Predicting disengagement and its effects:

What evidence is there on the extent to which disengagement can be predicted at younger ages? (8-12)

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Introduction

Research and theory in education strongly suggests that disengagement from school is the cumulative result of many factors that reach back a considerable distance into a student's life — predictive factors can emerge very early on in primary school and even before. Recent thinking about the process of disengagement and early leaving points to the processes beginning early. Some have described understanding of the process as needing a 'life course perspective' (see Audas and Willms, 2001). They suggest that later expressions of a lack of engagement in school, including disaffection and early leaving, are linked to negative attitudes to school, behaviours and poor progress that can appear early and have cumulative effects. It points to a need to understand the origins and development of low achievement, risk-taking behaviour, and disengagement from school as events that tend to occur at different phases of a child's schooling, sometimes evident quite early. It also suggests that it is possible to predict later patterns of disengagement from earlier phases of school. This then makes it possible to identify ways of being able to intervene, address the issues and produce change.

There has been a considerable volume of research predicting disengagement and its effects. The literature suggests that there are risk factors for both school disaffection and poor achievement that are evident when children enter school, and these risk factors are cumulative and predictive of longer-term life outcomes.

It is not an uncontested viewpoint, though. Some studies have promoted debate about whether or not risk factors associated with earlier stages of schooling or personal background factors can predict accurately later levels of student disengagement from school (see, for example, Gleason and Dynarski, 1998). Such work makes the point that low student engagement during the secondary school years is not simply the consequence of family-related risk factors, such as poverty, low parental education or poor cognitive ability. It goes on to indicate that that many children who grow up in poor families, or have behaviour problems and cognitive difficulties during their primary school years, can still have good outcomes, graduating from high school and leading happy and productive lives (Werner and Smith, 1992).

Most studies examining predictors of disengagement, however, show that there are recurring and strong relationships between student disengagement and sets of student and school factors evident in earlier stages of schooling. For example, a major study in Philadelphia was able to identify half of all eventual early school leavers as early as Year 6 (Mezzacappa, 2005). Similarly, researchers were able to identify 85 percent of eventual early leavers in Chicago's public schools based on just a few facts about the students when they were in Year 9 (Allensworth and Easton, 2005). Using the information from such studies it is possible to identify the sorts of factors that will fairly accurately predict from an earlier stage of schooling disengagement and potential early leaving.

The studies can be broken down into three main categories. The first focuses on students who are legally able to leave school. These studies frequently look for early warning signs as possible predictors of disengagement. The second group of studies focuses on the middle years (students aged 10-14), and the third focuses specifically

on primary age students (students aged 5 – 12). There are very few studies dealing with student disengagement in the early primary school years, and yet the general studies discuss predictors as early as the 1st grade.

This paper begins by presenting some of the predictors of disengagement that can be measured or identified at various stages of schooling, including those in the early stages. These include students' personal attributes, socio-economic status, family background, health issues, ethnicity and gender. Following this, the paper outlines some of the early predictors of disengagement that are linked to school. These include student attendance and absences, participation and sense of belonging, behaviour, academic achievement and relationships. The predictors highlighted in this literature review are generally measurable.

In summary, the paper finds that, according to the literature, it is possible to predict disengagement with a fairly high degree of accuracy in the younger years (8-12). The factors that are referred to most frequently, and appear to have the highest level of accuracy, are school attendance, poor achievement (particularly in maths and English), suspensions, SES and poor school behaviour.

Student predictors of disengagement

Researchers investigating the predictors of disengagement have highlighted the importance of social and demographic characteristics of students. These characteristics are not specific to a particular stage of schooling, but measures of them in the later stages of primary school have been used to predict later patterns of disengagement.

Personal attributes

Students who become disaffected with school and are more likely to withdraw tend to exhibit several personal attributes. According to the literature such students often:

- lack personal motivation (Bridgeland, Dilulio, & Morison, 2006);
- suffer from low self-esteem (Audas & Willms, 2001; Murray, Mitchell, Gale, Edwards, & Zyngier, 2004; Russell, Ainley, & Frydenberg, 2005; Wehlage & Rutter, 1986); and
- have lower levels of self-rated academic ability (Murray et al., 2004).

