

BOO091031 ® Coping with school moves

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Abstract

School mobility is widely held to be disruptive to students' education either directly, by disrupting curriculum continuity or indirectly through social stress and engagement issues affecting the student. Paradoxically, mobility has not been consistently linked to poorer academic outcomes; where mobility was linked with lower academic achievement, behaviour problems and/or inadequate adjustment issues were also found. Adjustment problems implicate student coping strategies. There is a gap in the mobility literature in relation to coping strategies.

This study tests the hypothesis that when particular academic coping strategies are employed by mobile students academic achievement is supported and behavioural problems are avoided. A sample of over one thousand secondary students was employed to gather measures of mobility, academic achievement, suspensions and coping strategies in the pursuit of the following questions:

1. Is mobility linked to lower achievement in Australian students?
2. Is mobility linked to suspensions in Australian students?
3. Are coping strategies employed by mobile students whose academic achievement is satisfactory or better different from those employed by mobile students who are failing?
4. Are coping strategies employed by mobile students who are suspended different from those employed by mobile students who are never suspended?

Supporting prior findings the mobile students of this study achieved at lower levels and had more suspensions than the non-mobile students. Results indicate that positive coping strategies play an important role in the achievement profile of mobile students. Adaptive coping was linked to higher academic achievement while the converse was found for non-productive coping strategies in mobile students. Possible explanations for prior inconsistent findings are suggested.

Children of mobile middle and high SES families and those whose moves are necessitated by parental employment such as military families, rarely report negative effects. In addition, pre-existing differences have been found to account for achievement differences between mobile and other students in longitudinal studies. Results here suggest that it is not only mobility per se that determines children's outcomes but rather the reasons for moving and the family's attitude to moving. Adolescent's coping repertoires have been found to be largely developed over time in concert with their family's reactions to the range of circumstances they face. They result from socialising influences found within the family. Strategies modelled at home might be the ones the child/adolescent learns to use to manage stress. This could explain why children of some highly mobile families rarely report adverse academic achievement outcomes.

Introduction

Mobility and its effects on academic achievement are the focus of many recent studies. This paper discusses the links between school mobility, academic achievement, challenging behaviour and coping strategies in an Australian regional adolescent sample. More specifically, it examines the hypothesis that the relationship between mobility and academic achievement is associated with coping strategies and suspensions.

Australia and the United States have very mobile populations (Benson, Haycraft, Steyaert, & Weigel, 1979; Fields, 1997). A large Australian study conducted in 2002 by the Commonwealth Department of Education, Science and Training and Department of Defence (DEST & DoD), estimated 30 per cent of families with children move at least once every three years (Commonwealth Department of Education Science and Training, & Department of Defence, 2002). Defined in this study as 'more than two moves in a period of three years,' (DEST & DoD, 2002, p.1) and as a "non-promotional school change" (Rumberger, 2003, p. 6) student mobility has a range of antecedents and effects.

Students move schools for a number of reasons, some more stressful than others. In Queensland, where this study took place, children of Defence Force personnel move frequently. This type of move is qualitatively different in terms of support, to a move of relocation for work or to seek work, and is likely to involve different family structures and attitudes (Benson et al, 1979). Divorce, family breakdown, redundancy, poverty or life-style changes also necessitate a school move (DEST & DoD, 2002). Similar mobility reasons are noted in the UK, (Dobson & Heathorne, 1999) and the US (Schafft, 2006; Ou & Reynolds, 2008) with mobility rates of 30-50% cited in low income urban US families (Eckholm, 2008).

In addition to socioeconomic and structural factors, school mobility is also linked to challenging behaviour at school (Engec, 2006; Sorin & Iloste, 2006). Engec (2006) examined official records for the mobility rates of three quarter of a million students in the US and found that those students who were mobile were suspended two to three times as often as non-mobile students.¹ Mobility might be the result of behaviour problems (Sorin & Iloste, 2006) with a change of school deemed to be a “fresh start” by parents and students. Alternatively, it might precede it and cause adjustment problems.

