Student Disengagement in Relation to

Expected and Unexpected Educational Pathways

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Abstract

Students’ different educational pathways were examined in relation to their disengagement during adolescence. The participants were Icelandic youth (N=832) who were followed from age 14 to 22. Based on their academic achievement at age 15 and educational attainment at age 22 they were classified into groups that took expected versus unexpected paths. The findings indicate that adolescents’ behavioural disengagement (negative school behaviours) and emotional disengagement (academic disinterest, disidentification with school) differentiated according to their pathways. At age 14, those “at risk” academically who graduated unexpectedly showed fewer negative behaviours than the expected dropouts. Moreover, high achievers who dropped out unexpectedly showed more behavioural (negative behaviours) as well as emotional (academic disinterest, disidentification with school) disengagement compared to expected graduates. The following year (age 15), in general, disengagement increased among unexpected dropouts but decreased among expected graduates. Males and students from lower-SES backgrounds were generally more disengaged, and males from those backgrounds became more emotionally disengaged during their last year in compulsory school.

Key words: Emotional school engagement, behavioural school engagement, school dropout, longitudinal study
Student Disengagement in Relation to Expected and Unexpected Educational Pathways

In our modern knowledge-based societies, young people who do not complete upper secondary education face more disadvantage than ever before. Findings from various western countries indicate that those who leave school face similar negative economic and psychosocial consequences. They have poorer prospects in the labor market compared to those who finish school, along with lower lifetime earnings and higher rates of unemployment (e.g., European Commission Directorate General for Education and Culture, 2005; Rumberger & Lamb, 2003). In addition they seem to be more at risk of becoming dependent on welfare, having health problems, and engaging in antisocial behaviour (see Rumberger & Thomas, 2000). The negative personal and societal costs of school dropout indicate that the adolescent decision on whether to drop out or persist with the formal school system can be described as one of the most crucial developmental tasks of this age period.

In recent years the problem of school dropout has received increased attention. The Council of the European Union (2004) has proposed a common benchmark for the member states: by the year 2010, the early school leaving rate should be no more than 10%. In the U.S. this problem has also been addressed nationally, as one of the National Educational Goals adopted in 1990 (US Department of Education, 1990). In this federal reform plan, the No Child Left Behind (NCLB) Act of 2001, all states are required to incorporate graduation rates into their accountability systems for high schools (US Department of Education, 2002). In Iceland, where this study was conducted, the dropout problem is also of concern; in 2008 the Icelandic government legislated educational reforms that aim to reduce dropout (The Upper Secondary School Act No. 92/2008). Thus, multiple nations are concerned with reducing the possibility that
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A student will drop out or leave school before receiving an appropriate diploma or certification. At the same time, reducing the dropout rate is a challenging task and it is important to understand what might lie behind young peoples’ choice to leave school.

**School Engagement**

School engagement is a central concept in most theories of school dropout (Finn, 1989; Newmann, Wehlage, & Lamborn, 1992; Rumberger & Larsson, 1998). Dropping out is increasingly viewed as the end to a long-term process in which students disengage from school, frequently beginning in the early grades (Alexander, Entwisle, & Kabbani, 2001; Ensminger & Slusacick, 1992). Researchers have found that among children and adolescents, school engagement is related to educational outcomes such as academic achievement and school dropout (Alexander, Entwisle & Horsey, 1997; Finn, 1993; Finn & Rock, 1997; Rumberger, 1995).

Students’ school engagement is considered important for prevention purposes: it is seen to prevent students’ alienation from school, increase their academic motivation, and facilitate school success (see Fredricks, Blumenfeld, & Paris, 2004). Finn (1989) presents two conceptual models that describe dropout as the final stage of a cumulative and dynamic development of school disengagement. In the frustration–self-esteem model the process begins with the student failing to achieve at school which leads to frustration. In order to protect his or her self-esteem the student rejects school by engaging in disruptive behaviour and even withdrawing from school. The process is described as a vicious cycle in which students fail repeatedly, leading to increasing frustration that in turn produces low self-esteem and results in problem behaviour or behavioural disengagement (Finn, 1989; Griffin, 2002; Rumberger, 2004).
In the participation-identification model students’ engagement involves two dimensions: behavioural and emotional. Students who engage in school are those who invest emotionally in it and participate in behaviours that support this investment; they are therefore more likely to succeed at school. Over a period of time, good performance and active participation result in the student gradually identifying with school. The student develops a feeling of belonging and bonds with the school and finds it important to succeed in school-relevant goals. Accordingly, it is assumed that students who do not participate in school and classroom activities do not bond with school and are more likely to fail at school, which leads them to gradually disidentify with it (Finn, 1989; Griffin, 2002; Newmann et al., 1992).

In both of these frameworks school failure or dropout is seen as a result of a long-term process of disengagement; thus school performance plays an important role in the students’ developing views of themselves and in whether or not they identify with, and bond with school. The difference between the models is that the frustration–self-esteem model highlights behavioural disengagement while the participation-identification model of students’ engagement or disengagement includes both behavioural and emotional components (Finn, 1989; Finn & Rock, 1997; Rumberger, 2004).