Where these attributes appear earlier in school, they can signal later disaffection and disengagement. One study, for example, asserts that from Grade 3 there are noticeable differences in measured academic ability with future students who disengage and leave school early scoring lower than students who complete school (Barrington & Hendricks, 1989).

Other key indicators of disengagement include aggressive and anti-social behaviour in the early years of schooling (Audas & Willms, 2001; Moffat, 1993) sometimes leading to confrontations with the law (Neild & Balfanz, 2006).

Socio-economic status (SES)

The socio-economic (SES) status of a student is related to the probability of disengagement. In his international comparative study of student engagement, Willms (2003) reported that the chances of having a low sense of belonging in school are about 38 per cent greater for students from low SES families than for students from average SES families, and substantially higher again compared against students from high SES families. SES is a strong predictor of disengagement and the factor is one of the most prominent in the research literature. Studies have found the following to be predictors of disengagement and early leaving:

- low SES — this can be based on financial capacity, parents' occupation and level of education, and the local neighbourhood (Balfanz & Herzog, 2006; Murray et al., 2004; Rumberger, 1995, 2004, 2007; Willms, 2003);
- coming to school hungry and experiencing poor nutrition due to family circumstances (Russell et al., 2005); and
- homelessness associated with family background (Lamb et al., 2004; Russell et al., 2005).

Family culture or pattern (status)

Family structure and culture are other key predictors of disengagement and early leaving. Generally students likely to become disengaged have one or more of the following risk factors evident in earlier stages of schooling:

- low parental involvement with their school, evident in the primary years (Bridgeland et al., 2006);
- large family size (Murray et al., 2004);
- family dysfunction (Lamb et al., 2004; Murray et al., 2004);
- family break-up and/or re-formation: being in a single-parent family or a step family is a risk factor associated with disengagement (Murray et al., 2004; Rumberger, 2007; Willms, 2003);
- high family mobility — transience (Murray et al., 2004); and
- spending three or more hours at home alone after school per day (Rumberger, 2007).

Health Issues

Health plays a vital role in the disengagement of students in the younger years. It may be their own health or the health of a family member that reduces the student's capacity to engage at school. Surveys of disengaged students and early school leavers report the following have a negative impact on student engagement:

- physical illness (Russell et al., 2005);
- mental illness (their own or that of a parent) (Lamb et al., 2004; Murray et al., 2004);
- a disability or integration need (Murray et al., 2004); and
- a learning disability (Murray et al., 2004).

Race, ethnicity and gender

Within Australia certain race and ethnic groups are more prone to disengagement and early leaving than others. Indigenous students are particularly vulnerable to becoming disengaged from school and early school leaving (Lamb et al., 2004), but Chinese students are far less so. The international literature identifies refugees and recent arrivals as being susceptible to disengagement (Willms, 2003).

Male students also show a higher risk of disengagement (Murray et al., 2004). This is indicated in the work of Potter and Briggs (2003) who interviewed 5- and 6-year-olds in Australian schools and found that "33 per cent of the boys said they disliked school compared with only six per cent of the girls" (Potter & Briggs, 2003, p. 46). Other work shows that the risk of disengagement for males intersects with and is more dependent on other factors such as social background and ethnicity.

School predictors of disengagement

A range of studies has shown that while demographic and personal factors are important, they are not necessarily the most immediately salient predictors of disengagement. Students' educational experiences in earlier stages of schooling can be major predictors of disengagement.

