

# **A SEARCH FOR THE DETERMINANTS OF STUDENTS' EDUCATIONAL EXPECTATIONS FOR HIGHER EDUCATION IN FOUR EUROPEAN CITIES: THE ROLE OF SCHOOL SES COMPOSITION AND STUDENT ENGAGEMENT**

## **Abstract**

Social inequality in students' educational expectations, a strong predictor of educational attainment, differs substantially between countries. Although education system characteristics are translated into school composition effects, the school level is often forgotten in comparative research. Moreover, to explain school effects, we introduce the concept of student engagement into sociological research on expectations. Results of multilevel analyses (R) on data from 7566 students in 126 high schools in four cities – Barcelona (Spain), Ghent (Belgium), Bergen (Norway), and Reykjavík (Iceland) – demonstrated positive effects of (1) SES composition, but mainly in systems with substantial school segregation, (2) behavioral and emotional engagement on expectations.

**Keywords:** Educational expectations, social inequality, cross-national research, school effects research, student engagement

## **Introduction**

The educational expansion happening in all industrialized countries is reflected in rising higher education participation rates (OECD, 2018). However, the degree of social inequality in educational attainment varies across countries. In Europe, the association between family background and a higher education diploma is lowest in the Nordic countries (Braun, 2018). Already earlier in the life course, the same geographical trend in social inequality is found in the expectations of secondary school students to attend higher education – that is, educational expectations (Parker et al., 2016). These expectations are a strong predictor of educational attainment, according to substantial research (e.g., Schoon and Parsons, 2002). The essential role of expectations was already theoretically established in the 1960s in the well-known Wisconsin Model of socioeconomic attainment (Sewell et al., 1969), still the most common point of departure in research to expectations. This sociopsychological model of social reproduction and mobility stated that students' achieved and ascribed characteristics influence their future educational attainment through significant others' and students' own expectations in secondary education. More recent sociological research influenced by rational choice theory

understands expectations as an educational choice based on rational decision-making (Morgan, 1998). Both perspectives focus on the social inequality as expressed in individual disparities across social, ethnic, and gender divides. While inequality based on gender and ethnicity has declined (Parker et al., 2016), the impact socioeconomic status (SES) exercises on expectations has remained nearly the same for the last two cohorts (Schoon and Parsons, 2002). This social inequality is found across nations (Dupriez et al., 2012) and is attributed to distinct socialization processes and different resources and opportunities (Gutman and Akerman, 2007).

Social inequality in expectations occurs, however, not only at the individual level. The perceived structure of opportunity within society determines expectations (Yun and Kurlaender, 2001). Few comparative studies showed how institutional characteristics of secondary education, such as tracking, create differences in expectations (e.g., Buchmann and Park, 2009). In these studies, the contextual level in between – that is the school – gets no attention (exception: Dupriez et al., 2012). Nevertheless, in the tradition that looks into school effects on students outcomes (see Teddlie and Reynolds, 2000a), effects of school composition are demonstrated on expectations, although these were single-country studies (e.g., Yun and Kurlaender, 2001; Frost, 2007 (US); Van Houtte and Stevens, 2010 (Flanders); Khattab, 2005 (Israel)). As education systems effects run through school composition effects (Dronkers et al., 2011), we acknowledge the importance of the school level in comparative research on educational decision-making.

This article seeks to increase contextual understanding of social inequality in students' expectations by focusing on school composition effects cross-nationally, using data from four European cities. The research design does not allow to test the influence of macro-level variables such as education system characteristics, but we follow other research that groups countries sharing similar characteristics and substantiate between-group differences theoretically (e.g., Buchmann and Dalton, 2002). We will compare two Nordic cities – Bergen, Norway, and Reykjavík, Iceland – with Barcelona, Spain, and Ghent, Flanders. These two groups are exemplary for how institutional features translate into different school composition differentiation. The Nordic education systems can be described as the prototype of comprehensive education, which leads to little school segregation (Janmaat and Mons, 2011). Spain and Flanders use forms of ability grouping characterized by institutional mechanisms that steer poorly informed, often low SES students towards lower status ability groups (Boone and Van Houtte, 2013 (Flanders); Tarabini et al., 2018 (Spain)), creating high differentiation in school composition (Dupriez et al., 2008). We will expand the limited research on social

inequality in expectations across countries (Parker et al., 2016) by focusing on the overall effects of school SES composition. We will also investigate the possible varying effects of school composition according to the two groups of cities, as composition effects on other student outcomes vary across education systems (Dronkers et al., 2011).

Second, in the inquiry to learn more about *how* schools influence educational expectations, we put forward the multidimensional concept of student engagement (Fredricks et al., 2004). Many students are not interested, connected, or involved in secondary education, in other words, they disengage from school life (Appleton, Christenson and Furlong, 2008). In student engagement literature, engagement is not merely seen as an individual attribute of the student, but as the result of the interplay between the student and the school (Christenson, Reschly, and Wylie, 2012). Engagement has become the predominant way to understand and prevent students from dropping out of school (e.g., Archambault et al., 2009), implying it plays a substantial role in educational decision-making. However, the interest in this process variable (Christenson et al., 2012) has not yet been echoed in sociological research on expectations, although focusing on its role could lead to a better understanding of the process of expectation formation. In addition, the need for policy measures to raise educational attainment is expressed, as the common approach to raise (disadvantaged) youngsters' expectations without implementing other measures is questioned by some researchers to have an impact (St. Clair and Benjamin, 2011). Engagement could be a more interesting policy avenue to reduce social inequality in higher education attendance especially in times where policymakers urge to "not waste talent" (Brown and Tannock, 2009).

Our specific objectives are (1) to analyze the impact of school SES composition on students' expectations and examine whether this school effect on educational decision-making differs across different education systems, building a bridge between comparative and school effects research on expectations, and (2) to understand better how schools influence expectations by introducing the concept of student engagement into the research field on expectations.

### **Where is the school in comparative education research?**

Comparative research shows that ability grouping structures the formation of expectations (e.g., Matějů et al., 2007). Tracking serves as a sorting machine that directs students into different postsecondary pathways, ensuring that expectations are more realistic (Buchmann and Park, 2009; for nuance: Author(s), 2018). However, more social inequality in educational expectations is found in highly differentiated systems (Parker et al., 2016), because early

selection gives rise to more social inequality in educational choices (Gamoran, 2001). With students from low socioeconomic and ethnic minority backgrounds overrepresented in low-status groups, more social and ethnic segregation is created in stratified systems (Jenkins et al., 2008). Some authors have postulated that the detrimental effects of ability grouping on social equality are not caused by the structural design itself, but by the segregation in the learning context – school composition, for example – that it encourages (Hallinan, 1994). Nevertheless, the school as the contextual level is often forgotten in comparative research, although system properties determine the sorting and allocation of students to schools (Janmaat and Mons, 2011), and their effects might thus be mediated by school effects (Dronkers et al., 2011). Focusing on school composition can also explain why remarkable social inequality in expectations is even found in some comprehensive systems (see Buchmann and Park, 2009). It is not only strictly tracking systems, but also comprehensive systems with de facto ability grouping that create significant differentiation in school composition (Dupriez et al., 2008) and large-scale comparative research often ignores these “hidden” ability grouping mechanisms and groups countries based on official information on ability grouping (see below).