Empirical findings suggest that engagement is a multidimensional concept (Glanville & Wildhagen, 2007). In a literature review, Fredricks and her colleagues (2004) define three broad dimensions of school engagement: behavioural, emotional, and cognitive. Behavioural engagement refers to students’ conduct, schoolwork-related behaviour, and participation in both the academic and social aspects of schooling. At one end of the behavioural spectrum are such positive behaviours as good attendance, following school rules, completing homework, and being involved in learning. At the other end are negative behaviours such as truancy, skipping
school, behaving disruptively, or being withdrawn in the classroom. Emotional engagement refers to students’ positive and negative affective reactions towards their school work, toward people at school, such as classmates and teachers, and toward school in general. This includes students’ interests in their academics and sense of belonging to school, or the opposite: disidentification with school and boredom with school work. Cognitive engagement is seen as students’ preparedness to invest in their learning and their preference for and persistence in the face of academic challenges (see Fredricks et al., 2004; Rumberger, 2004).

**School Engagement and Educational Attainment**

In their review on school engagement Fredricks and her colleagues (2004) point to several limitations of current research on student engagement. First, they say, most studies on the relationship of engagement and school dropout focus only on behavioural engagement. Second, in the relatively few studies that include both emotional and behavioural components, the two components are often combined in a single indicator, which makes it impossible to explore the possibly different relationships between the two dimensions and dropout. Third, the majority of studies make no distinction between subcategories of engagement constructs that may be problematic, such as different sources of emotions. For example, one student may disidentify with school as a whole while another may be disinterested in the school work itself. In addition, Fredricks and her colleagues emphasize that only a minority of engagement studies use longitudinal designs.

Among studies that focus on students’ behavioural engagement in relation to educational attainment, Rumberger (1995) found that students who were engaged behaviourally with school in 8th grade were less likely to drop out than students who were disengaged. Similarly, Finn and Rock (1997), who explored the behavioural engagement in 10th grade of minority students from
low-income homes, found that resilient students who completed high school showed the most engagement behaviours and students who dropped out showed the fewest.

Meeting the criticism made by Fredricks and her colleagues, and outlined above, is a study by Archambault, Janosz, Fallu, and Pagani (2009) on the relationship of emotional and cognitive as well as behavioural engagement and early high school dropout. Their results indicated that of the three dimensions only behavioural engagement predicted early school dropout. However, one explanation of these findings could be that the study focused only on early dropouts; Stearns and Glennie (2006) found that students who dropped out early were more likely to do so because of behavioural problems, compared to older students. Moreover, Archambault and her colleagues (2009) only examined engagement at one time point (age 13). Based on their findings, Janosz, Archambault, Morizot, and Pagani (2008) argue for the importance of using a developmental approach, tracking engagement over time in relation to school dropout. They studied the distinct trajectories of global school engagement over a 3-year period with students aged 12 to 16 and concluded that the risk of dropout was closely linked to unstable development of school engagement.

Heterogeneity of students who drop out

Studies on school dropouts have been criticized for ignoring the psychosocial heterogeneity of students who drop out, treating them as a homogenous group (Feinstein & Peck, 2008; Janosz, Le Blanc, Boulerice, & Tremblay, 2000). Few researchers, however, have directly approached the issue of the diversity of students who drop out (e.g., Englund, Egeland, & Collins, 2008; Janosz, et al., 2000).

In their typological study, Janosz and his colleagues (2000) identified four types of dropouts based on the three school dimensions of school grades, school misbehaviour, and
commitment to schooling. They called the types quiet, disengaged, low-achiever, and maladjusted. The quiet group had the most positive school profile among the dropouts (high commitment and very low school misbehaviour) but their school performance was poorer than that of the students who graduated. The three other groups all had low commitment to school. The maladjusted had the most negative profile, including significant problems with both academics and school behaviour. The other two groups showed low to average misbehaviour but the low achievers had very poor academic performances while the disengaged had good achievement scores.

Another approach to examining the heterogeneity of students who drop out is to explore the factors that distinguish between those who do and do not follow the normative and thus predicted educational tracks (see Feinstein & Peck, 2008). One way to define which students are and are not on a normative track is to look at their academic achievement. Some students appear to be on promising educational pathways but fail to do well, while others appear to be at risk for failure but nevertheless negotiate successful educational pathways. Even though students’ early academic achievement is the strongest predictor of later performance (Ripple & Luthar, 2000) and low achievement is one of the strongest single risk factors for school dropout (see Alexander, et al., 2001; Battin-Pearson et al., 2000; Blondal & Adalbjarnardottir, 2009; Rumberger, 1987, 1995) some students who have a history of academic failure still graduate from upper secondary school (Englund et al., 2008). The opposite is also true: some high-achieving students drop out. For example, the disengaged students in the study by Janosz and his colleagues (2000) performed at about the average in school, but had low commitment to school and still dropped out.
Focusing on the factors that distinguish between students who follow predicted directions at key turning points in their education and those who follow unexpected pathways can provide valuable information on the nature of educational risk. In addition, such research could contribute to the development of successful dropout prevention and intervention programs that take into account the special needs and strengths of different at-risk groups (see Janosz et al., 2000).

