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Queensland's future: parenting the youth of today

ABSTRACT

Policy change to enhance academic and psychosocial outcomes for Queensland's children and adolescents, the source of the State's future human capital, is imperative. This proposal stems from the findings of an empirical Queensland study that compared typical, resilient and students at risk. A sample of 1,100 Indigenous and non-Indigenous secondary students reported on their school perceptions, parenting, coping strategies, and academic goals. Their responses were modelled using structural equation modelling techniques. These techniques have the advantage of being able to take into account mediation pathways between variables as well as direct links to outcome variables and thus can account for the influences of a number of factors upon an outcome simultaneously, showing the most significant effects. Results not only showed the strong links between parenting behaviours and higher academic achievement, but also highlighted that authoritative parenting acted as a protective factor against disadvantaged socioeconomic variables and behavioural problems. Warm and involved parenting coupled with high levels of monitoring promoted resilience in both Indigenous and non-Indigenous samples. Science programs in Queensland currently only target the biological aspects of reproduction. But in addition to facts about conception, future parents urgently need an understanding of child development and the effects of nurturing parenting upon social adjustment, coping and academic achievement. Conversely, they need to know how detrimental neglect can be to a child. Policy governing the science curriculum needs to change so that all adolescents are exposed to this knowledge before they become parents. Moreover, antenatal classes should be coupled with parenting classes.

Using a sample of 1,050 secondary school students from a regional city, the links between parenting and achievement and parenting and school perceptions were compared and contrasted for three groups: typical, resilient and students at risk of

academic failure. Structural equation modelling was used to validate the questionnaires used. Results confirmed parenting style links with achievement in an Australian context. Past findings were consolidated to the current cultural and historical context. Authoritative parenting was significantly linked with higher academic achievement and higher school climate perceptions. Conversely, neglectful parenting predicted lower achievement and school perceptions. The study validated Bronfenbrenner's theory of development.

Introduction

Human capital enrichment, whatever the adopted definition of human capital, is best conceptualised as developing within and across several contexts. For example, if considering human capital in terms of knowledge and skill attainment, not only is the school or institutional environment of importance but also the support sustaining the individual, including fiscal, infrastructure and social forms of support.

Knowledge and skill attainment are constantly evolving to meet the demands of our complex globalised economy. Critical in setting the stage for future skill and knowledge acquisition are the school years. It is therefore no surprise that the Queensland State Government has focused on school retention rates to improve the social and economic outcomes of youth, as outlined in *Education and Training Reforms for the Future (ETRF) (2003)*. Retention rates report the total number of students who stay on at school from Year 8 through to Year 12. Rothman (2004, 113) summarised Australian retention trends: "The rate peaked in 1992, and has remained above 72 per cent into the 2000s. In 2002, the Year 7-12 apparent retention rate was 75.1 per cent".

The most consistent predictor for dropping out of school has been found to be low academic achievement (e.g., Battin-Pearson, Newcomb, Abbott, Hill, Catalano and Hawkins 2000; Bradley 1992). Reporting on student dropouts in Australia, McMillan and Marks (2003, 86) concluded "Not only are low achievers more likely to leave school early, they are among the first to do so". Ongoing concern with adolescent outcomes as a basis of the quality of future human capital is the Queensland Government's focus on examining the trajectories of young people who are neither in work nor in education (DETA, 2007).

The current study

Findings reported here are part of a larger investigation of factors known to predict secondary school students' academic failure (McMillan and Marks 2003). The underpinning framework of the study is Bronfenbrenner's bioecological theory which posits that individual human development, and academic socialisation in particular, occur as a result of interactions within and between multiple embedded ecological systems impacting upon the developing person (Bronfenbrenner 1979, 1989).

Bronfenbrenner (1979) proposed that student centred, family centred, school centred and macrosystem factors, such as the cultural and economic fabric of society, including policies

impacting upon adolescent well-being, contribute to produce a school drop-out. As such, it is not sufficient to examine individual context factors, such as family, peers or school, in isolation. Any explanations about academic failure need to examine interaction between these domains.