Children of mobile families were found to have more behavioural, emotional and school problems than other children (Simpson & Fowler, 1994). Simpson and Fowler (1994) analyzed behavioural and emotional variables and school functioning data for 10,362 US children in grades one through twelve. Mobile students were 2.3 times more likely to have emotional or behavioural problems and 2.2 times more likely to have received psychological help. The study did not however, establish causality effects.

Mobility is widely held to be disruptive to a student’s education either directly, by disrupting curriculum continuity or indirectly through social stress and engagement issues affecting the student (Ou & Reynolds, 2008). A negative link between academic achievement and mobility has been found in Australia both in literacy and numeracy domains (DEST & DoD, 2002) and in the US where mobility has been shown to negatively predict achievement and school completion (Ou & Reynolds, 2008). Establishing a causal relationship between mobility and educational attainment is difficult however, due to the many confounding variables that must be considered. For example, mobile students are more likely to be poor, more likely to come from a single-parent home, and more likely to be in a household where the householder is unemployed or failed to complete high school (Heinlein, & Shinn, 2000). Nonetheless some studies have showed that even after controlling for prior attainment and background demographic factors mobility impacted achievement negatively in UK students (Temple & Reynolds, 1999; Strand & Demie, 2007).

It is important to note that research examining mobility and academic outcomes has not consistently shown a negative link (Benson et al, 1979). When mobility is a choice rather than enforced, for example in military families or migration to another country, it is more closely associated with positive rather than negative outcomes (Buerkle & Christenson, 1999; Marchant & Medway, 1987). Children of mobile middle and high SES families (Mehana & Reynolds, 1995; Dobson & Henthorne, 1999), children with high IQs (Long, 1992) and children whose parents are university graduates (Long, 1975) rarely report negative effects. In addition, pre-existing differences have been found to account for achievement differences between mobile and other students in longitudinal studies (Blane, Pilling & Fogelman, 1985; Schaller, 1976; Strand & Demie, 2006) Buerkle and Christenson (1999) contend that it is not mobility *per se* that determines children’s outcomes but rather the reasons for moving and the family’s attitude to moving.

Research on the impact of family relocation suggests that there are risks of impairment to children’s psychosocial adjustment mediated by the nature of the move (e.g. divorce or bereavement), negative parental attitudes to the move, poor pre-move adjustment and the number of family moves (Humke & Schafer, 1995). This suggests that one of the mechanisms whereby school mobility is translated into achievement outcomes occurs via student attitudes and coping mechanisms that are learnt within the family context. If this is correct then it would go some way to explain why moving schools is sometimes connected with negative school outcomes and sometimes not.

Considerable research has demonstrated a link between adaptive coping strategies and parenting behaviour (Hardy, Power, & Jaedicke, 1993; Kliwer, Fearnow, & Miller, 1996), and a link between adaptive coping strategies and child outcomes (Ayers, Sandler, West, & Roosa, 1996; Lengua & Sandler, 1996). In research identifying associations between coping and adjustment, it has been demonstrated that active strategies, such as problem solving and seeking social support, are associated with more positive child outcomes than are avoidant strategies (e.g., wishful thinking, denial of the problem) (Ayers, Sandler, West, & Roosa, 1996;

¹ Comparable figures for Australian students are not widely available. When the author tried to obtain suspension rates of secondary students from schools the State Education Department forbade schools from releasing those records.

Herman-Stahl, Stemmler, & Petersen, 1995; Lengua & Sandler, 1996). Coping resources appear to enhance functioning during, and recovery from, the experience of adversity and to support resilience against stressors (Fredrickson, 2001). Recent research has also linked adaptive coping to classroom engagement in adolescents (Reschly, Huebner, Appleton & Antaramian, 2008).