In sum, the existing literature on the association between student engagement and school dropout has important limitations. First, most of the studies focus on behavioural engagement, and only a few on emotional engagement, and then usually in combination with behavioural engagement in only one construct. Second, a majority of the studies do not differentiate between the various sources of students’ emotional disengagement. Third, studies on school dropout have been criticized for ignoring the diversity of students who drop out, particularly those who appear to be at risk but still beat the odds and those who appear to be on promising educational pathways but fail to do well. Fourth, studies on the association between students’ engagement and school dropout have been criticized for using cross-sectional rather than longitudinal data (Fredricks et al., 2004). Since school dropout often seems to result from a long-term process of withdrawal from school (Finn, 1989) it may be especially important to analyze the predictors of school dropout longitudinally.

The major aim of this study is to respond to these limitations in previous research.

The Present Study

In our study we explore how school engagement processes distinguish between students who follow expected versus unexpected educational tracks across time. We focus both on behavioural disengagement (negative school behaviours) and emotional disengagement
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(academic disinterest and disidentification with school) at age 14. In addition we focus on the over-time change in disengagement between age 14 and 15.

We build our expectations of students’ educational attainment at age 22 on their academic achievement at the end of compulsory school (age 15), as previous achievement is such a salient predictor of graduation (e.g., Englund et al., 2008). In Iceland, young people normally complete upper secondary education at age 20.

Our main hypothesis is that adolescents’ disengagement at age 14 and over-time change in disengagement between age 14 and 15 differentiates between students who follow different educational tracks. We anticipate that (a) expected dropouts (low-achieving students who drop out) will be more disengaged at age 14 compared to unexpected graduates (low-achieving students who graduate), and (b) that unexpected dropouts (high-achieving students who drop out) will be more disengaged at age 14 compared to expected graduates (high-achieving students who graduate).

Also, we anticipate that (c) expected dropouts (low-achieving students who drop out) will become more disengaged from age 14 to 15 compared to unexpected graduates (low-achieving students who graduate), and (d) unexpected dropouts (high-achieving students who drop out) will become more disengaged from age 14 to 15 compared to expected graduates (high-achieving students who graduate). We expect these relationships to persist even after taking the adolescents’ background (gender and SES) into account.

Method

Participants

This study is part of a larger ongoing, longitudinal study: the Reykjavik Adolescent Risk-Taking Longitudinal Study (RAR-LS; Adalbjarnardottir, 1994). The focus is on 832 adolescents
who (a) participated in the baseline study at age 14 (9th grade); (b) participated in the follow-up study at age 15; and (c) completed standardized national achievement tests at the end of compulsory school (10th grade, age 15); and (d) for whom registered data on their educational progress was available within Statistics Iceland (age 22).

These 832 were a subgroup of the initial sample of 1,010 14-year-old students (51% female) drawn from the population of students attending the 9th grade of compulsory school in Reykjavik, the capital city of Iceland. Approximately 90% of Reykjavik’s 9th-grade public-school population participated in the study at baseline. The case loss was the result of absenteeism (9%) and parental refusal to participate (8 cases, less than 1%). The sample was homogeneous with respect to culture (native Icelanders), religion (Lutheran), and language (Icelandic) and thus representative of Reykjavik. At baseline, 70.4% of the adolescents lived with both biological parents, 14.3% lived with a single parent, 13.6% lived in blended families (one biological parent and one stepparent) and 1.7% lived in other types of households. In terms of SES, based on the Hollingshead (1975) categories, 3.7% were in Class 1 (the lowest class); 18.9% were in Class 2, 25.4% in Class 3, 18.3% in Class 4, 15.4% in Class 5, and 18.3% in the highest, Class 6.

Procedure

Permission for the study was granted by the Icelandic Data Protection Commission, the Ministry of Education, and the Educational Testing Institution of Iceland. All of the principals at the 19 compulsory schools in Reykjavik provided their written permission to collect data in their schools. Letters describing the study were sent to the adolescents and their parents. The parents were asked to contact the research project if they or their adolescent did not want to participate in the study. Researchers have found that in studies requiring active parental consent for an
adolescent to participate, well-functioning families tend to be overrepresented (see Lamborn, Mounts, Steinberg, & Dornbusch, 1991). The self-report questionnaire was administered during school hours with the help of trained data collectors. The adolescents were informed that they could refuse or discontinue participation at any time and were assured that their answers were strictly confidential. The second round of data collection took place when the adolescents were 15, in 10th grade, their final year of compulsory school.