Figure 1 illustrates Bronfenbrenner's bioecological theory, showing the bi-directional nature of interactions between multiple contexts and the developing individual. At the centre, a person comprises a set of unique attributes which are nonetheless continually forged by experience. The degree and nature of this experience depends upon its location within the ecosystem and ranges from proximal influences (microsystem) to more distal ones (macrosystem). One might consider these influences to be psychological, in the case of microsystem and mesosystem events, and sociological, in the case of exo and macrosystem conditions. A key feature of this theory is that sociological factors impacting upon an individual, such as parental income and neighbourhood, are translated to psychological influences through processes such as parenting behaviours, teacher behaviours and involvement in cultural activities. Thus the emergence of academic resilience is possible even in disadvantaged socioeconomic (SES) contexts traditionally linked with academic risk (e.g. Casanova, Cruz Garcia-Linares, de la Torre and de la Villa Caprio 2005; Friedman and Chase-Landsdale 2002; Jimerson, Egeland, Sroufe and Carlson 2000). Conversely, academic success is not guaranteed even for children from affluent backgrounds.

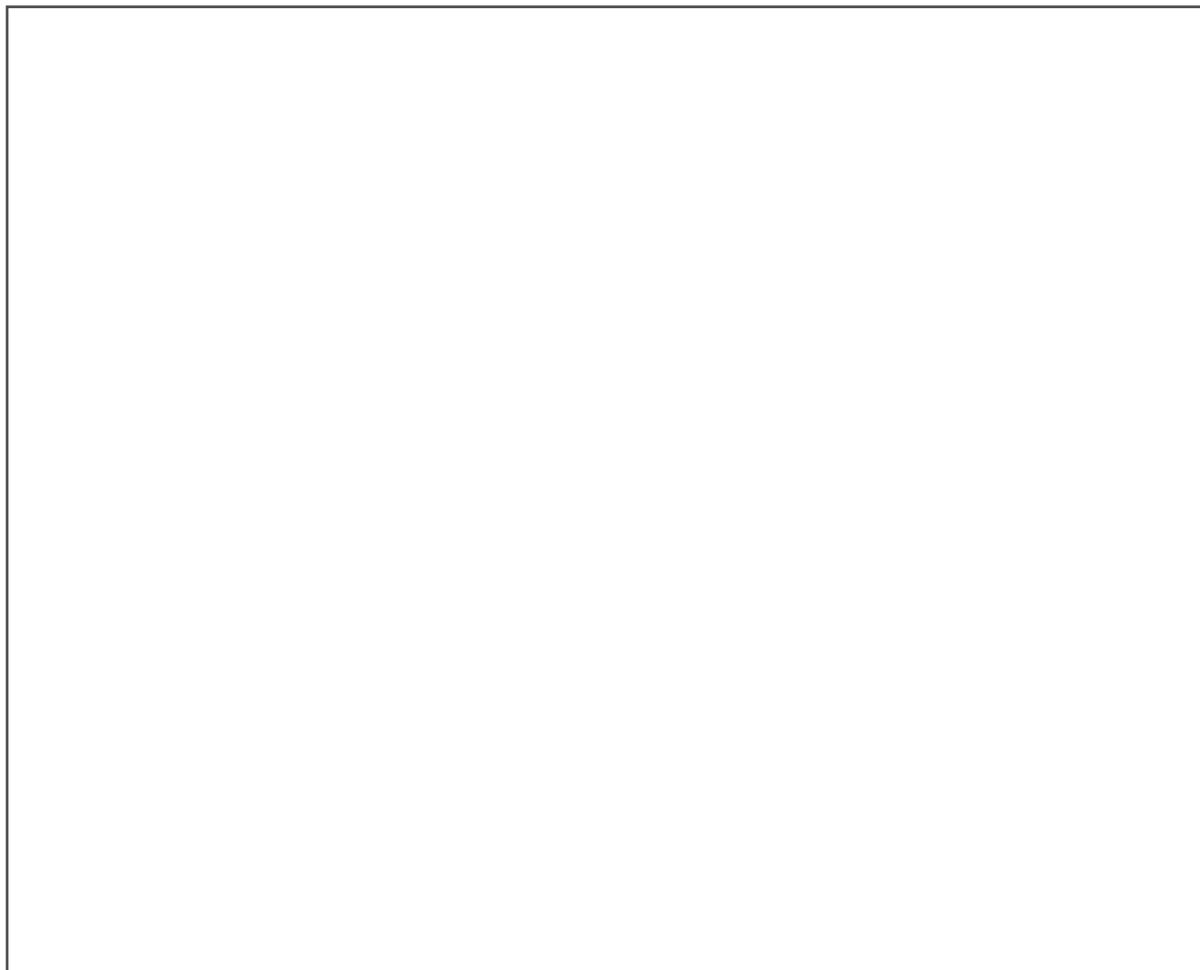


Figure 1. Conceptual scheme of Bronfenbrenner's systems and their interactions

Note: Diagram constructed by author to illustrate Bronfenbrenner's theories.

Parenting

Parental attitudes and behaviour, or parenting style, have been found to be more important than SES in predicting and fostering academic achievement (Christenson, Hurley, Sheridan and Fenstermacher 1997; Eamon 2005; Steinberg, Blatt-Eisengart, and Cauffman 2006; Steinberg, Lamborn, Darling, Mounts and Dornbusch 1994). Studies over several decades have shown that of the four parenting styles described by Maccoby and Martin (1983) authoritative parenting, characterised by high levels of parental warmth/involvement and monitoring/supervision, is predictive of positive psychological and academic competence for offspring. Authoritarian parenting or neglectful parenting, typified by high monitoring/supervision and low warmth/involvement, or low monitoring/supervision and warmth/involvement respectively, are associated with negative outcomes in these areas (Maccoby and Martin 1983; Steinberg, Mounts, Lamborn and Dornbusch 1991).

Parenting style links with academic achievement have not been hitherto examined in an Australian context. Moreover, with cultural changes taking place over the last 30 years in regards to family structure, there is a need to consolidate past findings to the current context.

School perceptions