Absences and expulsions

Student absences are both a measure of disengagement and a predictor of disconnectedness leading to early school leaving. Students fail to attend school for a variety of reasons, but once students have missed a certain amount of time it becomes much harder for them to re-engage. The literature identifies the following indicators of absence as predicting disengagement and early leaving:

- frequent/chronic non-attendance (Bridgeland et al., 2006; Murray et al., 2004; Neild & Balfanz, 2006);
- truancy (Audas & Willms, 2001; Bridgeland et al., 2006; Wehlage & Rutter, 1986; Willms, 2003); and
- episodes of suspension/exclusion (Butler, Bond, Drew, Krelle, & Seal, 2005; Rumberger & Thomas, 2000)

An American study by Barrington and Hendricks (1989) found that by Grade 3 (8yo), absences can be used to predict future dropouts with 66 per cent accuracy using a cut-off point of 6 absences per annum. The study also found that by Grade 5 (10yo) future dropouts will be absent twice as often as school completers and by Year 9 (14yo) future dropouts will be absent three times as often as school completers. (Barrington & Hendricks, 1989).

Another factors that can predict later disengagement is whether or not students get expelled from school. Broken attendance patterns linked to expulsions and truancy are visible signs of disengagement from school (Brooks et al. 1997; Barrington and Hendricks, 1989). A number of US studies have found that children from poor

backgrounds tend to have broken attendance records, and as a result, their academic achievement suffers (Alexander, Entwisle and Olsen, 2001; Rumberger and Larson, 1998). Other US studies suggest that broken attendance patterns can begin early in the school life of some children and signal later disruption and withdrawal (Barrington and Hendricks, 1989).

Participation and sense of belonging

In his international study, Willms (2003) focused on participation and a sense of belonging as key measures of disengagement. Participation and belonging have been measured in the following ways:

- the amount of time a student spends on homework. Students who spend less time on homework are more likely to drop out (Bridgeland et al., 2006; Bryk & Thum, 1989; Rumberger, 1995);
- student participation in organised extra-curricular activities, both at the school and in the community. Increased participation lowers the likelihood of disengagement (Willms, 2003); and
- the number of times students change schools (Rumberger, 1995; Rumberger & Thomas, 2000). Students who change schools frequently are more likely to disengage and drop out.

Willms found that a sense of belonging and a willingness to participate have a positive impact on engagement and attainment and these features can be predictive from a younger school age (Willms, 2003).

Behaviour

Many international studies highlight poor behaviour as a predictor of early disengagement and dropout (Audas & Willms, 2001; Neild & Balfanz, 2006; Rumberger, 2004; Wehlage & Rutter, 1986). According to Barrington and Hendricks, 63% of dropouts had at least two negative comments about their behaviour on their permanent record in primary school (Barrington & Hendricks, 1989).

Academic achievement

Academic performance plays a major role in students' sense of well-being in school, and their level of motivation and desire to learn (Willms, 2003; Lamb, 2004; (Audas & Willms, 2001; Bridgeland et al., 2006; Butler et al., 2005; Lamb et al., 2004; Murray et al., 2004; Rotermund, 2007; Rumberger, 1995, 2004; Rumberger & Thomas, 2000; Wehlage & Rutter, 1986). As young people ascend school, those who have struggled to achieve academically come under greater pressure as the demands increase. In the secondary years, students are expected increasingly to work on concepts and ideas, on principles and laws, on abstractions, and to take greater personal responsibility for their progress. Organization, commitment, and time management become crucial particularly given the competitive nature of graded assessment. Insecurity and alienation can grow during these years if students fall behind. Achievement in earlier stages of schooling is a powerful indication of the skill levels of students and the capacity to meet the growing academic demands in

later years. Those who are well behind in the primary school years will find it harder to catch up, unless intervention occurs. Poor progress leads to growing disenchantment, disengagement, and ultimately early exit from school. Achievement in primary school is a major predictor of disengagement and early leaving.

Figure 1 provides a series of panels that outlines the general sequence. It shows, in the first panel, school differences in mean levels of Year 5 AIM achievement in English (Victorian primary schools). In Year 5 there is a strong relationship between achievement levels and the social backgrounds of students across schools. Achievement is lowest in schools with the highest proportions of students from low SES backgrounds. In Year 9, the second panel, student engagement (proportions of students who agree or strongly agree with the item "I like being at school") is reported by levels of achievement (quartiles of achievement). By Year 9, the students with the lowest levels of academic achievement are those who least enjoy being at school. The third panel reports levels of early school leaving by Year 9 achievement. It shows striking differences by achievement levels. Over 35 per cent of students who are low achievers in Year 9 (those most likely to be disengaged and not enjoy being at school) end up leaving school before Year 12. This compares to only 9.9 per cent for students who are high achievers (those most likely to report that they enjoy being at school).