In addition to the survey data, information was obtained from the Educational Testing Institution of Iceland. This resource provided information on students’ performance on the standardized national tests given at the end of compulsory school (10th grade). Moreover, Statistics Iceland, the national statistical institute, provided information on the upper secondary education of the participants at age 22.

Measures

School dropout. The participants were considered to have dropped out of school if they had not completed, and were not registered in, an upper secondary school at age 22; in Iceland students are generally supposed to graduate during the year of their 20th birthday.

Academic achievement. Academic achievement at the end of compulsory school was used to set the expectations for students’ educational attainment at age 22. A composite of grades on standardized national tests in Icelandic and mathematics in 10th grade (age 15) was used to measure academic achievement at the end of compulsory school. The grades on the two subjects were highly correlated $r = .75, p = .00$.

Socioeconomic status. Socioeconomic status (SES) was assessed using the Hollingshead (1975) Index which links parents’ SES with their education and occupation. The families of the children were distributed between two socioeconomic classes. Those considered to be in the
lower-status category were unskilled and skilled manual workers and workers in service occupations. In the higher-status category were executives, teachers, university-educated specialists, professionals, and owners of businesses.

*School disengagement.* Students’ disengagement was assessed twice, when the adolescents were 14 and 15 years old. In their review on school disengagement Fredricks and her colleagues (2004) criticized the fact that most studies have collapsed the dimensions of engagement. In this study, following their recommendations, separate measurements of behavioural and emotional disengagement were developed and emotional disengagement was further divided into two constructs based on the sources of students’ emotions. Thus we use three measures of disengagement: negative school behaviours, academic disinterest, and disidentification with school. The construction of the three measures was guided by the results of exploratory factor analysis. Factor analysis was conducted on 10 items on school conduct and attitudes towards school and academics, using the students’ answers at age 14 and again at age 15. Virtually identical three-factor solutions emerged each time.

Negative school behaviours consist of four items that capture students’ negative behaviours at school. Three of the items are from the Icelandic version (Arnkelsson, 1987) of the Youth Self Report (YSR; Achenbach & Edelbrock, 1987). The adolescents were asked to rate the following statements: “I cut classes or skip school”, “I get into many fights”, “I disobey in school”, and “I do not prepare well for my classes”. Responses for the first three items were on a 3-point scale: *not true* (1), *somewhat or sometimes true* (2), and *often true* (3). Responses for the fourth item were: *never or seldom applies to me* (1), *sometimes applies to me* (2), and *almost always or always applies to me* (3). Cronbach’s alpha was .67 for the students’ answers at both age 14 and age 15.
To assess academic disinterest three items were used: “I feel bored with my studies”, “I am not interested in my studies”, and “I feel my studies are useless”. Finally, school disidentification was assessed using three items: “I am not happy at school”, “I want to attend a different school”, and “I want to quit school”. For the two constructs of emotional disengagement the adolescents were asked to respond to a 5-point Likert scale; it ranged from *never applies to me* (1) to *almost always applies to me* (5). Cronbach’s alpha for academic disinterest was .74 at age 14 and .75 at age 15. For disidentification with school Cronbach’s alpha was .72 at age 14 and .77 at age 15. The items in all three disengagement components were coded so that the higher scores indicate higher disengagement.

*Analysis*

The first step of the analysis was to predict educational attainment at age 22 (dropout vs graduation) based on academic achievement at age 15 using binary logistic regression (Englund et al., 2008).

The analysis of disengagement was run in two phases. First, using univariate analyses of variance (ANOVA), comparisons of negative school behaviours, academic disinterest, and disidentification with school at age 14 were made for the student groups following the four different educational pathways (expected dropouts, expected graduates, unexpected dropouts, and unexpected graduates), along with gender and SES. The Tukey test was used to conduct pairwise post-hoc comparisons of the student groups. The second phase consisted of univariate analyses of covariance (ANCOVA); we explored the over-time changes in the disengagement variables from age 14 to 15, controlling for corresponding disengagement at age 14 for the student groups, taking gender and SES into account. Through this process we assessed the over-time changes in engagement from age 14 to 15 taking into account the existing difference at age
14 as well as the effects of regression to the mean (Fitzmaurice, 2000). Pairwise post-hoc comparisons were based on 95% confidence intervals for the adjusted changes in engagement of the student groups.

Results

*Expected and Unexpected Educational Pathways Groups*

Academic achievement at age 15 was used to identify expected and unexpected educational pathways. The logistic regression model using academic achievement was 80% accurate in predicting educational attainment at age 22 ($b = -.98$, $p = .00$, $SE \ b = .06$, $OR = .38$, pseudo $R^2$ (Naglekerke) = .47) and produced four groups, as Table 1 shows. As can be seen in Table 1, of 595 students predicted to graduate, 84 dropped out (unexpected dropouts) and of 237 students predicted to drop out, 81 graduated (unexpected graduates).