School related factors comprise a very large area of research in connection to academic failure (for example see McWhirter et al. 2004). Dwyer argues "If there is one consistent theme that cuts across all the complexity and diversity associated with early school leaving it is that the school culture ultimately is what makes the difference" (1996, 75). Druin and Butler (1999) claim an effective school culture comprises a positive school climate. Marks (1998) investigated school climate in Australia through a longitudinal study, assessing students' perceptions of the quality of school life. Marks found Year 9 students' general satisfaction with school between the '80s and '90s has declined largely due to large between-schools differences in attitudes to teachers. This suggests that school climate is the result of interactions between teachers/administrators and students. Certain school climates have been found to be more conducive to positive student outcomes, irrespective of differences in within-student attributes (e.g. McEvoy and Welker 2000). What has not been explored to date is whether parenting influences the way students perceive school climate, the degree to which this occurs and whether these perceptions differ between typical, resilient and students failing academically.

Overall study aims

The study is based on the assumption that parenting socialises offspring to the demands

of school. The overall aim therefore was to examine a) whether parenting perceptions predict students' school perceptions and b) if, and how, parenting and school perceptions are linked to academic achievement.

Three groups of students were formed according to academic achievement and SES variables: typical, resilient and at-risk of dropping out. Students' ratings of parenting and school (as well as motivational goals and coping strategies) were then compared and contrasted. Survey results were illustrated qualitatively through 18 student interviews. The study culminated in a structural equation model based on Bronfenbrenner's theory, showing the links between parenting and school perceptions, and their joint influence upon motivations, academic coping and achievement, while accounting for socioeconomic factors (Appendix 1). Reported here are the findings linking parenting and school perceptions for the three groups of students.

Method

Participants

The sample comprised 1,127 Year 8-10 students from three urban state high schools in North Queensland. Self-report questionnaires were administered during a 45-minute class period four to six weeks after mid-year report cards were sent to students. A total of 1,050 completed questionnaires were obtained, 103 from Indigenous students; the remaining 77 surveys were missing parts of different scales, names or achievement grades.

Achievement

Students' English and mathematics mid-year results were obtained. These results were based on formal tests in each subject. They were self-reported and recorded as grades following prior researchers' approach (e.g., Urdan 2004). Grades were randomly checked with school records for approximately 15% of the sample, as students supplied their names on the surveys. 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 the student is failing the subject. In all, 218 students or 20.8% failed both subjects and thus formed the at-risk of dropping out group. The resilient group (N = 97, 9.2%) comprised of students who recorded passes or above in English and maths but whose parents were unemployed and educated up to high school. More than half of these students lived in a non-biological blended family. The rest of the students formed the typical group.