In this article, we will not elaborate on the effects of ability grouping in itself (for relevant information see Buchmann and Park, 2009), but focus on school composition effects to reveal another process of social inequality in expectations between countries.

### **School effects on students' expectations**

The inclusion of the school level through composition effects on expectations is relatively little explored because the sociopsychological Wisconsin Model (Sewell et al., 1969), concentrating on students and significant others, dominated the research on expectations. In the 1970s, an interest in school effects on different student outcomes was expressed, including students' expectations (e.g., Nelson, 1972). This school effects tradition asserted that schools matter in response to the influential but controversial Coleman (1966) report indicating the negligible effects of school resources. A positive effect of SES composition was found – that is, students in advantaged schools have higher expectations than students in disadvantaged schools, regardless of their own SES background. School effects ended up getting less attention, partly because individual effects were relatively larger (Thrupp, 1999). However, if there is no variation in contexts across schools, school effects will inevitably be small (Shavit and

Williams, 1985). Only research at an international level can remedy this problem by increasing variation between schools (Reynolds, 2000).

More recently, a renewed interest in the topic revealed that social-ethnic composition shapes expectations (e.g., Yun and Kurlaender, 2001 and Frost, 2007 for the United States; Van Houtte and Stevens, 2010 for Flanders). Cross-national research on this topic, however, remains extremely scarce (exception: Dupriez et al., 2012), while SES composition is “*the single most influential school characteristic in all OECD countries*” when it comes to student achievement (Dronkers and van der Velden, 2013, p1).

The most popular explanation for school composition effects on expectations focuses on peer effects (e.g., Van Houtte and Stevens, 2010). Students attending high SES schools have more opportunities to establish friendships with high SES peers, who are more likely to have high expectations. In the Wisconsin Model, peers function as definers – serving as examples – and modelers – encouraging certain goals – in the socialization process (Woefel and Haller, 1971). Rational choice inspired research describes peers’ expectations as sources of information (Morgan, 1998). Although both research traditions emphasize mostly positive effects of high SES peers, a negative effect on expectations may be hidden because low-performing individuals can evaluate themselves more harshly in high-performing schools than in low-performing schools – that is, the frog-pond effect (Davis, 1966). In other words, peers may not only serve as a normative but also a comparative reference group (Kelley, 1952), as one group can serve both functions. The first type – the normative reference group – specifies norms, attitudes, and values; the latter provides a frame of reference for evaluation. Through this analytical distinction, peer effects can also explain the relatively small net effects – compared with individual effects – of school SES composition on expectations (Nelson, 1972).

In addition, numerous studies have revealed differential instructional, school organizational, and management processes based on the student body composition (Thrupp, 1999). For example, teachers set lower academic standards and have lower expectations in disadvantaged schools (Boone and Van Houtte, 2013; Tarabini et al., 2018), influencing educational decision-making. As SES composition determines the opportunity structure, students in low SES schools are more likely to reject school as a way to achieve success (Van Houtte and Stevens, 2010), and thus expectations – an indicator of perceived opportunity (Yun and Kurlaender, 2001) – might be lower in these schools. Based on the literature review, we formulate an overall hypothesis for school SES composition:

Hypothesis 1a: In high SES schools, students have higher expectations for higher education than students in schools with a low SES student body.

Nevertheless, we also know that inequality of educational opportunity differs across systems, with a stronger relationship between individual SES and achievement in stratified systems (e.g., Marks et al., 2006). The larger individual SES effects are assumed to be partially explained by the stronger effects of the student's school composition. A very limited amount of studies on student achievement demonstrate that school composition effects also differ across education systems, with stronger effects in stratified systems than in comprehensive systems (Dronkers et al., 2011; Dunne, 2010). The relevance of the school one attends for his/her achievement is dependent on the degree of stratification in the education system. Based on these comparative studies on student achievement finding the education system as a moderator of school effects, we put forth the following hypothesis:

Hypothesis 1b: In stratified systems, the effect of the SES composition of the school on students' expectations is larger than in integrated non-ability grouping systems.

### **The neglected role of student engagement in expectations**

In trying to capture the process of what happens within schools influencing students' expectations, we turn to the concept of student engagement, a result of the interaction between school and student (Fredricks et al., 2004). The research community agrees that engagement is a multifaceted concept, mostly adopting Fredricks and colleagues' (2004) three dimensions. *Emotional engagement* describes students' affective reactions towards schooling, *cognitive engagement* refers to the willingness to invest in the learning process, while *behavioral engagement* describes students' conduct and participation in schooling. Originally known from dropout literature (Finn and Voelkl, 1993), student engagement was theoretical interesting to capture the process that leads students to the educational decision of disengaging from school completely. The construct also appealed because it was considered changeable, making it a key focus of school interventions. Since then, a strong body of evidence suggests the importance of student engagement not only in drop out (Archambault et al., 2009), but also in achievement (Fredricks et al., 2004), and (post)compulsory educational outcomes (Author(s) 2012; Author(s), 2011b). As dropping out in secondary education and expecting to attend higher education can be described as two sides of the same coin – the former as the outcome of complete disengagement, the latter as the educational decision to stay engaged even beyond secondary education – we expect an effect of engagement on students' expectations for higher

education. Including engagement in the literature about expectations could counter the criticism of the prevailing mechanistic view of expectations in policy documents that raising expectations automatically leads to higher education attendance. Expectations should be seen as the result of a dynamic and long-term decision-making process (St. Clair and Benjamin, 2011).