Insert Table 1 about here

In Table 2 descriptive statistics are summarized for the four groups of students who followed different educational pathways, by gender and SES. A higher proportion of the males were classified as expected dropouts whilst a higher proportion of the females belonged to the group of high achievers who graduated as expected, $\chi^2(3, N = 832) = 11.7$, $p = .00$. Compared to the adolescents from higher-SES families, the adolescents from lower-SES families were roughly three times more likely to belong to the group of low-achiever students who dropped out; they were much less likely to be in the group of high achievers who graduated, $\chi^2(3, N = 832) = 71.7$, $p = .00$.

Insert Table 2 about here

In general, the results of the ANOVAs and ANCOVAs indicated that adolescents’ school disengagement at age 14 and their over-time change in disengagement between ages 14 and 15—
distinguished between the different educational pathways. The results are shown in Tables 3, 4, and 5.

**Disengagement at Age 14**

*Negative school behaviours.* As Table 3 shows, negative school behaviours differed across the student groups, controlling for gender and SES. As Table 4 shows, on average, expected dropouts showed the most negative school behaviours and expected graduates the least, Tukey $p < .05$. No difference, however, was detected between the two groups that followed unexpected pathways: the low achievers who graduated unexpectedly and the high achievers who nevertheless dropped out. Moreover, males were more disengaged behaviourally ($M = 1.46$) than females ($M = 1.32$).

*Academic disinterest.* As shown in Table 3, adolescents’ academic disinterest at age 14 differed significantly between student groups, taking gender and SES into account. As Table 4 indicates, the expected graduates were less disinterested than the three other student groups, Tukey $p < .05$. Furthermore, males were more disinterested ($M = 2.62$) than females ($M = 2.46$), as were students from lower-SES backgrounds ($M = 2.65$) compared to their counterparts from higher-SES backgrounds ($M = 2.43$).

*Disidentification with school.* The groups of students also differed in their levels of identification with school (see Table 3). As Table 4 indicates, the expected graduates scored lower on disidentification with school than the other students, Tukey $p < .05$. Furthermore, students from lower-SES backgrounds scored higher on disidentification ($M = 2.15$) compared to their counterparts from higher-SES backgrounds ($M = 1.84$).

**Over-time Change in Disengagement between Ages 14 and 15**
**Negative school behaviours.** As Table 5 shows, the analyses of the adjusted over-time change from age 14 to 15 revealed a difference between the negative school behaviours of the student groups, controlling for gender and SES. As Table 4 indicates, negative behaviours decreased from age 14 to 15 among expected graduates ($CI = -0.13 – -0.07$). However, negative behaviours did not change from age 14 to 15 among the three other student groups (expected dropouts: $CI = -0.03 – 0.8$; unexpected graduates: $CI = -0.12 – 0.02$; unexpected dropouts: $CI = -0.04 – 0.9$). In addition, from age 14 to 15 negative behaviours decreased among females ($CI = -0.10 – -0.02$) but did not change among males ($CI = -0.03 – 0.05$).

**Academic disinterest.** As shown in Table 5, the analyses of the over-time change in academic disinterest from age 14 to 15 revealed a difference between the student groups, taking gender and SES into account. As Table 4 indicates, academic disinterest increased for the unexpected dropouts ($CI = 0.05 – 0.33$), but did not change for the other three groups (expected dropouts: $CI = -0.02 – 0.22$; unexpected graduates: $CI = -0.09 – 0.21$; expected graduates: $CI = -0.09 – 0.03$).

Moreover, the analysis detected a two-way interaction between SES and gender. Among males from lower-SES backgrounds, academic disinterest increased from age 14 to 15 ($CI = 0.12 – 0.34$), but that did not happen among higher-SES males ($CI = -0.16 – 0.11$) or among females of any SES level (lower SES: $CI = -0.09 – 0.14$; higher SES: $CI = -0.04 – 0.22$).

**Disidentification with school.** As Table 5 shows, the analyses of the adjusted over-time changes in disidentification with school from age 14 to 15 revealed differences between the student groups, controlling for gender and SES. As Table 4 indicates, for unexpected dropouts, disidentification increased during that period ($CI = 0.16 – 0.49$). On the other hand, levels of
disidentification decreased among the expected graduates ($CI = -0.15 – -0.01$) but did not change for the expected dropouts ($CI = -0.06 – 0.21$) and the low achievers who graduated unexpectedly ($CI = -0.11 – 0.23$).

Moreover, the findings indicated that disidentification with school increased from age 14 to 15 among students from lower-SES families ($CI = 0.08 – 0.26$), but not among students from higher-SES families ($CI = -0.08 – 0.13$). However, a two-way interaction indicated that the SES difference was dependent on gender: the disidentification increased among males from lower-SES families ($CI = 0.16 – 0.41$) but not among males from higher-SES families ($CI = -0.16 – 0.15$) or among females of any SES level (lower SES: $CI = -0.08 – 0.19$; higher SES: $CI = -0.10 – 0.20$).