Parenting style

Adolescents' report of parenting was measured using an adapted version of the Parenting Style Questionnaire (Lamborn, Mounts, Steinberg and Dornbusch 1991). It was expected that the adolescents' own perceptions of parenting would be more predictive of their psychological constructs and achievement than their parents' assessment of their behaviours. Feeling monitored, valued or controlled is a subjective experience (Paulson 1994). Research has validated this claim (e.g., Purdie, Carroll and Roche 2004; Leung, McBride-Chang and Lai 2004). The questionnaire measures the adolescents' perceptions of their parenting along the dimensions of warmth/involvement (10 items) and strictness/supervision (5 items).

School perceptions

The quality of school life questionnaire (Williams and Batten 1981) was employed to access students' perceptions of their school, comprising of three scales: teacher relationships (6 items), positive school affect (6 items) and school opportunities or value for the school curriculum (5 items). The quality of school life variable was composed by combining responses to the three scales[1].

Results

The SPSS 12 program was used to perform all statistical procedures. Of 1,050 students, 769 students reported a non-pure parenting style, while the remaining 281 students reported parenting typical of the four pure parenting styles. When a 3 x 5 contingency table (Table 1) analysis was performed for achievement and parenting typology, including non-pure parenting, a statistically significant relationship emerged - Fisher's exact statistic of 36.5, $df = 8$, $p < .001$. The proportion of variance in being a typical, resilient or student at-risk associated with parenting style is 18% (contingency coefficient). The results suggest neglectful parenting is a risk factor while authoritative parenting is a protective factor. Non-pure parenting and permissive parenting were not associated with any of the three groups of students since their expected frequency compared to their actual occurrence were not significantly different.

Table 1

Chi squared (χ^2) independence test between parenting style and being a typical, resilient or student at-risk (N=1050)

Parenting style		Student at-risk	Typical student	Resilient student	N
not-pure	N	156	545	68	769
	%	71.6	74.1	70.1	73.2
Neglected	N	38	50	12	100
	%	17.4	6.8	12.4	9.5
permissive	N	6	19	3	28
	%	2.8	2.6	3.1	2.7
authoritarian	N	6	12	4	22

	%	2.8	1.6	4.1	2.1
authoritative	N	12	109	10	131
	%	5.5	14.8	10.3	12.5
Total	Count	218	735	97	1050

A univariate analysis of variance (ANOVA) was conducted to test for differences in school climate perceptions between the three groups (N=1050). A statistically significant difference between the three groups was detected $F(2, 1047) = 26.9, p < .001$, partial eta squared (η^2) = .05, indicating a moderate size effect. Results confirmed expectations that typical and resilient students would rate their school experience more positively than students failing academically (Table 2).

Table 2

School climate means, standard deviations (S.D.) and sample size (N) by student group (N=1050)

	Mean	S.D.	N
At risk	33.7	9.7	218
Typical	39.3	10.2	735
Resilient	36.2	11.1	97

The final analysis examined links between parenting and school perceptions in the three groups of students.

A univariate analysis of variance (ANOVA) tested for differences in school perceptions resulting from the two parenting dimensions characterising parenting style, warmth and monitoring, checking for interaction effects between each dimension and the three groups of students. Main effects were not significant for the two parenting dimensions. Interaction effects (warmth x monitoring) were highly significant, Wilk's lambda, $F(1, 1049) = 63.7, p < .001$, partial eta squared (η^2) = .15, a large size effect, confirming the influence of authoritative and neglectful parenting respectively upon school perceptions. A test for interaction effects between parenting dimensions and membership of the three groups (monitoring x warmth x three groups) did not reach significance. Figure 2 demonstrates these results, showing that parenting styles significantly predicts school perceptions for each group of students. Of note is that students at academic risk in an authoritative parenting context have much higher ratings of school life even compared to typical and resilient students from other parenting contexts. Conversely, typical students from neglectful and authoritarian parenting contexts report lower ratings of school than other typical students.