Although research on expectations suggests engagement shapes them (e.g., Gutman and Akerman, 2007), empirical evidence about the effect of engagement on expectations is limited. In student engagement literature, expectations get some attention as an indicator of school success (Wang and Eccles, 2012) or an indicator of engagement (Author(s), 2011b). Wang and Eccles (2012) found that the decline in school engagement explains the corresponding decline in expectations in the later years of secondary education. Expectations become more “realistic” (Kao and Tienda, 1998) following an accumulation of scholastic experiences, expressed in engagement, and increased awareness of social structure. In a qualitative longitudinal study (St. Clair, Kintrea, and Houston, 2013), 75% of 15-year-olds indicated a change in their expectations in the last two years into what some of them described as “more realistic” assessments. Expectations take along different perceived individual (“I do not belong in school”) and structural (“My school does not prepare students well for higher education”) constraints (Andres et al., 1999) – therein distinguishing itself from the concept of students’ aspirations which reflect the education students hope or desire to achieve when they would not be constrained (Hanson, 1994). Considering these insights of engagement literature as well as the expectation research influenced by rational choice theory (Morgan, 1998), a student who is highly engaged in secondary education will appraise the risk and benefits associated with attending higher education differently from a student who is lowly engaged. It is indeed logical to suppose that highly engaged students also expect to benefit from that, in other words, have higher expectations. If a student has a sense of not belonging to the school community and experiences low engagement in school learning and life, the hypothesis is that this student does not want to prolong an educational career and participate in higher education:

Hypothesis 2a: Student engagement in secondary education has a positive effect on students’ expectations for higher education.

Engagement has been shown to depend upon the context (Ryan, 2000). If students in structurally disadvantaged positions feel powerless to influence educational outcomes, they are more likely to disengage (Stretesky and Hogan, 2005). Not only is less engagement found among students with low grades, low SES, and an ethnic minority background status (Author(s), 2012; Fredricks et al., 2004), students in low SES schools show less engagement as well

(Demagnet and Van Houtte, 2014). Spanish qualitative research showed how the social composition of schools is “of paramount importance when seeking to understand their possibilities for engagement with the school” (Tarabini et al., 2019, p. 14). These composition effects are again explained by pointing to peers as socializing agents of engagement (Ryan, 2000). In earlier work in the sociology of education, it was suggested that school composition effects on student outcomes can be explained by the lower engagement of students in disadvantaged schools (Willis, 1981). Engagement can, therefore, mediate school composition effects on student outcomes, as is shown for grades (Benner, Graham, and Mistry, 2008). These authors described how engagement as a proximal process is affected by structural school characteristics and influences grades as a distal educational outcome. We deduce the following hypothesis:

Hypothesis 2b: Student engagement mediates the effect of school composition on students’ expectations.

### **Education systems in four cities**

We compare two Nordic cities (Reykjavík, Iceland and Bergen, Norway) with a Western European city (Ghent, Belgium) and a Southern European city (Barcelona, Spain) to capture the variation in school composition needed to explore the role schools play in social inequality in students’ expectations (Reynolds, 2000) as well as to determine possible different composition effects across education systems (Dronkers et al., 2011). We will shortly describe these four relevant national or regional education systems. Although these systems also differ in access to higher education, we will not describe them here, as characteristics of secondary education play a much bigger role in explaining social inequality in expectations than tertiary education features (Matějů et al., 2007).

The education system in Flanders is an example of the *separation model*, which is also found in Germanic countries. Early selection into separate tracks at the end of primary school and high repetition rates are characteristic of this system. Officially, students in Flanders have to choose between four main tracks at the age of 14 – though, in practice, they have to make a choice two years earlier because of path dependencies (Boone and Van Houtte, 2013). In contrast, in Iceland, Norway, and Spain, the curriculum is comprehensive until the upper secondary level; however, in Spain, it is very common to have de facto ability grouping and even to establish different pathways by the tenth grade (Tarabini et al., 2018). Spanish education is an example of the *uniform integration model* typically found in the Southern European



countries, where rigid ability grouping starts in lower secondary, with high repetition rates and high levels of non-completion. Both Nordic systems belong to the *individualized integration model*, with its long, common curriculum, little to no grade retention, and emphasis on individualized teaching for all. This different approach to dealing with the academic heterogeneity of students is reflected in the composition variability of schools. The Flemish and Spanish education systems are both characterized by institutional mechanisms that steer poorly informed, often low SES, students towards lower status ability groups regardless of achievement level; high SES students, however, know how to navigate the education system, resulting in segregated schools (Boone and Van Houtte, 2013; Tarabini et al., 2018). In both systems, for example, ability grouping starts before the official age of choice. The studies by Boone and Van Houtte, and Tarabini and co-authors, also revealed that in both countries, teacher recommendations were biased in favor of high SES students, independent of achievement. Previous research often does not consider these differentiation mechanisms, and Spain is often categorized as a comprehensive system (Buchmann and Dalton 2002 on expectations; Dunne, 2010 on achievement). Dupriez and coauthors (2008) illustrated how Mons' heterogeneity models give rise to different educational environments, expressed in terms of school composition. The uniform integration model gives rise to differentiation similar to the separation model. This could explain why research on social inequality in expectations that departs from a consideration of the dichotomy between tracked and comprehensive systems finds substantial variation between comprehensive systems (e.g., Buchmann and Park, 2009).

In Europe, the comprehensive reforms were most successful in the Nordic countries, despite being implemented in many other countries. When the comprehensive model is opted to manage heterogeneity, it is based on curricular diversification. This structure permits to maintain students with different background and expectations in the same class. However, the management of heterogeneity in the separation model is based on grouping students with different levels of achievement in different tracks, and often in different schools.

In the same sense, we can add another difference between the Nordic countries and Spain and Belgium, namely the different educational pathways schools offer. In the Nordic countries, the 10<sup>th</sup> grade marks not only the end of compulsory education, but also the end of attending a certain school (Author(s), 2011a). Students must make a school decision as well as choose between vocational and academic tracks. Because of this school transition, the choice made after the 10<sup>th</sup> grade reflects a “new beginning”. Expectations and choices are free in terms of school offer. In the other two countries, students do not necessarily have to make a school

transition after 10<sup>th</sup> grade. School choice in lower secondary education before the official point of track decision is much more important in Spain and Flanders as it determines the educational trajectory in a much greater extent. In Spain, for example, most of these schools offer the academic track, only few offer both vocational and academic track. This affects the configuration of students' expectations and choices. The decision to attend the academic track is often affected by inertia, because students prefer not to switch schools (Prieto and Rujas, 2020).

In sum, school transitions structure educational decision-making, although typologies of education systems do not seem to take it into consideration. Because the educational choice after 10<sup>th</sup> grade is always accompanied by a school transition in the Nordic systems, the choice “truly” occurs after 10<sup>th</sup> grade in these systems. Educational decision-making in Spain and Flanders, however, occurs indeed earlier and is less transparent.