Discussion

One of the clearest findings of the study is that both the behavioural and emotional disengagement of students in the period of 9th and 10th grades (at the end of compulsory education in Iceland) can distinguish between their educational pathways at the upper secondary level. During adolescence, a critical point in students’ education, their feelings towards their academic tasks and school, as well as their school behaviours and the way their disengagement develops the following year, can have an impact: some students who are at risk academically are more resilient and some who seem to be on a promising educational track are more vulnerable.

This was especially the case for high-achieving students. Compared to the expected graduates, those who dropped out unexpectedly were more disengaged at age 14, both behaviourally and emotionally. Moreover, in general, while the expected graduates became even less disengaged the following year, the unexpected dropouts became more disengaged. Among low achievers, the difference between those who dropped out (expected dropouts) and those who
did not (unexpected graduates) is that at age 14 the expected dropouts showed more behavioural disengagement than the unexpected graduates. The following year, behavioural disengagement did not change for these two groups.

These findings are important: unlike earlier research on this question we compared not only the characteristics of students who drop out and those who complete school (see Janosz et al., 2008) but also focused on the disengagement of students who are the exceptions to the predictions and follow unexpected educational pathways.

More precisely, our study indicates that the extent to which students disengage from school at age 14 distinguishes not only between low-achieving students who drop out and high-achieving students who graduate but also between those who follow expected versus unexpected educational tracks. First, students who received low grades at age 15 and had not completed upper secondary school by age 22 (expected dropouts) were at age 14 the most behaviourally disengaged (e.g. cutting classes and disobeying at school) of the four groups; and those who received high grades at age 15 and had completed upper secondary school by age 22 (expected graduates) were the least behaviourally disengaged. This finding corroborates previous research findings and theory (Alexander, et al., 1997; Archambault, et al., 2009; Finn, 1989; Newmann et al., 1992).

Second, among the low achievers, the expected dropouts showed more negative behaviours, compared to the low achievers who beat the odds and graduated (unexpected graduates). Third, all three dimensions of disengagement differentiated between the high achievers who dropped out (unexpected dropouts) and the high achievers who graduated. Students who dropped out despite the expectations for them showed more negative behaviours, academic disinterest (e.g. being bored and seeing no point in their studies) and lack of
identification with school (e.g. feeling bad at school and wanting to quit), compared to those who followed a successful track and graduated. In general, the expected graduates were less disengaged, both behaviourally and emotionally, than the unexpected graduates and the two dropout groups. Our findings remained pronounced even after we took into account the parents’ SES and the adolescents’ gender.

Another major finding indicates the importance of looking not only at concurrent disengagement but also at how it develops over time (e.g., Janosz, et al. 2008). Our findings for over-time changes in disengagement are particularly interesting for the two groups of high academic achievers who followed different educational pathways: the expected graduates and the unexpected dropouts. The unexpected dropouts, who were already disengaged at age 14, became more emotionally disengaged the following year with regard to both academic interest and identification with school. The reverse was found for expected graduates: the least disengaged at age 14, their situation even improved from age 14 to 15 as both their negative behaviours and disidentification with school decreased.

Even though students tend to become less motivated during adolescence (e.g. Fredricks & Eccles, 2002) our study suggests that this general pattern may vary among students and that this variation is important in relation to educational attainment. In this regard our findings corroborate those of Janosz and his colleagues (2008) who found that students follow distinct trajectories of school engagement from age 12 to 16. By using a developmental approach in our study, and tracking engagement over a one-year period, we were able to distinguish between those who follow different educational paths.

With respect to gender and socioeconomic background at age 14, students from lower-SES backgrounds were more emotionally disengaged with regard to academic disinterest and
identification with school. Moreover, at age 14 males were more disengaged than females, showing more negative school behaviours and more disinterest in their studies. This general pattern of comparative disengagement between males and females and those of different SES is in line with findings from other studies (Jacobs, Lanza, Osgood, Eccles, & Wigfield, 2002; Janosz et al., 2008; Martin, 2007).

Further, our findings suggest that special attention should be paid to males from lower-SES backgrounds. Compared to other students they seem to be at greater risk of becoming more emotionally disengaged during their last year in compulsory school, showing both increased disinterest in their studies and negative feelings (disidentification) towards school. For males, disengagement has been one of the main explanations provided in the literature on their academic underachievement and higher rate of school dropout. For example, theories on “laddishness” hold that boys, and especially white, working-class, anti-school boys, are supposed to disengage from school, rejecting schools’ values and resisting school work, to protect their masculinity, resulting in lower achievement (see Jackson, 2002).

Our findings support the main theoretical frameworks describing school dropout as a gradual process in which students disengage and withdraw from school (see Finn, 1989; Newmann et al., 1992). Further, our study supports the importance of using a developmental approach to students’ engagement (Janosz et al., 2008) and acknowledging its multifaceted nature (Finn, 1989; Fredricks et al., 2004). Our study also supports the view that we must explore not only students’ behavioural engagement but also their emotional engagement (Fredricks et al., 2004). We found that not only students’ behaviour at school but also their feelings towards their studies and school are important indicators of disengagement towards school and education, factors that place them at risk of dropping out, even when they are doing well academically.
Therefore our findings suggest that to prevent dropout it is important to pay attention to how students feel about their studies and their school as well as their behaviours at school. Moreover, they suggest that the at-risk groups have different needs and strengths that should be taken into consideration in developing prevention and intervention programs (see Janosz et al., 2000).

