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**Student Quality of School Life Differences**

**Within and Between Primary Schools.**

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**Abstract**

*This paper presents the results of a study to assess the impact of a stress management, a self-development and a relaxation technique on the quality of school life and rates of absenteeism of 448 Year 5 and 6 students in 16 classes at 4 Lower Hunter Valley primary schools in the state of New South Wales, Australia in the year 2000. The Quality of School Life questionnaire (Ainley & Bourke, 1992) scales were used as indicators of students' perceptions of aspects of their school life including stressful and satisfying elements. Various student, teacher, and class contextual variables were also collected and investigated.*

*Significant school and class differences on almost all scales were evident. But overall, students tended to perceive a higher quality of school life in Term 2 than in Term 3. Possible explanations of school and class and intervention differences and the decline in quality of school life in Term 3 are discussed while implications including the apparent importance of positive peer relationships and an exciting and enjoyable curriculum in ensuring students have a high quality of school life are described. Finally, the need for the provision of support services to students who indicated a high level of dissatisfaction with their school life is suggested.*

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Student Quality of School Life Differences

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## INTRODUCTION

### Overview and Background

This paper reports the second stage of a two-stage study concerned with intervention techniques that teachers can use in attempting to improve student quality of school life and reduce student absence. Stage 1 of the study identified and developed and trialed three promising intervention strategies, and this paper reports on the use of these strategies by teachers in a small number of normal upper primary classrooms.

Traditionally, research regarding student quality of school life, satisfaction, and the cause and effect of student and teacher stress in our schools has examined these concepts as separate phenomena. More recent research, however, has begun to address the interactive dynamics of affective aspects of classrooms (see for example, Schofield & Bourke, 1997; Leonard, 1998; Leonard *et al*, 2000, 2001a, 2001b).

What is readily apparent from these recent studies is that, with students and teachers sharing the same environment, many of their life experiences and potential stresses are also shared. For the welfare of their students, teachers need to be aware of these interactions and to be proactive in developing an appropriate school environment for their students, perhaps through the use of appropriate stress management and relaxation techniques.

### Rationale for the Study

This study is based on the concept that for primary school children, the school environment they share with teachers resembles an actual workplace. Such an assumption is feasible in that students spend a similar number of hours each day at school as are spent at work by many members of the work force, they undertake mental and physical tasks of similar duration and intensity to many workers, their output is monitored by superiors and, as with many workplaces, they have a regimented daily routine.

Whilst childhood is often perceived as a happy time, some authors have argued that the years spent by children in educational environments could be a time of considerable stress, as success or failure in this environment was a major determinant of future occupational status (Anderson & Steinle, 1978; Medeiros *et al*, 1983, Schofield & Bourke, 1997). Thus, it is possible to assume that those work, social, and environmental stresses which operate in the workplace may also operate within a school context.

A consequence of teachers not addressing the stressors impacting on their students can be deduced from other research which has propounded the hypothesis that negative stress leads to illness (Fineman, 1995; Hargreaves, 1998; Troman, 2000), often linked to immunosuppression which results in an individual being susceptible to viral disease (Newberry *et al*, 1991; Totman, 1988), leading in some cases to a pattern of absenteeism (Donaldson, 1993; Galloway *et al*, 1984; Shellenbarger, 1998). In all work environments such a pattern of absenteeism is a major financial issue but, in a school setting, there is also the added impact of a possible reduction in the quality of educational outcomes.

The principal concern of this part of the present study was to determine if any or all of three stress management and relaxation strategies were related to student quality of school life and/or to student absenteeism. As a secondary issue, teacher stress, satisfaction and absence were also considered in relation to the three strategies.

## RESEARCH INSTRUMENTS, SAMPLE AND PROCEDURE

The seven scales of the primary form of the student Quality of School Life (QSL) questionnaire (Ainley & Bourke, 1992) were used as indicators of student satisfaction and stress. This instrument consists of two general and five specific scales, the latter concerned with student perceptions of different aspects of their life at school. The QSL scales were based on four response categories. For all QSL scales except Negative Affect, a score of 4 indicated a favourable response to each aspect of schooling through to a score of 1 indicating an unfavourable response. For the Negative Affect scale, the coding was reversed. The contextual variables gender, school, class and year of schooling were also collected in addition to the number of days absent for each student. Teachers completed two established questionnaires, one a self-report of teacher stress on four scales, the other a self-report of three aspects of teacher satisfaction (Smith and Bourke, 1992). Self-reports of teacher absence were also collected and a brief teacher background questionnaire was administered.

The sample involved in implementing the interventions consisted of 16 classes with a total of 448 students. The classes were selected from Stage Three classes (Years 5 & 6) at four Department of Education and Training Public Schools in the Lower Hunter Valley, New South Wales, Australia. The four schools were chosen to provide a representative sample of schools in the Hunter Region encompassing a broad range of student socio-economic background.

The questionnaires were first completed by this sample of students and their teachers in Term 2 of the four-term school year, prior to any intervention being undertaken. There were three separate interventions implemented subsequently. Of the four classes at each of the four schools involved in the study, one class implemented one of the three interventions, and the fourth class acted as the control group. The three interventions, implemented over a period of ten weeks, were as follows:

1. A sequence of ten lessons aimed at improving students' communication and interaction skills adapted by the researcher from the Dutch program called "Action-Reaction" developed by Freerk Ykema (Woltring & Ykema, 1999). This program (called *Action/Reaction* here) aims to develop students' self-respect, self-confidence, self-control and self-reflection.
2. The use of Progressive Relaxation, Breathing and Imagination as stress reduction techniques (*Progressive Relaxation*). Davis, Eshelman and McKay (1995) identified that these techniques were appropriate for relieving a broad range of stress related symptoms.
3. The strategic use of background / mood music selected by the researcher to promote an appropriate working environment and minimize stress and disruption at transition periods during the day such as before school, after recess and after lunch (*Background Music*).