## **Methods**

### ***Sample***

We used data from the International Study of City Youth (ISCY), a longitudinal cross-national study tracking one cohort of students for 4 or 5 years in and beyond high school in different cities worldwide. For this study, we analyzed first-wave survey data from four cities: Barcelona (Spain), Ghent (Belgium), Bergen (Norway), and Reykjavík (Iceland). In total, data were collected from 8520 students in the modal grade for 15-to-16-year-olds from 2013–2014 (Reykjavík: 2014–2015). In cities where the curriculum is comprehensive until the upper secondary level (Bergen, Barcelona, Reykjavík), students were surveyed in the last year of lower secondary education. In Ghent, students were already tracked when surveyed in the first wave.

All schools with students in the target group were invited to take part, except in Barcelona where a sample based on sector and school context was taken. The number of schools participating/invited was 25/25 in Bergen, 44/44 in Reykjavík, 30/39 in Ghent (77%), and 27/29 in Barcelona (93%). All students in the modal grade for 15-to-16-year-olds attending school on the day of the survey were asked to take part. Respondents answered the questionnaire online under a teacher and/or a member of the research team's supervision. The number of students participating/invited was 2147/2678 in Bergen (80%), 1963/2408 in Reykjavík (81%), 2354/2608 in Ghent (90%), and 2056/2243 in Barcelona (92%).

The educational authorities in all four cities, as well as the Icelandic Data Protection Commission, the Norwegian Centre for Research Data, the Belgian Privacy Commission, and the Barcelona Education Consortium, with the support of the Educational Assessment Board of Catalonia, granted permission for the study. In Barcelona and Reykjavík, parents' active consent for their children's participation was collected, while in Bergen and Ghent, passive consent was obtained.

### **Research design**

The main focus of our study is the exploration of school composition's influence on students' educational expectations across different education systems and of a possible interaction between schools' SES composition and characteristics of the systems (e.g., Dronkers et al., 2011). The education systems in the four cities were categorized into the individualized integration system in Bergen and Reykjavík and a system based on de facto ability grouping in Barcelona and Ghent. In addition, we explore the relationship of students' engagement to their educational expectations controlling for their background and perceived academic ability, as well as the features of the education systems and school SES composition.

We have a nested data structure, as we use clustered samples of students nested within schools in four cities. The model was built up with two levels – school and individual level – and the cities were included as fixed effects at the school level (see Bol et al., 2014). Given the structure of the data and the dichotomous dependent variable, multilevel logistic regression was the method of choice. The data is analyzed with random intercept binary logistic regressions. Regression models were computed in R (R Core Team, 2016), using the lme4 package (Bates, Maechler, Bolker, and Walker, 2015). The LR-test was used to assess the p-values of independent variables in the models.

We used stepwise analyses, starting at the school level with the dummy variable for the education systems (Model 1) to compare students' expectations in different systems. In Model 2, we added the schools' SES composition. In the next two models, we added the control variables at student level: background characteristics (gender, immigration background, number of books at home, SES) and perceived academic ability (Model 3), as these factors are relevant for expectations (McDaniel, 2010; Salikutluk, 2016; Tramonte and Willms, 2010). In Model 4, we examine the role of the student engagement variables. Finally, in Model 5 we explored the interaction between schools' SES composition and education system characteristics (integration vs. ability grouping). We present the findings in average marginal

effects, which allow for a comparison of coefficients across models, in contrast to odds ratios (Mood, 2010). Predictor variables were grand mean-centered, except the dummy variables.

## **Variables**

### **Outcome**

The outcome variable was educational expectations. Students were asked at age 15 what they planned to do after leaving upper secondary school. The options differed slightly across cities due to different education systems. The main common categories were “Go to university,” “Get a job,” and “Unsure at present.” The outcome variable was recoded into a dichotomous variable: expecting to pursue higher education (1) and not expecting to (0). Of the participants, 60% were expecting to pursue higher education – 56% in the cities with integration systems, and 64% in the cities with ability grouping systems ( $z = 2.22$ ;  $p < 0.05$ ). **Table** Table 2 shows descriptive statistics for the research variables by education systems.

### **School-level variables**

*School SES composition* was created by calculating the mean SES of the students at each school ( $M = 58.86$ ,  $SD = 12.18$ , range 26.26–74.85). *Education system* was a dummy variable for the characteristics of the systems in the four cities – integration in Bergen and Reykjavík (0) and ability grouping in Barcelona and Ghent (1).

### **Student-level variables**

*Student background characteristics* included in the analysis were gender (52% female, 0 = male, 1 = female), immigrant background (25% students having either one or two parents born abroad were considered to have immigrant background, 0 = native, 1 = immigrant background), and numbers of books at home (52% with more than 100 books, 0 = 100 or less, 1 = more than 100 books). Socioeconomic status (SES) was based on parental occupation using the ISEI index (Ganzeboom, 2010). If both parents worked, the higher-ranked occupation was used ( $M = 59.70$ ,  $SD = 21.56$ , range = 11.74–88.96)<sup>1</sup>.

[insert Table 1]

The construction of the following four scales for *perceived academic ability* and *behavioral, emotional, and cognitive engagement* was guided by the results of factor analysis using principal axis factoring (oblique rotation) (Costello and Osborne, 2005). Four factors gave the

best fit. Three factors represent the dominant dimensions of engagement: behavioral, emotional, and cognitive (Appleton et al., 2008; Fredricks et al., 2004), which are, respectively, negative school behaviors, school identification, and investment in academics. The fourth factor represents the perceived academic ability. The analysis resulted in a good fit with a clear factor structure: the factor loadings were generally high (ranging from .31 to .86) and there were no cross-loadings (see Table 1). The scales showed good reliability (see below). *Negative school behaviors* consist of five items that capture school misconduct. Examples of the items are “I get into trouble frequently at school” and “How often this school year have you been absent from school for a day without permission?” Students were asked to rate on a 4-point scale how often in the school year they had shown the behavior in question; responses ranged from “Never” to “Five or more times.” For the item “I get in trouble frequently at school,” responses were also measured on a 4-point scale but ranged from “Strongly agree” to “Strongly disagree.” Higher scores constitute more frequent negative school behaviors ( $M = 1.54$ ,  $SD = 0.52$ , range = 1–4, Cronbach’s  $\alpha = .69$ ). *School identification* measures feelings of belonging to and identifying with the school. Responses to the four items – for instance, “I feel happy about my life at school” and “I will leave this school with good memories” – were measured on a 4-point scale and ranged from “Strongly disagree” to “Strongly agree.” The higher the score, the more the identification with school ( $M = 3.15$ ,  $SD = 0.54$ , range = 1–4, Cronbach’s  $\alpha = .76$ ). *Investment in academics* represents students’ psychological investment in academic tasks and their persistence when facing difficulties. It consists of three items. For example, “In class, I put in my best effort” and “In class, I keep working even if the material is difficult.” Responses ranging from “Strongly agree” to “Strongly disagree” were measured on a 4-point scale. A higher score represents higher academic investment ( $M = 2.81$ ,  $SD = 0.75$ , range = 1–4, Cronbach’s  $\alpha = .84$ ). *Perceived academic ability* consists of two items. The first is “What results do you expect to get in your studies this year?” Responses were given on a 5-point scale and ranged from “I expect to get very good results” to “I expect to get very poor results.” The second item is “How would your teachers rate you as a student?” The responses were given on a 4-point scale and ranged from “One of the top students” to “A student who does not do well.” The scale was adjusted to a 5-point scale. The higher scores indicate more perceived academic ability ( $M = 3.39$ ,  $SD = 0.84$ , range = 1–5, Cronbach’s  $\alpha = .84$ ). Direct measure for academic ability (e.g., grades) for our sample was only available for two of the four cities. The Bergen and Reykjavík data indicates that perceived ability is a good proxy for academic ability, showing a strong correlation between the two measures ( $r = 0.61$  and  $r = 0.63$ , respectively).