This study has at least two limitations. First, our analysis relied on adolescents’ self-reports on their disengagement; we obtained no objective validation of that measure through other data sources. Similar results, however, have been obtained for the relationship of disengagement and school dropout in spite of different methods of data collection (see Finn & Rock, 1997). Second, our first round of data was collected in 1994 and cognitive disengagement was not included and thus is not discussed here. Now it is considered to be the third major dimension of students’ engagement but seems to be missing from the literature on school dropout (see Fredricks et al., 2004).

Our study also has several strengths. First, we included behavioural and emotional mechanisms separately and further distinguished between students’ emotions towards their academics and towards school. A second strength is that we also explored students’ disengagement in relation to different educational pathways. Moreover, we focused especially on students who are the exceptions to predictions about the expected pathway; this is very rare in research on school dropout (Englund et al., 2008). This approach provides a valuable insight into possible reasons for academic resilience among at-risk students and vulnerabilities for academically strong students. The third strength of our study is its longitudinal design, which makes it possible to look at students’ educational attainment eight years later and conclude with more certainty that behavioural and emotional disengagement at age 14, as well as changes in it over time, distinguish between different educational pathways. The fourth strength is that the
study relied on official, and highly reliable, data on educational outcomes. Data on previous academic achievement (10th grade) came from the Educational Testing Institution of Iceland and those on educational attainment from Statistics Iceland.

In short, by exploring students’ disengagement with a focus on their expected and unexpected educational pathways as well as both their behavioural and emotional disengagement, we were able to detect important critical differences in what happens to some proportion of students during the period of age 14 to 15: some become more vulnerable to dropout and others become more resilient. The findings about change over time are particularly interesting in the case of academically competent students; those who eventually dropped out became even more disengaged the following year and those who graduated became even less disengaged.

Students’ engagement seems to be more amenable to support than many other psychosocial characteristics that have frequently been used in dropout prevention programs, such as self-esteem (Finn & Rock, 1997). In light of the above findings, this study should be informative for prevention and intervention practices both for those who work with young people and for policy planners in education.
References


Hollingshead, A. B. (1975). *Four-factor index of social status*. Unpublished manuscript, Department of Sociology, Yale University, New Haven, CT.


Table 1

*Classification of Expected and Unexpected Educational Pathways Groups*

<table>
<thead>
<tr>
<th>Predicted</th>
<th>Graduated</th>
<th>Dropped out</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predicted to graduate</td>
<td>511</td>
<td>84</td>
<td>595</td>
</tr>
<tr>
<td>Expected graduates</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Predicted to drop out</td>
<td>81</td>
<td>156</td>
<td>237</td>
</tr>
<tr>
<td>Unexpected graduates</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>592</td>
<td>240</td>
<td></td>
</tr>
</tbody>
</table>
Table 2

*Student Groups by Gender and SES*

<table>
<thead>
<tr>
<th>Group</th>
<th>Expected dropouts</th>
<th>Expected graduates</th>
<th>Unexpected dropouts</th>
<th>Unexpected graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>86</td>
<td>22.4</td>
<td>34</td>
<td>8.9</td>
</tr>
<tr>
<td>Females</td>
<td>70</td>
<td>15.6</td>
<td>47</td>
<td>10.5</td>
</tr>
<tr>
<td>SES</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>116</td>
<td>29.6</td>
<td>46</td>
<td>11.7</td>
</tr>
<tr>
<td>Higher</td>
<td>40</td>
<td>9.1</td>
<td>35</td>
<td>8.0</td>
</tr>
</tbody>
</table>

*Note.* Row percentages are presented that sum to 100%.
Table 3

**Analysis of Variance for Students’ Disengagement at Age 14**

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>F</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Negative behaviours</td>
<td>Academic disinterest</td>
<td>Disidentification with school</td>
</tr>
<tr>
<td>Gender (G)</td>
<td>1</td>
<td>19.6***</td>
<td>4.3*</td>
<td>0.6</td>
</tr>
<tr>
<td>SES</td>
<td>1</td>
<td>1.6</td>
<td>4.0*</td>
<td>5.9*</td>
</tr>
<tr>
<td>Student groups (SG)</td>
<td>3</td>
<td>21.9***</td>
<td>10.6***</td>
<td>10.7***</td>
</tr>
<tr>
<td>G X SES</td>
<td>1</td>
<td>1.2</td>
<td>0.6</td>
<td>0.1</td>
</tr>
<tr>
<td>G X SG</td>
<td>3</td>
<td>1.4</td>
<td>0.6</td>
<td>0.4</td>
</tr>
<tr>
<td>SES X SG</td>
<td>3</td>
<td>1.1</td>
<td>0.3</td>
<td>0.8</td>
</tr>
<tr>
<td>G X SES X SG</td>
<td>3</td>
<td>1.5</td>
<td>0.6</td>
<td>0.5</td>
</tr>
<tr>
<td>Within-groups</td>
<td>816</td>
<td>MS: 0.15</td>
<td>0.58</td>
<td>0.71</td>
</tr>
</tbody>
</table>

