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Impact of grade retention and school engagement on student intentions to enrol in higher education in Portugal

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Abstract

Grade retention and inequalities that derive from grade retention can influence student school trajectories and careers. Grade retention can discourage students from education, and increase school failure and dropout. This study explored the relationship between grade retention and student intentions to enrol in higher education. We also studied the role of school identification and behavioural engagement in this relationship. The analysis is based on a sample of 1,089 students (grades 6 to 10) from Portugal, one of the European countries with the highest rates of grade retention. We employed multilevel probit regression modelling with random intercept and fixed slopes to explore both the individual and school level effects of grade retention. The analyses showed that retained students had a lower probability of intent to enrol in higher education and that there was a contextual effect of the number of retained students in the school, on students' probability of intent to enrol in higher education. This association was partially explained at the individual level by students' school identification. Retained students presented lower levels of school identification, which in turn results in lower probabilities of enrolling in higher education. Student behavioural engagement was not associated with grade

retention nor student intentions. Our findings suggest the need for interventions that foster students' school identification to overcome the adverse effects of grade retention.

1 | INTRODUCTION

A university degree has become a prerequisite for professional positions and careers in the current information-based society (OECD, 2019). Furthermore, higher education is regarded as an increasingly valued instrument for social cohesion and democracy; and as a central element of economic stability and development (Baum et al., 2013; Carnevale et al., 2013). For this reason, the sustainable development goal for education (SDG 4) of the United Nations, is supported also by the Organisation for Economic Co-operation and Development (OECD) to "*ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university*" (OECD, 2019, p. 10).

Several social and psychosocial factors can influence student decisions to enrol in higher education (Fraysier et al., 2020; Hillman, 2010; Kim & Nuñez, 2013). Grade retention interacts with such factors and may aggravate inequalities in access to higher education (European Commission, 2020). According to the OECD, grade retention "*tends to stigmatise repeaters, undermining their self-esteem and sense of belonging at school, and reinforcing their disengagement from the learning process*" (OECD, 2018, p. 41). Grade retention practices give rise to equity issues because grade retention is disproportionately experienced by those already disadvantaged, such as students of lower socio-economic status or minority groups (e.g., Bastos & Ferrão, 2019; Ikeda & García, 2013; Nunes et al., 2018). Grade retention and inequalities that derive from grade retention can influence student school trajectories and professional life projects. Grade retention can negatively affect the academic self-perception of students, and may discourage them from education. It may also increase school failure and dropout (Fine & Davis, 2003; Lopes & Medeiros, 2010; OECD, 2018; Ou & Reynolds, 2010).

Since grade retention is applied unequally, it represents a threat to the realisation of citizens' equal right to education, including access to higher education and the labour market (Walton, 2018). In contrast, positive attitudes towards school, including feelings of wellbeing and belonging, and valuing school, have a significant impact on academic behavioural engagement, and are associated with a strong influence on student intention to continue studying (Curtis et al., 2012; Hillman, 2010). The study on which this article reports aimed to explore the relationship between grade retention and student intention to enrol in higher education, and the role of students' identification with their schools, and behavioural engagement within this relationship. Since few studies accounted for the multilevel nature of outcomes in the school context (Marsh et al., 2012; Rumberger & Palardy, 2004), we also investigated the effect of grade retention at the school level. That is, the effect of the proportion of retained students in the school on students' intention to enrol in higher education.

2 | GRADE RETENTION AND STUDENT ENROLMENT IN HIGHER EDUCATION

A significant potential influence on students' plans and intentions, not only in higher education enrolment but also in high school completion, is grade retention (Fine & Davis, 2003; Fraysier et al., 2020; Jimerson, 1999; Ou & Reynolds, 2010). Grade retention is the practice of requiring students to repeat a grade when they have not met the learning objectives for that grade (Beswick et al., 2008). Grade retention is often the subject of heated debate because it is a practice associated with negative consequences for students (Beswick

et al., 2008). Several studies have indicated that, in the long term, retained students often end up leaving school before graduation (Guèvremont et al., 2007; Hughes et al., 2017, 2018; Jimerson et al., 2002). This disengagement with school occurs despite performing better in their coursework than promoted students (Alexander et al., 2003).

Regarding retained students' school aspirations and intentions, Seabra (2006) points out that retained students associated school with negative experiences and feelings, demonstrated lower aspirations regarding the education level that they aimed to achieve, and showed more reservations about what the school can provide them. Fine and Davis (2003) and, more recently, Fraysier et al. (2020) also observed that grade retention was associated with a reduced chance of enrolling in higher education, even after controlling for gender, ethnicity, achievement, and socioeconomic status. Using both regression and propensity score matching, Ou and Reynolds (2010) observed that grade retention was significantly associated with lower rates of participation in higher education. No access to higher education could lead to lower access to jobs and lower incomes—the employment rate of adults with only upper secondary education is about nine percentage points lower than those with a higher education degree and adults with higher education earn on average 57% more (OECD, 2019).

Hence, the evidence indicates that grade retention could have adverse effects on student intention to enrol in higher education. However, the underlying mechanisms linking grade retention with student enrolment in higher education remains unclear. Researchers have hypothesised that the effects of grade retention on school completion and higher education enrolment are mediated by its effects on students' school disengagement during their school trajectory (Alexander et al., 2003; Bear et al., 2019; Pagani et al., 2001). This hypothesis is based on studies concluding that retained students, compared to promoted students, demonstrated less academic effort and school engagement (Alexander et al., 2003; Bear et al., 2019; Hong & Yu, 2007; Jimerson, 2001; Martin, 2009, 2011). The work of Fraysier et al. (2020) revealed that both students' engagement and grade retention predict higher education enrolment, but no mediation effect was tested. The present study provides an extension to the existing literature by assessing the underlying mechanisms that link grade retention and higher education enrolment.