[insert Table 2]

## Results

The results of stepwise multiple logistic regression are presented in Table 3, showing average marginal effects on the probability of students expecting to pursue higher education in Barcelona, Bergen, Ghent, and Reykjavík. The between-school variance in the intercept-only model was 0.41 ( $SE = 0.06$ ) and significant, suggesting between-school differences in expectations. Even though some say it is not considered appropriate to divide the outcome variance into within- and between-school components in models with a dichotomous outcome variable due to low variance, the between-school variance components can be an indicator of the importance of including school-level variables (see, Frost, 2007). In Model 1, we compared expectations among students living in Barcelona and Ghent, where the education systems are characterized by ability grouping, with students in Bergen and Reykjavík, where the systems are based on integration. The findings indicated that students in education systems characterized by ability grouping had on average a 7 percentage point greater probability to expect to pursue higher education compared to students in integration systems ( $p < .01$ ). Controlling for education system features, socioeconomic composition in schools significantly predicted expectations, as shown in Model 2. The results confirm our expectations that in high SES schools, students had higher educational expectations than students in schools with a low SES student body (Hypothesis 1a). With one standard deviation increase in SES composition, the probability of expecting versus not expecting to pursue higher education increased by 12 percentage points ( $p < .001$ ).<sup>2</sup>

[insert Table 3]

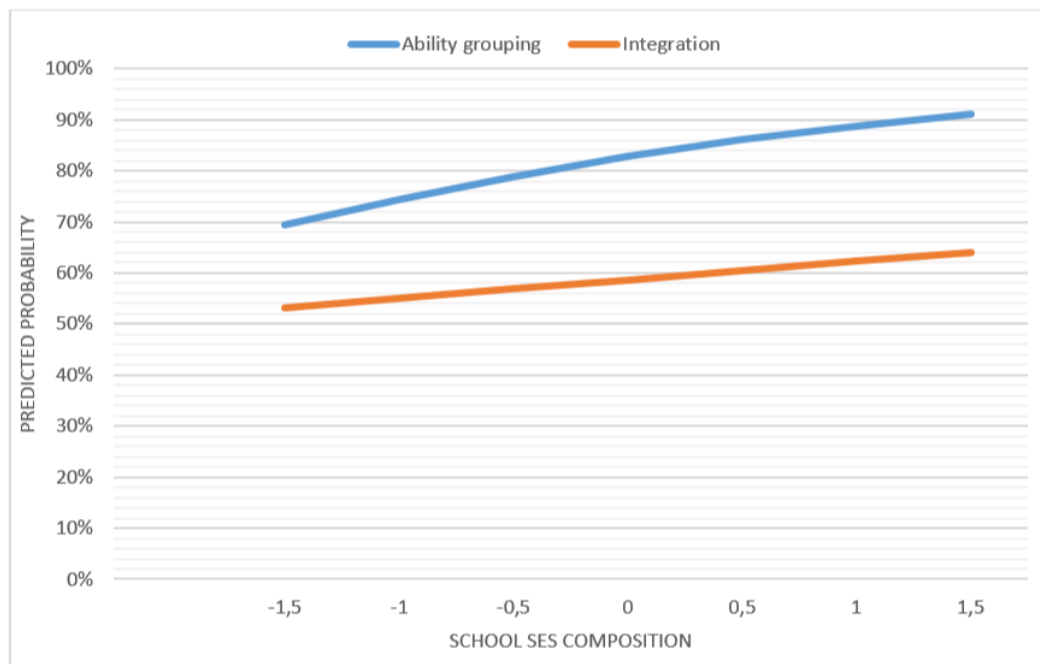
In Model 3, we included perceived academic ability and student background; both significantly predicted expectations, while controlling for SES composition and education system. Girls had a greater probability of higher education expectations than boys did ( $AME = 0.11, p < .001$ ), and students with an immigration background were more likely to expect to pursue higher education than native students were ( $AME = 0.05, p < .001$ ). In addition, students in homes with more than 100 books were more likely to have higher education expectations compared to those living in a home with 100 or fewer books ( $AME = 0.07, p < .001$ ). Moreover, with one standard deviation increase in students' SES, the probability of expecting versus not expecting to pursue

higher education increased by 4 percentage points ( $p < .001$ ). In addition, when students' perceived ability increased by one standard deviation, their probability of expecting to enroll in higher education increased by 13 percentage points ( $p < .001$ ) after controlling for students' background and SES composition.

In Model 4, we added three indicators of student engagement. Controlling for SES composition, education system, students' background, and perceived academic ability, both negative school behaviors ( $AME = 0.03$ ,  $p < .001$ ) and school identification ( $AME = 0.02$ ,  $p < .001$ ) were significantly related to educational expectations. The probability of having higher education expectations decreased by 3 percentage points with one standard deviation increase of negative school behaviors ( $p < .001$ ) and increased by 2 percentage points with one standard deviation increase of school identification ( $p < .001$ ). These findings were generally in accordance with our hypothesis that student engagement has a positive effect on students' expectations for higher education, although academic investment did not significantly predict expectations ( $p > .05$ ) net of other predictors (Hypothesis 2a). However, our findings do not support our hypothesis (2b) that engagement mediates the effect of school composition on students' expectations, as the average marginal effects for SES composition did not change when we added engagement to the model ( $AME$  for SES compositions was 0.09 in both Model 3 and Model 4).

Finally, in Model 5 we explored the interaction between schools' SES composition and education system characteristics (integration vs. ability grouping) which was significant. **Figure 1** shows the interaction, i.e. the predicted probability of expecting to pursue higher education by schools' SES composition in integration versus ability grouping systems, net of students' background, perceived ability, and engagement. The analysis indicates that the effect of school SES composition was substantially larger in ability grouping systems than in systems based on integration as we expected (Hypothesis 1b). The decreasing AIC values suggest an improvement in model fit across the five models (see Table 3).