* p < .05. *** p < .001.
Table 4

Mean Scores for Disengagement at Time 1 (Age 14) and Adjusted Mean Scores for Over-Time Change from Age 14 to 15 among Different Student Groups Controlling for Gender and SES

<table>
<thead>
<tr>
<th>Group</th>
<th>Negative school behaviours</th>
<th>Academic disinterest</th>
<th>Disidentification with school</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>T1*** Change***</td>
<td>T1*** Change**</td>
<td>T1*** Change***</td>
</tr>
<tr>
<td>Expected dropouts</td>
<td>1.62&lt;sup&gt;a&lt;/sup&gt; 0.03&lt;sup&gt;=&lt;/sup&gt;</td>
<td>2.83&lt;sup&gt;a&lt;/sup&gt; 0.10&lt;sup&gt;=&lt;/sup&gt;</td>
<td>2.37&lt;sup&gt;a&lt;/sup&gt; 0.08&lt;sup&gt;=&lt;/sup&gt;</td>
</tr>
<tr>
<td>Unexpected graduates</td>
<td>1.45&lt;sup&gt;b&lt;/sup&gt; -0.05&lt;sup&gt;=&lt;/sup&gt;</td>
<td>2.68&lt;sup&gt;a&lt;/sup&gt; 0.06&lt;sup&gt;=&lt;/sup&gt;</td>
<td>2.13&lt;sup&gt;a&lt;/sup&gt; 0.06&lt;sup&gt;=&lt;/sup&gt;</td>
</tr>
<tr>
<td>Unexpected dropouts</td>
<td>1.48&lt;sup&gt;b&lt;/sup&gt; 0.03&lt;sup&gt;=&lt;/sup&gt;</td>
<td>2.72&lt;sup&gt;a&lt;/sup&gt; 0.19&lt;sup&gt;+&lt;/sup&gt;</td>
<td>2.14&lt;sup&gt;a&lt;/sup&gt; 0.33&lt;sup&gt;+&lt;/sup&gt;</td>
</tr>
<tr>
<td>Expected graduates</td>
<td>1.28&lt;sup&gt;c&lt;/sup&gt; -0.10&lt;sup&gt;−&lt;/sup&gt;</td>
<td>2.39&lt;sup&gt;b&lt;/sup&gt; -0.03&lt;sup&gt;=&lt;/sup&gt;</td>
<td>1.82&lt;sup&gt;b&lt;/sup&gt; -0.08&lt;sup&gt;−&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

Note. Different superscripts at T1 indicate significant difference between groups on disengagement at age 14, at p < .05.

Note. For over-time change from age 14 to 15 superscript of – indicates decrease in disengagement, = indicates no change, and + indicates increase at p < .05. ** p < .01. *** p < .001.

Note. Negative school behaviors: Scores for the replies ranged from 1-3. Academic disinterest and disidentification with school: Scores ranged from 1-5.
Table 5

*Analysis of Variance for Over-Time Changes in Students’ Disengagement*

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>F</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disengagement age 14</td>
<td>1</td>
<td>290.3***</td>
<td>274.3***</td>
<td>298.9***</td>
</tr>
<tr>
<td>Gender (G)</td>
<td>1</td>
<td>5.9*</td>
<td>0.5</td>
<td>1.4</td>
</tr>
<tr>
<td>SES</td>
<td>1</td>
<td>0.0</td>
<td>2.0</td>
<td>4.2*</td>
</tr>
<tr>
<td>Student groups (SG)</td>
<td>3</td>
<td>7.7***</td>
<td>3.3*</td>
<td>7.1***</td>
</tr>
<tr>
<td>G X SES</td>
<td>1</td>
<td>2.7</td>
<td>6.6*</td>
<td>4.1*</td>
</tr>
<tr>
<td>G X SG</td>
<td>3</td>
<td>0.5</td>
<td>0.2</td>
<td>1.0</td>
</tr>
<tr>
<td>SES X SG</td>
<td>3</td>
<td>0.8</td>
<td>1.8</td>
<td>0.6</td>
</tr>
<tr>
<td>G X SES X SG</td>
<td>3</td>
<td>0.2</td>
<td>2.3</td>
<td>0.2</td>
</tr>
<tr>
<td>Within-groups</td>
<td>815</td>
<td>MS: 0.09</td>
<td>0.44</td>
<td>0.57</td>
</tr>
</tbody>
</table>

* p < .05. *** p < .001.