The student and teacher questionnaires were re-administered in Term 3, at the conclusion of the intervention period.

## RESULTS

Results for the QSL scales of the student questionnaire and for student absence are first reported for individual schools and classes then jointly for classes undertaking each of the three interventions and the control classes. The intervention group results on the scales of the teacher questionnaires and teacher absence are then presented.

### **Summary of School and Class Differences**

QSL scale means indicated overall that students were quite satisfied with their quality of school life. All scale means were above the mid-point of the scale (2.5) with the exception of the Negative Affect scale (the reverse scale), the latter indicating a lack of negative perceptions. Correlations between the QSL scales were all significant at the 0.01 significance level, indicating that students who were more satisfied with one aspect of their schooling were also more likely to be satisfied with other aspects of their schooling, as measured by the QSL scales. Students who perceived school as an unhappy and uninviting place, indicated by higher scores on the Negative Affect scale, were more likely to have lower scores on the other QSL scales.

A number of relationships were observed between the student school and/or class and the QSL scales. Students at School 3 indicated a higher level of satisfaction on thirteen of the fourteen QSL measures made when compared to students enrolled at the other three schools. There were significant differences between classes for all QSL scales. General trends indicated that students in Class 3 at School 2 and Class 2 at School 3 tended to perceive a high level of quality of school life while students in Classes 1 and 2 at School 1, and Class 3 at School 4 were generally less happy than students in the other thirteen classes on the majority of scales. Means and standard deviations for the QSL scales and student absence in Terms 2 (pre-intervention) and Term 3 (post-intervention) by School and Class are presented in Table 1 and Table A1 (see Appendix 1) respectively.

**Table 1. QSL Scale Mean Scores (SD) and Student Absence (%) in Term 2 and Term 3 by School**

STUDENT SCALES	SCHOOL				
	School 1 (N=103)	School 2 (N=121)	School 3 (N=110)	School 4 (N=114)	Total (N=448)
<b>TERM 2 QSL</b>					
General Satisfaction	2.84 (0.76)	3.28 (0.61)	3.32 (0.64)	2.88 (0.73)	3.09 (0.72)
Negative Affect	1.73 (0.68)	1.55 (0.58)	1.52 (0.63)	1.70 (0.64)	1.62 (0.64)
Teacher	3.03 (0.82)	3.60 (0.59)	3.69 (0.44)	3.26 (0.75)	3.41 (0.71)
Opportunity	3.41 (0.62)	3.63 (0.48)	3.66 (0.49)	3.57 (0.51)	3.57 (0.53)
Achievement	3.39 (0.56)	3.25 (0.68)	3.50 (0.54)	3.30 (0.54)	3.36 (0.59)
Social Integration	3.00 (0.70)	3.27 (0.60)	3.32 (0.53)	3.13 (0.66)	3.19 (0.63)
Adventure	2.55 (0.71)	3.00 (0.68)	2.99 (0.75)	2.59 (0.71)	2.79 (0.74)
<b>TERM 2 STUDENT ABSENCE</b>					
Absence for Illness (%)	2.77 (5.69)	2.33 (3.42)	3.11 (5.46)	4.07 (5.62)	3.07 (5.12)
Total Absence (%)	4.71 (6.37)	6.12 (6.16)	8.41 (8.94)	9.65 (8.02)	7.26 (7.67)
<b>TERM 3 QSL</b>					
General Satisfaction	2.71 (0.80)	3.22 (0.64)	3.36 (0.61)	2.99 (0.63)	3.08 (0.71)
Negative Affect	1.84 (0.75)	1.55 (0.61)	1.54 (0.60)	1.72 (0.65)	1.66 (0.66)
Teacher	2.90 (0.90)	3.54 (0.57)	3.64 (0.52)	3.18 (0.64)	3.33 (0.72)
Opportunity	3.34 (0.67)	3.57 (0.48)	3.65 (0.53)	3.49 (0.52)	3.52 (0.56)
Achievement	3.42 (0.51)	3.19 (0.65)	3.51 (0.53)	3.36 (0.52)	3.36 (0.57)
Social Integration	3.05 (0.70)	3.32 (0.50)	3.34 (0.52)	3.09 (0.64)	3.20 (0.61)
Adventure	2.54 (0.78)	2.96 (0.73)	2.99 (0.74)	2.65 (0.75)	2.79 (0.75)
<b>TERM 3 STUDENT ABSENCE</b>					
Absence for Illness (%)	4.11 (6.56)	3.33 (4.23)	2.89 (4.60)	3.51 (6.00)	3.45 (5.39)
Total Absence (%)	7.64 (8.97)	8.56 (8.38)	9.95 (10.72)	6.82 (9.67)	8.25 (9.50)