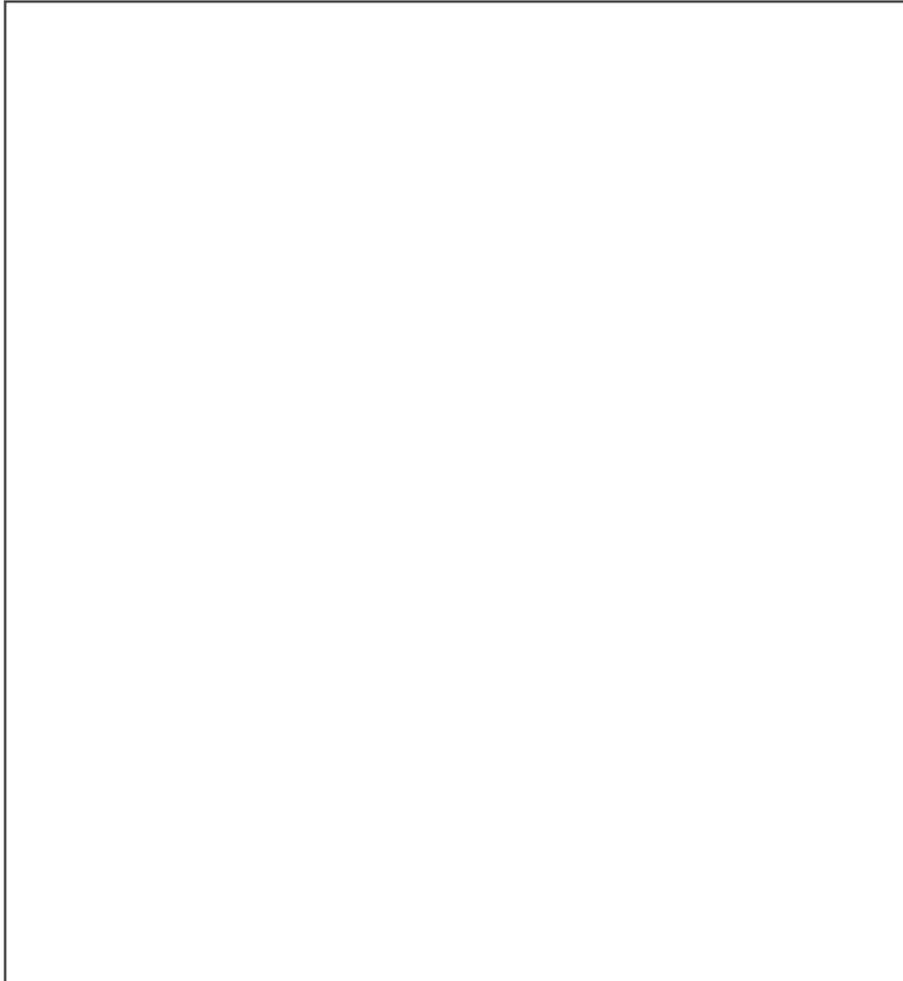


Figure 2. Perceived school climate by parenting style and student group.

Discussion and recommendations

The main aims of this study were to examine a) if parenting style predicted achievement and b) if parenting style predicted school perceptions in students independently of their academic achievement.

The study validated previous findings associating parenting style and academic achievement (e.g., Lamborn, Mounts, Steinberg and Dornbusch 1991; Steinberg, Lamborn, Darling, Mounts and Dornbusch 1994) and extended those findings to an Australian regional context. An authoritative parenting style is predictive of academic success and a neglectful parenting style is predictive of academic failure. Moreover, parenting style appears to influence school perceptions, over and above the influence that academic failure might confer upon school perceptions. This result validates Bronfenbrenner's theory which posits that there are mesosystem interaction effects between home and school, with home being a significant socialising factor for academic success. Understanding of the multifactor nature of academic failure is thus extended to include interactions between important

social contexts of adolescent participation.

Limitations of the study include the lack of measurement of student temperament factors. It is likely that student perceptions are shaped by innate temperament factors as well as by environmental influences. However, prior studies suggest that parenting behaviours moderates innate characteristics. For example, longitudinal work conducted in Australia showed that adolescent temperament factors were moderated by parenting style: neglectful parenting exacerbated behavioural problems (Letcher, Toumbourou, Sanson, Prior, Smart and Oberklaid 2004). Similarly, genetic predisposition to violence and antisocial behaviour was shown to be highly moderated by parenting behaviour in a New Zealand study over 26 years (Caspi et al 2002). Another limitation of the study is its cross sectional nature. Longitudinal work needs to be conducted to establish causality.