Low achievement in Year 5 is concentrated in schools serving disadvantaged populations. Low achievers in Year 9 (more than half) least enjoy being at school and this group is the most likely to drop out of school before reaching the final year. The strong patterns across the different year-levels highlight the reasons why school achievement measured in the primary school years can be a powerful predictor of later disengagement from school and early leaving. The pattern in Year 5 also shows that there is a social base to achievement patterns and looking at achievement alone will not necessarily lead to a good understanding of the causes of disengagement and early school leaving.

The literature also indicates strong links between dimensions of poor student achievement and disengagement. Students in primary school are significantly more likely to disengage if they are:
- failing or well behind in English or maths (Neild & Balfanz, 2006);
- not keeping up with school work (Bridgeland et al., 2006; Butler et al., 2005; Rotermund, 2007);
- displaying a history of low achievement (Audas & Willms, 2001; Bridgeland et al., 2006; Butler et al., 2005; Lamb et al., 2004; Murray et al., 2004; Rotermund, 2007; Rumberger, 1995, 2004; Rumberger & Thomas, 2000; Wehlage & Rutter, 1986; Willms, 2003); and
- having difficulties with literacy and numeracy (Butler et al., 2005; Lamb et al., 2004; Murray et al., 2004; Rumberger, 2007; Willms, 2003).

By Grade 3 (8yo), researchers using a pre-determined cut off score in achievement tests were able to predict future early school leavers with 70 per cent accuracy. Those who subsequently left were already struggling with the curriculum in Grade 3. They also found that by Year 9 (14yo) early leavers could be identified with 85 per cent accuracy by the number of failing grades (Barrington & Hendricks, 1989). Neild and Balfanz (2006) found that the two strongest predictors of early leaving in their study were poor attendance and low achievement.
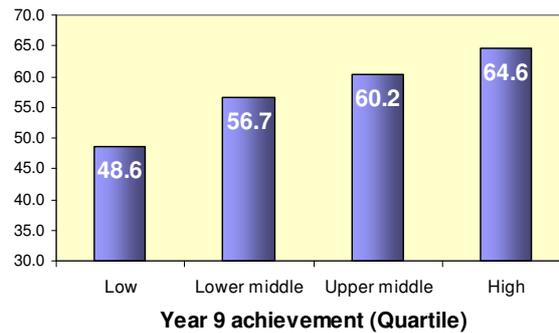
Figure 1   Year 5 AIM English achievement (schools), Year 9 student engagement and early leaving (students)
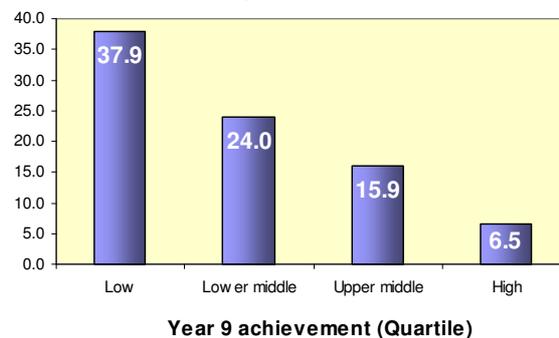
Year 5 achievement (schools)
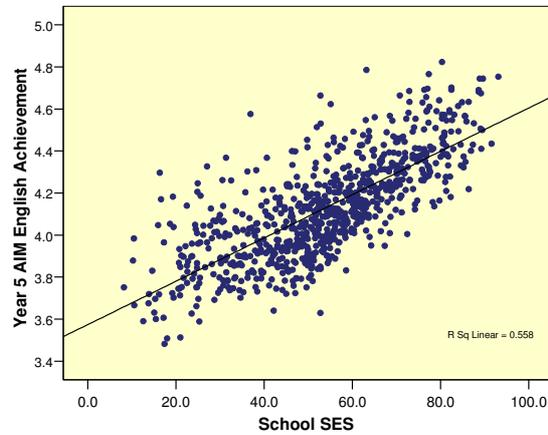
Year 9 student engagement