Coping

Over the last 30 years several studies have contributed to the development of coping as a construct and its manifestations. Coping comprises a diverse number of cognitive, affective, and/or behavioural characteristics (Endler, Parker, & Summerfeldt, 1993; Oakland & Ostell, 1996) responding to contextual demands (Pearlin & Schooler, 1978; Schwartz, Neale, Marco, Shiffman, & Stone, 1999), and including cognitive appraisal (Folkman & Lazarus, 1980, 1985; Lazarus, 1999; McCrae, 1984).

Lazarus and Folkman (1985) define coping as “a person’s constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (p.141). Lazarus and Folkman (1984) further describe two types of coping. One, problem-focused coping, aimed at actively attempting to alter the source of the stress, the other emotion-focused coping, used to reduce or manage emotional distress associated with a situation. Lazarus (2000) emphasised that although problem- and emotion-focused coping are conceptually distinguishable, they usually occur together.

Adolescents describe coping as the behaviours they undertake to reduce stressful situations (Frydenberg & Lewis, 1993). In other words, coping strategies have a role as moderators in the relationship between a stressful environment and subjective well being (Compas, 1987). Specifically, coping strategies are used to alleviate negative emotions arising from a stressful event, such as failing an assessment, not completing school tasks, social isolation (Folkman & Lazarus, 1988; Kamins & Dweck, 1999; Lazarus, 1993). Other researchers have further categorised coping in productive non-productive terms. Frydenberg and Lewis (1999) proposed three coping categories: solving the problem, reference to others, and non-productive coping. Solving the problem involves working on a problem and remaining optimistic; reference to others involves turning to others for support; and non-productive coping involves ignoring the problem, worrying, and wishful thinking.

In a study of over one thousand Australian adolescents Lewis and Frydenberg (2002) found that failure to cope signalled the employment of non-productive strategies. Frydenberg and Lewis, (1994) also found evidence that one’s choice of coping strategies is fairly consistent regardless of the nature of the concern, indicating perhaps familial or learnt trends. Generally it is thought that greater use of non-productive coping strategies is associated with less wellbeing, and to a lesser extent, greater use of productive coping strategies is associated with greater well-being (Frydenberg & Lewis, 1994). Such results echo older empirical evidence showing non-productive coping styles were associated with depression, anxiety, venting emotions, acting out, and poor adolescent psychological adjustment (Compas, Malcarne, & Fondacaro, 1988).

Moving schools signals a change likely to be stressful. The degree of stress experienced from a school move depends on whether the move was voluntary and beneficial, or involuntary with a concomitant lack of support. Such a move might bring into action particular coping responses. There appears to be a gap in the literature as far as mobility and academic coping is concerned.

Mobility is also associated with being unable to meet school demands (DEST & DoD 2002) and therefore adaptive, problem solving coping strategies are likely to be important to help maintain a student’s engagement with school tasks. Tero and Connell (1984) developed the Academic Coping Inventory for use with school aged students. They and others (Mantzicopoulos, 1997) found that positive coping strategies were linked to higher achievement while projective, non-coping and denial strategies correlated negatively with achievement. Persistence with demanding tasks and academic self-regulation such as correcting mistakes and trying to understand academic material is considered to be “positive” or adaptive problem solving coping, because it leads to increased learning and better outcomes. By contrast, ignoring or denying academic difficulties, blaming others, or the teacher, or downplaying the importance of school assessment activities is characteristic of non-adaptive coping (Kaplan & Midgley, 1999). Positive coping strategies appear to mediate positive classroom affect (Kaplan & Midgley, 1999) and are implicated in the facilitation of resilience (Boon, 2008; Howard & Johnson, 2000). Projective coping strategies have been correlated with disruptive behaviour (Friedel, Marachi & Midgley, 2002). Low levels of adaptive coping strategies might be implicated when challenging and disruptive behaviour is displayed, such that unresolved stress in students who experience a school move could precipitate outbursts of inappropriate behaviour.