Parenting is an extraordinarily difficult area to influence and moderate. However, a possible intervention could take place before young Australians become parents, within the school context. It is recommended that developmental science and parenting is taught within the science curriculum in Years 8-10, to both boys and girls, before the next generation of young people become parents. Students are currently taught about the biological aspects of reproduction but the developmental needs of children and influences impinging upon these are not included. This would be a relatively simple matter to implement since most qualified teachers are trained in child development as part of their bachelor of education degrees.

In addition, any incentives that the Federal Government offers for new parents, should be tied to completing parenting classes that prepare parents for the critical task of shaping the life of a new person. These need to extend beyond babyhood into the primary and secondary years, with particular attention paid to the stresses of major transitions.

Most parents would be happy and willing to invest time into shaping their child's future, if they knew what to do and if they understood the ramifications of some of their less appropriate responses to their children's education and well-being. There can be no greater investment into Queensland's future human capital than that of responsible and responsive parenting for the State's youth.

References

- Arbuckle, J.L. and W. Wothke. 1999. Amos 5.0 users' guide. Chicago: SmallWaters.
- Battin-Pearson, S., M.D. Newcomb, R.D. Abbott, K.G Hill, R.F. Catalano, and J.D. Hawkins. 2000. Predictors of early high school dropout: A test of five theories. *Journal of Educational Psychology* 92, no. 3: 568-582.
- Bradley, G. 1992. Increasing student retention. *Youth Studies Australia* 11, no. 2: 37-42.
- Bronfenbrenner, U. 1979. The ecology of human development-experiments by nature and design. Cambridge: Harvard University Press.
- Bronfenbrenner, U. 1989. Ecological systems theory. *Annals of Child Development* 6: 187-249.
- Caspi, A., J. McClay, T.E. Moffitt, J. Mill, J. Martin, I.W. Craig, A. Taylor, and R. Poulton. 2002. Role of genotype in the cycle of violence in maltreated children. *Science* 297: 851-854.

- Casanova, P.F., M. Cruz Garcia-Linares, M.J. de la Torre, and M. de la Villa Caprio. 2005. Influence of family and sociodemographic variables on students with low academic achievement. *Educational Psychology* 25, no. 4: 423-435.
- Christenson, S.L., C.M. Hurley, S.M. Sheridan, and K. Fenstermacher. 1997. Parents and school psychologists' perspectives on parent involvement activities. *School Psychology Review* 26: 111-130.
- DETA (2007) *The Next Step*. Retrieved from <http://education.qld.gov.au/nextstep/pdfs/2007pdfs/coverandprelims.pdf>, 12, August 2007
- Druin, G., and J.A. Butler. 1999. Effective Schooling Practices and At-risk Youth: What the Research Shows, *School Improvement Research Series*, Northwest Regional Educational Laboratory. 2003. <http://nwrel.org/scpd/sirs/1/topsyn1.htm>
- Dwyer, P. 1996. *Opting Out: Early School Leavers and the Degeneration of Youth Policy*. National Clearinghouse for Youth Studies in conjunction with the Youth Research Centre: Hobart.
- Eamon, M. 2005. Social-demographic, school, neighbourhood, and parenting influences on the academic achievement of Latino young adolescents. *Journal of Youth and Adolescence* 34, no. 2: 163-174.
- Friedman, R.J., and P.L. Chase-Landsdale. 2002. Chronic adversities. In *Child and Adolescent Psychiatry*, ed. M. Rutter and E. Taylor, London: Blackwell.
- Jimerson, S., B. Egeland, L.A. Sroufe, and B. Carlson. 2000. A Prospective Longitudinal Study of High School Dropouts Examining Multiple Predictors Across Development. *Journal of School Psychology* 38, no. 6: 525-549.
- Lamborn, S.D., N.S. Mounts, L. Steinberg, and S.M. Dornbusch. 1991. Patterns of competence and adjustment among adolescents from authoritative, authoritarian, indulgent and neglectful families. *Child Development* 62: 1049-1065.
- Letcher, P., J. Toumbourou, A. Sanson, M. Prior, D. Smart, and F. Oberklaid. 2004. Parenting style as a moderator of the effect of temperament on adolescent externalizing and internalizing behaviour problems. *The Australian Educational and Developmental Psychologist* 20, no. 1: 5-34.
- Leung, C.Y-W, C. McBride-Chang, and B. P-Y Lai. 2004. Relations among maternal parenting style, academic competence and life satisfaction in Chinese early adolescents. *Journal of Early Adolescence* 24, no. 2: 113-143.
- Maccoby, E., and J. Martin. 1983. Socialization in the context of the family: Parent-child interaction. In P.H. Musen (Series Ed.) and E. M. Hetherington (Vol. Ed.), *Handbook of Child Psychology: Vol. 4. Socialization, personality, and social development*, 4th ed, New York: Wiley.
- Marks, G. N. 1998. *Attitudes to school life: their influences and their effects on achievement and leaving school*. LSAY Research Report No 5. Melbourne: ACER .
- McEvoy, A., and R. Welker. 2000. Antisocial behaviour, academic failure, and school climate: a critical review. *Journal of Emotional and Behavioural Disorders* 8, no. 3: 130-140.
- McMillan, J. M., and G.N. Marks. 2003. School Leavers in Australia: Profiles and Pathways. LSAY Research Report No 31. Melbourne: ACER.
- McWhirter, J. J., B.T. McWhirter, E.H. McWhirter, and R.J. McWhirter. 2004. *At-risk youth: a comprehensive response*. Toronto: Thompson-Brooks /Cole.