**Figure 1.** Predicted probability of expecting to pursue higher education by schools' SES composition in integration vs ability grouping systems.



## Discussion

In view of the enduring social inequality in higher education attendance (OECD, 2018), a focus on students' expectations in secondary education can increase understanding of how education systems and schools influence – and therefore counteract – social reproduction in educational decision-making. We have extended the existing research on expectations in two ways. First, we aimed to connect comparative studies on expectations neglecting the role of schools (e.g., Buchmann and Dalton, 2002; Parker et al., 2016) with single-country studies on school effects (e.g., Frost, 2007; Van Houtte and Stevens, 2010) as a way to understand how educational structures are translated into the day-to-day social reality for students. Second, we transcended the school effects research on expectations by including the concept of student engagement (Fredricks et al., 2004) in order to possibly understand how schools affect students' expectations. Combining these research traditions, we showed how the different levels of systems, schools, and students all influence students' expectations to attend higher education.

### *Different education systems*

We have compared educational expectations in two individualized integration systems (represented by Bergen and Reykjavík), with two ability grouping systems (represented by Ghent and Barcelona). The effect of being a student in an ability grouping system versus an



integration system is stronger than the effect of any of the individual-level variables, demonstrating that policymakers should not see expectations as only an individual attribute (St. Clair and Benjamin, 2011). This view is part of an individualized and decontextualized discourse on educational choice and attainment (Author, 2020). Expectations, and educational decisions in general, are solely seen as an individual, or family matter, and students and their families are held responsible for their lack of ambition and lower educational attainment (St. Clair and Benjamin, 2011).

Remarkably, we found that students in the two ability grouping systems had a higher probability of expecting to participate in higher education than students in comprehensive systems did. A naïve interpretation of these findings could lead to an optimistic view of ability grouping systems (e.g., Rosenbaum, 2001; see Author(s), 2018), but it is more likely that high expectations in those systems are the symptom of a problem. The goal of ability grouping is to increase the effectiveness and efficiency of instruction, as well as to serve as a sorting machine that steers students towards different pathways (Hallinan, 1994). One would expect that ability grouping forces students to select the direction their educational path takes at an early stage. However, previous Flemish research demonstrated that this organizational structure does not necessarily lead to homogeneous expectations within tracks (Author(s), 2018). As is also found in U.S. research (Rosenbaum, 2001), students in lower ability groups often still expect to pursue higher education, which might be a consequence of an information deficit. Of course, not necessarily all ability grouping systems will have these overall high expectations among youngsters as the way ability grouping is implemented is crucial to the effect it has on individuals (Hallinan, 1994). Both the Flemish and Spanish education systems are nontransparent systems, known to create substantial social inequality (see above), and we believe this non-transparency causes information deficits among (often disadvantaged) students. Future comparative research should, thus, bear in mind that not only official ability grouping structures influence youngsters' choices.

Furthermore, multilevel analysis is required at the system level to accurately draw conclusions on the influence of education systems. However, as Hadjar and Scharf (2019) note, up-to-date, no datasets exist including 20 to 30 countries with profound information on educational decisions. Future research would benefit from such a dataset with enough variation and information at the school-level in order to capture how the student, school, and system-level both separately and interactively lead to certain educational expectations. Another limitation of the research is that we only included one city per country, and future research should also

include more cities as well as rural regions. Students' expectations are influenced by the regional opportunity structures, like the proximity of higher education or the labor market (see Rosenbaum, 2001).

We may also not forget that fewer young people actually pursue higher education in Norway and Iceland compared to Belgium and Spain (Author(s), 2011a; OECD, 2018). This may be related to differences in both labor market opportunities for young people and the education systems, which may offer interesting avenues to explore in future cross-national research. Labor market opportunities are one of the most important aspects in the construction of expectations according to the students (Trebbels, 2015). In Iceland and Norway, the youth unemployment rate has traditionally been low with unusually attractive job opportunities for young people with little formal education, while the opposite is true in Belgium and, especially, in Spain (OECD, n.d.). According to economic theories of educational choice, a cost/benefit analysis results in whether further education is chosen (e.g., Becker and Hecken, 2009). For example, unemployment rates can push students into further schooling, as echoed in the parking theory, which claims that students "park" themselves in higher education as a strategy to avoid anticipated unemployment (see Gambetta, 1987). However, a lot of professions facing a labor shortage in Europe do not require higher education (European Commission, 2014). Vocational education can also smooth the transition from school to work and serves as a safety net for students who are unlikely to attend higher education (Shavit and Müller, 2000). Looking into the enhancement of the social status of vocational education and occupations could thus be an interesting avenue for policy makers.

In addition, the education systems in Iceland and Norway seem to be more flexible regarding students' age compared to Spain and Flanders. According to a study conducted in 28 countries, in both Norway and Iceland, a comparatively low percentage of students transition into higher education within two years of leaving upper secondary school (Hauschildt, Vögtle, and Gwosc, 2018). The effect of this flexibility may be that in Norway and Iceland adolescents at age 15 do not feel as much of a push to make decisions about higher education as their counterparts in Flanders and Spain do, who may view their education as more of a continuous progression, from compulsory to higher education, prior to entering the labor market. Longitudinal research should assess whether between-system differences exist in the predictive value of expectations, which has been suggested but not researched (Rosenbaum, 2001). Of course, expectations are "not perfect forecasts" of educational attainment (Morgan, 1998, p. 1), and other factors' influences on educational pathways, such as social, cultural, and economic capital of families,

should not be forgotten (Entrich, 2019) These findings suggest the importance of promoting flexibility or permeability of educational systems with ability grouping. The objective should be to increase the possibilities to reverse the decisions taken by youngsters, thus allowing real second chances that favor changes in their educational pathways. Low SES parents have less knowledge on the education system which gives a disadvantage in successfully progressing to higher education (Vryonides, 2007). Especially in non-transparent systems, such as the Flemish and Spanish one, a lack of information can be detrimental. Overall, the earlier the selection in the system takes place, the higher the effect of social background on educational attainment and labor market outcomes (Brunello and Checchi, 2007; Horn, 2009; Van de Werfhorst and Mijs, 2010). As it is of uttermost importance that talents, interests, and educational expectations should inform selection, a first step in ability-grouping systems could be to postpone the age of selection to limit the role of social background in educational decision-making.