Disruptive behaviour and suspensions

It is thought that mobility not only affects students academically, but behaviourally and developmentally as well. Engec (2006) has demonstrated the links between mobility and suspensions in US students. Wood, et al. (1993) reported that American children who moved frequently were 50-100 per cent more likely to experience a learning disorder, a delay in growth or development or have four or more behavioural problems than children who moved infrequently. Sorin and Iloste (2006) found one of the factors linked to mobility in Queensland is challenging behaviour.

Whether challenging behaviour is a precursor or result of mobility has not been examined. It is, however, an indicator of adjustment to school (e.g., Jimerson et al., 2000; McEvoy & Welker, 2000) and often precipitates suspensions (Jimerson et al., 2000). Challenging behaviour is broadly divided into two: externalizing, where problems are directed towards others and the environment, and internalizing, where problems turn inwards towards the self. Typically, externalizing behaviours involve an acting out style of responding that includes a repertoire of behaviours such as aggression, arguing, impulsivity and disobedience. By contrast, internalizing behaviours withdraw the student from participation and may lead to absenteeism and truancy, which in itself might lead to suspension. These students often experience emotional difficulties such as anxiety, phobias, fearfulness, depression, loneliness and somatic symptoms like headaches and stomach-aches (Gresham, Lane, MacMillan & Bocian 1999). Internalizing and externalizing behaviours result in frequent referrals and suspensions. McEvoy and Welker (2000) contend that academic failure and challenging behaviour exist in a reciprocal relationship. The extent to which mobility is significantly linked with suspension levels in Australian students has not been fully explored at this time.

Purpose, aims and methods

The aim of the present study was to examine the relationship between mobility, suspensions, coping strategies and academic achievement in an Australian adolescent sample.

It is hypothesized here that the negative impact of mobility on achievement is related to the student's coping characteristics and mediated by challenging behaviour. If there is little notice given prior to the move, stress and feelings of insecurity are generated (Butler et al., 1990). Sudden or unexpected moves due to redundancy, bereavement or divorce can be especially disruptive because of broken social ties and discontinuous school experiences, compounding the effects of a stressful home environment (Schafft, 2006). The ability to cope successfully with such changes is likely to ameliorate their detrimental effects. However, coping strategies might be compromised because of long standing stress and SES disadvantage (DuBois, Felner, Meares, & Krier, 1994). In other words, a history of difficulties in one's family might diminish the capacity of one's adaptive coping or the parent's capacity to demonstrate adaptive coping to their children, who in turn might model similar attitudes and behaviours. Buerkle and Christenson (1999) found a higher percentage of mobile families compared to non-mobile families cited a number of stressful life events. Similar claims are found elsewhere (Mao, Whitsett & Mellor 1998). Moreover, psychosocial adjustment measures linked to forced mobility have been shown to be long lasting (Braver, Ellman & Fabricius, 2003).

Since achievement is highly predicted by school engagement, coping strategies directed at academic problem solving might be one of the links between achievement and mobility. School engagement, one of the strongest predictors of academic achievement and a protective factor against school drop out (Janosz, Archambault, Morizot, & Pagani, 2008) is characterised by behavioural (e.g., compliance, participation in school activities, and in extracurricular activities), affective (e.g., socio-emotional interest in school), and cognitive (e.g., learning motivation and uses of self-regulatory coping strategies) dimensions (Fredricks, Blumenfeld, & Paris 2004), including problem based coping strategies (Reschly et al, 2008)

Adaptation to a new school involves dealing with new social and academic expectations, demanding behavioural and cognitive responses. Depending on student internalising processes and coping strategies these demands might or might not be adequately met (Compas, 1987). Student internalising processes lead to adaptive or non-adaptive behavioural and academic coping, partly as a result of family (Kim & Kim, 2008) or school correlates (Newman, 2000; Marchand & Skinner, 2007). Coping then is an important and largely unexplored dimension that might link mobility to achievement via classroom engagement brought about by a proactive problem-solving response to classroom demands.