With regard to the relationship between student absence and the QSL scales, a general trend was evident indicating students who reported higher quality of life at school were absent from school for fewer days for both illness and total absence while higher negative feelings and emotions regarding school were related to increased absence. The significant negative correlations between Term 3 Sick (%) and Term 3 General Satisfaction and Adventure reinforced this relationship and also the link identified in the literature between increased illness and lower quality of life. Whilst not reaching statistical significance, the relationship between lower Achievement scale scores and increased absence rates is also of import in terms of school effectiveness assessment as student achievement is increasingly a key criterion in the school effectiveness assessment process. A significant school difference was evident for Term 2 Total (%) with the range of school means approximately 4.9 percent. Students at School 4 (9.7%) had the highest average percentage total Term 2 absence and students at School 1 had the lowest (4.7%)

A significant class difference was also evident for Term 2 Total Absence (%) with the range of class means approximately 6.6 percent with the students in Class 4 at School 4 having the highest average level of percentage days absent (11.1%) and students in Class 4 at School 1 having the lowest (4.4%). This result indicates that students in Class 4 at School 1 were more likely to be at school on any given day than students in other classes and be present for 2.9 days more (6.6%) than students in Class 4 at School 4 during the term.

### **Student QSL and Absence by Intervention Strategy**

Means and standard deviations for the QSL scales and the percentage of days absent in Terms 2 (pre-intervention) and Term 3 (post-intervention) by intervention strategy and control are presented in Table 2. Two categories of absence are shown – the proportion of days absent through illness and the proportion of absence for all causes (total absence).

**Table 2. QSL Scale Mean Scores (SD) and Student Absence (%) in Term 2 and Term 3 by Intervention Strategy**

STUDENT SCALES	INTERVENTION				
	Control Group (N=111)	Action / Reaction (N=113)	Progressive Relaxation (N=111)	Background Music (N=113)	Total (N=448)
<b>TERM 2 QSL</b>					
General Satisfaction	2.92 (0.75)	3.17 (0.71)	3.01 (0.71)	3.24 (0.66)	3.09 (0.72)
Negative Affect	1.72 (0.67)	1.61 (0.69)	1.60 (0.60)	1.56 (0.59)	1.62 (0.64)
Teacher	3.16 (0.80)	3.52 (0.73)	3.40 (0.69)	3.54 (0.55)	3.41 (0.71)
Opportunity	3.50 (0.62)	3.60 (0.51)	3.56 (0.54)	3.63 (0.45)	3.57 (0.53)
Achievement	3.29 (0.62)	3.38 (0.57)	3.34 (0.54)	3.42 (0.61)	3.36 (0.59)
Social Integration	3.07 (0.67)	3.21 (0.66)	3.17 (0.65)	3.29 (0.52)	3.19 (0.63)
Adventure	2.68 (0.78)	2.80 (0.72)	2.79 (0.69)	2.90 (0.76)	2.79 (0.74)
<b>TERM 2 STUDENT ABSENCE</b>					
Absence for Illness (%)	3.74 (6.01)	3.06 (5.11)	3.01 (5.17)	2.47 (3.99)	3.07 (5.12)
Total Absence (%)	7.16 (7.53)	8.10 (8.85)	7.70 (7.95)	6.09 (6.03)	7.26 (7.67)
<b>TERM 3 QSL</b>					
General Satisfaction	3.04 (0.71)	3.15 (0.68)	3.02 (0.74)	3.11 (0.72)	3.08 (0.71)
Negative Affect	1.76 (0.73)	1.56 (0.60)	1.67 (0.65)	1.65 (0.65)	1.66 (0.66)
Teacher	3.14 (0.81)	3.46 (0.65)	3.28 (0.74)	3.42 (0.64)	3.33 (0.72)
Opportunity	3.42 (0.71)	3.55 (0.54)	3.54 (0.47)	3.55 (0.49)	3.52 (0.56)
Achievement	3.42 (0.57)	3.37 (0.53)	3.31 (0.60)	3.36 (0.59)	3.36 (0.57)
Social Integration	3.17 (0.63)	3.23 (0.59)	3.17 (0.64)	3.26 (0.56)	3.20 (0.61)
Adventure	2.75 (0.78)	2.85 (0.75)	2.73 (0.70)	2.84 (0.77)	2.79 (0.75)
<b>TERM 3 STUDENT ABSENCE</b>					
Absence for Illness (%)	3.69 (6.09)	3.16 (4.31)	3.16 (4.76)	3.78 (6.19)	3.45 (5.39)
Total Absence (%)	8.44 (9.90)	7.57 (8.48)	8.98 (10.39)	8.03 (9.20)	8.25 (9.50)

Two things are notable with respect to the QSL scales in Table 2. The most favourable aspect of school related to the future Opportunity students saw the school presenting them

with, and the least favourable was a sense of Adventure (or excitement) in learning. Secondly, there was little change in mean QSL scores between the Term 2 and Term 3 administrations for any of the groups.

With respect to student absence, it will be noted that, on average, absence rates for illness were low, but were strongly positively skewed with a few students having a high level of reported illness. Of course, overall absence rates were higher, and again positively skewed. Absence was generally higher in Term 3 than in Term 2 perhaps because Term 3 includes the major part of winter in Australia, when respiratory and similar illnesses are likely to be more prevalent. Despite this, it should be noted that the Action/Reaction group did record a lower total absence in Term 3 compared with Term 2, although the difference was not significant.

The differences between each of the QSL scale scores and absence rates between Terms 2 and 3 are shown in Table 3. In this table a positive difference indicates that QSL or absence was greater in Term 3, and a negative difference that QSL or absence was greater in Term 2. Changes in only two of the seven QSL were found to be statistically significantly different between the three intervention and one control groups – General satisfaction ( $F=3.47$ ,  $df=3,447$ ,  $p<.05$ ) and Achievement ( $F=3.45$ ,  $df=3,447$ ,  $p<.05$ ). For these scales, Scheffe multiple range tests were used to determine which of the groups differed. In both cases, it was the Background Music group that decreased in satisfaction and the Control group that increased satisfaction significantly. Finally, neither of the absence measures exhibited differences in the change in proportion of days absent between the four groups.