### ***SES composition at the school level***

System-level features, such as level of differentiation, influence students' allocation to schools. In turn, the characteristics of these schools (e.g., SES composition) affect expectations as they shape the educational opportunity structure. We found that SES composition is related to expectations, with students in high SES schools having a higher likelihood of higher education expectations than students in disadvantaged schools (hypothesis 1a), suggesting possible long-term effects of secondary schools. Of course, the present analyses cannot establish causality, but the analyses controlled for the most important individual features. SES composition effects are mostly explained as peer effects (e.g., Van Houtte and Stevens, 2010). As explained above, students at high SES schools may be influenced by high SES peers, who serve as a normative and comparative reference group (Kelley, 1952), both having opposite effects (Nelson, 1972). In this study, the normative effect on expectations seems to be bigger than the comparative effect of peers, resulting in a positive effect of SES composition. An alternative explanation focuses on lower academic standards and teacher expectations at low SES schools (Boone and Van Houtte, 2013; Tarabini et al., 2018). Students at disadvantaged schools do not see school as a way to achieve success (Van Houtte and Stevens, 2010), resulting in lower expectations of pursuing higher education.

Although most policymakers are especially concerned by ethnic segregation (see also Kahlenberg, 2012), our results indicate to put the socio-economic composition back on the policy agenda. However, our findings also show that schools' SES composition has a

substantially greater effect on students' expectations to pursue higher education in stratified systems compared to integrated non-ability grouping systems, confirming hypothesis 1b. Our research shows that comparative research is necessary to be able to generalize school effects, as single-country studies on school composition effects on expectations are often performed on data of systems with large between-school differences (e.g., the United States). Our result accords with the limited earlier research on expectations (Dupriez et al., 2012) and achievement (Dronkers et al., 2011) which provided evidence for the small, sometimes even absent, school effects in integration systems. The level of social inequality between schools, therefore, is dependent on the type of system. This variation is another source of educational inequality of opportunity between students from different educational contexts.

In terms of policy, we encourage schools to create a normative framework that supports higher education enrolment among students, teachers, and counsellors (Robinson and Roksa, 2016), especially schools in non-transparent systems. Specifically, schools could establish a “college-going culture”, which means that all students, regardless of social background, have the resources, preparation, and support they need for higher education (Schneider, 2007). Offering guidance and information should also start early enough, as tenth grade expectations influence students' eventual enrollment in higher education (Author, 2021) and the stability of expectations predicts school achievement (Bozick et al., 2010).

### ***Student engagement***

This article goes a step further by also investigating if schools can influence student expectations by focusing on an amenable attitude influencing students' expectations. Focusing on student engagement can serve as a possible way to counter social inequality, especially because policy measures targeting on raising expectations have no, and even adverse, effects (St. Clair and Benjamin, 2013). Raising expectations is not sufficient to raise participation rates in higher education, as is demonstrated by a Flemish longitudinal study on how many vocational track students have high expectations in tenth grade but none of them eventually attended higher education five years later (Author, 2021). If high expectations are unrealistic, they may adversely affect labor market outcomes (Schneider and Stevenson, 1999). Unfulfilled ambitions also may harm students' well-being (Wrosch et al., 2007).

We find that the higher the behavioral and emotional engagement, the higher the likelihood that students express higher education expectations (see also Wang and Eccles, 2012). Our results reflect the importance of using a multidimensional measurement of engagement (Fredricks et

al., 2004), as hypothesis 2a is only partially supported. We did not find any effect of cognitive engagement – possibly the strong effect of our measurement of academic ability catches the cognitive variation among the respondents. Perceived academic ability has indeed the strongest impact on the outcome variable, which is in accord with prior research (Buchmann and Dalton, 2002; McDaniel, 2010).

With regard to other individual-level variables, our results confirm other research stating that students' expectations are higher among girls, immigrants, and students from families with higher SES and cultural capital (McDaniel, 2010; Salikutluk, 2016; Tramonte and Willms, 2010). The aforementioned results are in line with many previous studies (e.g., Author(s), 2011b: Rumberger, 2011; Lamb et al., 2011) showing that the three groups of individual factors that affect expectations – background, abilities, and student engagement – are also the three main groups of individual factors that influence the outcomes of upper secondary education, whether the outcome is grades, completion, or dropout. It is important to underscore here that the relationship between engagement and expectations may not be unidirectional (e.g., Tinto's (1997) model of student persistence). The relationship between engagement and achievement is reciprocal, with high achievement promoting further engagement (Author(s), 2011b). In addition, well-performing students raise their level of expectations (Bond and Saunders, 1999), and vice versa (Khatab, 2015).

Although we found a relationship between two out of three indicators on engagement and expectations, engagement cannot explain SES composition effects on expectations (hypothesis 2b), as has been demonstrated for grades (Benner, Graham, and Mistry, 2008). Future research should explore other mechanisms of how SES composition influences expectations, such as teacher expectations, to detect how detrimental effects of SES composition could be countered (see Author, 2020). Still, the results broadly confirm that engagement should be included in future research on expectations, and the process of aspiration formation must be seen as dynamic and interactive (St. Clair and Benjamin, 2011). These results could also be informative for policymakers, as current policy measures that focus solely on raising expectations for the purpose of raising higher education attendance is criticized (St. Clair and Benjamin, 2011). Policy directed at increasing engagement could, instead, be an important pathway for schools to better support their students' transitions. Previous research has demonstrated the benefits of this changeable attitude for other outcomes of educational success, such as dropout (see Archambault et al., 2009). The school plays an important role in fostering student engagement. Findings from these studies indicate that supportive relationships with teachers and peers, and

a school and family environment that emphasis both responsiveness to adolescents' needs and academic and disciplinary demands, facilitates student engagement (Pellerin, 2005; Wang and Eccles, 2012).

### **To conclude**

In sum, this study on expectations urges to broaden the perspective on students' choice for higher education. We should break down the individualized discourse on educational choice, as the different levels of the individual student and his/her family, the school, and the education system all influence students' expectations to attend higher education. This study took a step in contextualizing the formation of expectations, by exploring how factors on different levels influence students' expectations for higher education by means of relating school composition and student engagement to determining student outcome in different education systems. This way, we address two lacunae in the literature on students' expectations: the absence of the concept of student engagement and the lack of cross-national research on school effects. Our study underlines the importance of studying different levels simultaneously (the individual level, the school, and the education system) and has shown the following:

1. The educational system.

Rather unexpectedly, students in the studied ability grouping systems have higher expectations of entering higher education than students in integration systems do. It is important to point out that these high expectations will not necessarily occur in all ability-grouping systems, but both the Flemish and Spanish systems are non-transparent ability-grouping systems. This non-transparency could easily create information deficits among (especially disadvantaged) students and their families.