It is hypothesized that mobility effects will be ameliorated if positive coping is employed; this will protect against challenging behaviour and suspensions since stress will be resolved because engagement with school

tasks will be higher; if the balance of coping strategies tips in favour of non-coping and projective coping, stressors will be less likely to be satisfactorily dealt with in context, leading to inappropriate behaviour, less engagement time with scholastic tasks, possibly withdrawal and truancy. This will further exacerbate existing gaps in knowledge due to mobility, the net result being lower academic achievement and higher suspension rates. Denial coping, characterised by tendencies for students to shrug off a negative event or say they do not care very much about it, is not thought to play a significant role in predicting achievement or challenging behaviour because the student reports indifference to the stress situation.

Questions investigated in the study:

1. Is mobility linked to lower achievement in this Australian sample?
2. Is mobility linked to suspension level in Australian students?
3. Are coping strategies employed by mobile students whose academic achievement is satisfactory or better different from those employed by mobile students who are failing?
4. Are coping strategies employed by mobile students who are suspended different from those employed by mobile students who are never suspended?

Sample

The sample consisted of 1127 Year 8 -10 students, aged 12-15, from three state high schools in a regional city in North Queensland, Australia. Participating schools were selected because they were located in separate geographical areas of the city. Parents were sent letters informing them of the study and requesting parental permission for student participation. The resulting sample represented 81 % of the students enrolled in the schools present on the days data were collected. Self-report questionnaires were completed during class period between two and four after mid-year report cards were issued to students. 1050 complete questionnaires were obtained; the remaining 77 surveys were randomly missing various parts so were not included. The principal researcher randomly checked 15% of the student responses for accuracy of grades, suspensions and mobility with the participating schools as students supplied their names on the questionnaire.

Measures

1. Academic achievement: English and mathematics mid-year grades were recorded as grades following the approach used by Paulson, Marchant and Rothlisberg, (1998). The grades are coded: E = 0, D = 1, C = 2, B = 3 and A = 4, representing marks of up to 25% (E), 25-49% (D), 50-65% (C), 66-80% (B) and over 80% (A) respectively. Grade C is the cut-off for a pass in the subject. An English or mathematics grade of less than 2 indicates that student is failing the subject.
2. Suspensions (challenging behaviour): Students reported the number of times they were suspended. These were coded: never suspended (0), suspended once/suspended many times (1).
3. The Academic Coping Inventory (ACI) developed by Tero and Connell (1984), measures students' self-reported coping strategies. This inventory includes four scales assessing the "positive," ($\alpha = .75$), "projective," ($\alpha = .72$), "denial," ($\alpha = .72$), and "non-coping" ($\alpha = .77$), strategies. All items begin with the stem, "when something bad happens to me in school," and include the examples, "such as not doing well on a test, or not being able to answer a question in class." Items on scales measuring coping strategies were responded to on a four-point Likert scale with anchors of 1 ("not at all true") and 4 ("very true") to conform to the procedure used by the developers of the scales. The ACI, (12 items, Appendix A) was subjected to a confirmatory factor analysis (CFA) using the Amos 16.0 computer software program; it yielded good fit indices upon CFA (Appendix B).
4. Definition of mobility is problematic since different research studies have adopted different working definitions (DEST & DoD, 2002). Based on Dunn, Kadane and Garrow's (2003) research which demonstrated a quantifiable effect on achievement from a single school move, a mobile student in this study is a student who reported *one* different school from their current one since starting secondary school. Thus respondents reporting that they have been in the school for less than one semester (8 Grade), less than one year (Grade 9) and less than two years (Grade 10) form the mobile student category of this study. This is a more stringent definition of mobility than many other studies have adopted (DEST & DoD, 2002).

Findings

The SPSS 16 program was used to perform all statistical analyses. Table 1 presents summary statistics for mobile and non-mobile students, for academic grades and suspension level. Results show that a larger proportion of mobile compared to non-mobile students achieve at lower levels and have more suspensions (37.6% compared to 15.2%).