Student outcomes (Early leaving)

Source: Year 5 AIM data from the Victorian Department of Education and Early Childhood Development. Schools have enrolments of 150 students or more.
Results on Year 9 student engagement and early leaving derived by Stephen Lamb from the Y98 cohort of the Longitudinal Surveys of Australian Youth.

A related aspect to achievement is motivation. Students need to be motivated to be engaged. The following factors have been found to predict lower levels of student motivation, evident in primary school:

- low expectations (Bridgeland et al., 2006; Bryk & Thum, 1989)
- unchallenging work (Bridgeland et al., 2006), and
- fear of failure (Bridgeland et al., 2006; Butler et al., 2005; Lamb et al., 2004; Rotermund, 2007; Russell et al., 2005).

Relationships

Quality of relationships in school can predict how well students respond to school and later levels of disengagement. The relationships that impact on a child's engagement relate mainly to family, peer, and teacher relationships. In relation to the family, primary school students who later disengage often have:

- too much freedom (Bridgeland et al., 2006);
- poor communication with parents (Bridgeland et al., 2006); and
- limited behavioural regulation by parents (Wehlage & Rutter, 1986).

With regard to peer relationships, the literature points to the negative effects of students:

- spending time with students not interested in school or who display anti-social behaviour (Bridgeland et al., 2006; Ellenbogen & Chamberland, 1997; Rumberger, 2007);
- being bullied (Butler et al., 2005; Rumberger, 1995); and
- not feeling that they fit in or belong at their school (Audas & Willms, 2001; Butler et al., 2005; Willms, 2003).

These elements can be signals of later disengagement.

The final relationship relevant to student engagement is the quality of the teacher-student relationship. The factors that have been found at earlier stages of schooling to signal potential disengagement are:

- a dislike of the teacher by the student (Rotermund, 2007);
- view of the teacher as unfair (Bridgeland et al., 2006; Bryk & Thum, 1989; Wehlage & Rutter, 1986);
- on-going conflict between the student and the teacher (Butler et al., 2005); and
- perceived lack of teacher interest in the student (Wehlage & Rutter, 1986).

Children as young as 5 report a direct link between their dislike of a teacher and the dislike of the subject they teach. On-going conflict with teachers in the early and middle years is an early warning of potential disengagement.

Table 1 : Estimated impact on disengagement of individual factors

	Factor	Estimated strength of impact on disengagement (strong, medium, weak)
Personal domain		
Personal attributes	Low motivation	Medium
	Low self-esteem	Medium
	Low self-rated ability	Medium
SES	Parents' financial resources	Medium
	Parents' level of education	Strong
	Parents' occupation	Medium
	Local neighbourhood characteristics	Strong
	Homelessness	Strong
Family factors	Low parental involvement with school	Medium
	Parents placing high pressure on children	Weak
	Family size	Weak
	Family dysfunction	Medium
	Family break-up or reformation	Medium
	High mobility	Strong
	Physical illness	Strong
	Mental illness	Strong
	Disability	Strong
	Learning disability	Strong
Race, ethnicity and gender	Indigenous status	Strong
	At-risk ethnic group	Strong
	Being male	Medium
School domain		
Attendance	Poor attendance	Strong
	Truancy	Strong
	Suspension/exclusion	Strong
Participation	Time on homework	Medium
	Participation in extra-curricular activities	Medium
	School transfers	Medium
Behaviour	Noted incidences of poor behaviour	Strong
Achievement	Poor achievement in literacy	Strong
	Poor achievement in maths	Medium
Relationships	Poor parental supervision	Medium
	Poor communication with parents	Medium
	Peer relationships with the disengaged	Medium
	Bullying	Medium
	Not fitting in	Medium
	Conflict with teachers	Strong

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