**Table 3. Change in QSL Means and Student Absence Rates Term 2 to Term 3 by Intervention Strategy**

STUDENT SCALES Term 3 - Term 2 (Difference)	INTERVENTION				
	Control Group (N=111)	Action / Reaction (N=113)	Progressive Relaxation (N=111)	Background Music (N=113)	Total (N=448)
<b>QSL</b>					
General Satisfaction	0.11 (0.67)	-0.01 (0.61)	0.01 (0.47)	-0.13 (0.50)	-0.01 (0.57)
Negative Affect	0.04 (0.69)	-0.05 (0.50)	0.07 (0.53)	0.09 (0.50)	0.04 (0.56)
Teacher	-0.02 (0.62)	-0.06 (0.59)	-0.11 (0.48)	-0.12 (0.56)	-0.08 (0.56)
Opportunity	-0.08 (0.60)	-0.05 (0.47)	-0.01 (0.42)	-0.08 (0.40)	-0.06 (0.48)
Achievement	0.13 (0.53)	-0.01 (0.44)	-0.03 (0.41)	-0.06 (0.51)	0.01 (0.48)
Social Integration	0.09 (0.53)	0.01 (0.53)	-0.00 (0.46)	-0.03 (0.48)	0.02 (0.50)
Adventure	0.07 (0.68)	0.05 (0.71)	-0.06 (0.52)	-0.07 (0.61)	-0.00 (0.64)
<b>STUDENT ABSENCE</b>					
Absence for Illness (%)	-0.05 (6.91)	0.10 (6.05)	0.15 (5.64)	1.32 (6.12)	0.38 (6.20)
Total Absence (%)	1.28 (9.50)	-0.53 (9.21)	1.28 (8.61)	1.94 (9.49)	0.99 (9.23)

## **Student summary and issues**

None of the interventions could be said to be related to positive change in either QSL or school attendance rates. The only significant differences found over the period of the interventions were for the General satisfaction and Achievement QSL scales, and both favoured the Control group over the Background Music group. Three notes of caution should be observed here. First, the Control group had the lowest mean scores before the interventions began for both of these scales, and the Background Music group had the highest mean scores. What could have been occurring over this time was regression to the overall mean by these two groups. Secondly, it might be expected that QSL scores would decrease between Term 2 and Term 3 as the school year moved on into the winter term. Consequently it is the relative movement of the QSL scale scores between intervention groups that should be of major interest, not the absolute change over the time of the intervention. Finally, during the intervention phase it became increasingly obvious to the researcher that some teachers were unable or unwilling to fully implement their particular intervention strategies effectively.

In considering the likely importance of the final issue, observations of some intervention lessons were carried out to assess the level and expertise of implementation. Discussions were subsequently undertaken with the participating teachers following the intervention phase in an attempt to assess their perceptions regarding the quality of their implementation of the interventions. Results of these investigations perhaps provide an interesting commentary on teacher's levels of perceived self-efficacy rather than what the researcher would suggest was an accurate account of their level of implementation of the intervention strategies. Some teachers who appeared to have implemented the interventions extremely well described their efforts in modest or even negative terms while others, who appeared to have made little or no effort to implement the intervention, were sometimes very positive in their accounts.

## **Teacher stress, satisfaction and absence by intervention strategy**

Means and standard deviations for the teacher stress and satisfaction scales and the percentages of days absent in Term 2 (pre-intervention) and Term 3 (post-intervention) by intervention strategy and control groups are presented in Table 4. Again two categories of absence are shown – absence through illness and total absence. It should be noted that there were only 16 teachers involved in these analyses. Consequently any conclusions arising from the teacher results should be treated with far greater caution than the corresponding student results.

The stress and satisfaction scales are based on four response categories such that a scale score of 4 represented high stress or satisfaction, and a score of 1 represented low stress or satisfaction. With respect to teacher stress, while stress due to students and physical conditions was relatively low, stress due to time pressures was moderate. Teacher satisfaction with workload and conditions was moderate, satisfaction with students was higher and satisfaction with the administration and senior staff of the school was relatively high. Teacher absence was higher than student absence in Term 3. Overall this difference seems to reflect higher teacher absence due to illness.

A similar procedure was followed of relating these teacher scale scores and absence to intervention strategies, as previously described for the student data. The differences for each of the teacher stress and satisfaction scales and absence between Term 2 and Term 3 are shown in Table 5. A positive difference indicates stress, satisfaction or absence was

higher in Term 3. As might be expected with the small numbers of teachers involved in each group, none of the differences observed in Table 5 was statistically significant. However, two trends in the teacher stress data are perhaps worthy of note – the Progressive Relaxation group had reduced stress due to conflict with staff and to time pressures, and the Background Music group had reduced stress due to students and physical conditions and to lack of rewards and recognition when compared with the other groups.

Trends in the teacher satisfaction data suggest that, overall, the Background Music group gained the most satisfaction over the period of the intervention. Whereas the Progressive Relaxation group had the highest gain in satisfaction due to workload and conditions, the Music group gained almost as much whereas neither of the other two groups gained at all. For the other two measures of satisfaction, relationships with students and the administration and senior staff of the school, the Background Music group had by far the largest gains.