Table 1 Descriptive statistics for mobile and non-mobile students

Measure		Non mobile students N= 925 %	Mobile students N=125 %
English grade	E	2.2	12.0
	D	7.8	26.4
	Pass (C)	42.6	31.2
	B	33.7	24.8
	A	13.7	5.6
Mathematics grade	E	4.1	10.4
	D	13.3	29.6
	Pass (C)	30.9	36.8
	B	24.6	14.4
	A	27.0	8.8
overall suspension	never suspended	84.8	62.4
	suspended	15.2	37.6

To determine the degree of association between achievement and mobility, a 2 x5 contingency table analysis was conducted for mobility and English achievement and mobility and mathematics achievement. There was a significant association between mobility and English achievement with a $\chi^2 = 82.1$, $df = 4$, $p < .001$, representing a medium association between mobility and English achievement (Cramer's $V = .279$). Similarly, a statistically significant relationship emerged for mathematics achievement with a $\chi^2 = 49.0$, $df = 4$, $p < .001$, also representing a medium association between mobility and mathematics achievement (Cramer's $V = .216$).

To assess whether mobility is linked to suspensions a 2 x 2 contingency table analysis was performed for suspensions and mobility. A statistically significant relationship emerged, with a $\chi^2 = 37.5$, $df = 1$, $p < .001$. The proportion of variance in suspension associated with being mobile was 19%, showing a medium link between mobility and higher levels of suspension, confirming other researchers' claims (e.g., Sorin & Iloste, 2006).

The other question under investigation was based on the hypothesis that low achieving mobile students are more likely to be suspended than high achieving mobile students. To confirm this a 2 x 2 contingency table analysis was performed for suspensions and achievement using only the mobile students of the sample (N=125). To do this, the mobile sample was split into two groups, those who achieved passes or better (grade C) in both English and Mathematics and those who did not. Results (Table 2) show that there are three times as many low achieving mobile students suspended as high achieving ones, the relationship being statistically significant, with a $\chi^2 = 46.7$, $df = 1$, $p < .001$. The proportion of variance in suspension associated with achievement in the mobile sample was 21%.

Table 2 Percentage of mobile students who were suspended by achievement group (N=125)

	<i>medium-high achiever</i>	<i>low achiever</i>
never suspended	80.9%	40.4%
suspended	19.1%	59.6%

To investigate the key question of the study, the hypothesis that mobile students who succeed academically adopt different coping strategies to those who do not, the mobile sample was once again split into two groups, those who achieved passes or better (grade C) in both English and Mathematics and those who did not. Results indicate the coping strategies adopted by mobile students who failed both subjects were significantly different from those of students who passed (Table 3). A MANOVA was computed resulting in significant main effects

(based on Wilk's lambda criterion) $F(4, 120) = 3.9, p < .005$, partial eta (η_p^2) = .12, indicated a large size effect. The differences between low and medium/high achieving students were due to differences in positive coping, $F(1, 123) = 11.4, p < .001, \eta_p^2 = .09$, a large size effect, and projective coping, $F(1, 123) = 4.4, p < .05, \eta_p^2 = .05$, a medium size effect, confirming initial hypotheses that coping factors are likely to be involved in the way mobility affects students' achievement.

Lastly, it was considered prudent to examine whether mobile students who are suspended have different coping strategies from those who are not irrespective of achievement level. Results of a MANOVA showed significant main effects (based on Wilk's lambda criterion) $F(4, 120) = 3.9, p < .005$, partial eta (η_p^2) = .11, indicated a large size effect. The differences between suspended and never suspended students were only due to differences in positive coping, $F(1, 123) = 12.1, p < .001, \eta_p^2 = .09$, a large size effect. A test for interaction effects between suspensions and achievement yielded non-significant results.

