates the classroom climate, in this study at least, whether the teacher is stressed or not does not seem to be a factor. More information on how teacher stress is manifested may be necessary to explore this issue further. Relationships between teacher reported stress and observed teacher behaviour (to be explored in Chapter 11) may provide further insights into this aspect of classroom interaction and its effect on the environment.

6.7 Conclusion

The results of this study suggest that student perceptions of their classroom environment are not influenced by whether they have a male or female teacher, whether their teachers are younger or older, are more or less experienced, or what subject they teach. This is noteworthy. The only variation evident in the current study was for senior school students, who perceived higher levels of *independence* in their classrooms. Possible reasons for this not unexpected finding have been explored.

Inter-relationships between key variables from the study exploring teacher perceptions of troublesome classroom behaviour in the previous chapters, and the findings from the present study were also investigated. While there were few relationships to report, the higher levels of student perceived *differentiation* in the classes with a higher percentage of troublesome students should not be overlooked. Similarly, and providing confirmation of this relationship by a form of triangulation, the students in the classes of teachers who had indicated that they spent more time than they ought on problems of order and control also reported higher levels of *differentiation*. These relationships were clear and unequivocal. There were no relationships indicated in the way students perceived the classroom environment and

the way teachers perceived the stress relating to managing student classroom behaviour, a finding of interest in its own right, particularly in light of some of the criticism of the veracity of the findings of the teacher stress literature (e.g., Cooper, 1995; Kyriacou, 1987; and, see Chapter 2).

The matching of student and teacher self-reports (albeit addressing different aspects of the classroom) has been attempted here to throw some light on how students and teachers perceive the same environment. An attempt to extend this exploration by relating the self-report data from teachers and students in this first section of the thesis to the observational study of teachers and students in the following section (in particular Chapter 8), will be presented in Section C. Such an exploration may provide further insights into the dynamic of teacher-student interaction that so strongly influences the classroom environment, in turn influencing the cognitive, affective and social outcomes for students.