Similarly there was no significant difference in change in teacher absence on either measure over the period of the intervention implementation. It was noted, however, that teacher absences across all interventions increased except for illness for the Action/Reaction group, where there was a marked decline in absence rate. The increase in total absence for this group was also smaller than the increases for all other groups. Contrary to the results for teacher satisfaction, the Background Music group had by far the greatest increases in teacher absence, both for illness and in total.

**Table 4. Teacher Stress and Satisfaction Scale Mean Scores (SD), and Student Absence (%) in Terms 2 and 3 by Intervention Strategy**

TEACHER SCALES	INTERVENTION				
	Control Group (N=4)	Action / Reaction (N=4)	Progressive Relaxation (N=4)	Background Music (N=4)	Total (N=16)
<b>TERM 2 TEACHER STRESS</b>					
Conflict	2.00 (1.04)	2.17 (0.14)	2.13 (0.72)	1.75 (0.32)	2.01 (0.61)
Student & Phys. Conditions	1.81 (0.41)	2.00 (0.74)	1.66 (0.40)	2.00 (0.20)	1.87 (0.45)
Time Pressures	2.33 (0.49)	2.54 (0.92)	2.54 (0.55)	2.83 (0.76)	2.56 (0.65)
Rewards & Recognition	2.17 (0.59)	2.50 (0.64)	2.42 (0.97)	2.33 (0.73)	2.35 (0.68)
<b>TERM 2 TEACHER SATISFACTION</b>					
Workload & Conditions	2.42 (0.55)	2.46 (0.55)	2.63 (0.69)	2.54 (0.83)	2.51 (0.60)
Relationship with Students	2.75 (0.40)	2.54 (0.37)	3.17 (0.36)	2.54 (0.64)	2.75 (0.49)
Administration & Senior Staff	2.71 (0.90)	3.08 (0.44)	3.25 (0.48)	3.17 (0.49)	3.05 (0.58)
<b>TERM 2 TEACHER ABSENCE</b>					
Absence for Illness (%)	2.27 (1.86)	7.39 (1.14)	3.41 (2.27)	2.27 (1.86)	3.84 (2.72)
Total Absence (%)	3.86 (2.62)	8.52 (1.14)	4.55 (1.86)	7.73 (5.74)	6.16 (3.63)
<b>TERM 3 TEACHER STRESS</b>					
Conflict	1.96 (0.69)	2.17 (0.30)	1.96 (0.44)	1.63 (0.44)	1.93 (0.48)
Student & Phys. Conditions	1.81 (0.31)	2.19 (0.68)	1.84 (0.48)	1.75 (0.37)	1.90 (0.47)
Time Pressures	2.33 (0.61)	2.38 (0.80)	2.33 (0.59)	2.71 (0.52)	2.44 (0.59)
Rewards & Recognition	2.46 (0.72)	2.42 (0.48)	2.25 (0.44)	2.04 (0.34)	2.29 (0.49)
<b>TERM 3 TEACHER SATISFACTION</b>					
Workload & Conditions	2.04 (0.32)	2.46 (0.37)	2.88 (0.48)	2.71 (0.52)	2.52 (0.50)
Relationship with Students	2.63 (0.32)	2.75 (0.22)	3.04 (0.39)	2.96 (0.34)	2.84 (0.34)
Administration & Senior Staff	2.71 (0.34)	3.08 (0.44)	3.17 (0.30)	3.42 (0.29)	3.09 (0.41)
<b>TERM 3 TEACHER ABSENCE</b>					
Absence for Illness (%)	3.75 (4.33)	3.63 (1.32)	3.75 (7.50)	11.25 (17.62)	5.59 (9.42)
Total Absence (%)	8.44 (5.14)	10.19 (1.63)	8.44 (8.74)	15.63 (16.54)	10.67 (9.22)

### Teacher summary and issues

Whilst none of the interventions implemented could be related to statistically significant positive change on any of the measures of teacher stress or satisfaction, or to teacher absence, trends suggested that overall the Background Music intervention had non-significant positive relationship with both teacher stress and teacher satisfaction. Trends also suggested that the Action/Reaction intervention had a non-significant relationship with lower levels of teacher absence.

**Table 5. Change in Teacher Stress and Satisfaction Means and Absence Rates Term 2 to Term 3 by Intervention Strategy**

TEACHER SCALES Term 3 - Term 2 (Difference)	INTERVENTION				
	Control Group (N=4)	Action / Reaction (N=4)	Progressive Relaxation (N=4)	Background Music (N=4)	Total (N=16)
<b>TEACHER STRESS</b>					
<b>Conflict</b>	-0.04 (0.48)	0.00 (0.43)	-0.17 (0.72)	-0.13 (0.16)	-0.08 (0.44)
<b>Student &amp; Phys. Conditions</b>	0.00 (0.31)	0.19 (0.33)	0.19 (0.46)	-0.25 (0.40)	0.03 (0.39)
<b>Time Pressures</b>	0.00 (0.36)	-0.17 (0.45)	-0.21 (0.61)	-0.13 (0.25)	-0.13 (0.40)
<b>Rewards &amp; Recognition</b>	0.29 (0.37)	-0.08 (0.29)	-0.17 (0.88)	-0.29 (0.44)	-0.06 (0.54)
<b>TEACHER SATISFACTION</b>					
<b>Workload &amp; Conditions</b>	-0.38 (0.34)	-0.00 (0.49)	0.25 (0.48)	0.17 (0.36)	0.01 (0.45)
<b>Relationship with Students</b>	-0.13 (0.44)	0.21 (0.50)	-0.13 (0.32)	0.42 (0.32)	0.09 (0.43)
<b>Administration &amp; Senior Staff</b>	-0.00 (0.71)	0.00 (0.41)	-0.08 (0.32)	0.25 (0.29)	0.04 (0.43)
<b>TEACHER ABSENCE</b>					
<b>Absence for Illness (%)</b>	1.48 (4.29)	-3.76 (2.17)	0.34 (7.07)	8.98 (19.06)	1.76 (10.48)
<b>Total Absence (%)</b>	4.57 (7.07)	1.66 (1.70)	3.89 (7.81)	7.90 (20.00)	4.51 (10.40)