Table 3 Means and Standard Deviations (S.D.) of coping strategies for low achieving and medium/high achieving mobile students and for those who have been suspended or never suspended (N=125)

<i>Coping</i>	<i>Student group</i>	<i>Mean</i>	<i>S.D</i>	<i>N</i>
Positive coping	medium-high achiever	2.73	.74	68
	low achiever	2.3	.66	57
Projective coping	medium-high achiever	1.73	.72	68
	low achiever	1.99	.68	57
Denial coping	medium-high achiever	2.05	.69	68
	low achiever	2.08	.70	57
Non-coping	medium-high achiever	2.11	.87	68
	low achiever	2.12	.74	57
Positive coping	never suspended	2.70	.64	78
	suspended	2.25	.79	47
Projective coping	never suspended	1.76	.70	78
	suspended	2.00	.70	47
Denial coping	never suspended	2.03	.69	78
	suspended	2.11	.70	47
Non-coping	never suspended	2.11	.79	78
	suspended	2.13	.85	47

Discussion

Results support hypotheses. They show that mobile students have significant differences in achievement, suspensions and coping strategies compared to non-mobile students. Additionally, findings provide an explanation as to why some previous studies have found negative links between mobility and achievement while others have not.

The selection of mobile students in this study has been very stringent, using a single non-promotional move to classify a student as mobile. Despite this rigorous selection, results show significant differences in achievement between mobile and non-mobile students; where multiple school moves are investigated it is likely that these associations will be even stronger.

The first aim of this research was to investigate whether mobility is linked to lower achievement and suspensions. Results showed a strong association between mobility and lower achievement confirming earlier Australian findings (DEST & DoD, 2002), and mobility and suspensions, consistent with previous US research (Engel, 2006). The link between achievement and mobility most likely reflects the gaps or lags in learning associated with moving schools and school systems. The link between suspensions and mobility might signal non-academic adjustment issues connected with mobility, involving peers or home stressors (DEST & DoD, 2002), impacting upon behaviour at school, and ultimately, as another corollary, achievement. As

hypothesised, this suggests that mobility effects on achievement are partly mediated by student behavioural factors.

Consistent with Buerkle and Christianson's (1999) claims, mobility is likely to be entangled with other long standing problematic familial, socioeconomic and adjustment issues, giving rise to coping strategies which may not support academic achievement. Where mobility is viewed as positive and is voluntary it is more likely that gaps in learning inevitably associated with changing schools or school systems (DEST & DoD, 2002), will be addressed by the student and supported by family or the organisation instigating the move, for example the Defence Force. Indeed, recent empirical data suggest coping style is influenced by parents and teachers (Friedel, Cortina, Turner & Midgley, 2007). Friedel et al (2007) used the Academic Coping Inventory and found parents' and teachers' influenced the child's adopted coping strategies, leading to achievement outcomes. For example, higher achievement is enhanced by engagement and perseverance with tasks, characteristic of positive coping (Reschly et al, 2008). Such might be the response of students who have moved with military parents or for reasons deemed to be advantageous like parental promotion. Alternatively, adolescents who display non-adaptive behaviours might persist with non-adaptive coping because their coping strategies have been established early in life and have been consolidated through interactions with parents or similarly minded peers (Hartup & Van Lieshout, 1995). This could explain the responses of mobile students whose behaviours result in suspensions. Prior reports of inconsistent links between mobility and achievement might thus be partly explained by the role played by adaptive coping strategies.

In this study, it was found that positive coping was used by students who achieved at a higher and had no suspensions, perhaps acting as a protective mechanism in mobile students. This might explain how some mobile students avoid the negative impact of mobility upon achievement and behaviour. A positive view of the school move, or coaching by teachers and parents to respond to academic challenges by adopting problem solving strategies might be examples of how mobility effects are counteracted by positive coping. Quick adjustment to the new school environment, indicating a level of resilience, may also affect positive outcomes. Students who view the move positively, have sufficient family support and strong academic motivational goals are also more likely to adopt positive coping strategies (Boekaerts, 2002) and adapt quickly to the new environment, minimising the negative impact of mobility. A coping strategies' index might be an important indicator of academic engagement for mobile adolescents. If mobility is perceived as undesirable, or is frequent, projective and non-coping might be reinforced predicting suspensions and lower achievement.