- Paulson, S. E. 1994. Relations of parenting style and parent involvement with ninth grade students' achievement. *Journal of Early Adolescence* 14: 250-267.
- Purdie, N., A. Carroll, and L. Roche. 2004. Parenting and adolescent self-regulation. *Journal of Adolescence* 27: 663–676.
- Rothman, S. (2004). Staying longer at school and absenteeism: evidence from Australian research and the longitudinal surveys of Australian youth. *International Education Journal* 5, no. 1: 113-123.
- Steinberg, L., I. Blatt-Eisengart, and E. Cauffman. 2006. Patterns of competence and adjustment among adolescents from authoritative, authoritarian, indulgent and neglectful homes: a replication in a sample of serious juvenile offenders. *Journal of Research on Adolescence* 16, no. 1: 47-58.
- Steinberg, L., S.D Lamborn, N. Darling, N.S Mounts, and S.M. Dornbusch. 1994. Overtime changes in adjustment and competence among adolescents from authoritative, authoritarian, indulgent, and neglectful families. *Child Development* 65: 754–770.
- Steinberg, L., N. Mounts, S. Lamborn, and S. Dornbusch. 1991. Authoritative parenting and adolescent adjustment across various ecological niches. *Journal of Research on Adolescence* 1: 19–36.
- The State of Queensland 2002. *Education and Training Reforms for the Future, A White Paper*. Retrieved from <http://education.qld.gov.au/etrf/whitepaper/pdfs/whitepaper.pdf>, March 2005.
- Urdan, T. 2004. Predictors of academic self-handicapping and achievement: examining achievement goals, classroom goal structures and culture. *Journal of Educational Psychology* 96, no. 2: 251-264.
- Williams, T., and M. Batten. 1981. *The Quality of School Life*. ACER Research Monograph No 12. Melbourne: ACER

Appendix 1

Final model (N=1050) combining SES, parenting, school and motivational constructs accounting for 48% of the variance observed in achievement.

[pic]

 [1] Validity of all questionnaires was established by subjecting the one factor congeneric models to a confirmatory factor analysis (CFA) using AMOS 5.0 (Arbuckle and Wothke

1999) with all estimates based on the maximum likelihood method.

parenting

R2 =.48

achievement

R2= .39

mastery

R2= .53

self-efficacy

.35

.42

R2=.16

self-

handicapping

-.40

-.20

school

.59

.22

Father's education

Mother's education

father's work

mother's work

Family structure

.14

.12

.15

.09

.11

R²= .54

positive coping

.20

.19

.48

.29

.55

.12