Teachers who implemented the Background Music intervention were the only group of teachers to report a lower level of stress on all four of the teacher stress scales in Term 3. Similarly these teachers were also the only group to indicate a higher level of satisfaction on all three teacher satisfaction scales in Term 3. These results contrast markedly with the student results that tended to indicate that the Background Music intervention was negatively related to student quality of school life and also student absence. Finally, in light of the apparent positive impact of the Background Music intervention on teacher stress and satisfaction, it is perhaps surprising that this group of teachers also reported the largest increase in rates of both teacher absence for illness and total teacher absence.

It is important, again, to be reminded that each intervention was implemented by only four teachers hence the generalisability of these results is highly questionable. It is also very likely that the level of implementation that appeared to affect the student analysis of the interventions similarly affected the teacher results. Accordingly it is anticipated that this effect will be exemplified in the individual class analyses presented below.

### Two instances of Action/Reaction implementation

Two of the four classes that implemented the Action/Reaction intervention were identified as presenting a contrast. The teacher of one class (called Action 1 class here) effectively implemented the intervention strategy in the opinions of both the researcher and the teacher. In the contrasting class (Action 3 class), another teacher implemented the same intervention less effectively in the opinion of both the researcher and teacher. Mean differences in QSL between Term 2 and Term 3 were compared for these two classes, as before (see Table 6).

The mean QSL scores for Action 1 improved and Action 3 declined for six of the seven scales, although in some cases by small amounts. The exception was the Negative Affect scale, on which both classes improved (recall that this was a reverse scale). On average, the difference was an improvement of 0.06 for Action 1 and a decline of 0.09 for Action 3, a net difference of 0.15 on the 4-point scale, which would be significant. Results for absence were less consistent. While Action 1 had less absence due to illness and Action 3 had more, the opposite was the case for total absence.

**Table 6. Change in QSL Means and Student Absence Rates Term 2 to Term 3 for Two Classes in the Action/Reaction Implementation Strategy**

STUDENT SCALES Term 3 - Term 2 (Difference)	CLASS		
	Action 1 (Class 4/1) (N=27)	Action 3 (Class 2/3) (N=26)	Total (N=448)
<b>QSL</b>			
General Satisfaction	0.02 (0.94)	-0.15 (0.52)	-0.01 (0.57)
Negative Affect	-0.07 (0.44)	-0.15 (0.58)	0.04 (0.56)
Teacher	0.06 (0.82)	-0.11 (0.37)	-0.08 (0.56)
Opportunity	0.11 (0.62)	-0.14 (0.47)	-0.06 (0.48)
Achievement	0.03 (0.59)	-0.09 (0.38)	0.01 (0.48)
Social Integration	0.09 (0.73)	-0.13 (0.32)	0.02 (0.50)
Adventure	0.01 (0.91)	-0.17 (0.61)	-0.00 (0.64)
<b>STUDENT ABSENCE</b>			
Absence for Illness (%)	-0.05 (6.91)	0.10 (6.05)	0.38 (6.20)
Total Absence (%)	2.44 (7.84)	-1.13 (9.26)	0.99 (9.23)

Scale scores for the two teachers involved are shown in Table 7. For the teacher of Action 1 class, stress due to students and physical conditions and lack of rewards and recognition decreased while the other two stress measures were unchanged. This teacher also had increased satisfaction on two of the three satisfaction scales. The teacher of Action 3 class had a slight reduction in stress due to conflict, but increased stress on the other three scales. This teacher also had less satisfaction with workload and conditions, more satisfaction with students, and remained unchanged on satisfaction with school administration. Both teachers had less absence due to illness but more total absence.

Indications from these two classes suggest that quality of school life might be dependent on effectiveness of the implementation of the Action/Reaction intervention strategy. Student absence would seem not to be related to implementation in the same way.

## SUMMARY AND CONCLUSIONS

Overall, the interventions implemented in this study appeared to have had some small impact on student quality of school life, student absence, teacher stress, teacher satisfaction, and teacher absence. Of particular interest are the apparent differential effects of some of the interventions for teachers and students. The Background Music intervention especially appeared to have positive effects in reducing teacher stress and increasing teacher satisfaction yet also appeared to have a negative impact on student quality of school life. It is also evident that effects of the interventions varied greatly probably due, at least in part, to the effectiveness of implementation of the interventions.

The general lack of significance of the interventions was disappointing yet, when considered in conjunction with the unexpected importance of school membership, provided perhaps the most interesting aspects of the analysis. Students at School 1 were more likely to report lower general satisfaction with school and poorer relationships with their respective teachers, while students at School 3 were more likely to perceive a better relationship with their respective teachers and more opportunities for the future from their schooling than students at other schools. Students at School 2 were more likely to report less negative feelings and emotions regarding school but also less opportunities for the future from their schooling, while students at School 4 were more likely to have a lower rate of total absence in Term 3 but also a poorer perception of their relationship with their peers than student at other schools.