Moreover it was found mobile students who were failing employed projective coping strategies to a greater degree than positive coping strategies. It seems whatever the cause of mobility, if positive coping strategies are adopted, challenging behaviour and suspensions will not be as likely and higher achievement will be promoted. Of interest was the finding that positive coping was the only strategy that differentiated those students who were suspended from those who were not within the mobile group suggesting that the nature of positive coping, a problem solving approach, is an important factor in school engagement.

Conclusions, recommendations and limitations

Although influences upon coping strategies were not investigated here, it is known that adaptive coping strategies can be developed (Frydenberg & Lewis, 1993). Stress caused by a new environment varies depending on contextual factors, such as the goal structure of the school/classroom or the apparent support from parents and teachers. This being the case, interventions can be put into place at school to assist students develop appropriate coping strategies which have been linked to better educational outcomes (Resnick et al, 1997). In addition, parental support should be offered and sought upon moving to a new school to foster positive links with the school and connectedness to the new environment, both known to foster better educational outcomes (Resnick et al, 1997). These interventions may go some way towards preventing a student from developing challenging behaviours or withdrawal in the form of absenteeism or truancy perhaps because of poor social contacts. Allan and Bardsley (1983) stated that many mobile children showed signs of unresolved stress in the form of bragging, aggression, rumination or fixations, and by way of supporting these children they advised that they should be allowed to express their feelings and share their concerns. While they were referring to primary aged school children, similar support may benefit secondary students, particularly in cases of an unplanned move which might give rise to depression, a very prevalent mood disorder in adolescents (Barlow & Durand, 2005).

Limitations of the study include the cross-sectional nature of the research design and the lack of information regarding the reason for each school move and information on possible learning disabilities which students

may have. Because of the reciprocal and contextual nature of human behaviour, a causal ordering between constructs can only be supported by longitudinal evidence.

Findings however support hypotheses and explain some inconsistencies reported in connection with the academic achievement of mobile students. Studies of longitudinal design are needed to establish the influences that might exist among these factors and the degree of reciprocity that might be present between adolescent characteristics and other factors connected to mobility. Mobility data delineating the number of moves each student has had and their timing, the reason for each move, the student's cultural background, since Australia has a large proportion of immigrants, along with student socio-demographic factors are needed to confirm effects of mobility on achievement. The coping strategies of mobile students whose moves are due to different causes (e.g., suspension and a fresh start as opposed to a parental job promotion) would highlight how best to support and understand the needs of mobile students.

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Appendix A The Academic Coping inventory

1. When something bad happens to me in school, I try to figure out what I did wrong so that it won't happen again.
2. When something bad happens to me in school, I say that the teacher didn't cover the things on the test.
3. When something bad happens to me in school, I say it was the teacher's fault.
4. When something bad happens to me in school, I tell myself it didn't matter.
5. When something bad happens to me in school, I get angry at the teacher.
6. When something bad happens to me in school, I can tell myself I'll do better next time.
7. When something bad happens to me in school, I worry that other students will think that I'm dumb.
8. When something bad happens to me in school, I say I didn't care about it
9. When something bad happens to me in school, I get really mad at myself.
10. When something bad happens to me in school, I feel really stupid.
11. When something bad happens to me in school, I try to see what I did wrong.
12. When something bad happens to me in school, I say it wasn't important

Appendix B

<i>Instrument</i>	<i>N</i>	<i>df</i>	<i>χ²</i>	<i>χ²/ df</i>	<i>P</i>	<i>GFI</i>	<i>AGFI</i>	<i>CFI</i>	<i>RMSEA</i>
ACI	1050	59	284.61	4.82	.001	.969	.949	.950	.050