2. The school-level.

System-level features, such as level of differentiation, influence students' allocation to schools. In turn, the characteristics of these schools (e.g., socioeconomic composition) affect expectations as they shape the educational opportunity structure. SES composition at the school level has an effect on higher education expectations in ability grouping systems, but not in integration systems.

3. The individual level.

Student engagement, a fundamental concept to understand educational decision-making (Rumberger, 2011; Lamb et al., 2011), also influences students'

expectations. Although student engagement is an individual attitude, it is constructed in the interaction between the student and the context, and used to capture the student-school relationship (Fredericks et al., 2016). Our study also confirms substantial social inequality in students' expectations for higher education, demonstrating that low SES youth is less likely to have expectations of attending higher education (Schoon and Parsons, 2002; Sewell et al., 2003).

The results confirm that there is substantial inequality of educational opportunity and expectations can indeed be seen as an indicator of perceived opportunity (Yun and Kurlaender, 2001). Our findings that expectations differ substantially across schools and education systems – while holding individual variations constant – demonstrates how policymakers should not perceive expectations for higher education solely as an individual attribute. An individualistic approach such as raising expectations masks that social inequality in higher education is a societal problem. To be clear, that does not mean that the student and his/her family is not of uttermost importance in the educational decision-making process and future attainment. It means that policy initiatives to raise educational attainment may fall short if they only address individual-level factors. Therefore, we pointed out how schools and education systems can better support students' expectations and attainment in higher education.

### **Notes**

<sup>1</sup> In this research, we follow what Thaning and Hällsten (2020) called “the dominant approach” of using the highest level of parents' SES in the literature on students' education outcomes and broader stratification research. However, recent studies have suggested the relevance of looking at how the combination of parents' SES influences children's education.

<sup>2</sup> It should be noted that we also tested the effect at school level of ability composition (mean perceived academic ability per school) and of ethnicity composition (proportion of students with an immigration background per school), as some single-country research showed effects of these school variables (e.g., Frost, 2007). However, both proved nonsignificant.

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**Table 1.** Rotated factor scores for student engagement and perceived academic ability.

Items	Academic investment	School identification	Negative school beh.	Perceived ability
1. In class, I try to work as hard as possible	.86			
2. In class, I put in my best effort	.82			
3. In class, I keep working even if the material is difficult	.64			
4. I like being at school		.71		
5. I feel safe at school		.67		
6. I will leave this school with good memories		.66		
7. Overall, how happy do you feel about your life at school?		.61		
8. This school year, how many times have you:				
8a. Skipped a class without permission?			.84	
8b. Been absent from school for a day without permission?			.66	
8c. Been in trouble with a teacher because of your behavior?			.43	
8d. Arrived late at school?			.41	
9. I get into trouble frequently at school			.31	
10. How would your teachers rate you as a student?				.78
11. What results do you expect to get in your studies this year?				.76

*Note.* Factor scores below .30 are not listed.



**Table 2.** Descriptive statistics in integration and ability grouping education systems.

Variables	Integration		Ability grouping		Total	
	<i>M</i> or %	<i>SD</i>	<i>M</i> or %	<i>SD</i>	<i>M</i> or %	<i>SD</i>
Dependent						
Expect to pursue higher education	55.8 ( <i>n</i> = 4025)		63.8 ( <i>n</i> = 4300)		60.0 ( <i>n</i> = 8325)	
School-level						
Education system	48.2 ( <i>n</i> = 4110)		51.8 ( <i>n</i> = 4410)			
SES composition	64.40 ( <i>n</i> = 69)	5.85	52.15 ( <i>n</i> = 57)	14.35	58.86 ( <i>n</i> = 126)	12.18
Student level						
Gender						
Female	51.1 ( <i>n</i> = 4102)		52.8 ( <i>n</i> = 4356)		52.0 ( <i>n</i> = 8458)	
Immigration background						
With immigration background	17.2 ( <i>n</i> = 4069)		32.3 ( <i>n</i> = 4319)		25.0 ( <i>n</i> = 8388)	
Number of books at home						
More than 100 books	59.3 ( <i>n</i> = 4027)		46.0 ( <i>n</i> = 4299)		52.4 ( <i>n</i> = 8326)	
SES	65.04 ( <i>n</i> = 3837)	17.94	54.68 ( <i>n</i> = 4085)	23.39	59.70 ( <i>n</i> = 7922)	21.56
Perceived academic ability	3.54 ( <i>n</i> = 4101)	0.85	3.26 ( <i>n</i> = 4349)	0.81	3.39 ( <i>n</i> = 8450)	0.84
Negative school behaviors	1.44 ( <i>n</i> = 4059)	0.49	1.64 ( <i>n</i> = 4310)	0.54	1.54 ( <i>n</i> = 8369)	0.52
School identification	3.24 ( <i>n</i> = 4087)	0.58	3.06 ( <i>n</i> = 4335)	0.48	3.15 ( <i>n</i> = 8422)	0.54
Academic investment	3.02 ( <i>n</i> = 4054)	0.74	2.61 ( <i>n</i> = 4310)	0.70	2.81 ( <i>n</i> = 8364)	0.75

**Table 3.** Stepwise multilevel logistic regression: Average marginal effects on the probability of expecting to attend higher education.

	Model 1	Model 2	Model 3	Model 4	Model 5
<b>School-level</b>					
Ability grouping	0.07** (0.03)	0.19*** (0.02)	0.23*** (0.02)	0.24*** (0.02)	0.22*** (0.02)
SES composition		0.12*** (0.01)	0.09*** (0.01)	0.09*** (0.01)	0.06*** (0.01)
<b>Student level</b>					
Girls			0.11*** (0.01)	0.11*** (0.01)	0.11*** (0.01)
Immigration background			0.05*** (0.01)	0.06*** (0.01)	0.06*** (0.01)
More than 100 books			0.07*** (0.01)	0.07*** (0.01)	0.07*** (0.01)
SES			0.04*** (0.01)	0.04*** (0.01)	0.04*** (0.01)
Perc. academic ability			0.13*** (0.01)	0.11*** (0.01)	0.11*** (0.01)
Neg. school behaviors				-0.03*** (0.01)	-0.03*** (0.01)
School identification				0.02*** (0.01)	0.02*** (0.01)
Academic investment				0.00 (0.01)	0.00 (0.01)
<b>Interaction</b>					0.08**
SES comp. x Educ. system					(0.01)
AIC	9635	9543	8685	8645	8634
Log Likelihood	-4815	-4767	-4333	-4311	-4302
Number of students	7566	7566	7566	7566	7566
Number of schools	126	126	126	126	126
Variance school (intercept)	0.36	0.12	0.16	0.16	0.13

Notes. Presented are average marginal effects and SE in parentheses; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