**Table 7. Change in Teacher Stress and Satisfaction Means and Absence Rates - Term 2 to Term 3 by Intervention Strategy**

<b>TEACHER SCALES Term 3 - Term 2 (Difference)</b>	<b>CLASS</b>		
	<b>Action 1 (Class 4/1) (N=1)</b>	<b>Action 3 (Class 2/3) (N=1)</b>	<b>Total (N=16)</b>
<b>TEACHER STRESS</b>			
<b>Conflict</b>	-0.50	-0.17	-0.08 (0.44)
<b>Student &amp; Phys. Conditions</b>	0.00	0.63	0.03 (0.39)
<b>Time Pressures</b>	0.00	0.17	-0.13 (0.40)
<b>Rewards &amp; Recognition</b>	-0.50	0.17	-0.06 (0.54)
<b>TEACHER SATISFACTION</b>			
<b>Workload &amp; Conditions</b>	0.67	-0.17	0.01 (0.45)
<b>Relationship with Students</b>	0.67	0.33	0.09 (0.43)
<b>Administration &amp; Senior Staff</b>	0.00	0.00	0.04 (0.43)
<b>TEACHER ABSENCE</b>			
<b>Absence for Illness (%)</b>	-2.32	-4.32	1.76 (10.48)
<b>Total Absence (%)</b>	3.41	4.51	4.51 (10.40)

In the broader context of school reform it is hoped that further investigation will be undertaken of the intervention strategies explored and refined in this study, and perhaps other strategies intended to reduce stress. In particular, interventions are needed that facilitate the establishment of classroom environments where students and teachers want to be, where educational outcomes are enhanced, students are led to a broader life experience, and absenteeism is reduced.

Investigation should also be pursued to identify more fully benefits for educators and students who are empowered with skills to improve their quality of school life, increase student satisfaction and reduce student stress levels. Students who feel good about themselves and who are excited and stimulated by their school environment are more likely to be students who are ready to learn. Students who want to learn will want to be at school and are likely to make an increased effort to attend. An associated improvement in teacher morale and reduced absence may also result.

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### Appendix 1. Table A1. QSL Scale Mean Scores (SD) and Student Absence (%) by Class

QSL SCALES	C1/S1 N=25	C2/S1 N=24	C3/S1 N=27	C4/S1 N=27	C1/S2 N=29	C2/S2 N=30	C3/S2 N=30	C4/S2N =32	C1/S3 N=29	C2/S3 N=26	C3/S3 N=29	C4/S3 N=26	C1/S4 N=28	C2/S4 N=27	C3/S4 N=29	C4/S4 N=30	TOTAL (N=448)
<b>TERM 2 QSL</b>																	
General Satisfaction	2.63 (0.82)	2.69 (0.68)	3.17 (0.62)	2.86 (0.83)	3.26 (0.54)	3.19 (0.60)	3.44 (0.48)	3.22 (0.78)	3.20 (0.68)	3.53 (0.42)	3.22 (0.72)	3.35 (0.67)	3.24 (0.56)	2.98 (0.65)	2.48 (0.75)	2.84 (0.73)	3.09 (0.72)
Negative Affect	1.75 (0.74)	1.73 (0.67)	1.56 (0.48)	1.90 (0.80)	1.67 (0.56)	1.50 (0.53)	1.41 (0.53)	1.62 (0.68)	1.49 (0.57)	1.52 (0.74)	1.52 (0.56)	1.56 (0.69)	1.51 (0.50)	1.70 (0.56)	1.96 (0.80)	1.63 (0.61)	1.62 (0.64)
Relationship with Teacher	2.90 (0.91)	2.62 (0.79)	3.42 (0.52)	3.13 (0.86)	3.52 (0.59)	3.30 (0.66)	3.87 (0.24)	3.51 (0.68)	3.71 (0.44)	3.85 (0.32)	3.67 (0.40)	3.54 (0.53)	3.69 (0.39)	3.40 (0.48)	2.74 (0.81)	3.23 (0.88)	3.41 (0.71)
Opportunity	3.41 (0.56)	3.44 (0.78)	3.57 (0.43)	3.21 (0.66)	3.60 (0.54)	3.60 (0.51)	3.79 (0.32)	3.54 (0.51)	3.56 (0.63)	3.79 (0.28)	3.63 (0.46)	3.67 (0.49)	3.74 (0.33)	3.64 (0.47)	3.34 (0.66)	3.59 (0.47)	3.57 (0.53)
School Achievement	3.41 (0.54)	3.34 (0.58)	3.51 (0.37)	3.31 (0.70)	3.25 (0.68)	3.27 (0.64)	3.40 (0.47)	3.10 (0.85)	3.44 (0.53)	3.57 (0.43)	3.46 (0.64)	3.53 (0.54)	3.59 (0.40)	3.25 (0.43)	3.18 (0.57)	3.25 (0.62)	3.36 (0.59)
Social Integration	2.90 (0.80)	2.93 (0.73)	3.25 (0.41)	2.91 (0.77)	3.21 (0.59)	3.33 (0.54)	3.28 (0.64)	3.27 (0.64)	3.30 (0.49)	3.48 (0.40)	3.23 (0.64)	3.27 (0.55)	3.35 (0.45)	3.12 (0.71)	2.89 (0.70)	3.18 (0.67)	3.19 (0.63)
Adventure	2.33 (0.63)	2.62 (0.61)	2.63 (0.72)	2.62 (0.84)	2.99 (0.59)	3.03 (0.63)	2.95 (0.59)	3.04 (0.88)	3.01 (0.70)	3.11 (0.55)	2.86 (0.90)	3.01 (0.80)	2.91 (0.56)	2.72 (0.60)	2.22 (0.74)	2.53 (0.75)	2.79 (0.74)
<b>TERM 2 STUDENT ABSENCE</b>																	
Absence for Illness (%)	1.47 (1.86)	3.11 (8.09)	3.19 (6.47)	3.27 (4.67)	2.57 (3.38)	2.16 (3.81)	2.65 (4.16)	1.95 (2.22)	4.31 (7.14)	2.49 (4.77)	4.23 (5.91)	1.17 (1.86)	3.57 (3.62)	3.99 (5.73)	4.95 (6.19)	3.78 (6.58)	3.07 (5.19)
Total Absence (%)	5.17 (4.94)	4.83 (8.17)	4.45 (7.40)	4.44 (4.73)	6.01 (4.15)	7.34 (7.86)	6.60 (7.05)	4.64 (4.80)	8.81 (9.62)	10.17 (10.29)	7.65 (8.99)	7.08 (6.52)	8.40 (4.55)	9.25 (8.11)	9.76 (7.53)	11.09 (10.67)	7.26 (7.67)
<b>TERM 3 QSL</b>																	
General Satisfaction	2.39 (0.88)	2.75 (0.68)	2.81 (0.76)	2.88 (0.83)	3.15 (0.56)	3.22 (0.68)	3.43 (0.49)	3.10 (0.74)	3.39 (0.50)	3.38 (0.54)	3.38 (0.65)	3.30 (0.76)	3.24 (0.54)	2.99 (0.49)	2.82 (0.76)	2.92 (0.66)	3.08 (0.71)
Negative Affect	1.78 (0.78)	1.98 (0.95)	1.77 (0.51)	1.83 (0.78)	1.60 (0.59)	1.59 (0.57)	1.37 (0.48)	1.66 (0.74)	1.52 (0.62)	1.36 (0.43)	1.68 (0.59)	1.58 (0.72)	1.59 (0.59)	1.83 (0.65)	1.80 (0.78)	1.70 (0.56)	1.66 (0.66)
Relationship with Teacher	2.65 (0.99)	2.61 (0.88)	3.13 (0.84)	3.19 (0.76)	3.44 (0.64)	3.43 (0.39)	3.79 (0.30)	3.50 (0.63)	3.70 (0.40)	3.75 (0.43)	3.56 (0.72)	3.56 (0.43)	3.47 (0.51)	3.26 (0.50)	2.88 (0.67)	3.13 (0.72)	3.33 (0.72)
Opportunity	3.35 (0.57)	3.08 (0.89)	3.57 (0.45)	3.32 (0.67)	3.49 (0.60)	3.65 (0.41)	3.71 (0.36)	3.45 (0.49)	3.67 (0.43)	3.65 (0.48)	3.60 (0.64)	3.68 (0.55)	3.51 (0.48)	3.47 (0.41)	3.47 (0.63)	3.52 (0.56)	3.51 (0.56)
School Achievement	3.46 (0.57)	3.63 (0.36)	3.29 (0.51)	3.34 (0.53)	3.28 (0.60)	3.03 (0.76)	3.30 (0.46)	3.15 (0.73)	3.48 (0.43)	3.48 (0.60)	3.54 (0.60)	3.55 (0.51)	3.49 (0.47)	3.31 (0.46)	3.27 (0.59)	3.36 (0.53)	3.36 (0.57)
Social Integration	2.92 (0.84)	3.17 (0.59)	3.12 (0.58)	3.00 (0.75)	3.30 (0.43)	3.24 (0.52)	3.39 (0.45)	3.33 (0.60)	3.44 (0.36)	3.35 (0.39)	3.29 (0.68)	3.29 (0.61)	3.27 (0.45)	3.03 (0.70)	2.90 (0.72)	3.16 (0.63)	3.20 (0.61)
Adventure	2.21 (0.65)	2.70 (0.83)	2.61 (0.71)	2.63 (0.87)	2.81 (0.80)	2.93 (0.63)	3.13 (0.63)	2.95 (0.83)	3.06 (0.70)	2.94 (0.73)	3.03 (0.70)	2.92 (0.85)	2.85 (0.64)	2.64 (0.51)	2.43 (0.71)	2.69 (0.66)	2.79 (0.75)
<b>TERM 3 STUDENT ABSENCE</b>																	
Absence for Illness (%)	3.04 (4.30)	5.02 (8.64)	4.22 (7.41)	4.17 (5.39)	2.41 (3.69)	2.95 (4.36)	3.03 (3.82)	4.81 (4.74)	3.86 (5.92)	3.07 (4.36)	2.67 (4.69)	1.89 (2.63)	3.96 (8.31)	2.75 (4.38)	4.89 (6.56)	2.45 (3.64)	3.45 (5.39)
Total Absence (%)	6.66 (6.52)	8.37 (9.21)	8.64 (12.46)	6.89 (6.58)	7.11 (7.32)	10.52 (9.36)	8.11 (8.37)	8.47 (8.37)	12.11 (12.01)	9.04 (8.67)	10.55 (13.75)	7.79 (6.36)	7.15 (9.10)	6.05 (11.69)	7.71 (8.09)	6.35 (9.98)	8.25 (9.50)