2.1 | Student identification with schools, behavioural engagement and enrollment in higher education

According to Voelkl (2012), academic outcomes such as achievement, school attendance, and higher education participation are linked to students' school identification and behavioural engagement. School identification is an affective form of student engagement that comprises student feelings of belonging as a significant member of the school community and sense of inclusion in school, and valuing school because of its personal or practical importance for the student (Voelkl, 2012). Khoo and Ainley (2005) and Hillman (2010) observed that having positive attitudes and feelings of identification towards school in grade 9 had a significant influence on whether a student completes and continues beyond secondary school.

School identification is a strong motivator of school and behavioural engagement (Korpershoek et al., 2020; Voelkl, 2012). Behavioural engagement refers to behaviours that indicate active participation in school and classroom activities, such as effort, attendance, active classroom participation, and homework completion (Appleton et al., 2006; Fredricks et al., 2011). Empirical evidence suggests that student behavioural engagement mediates the relationship between school identification and student academic outcomes, such as school completion and academic achievement (Osterman, 2000; Reschly & Christenson, 2012; Voelkl, 2012). Students who developed a sense of identification with the school were more engaged in classroom activities, actively participating in their learning, and completing assignments, which improved their academic achievement (Korpershoek et al., 2020). Conversely, those who do not develop a feeling of belonging and valuing are more likely to disengage or withdraw (Voelkl, 2012). Both affective and behavioural disengagement have been positively associated with school

dropouts (e.g., Archambault et al., 2009; Lovelace et al., 2017; Rumberger & Lim, 2008), and participation in higher education depends on successful completion of high school.

Few studies have examined the role of students' school engagement directly on their higher education enrolment and participation (e.g., Fraysier et al., 2020; Hillman, 2010). They suggest that both school identification and behavioural engagement at the secondary school level are good predictors of both student enrolment and persistence at the university level (Fraysier et al., 2020; Hillman, 2010). Since retained students have demonstrated less school identification and behavioural engagement in previous studies (Bear et al., 2019; Fraysier et al., 2020; Hong & Yu, 2007; Jimerson, 2001; Martin, 2009, 2011), it is possible that student identification with their schools and behavioural engagement work as mediators of the relation between grade retention and student intention to enrol in higher education. According to the Finn model for understanding the process of student withdrawal (1989), followed by Voelkl (1997, 2012), student engagement, particularly their identification with school, is formed as a result of numerous interactions between students and the school context, including students' experiences of success or failure accumulated over the years. While positive experiences, such as high academic achievement, lead to feelings of belonging at school and valuing the school, negative experiences, such as failure and grade retention, can have the opposite results, leading to disengagement from school. This pattern may be cyclical, in that students who disengage with school are, in turn, less likely to participate further in school, experiencing more failure and ultimately withdrawal from school and higher education (Voelkl, 1997). In other words, early patterns of achievement could become habitual patterns of behaviours (Voelkl, 1997). According to this conceptualisation, in the present study we suggest that previous experiences of failure, expressed in the form of grade retention, lead to the diminishing of students' identification with school and their behavioural engagement. This is liable to increase their chances of eventually dropping out of school and decrease their intention to enrol and participate in higher education.

2.2 | Contextual school effects on student intention to enrol in higher education

Higher education access is influenced not only by individual characteristics, but also by the economic, social, and schooling context (Kim & Nuñez, 2013). Approximately 20%–25% of the variability in student outcomes can be attributed to the characteristics of the schools that students attend (Rumberger & Palardy, 2004). One of the school factors that can influence students' academic trajectory is student composition, that is, the social and academic characteristics of the group of students that attend the school. The student composition of the school is a relevant variable, in part, because students are not randomly assigned to school. For example, some schools have a predominance of students from disadvantaged families or high proportions of retained students, or both (Harker & Tymms, 2004).

Student composition of the school may affect achievement and student enrolment in higher education directly through interactions with peers (Rumberger & Rotermund, 2012; Ryan, 2000). The student composition of the school can enhance student enrolment in higher education by peers sharing information about the higher education programmes, and by peers providing emotional support and assistance in the enrolment process (Kim & Nuñez, 2013; Okpych & Courtney, 2017; Ryan, 2000). School average parental education level, for example, has been associated both with school dropout rate (Rumberger & Thomas, 2000) and higher education enrolment (Addi-Raccah & Ayalon, 2008; Kim & Nuñez, 2013). Students can access information about higher education from their parents, if parents have a higher education degree. Students with parents without higher education tend to rely on peers for guidance and information (Gibbons et al., 2006; Xing & Rojewski, 2020). Therefore, in schools where most of the students' parents had lower levels of education, students faced more difficulties in accessing other sources of information.

In contrast, some studies suggest that the proportion of retained students in a school may have some spillover effect on other students' school outcomes (Demanet & Van Houtte, 2016; Gottfried, 2013a, 2013b; Lavy

et al., 2011). A low proportion of retained students in a school could be a contextual factor that facilitates the likelihood of a student engaging with the school, contributing to their intention to enrol in higher education. Voelkl (2012) identified some contextual conditions affecting students' likelihood of engaging with the school that could be affected by the number of students retained. These contextual conditions are association with similar other conditions, such as being treated fairly and being supported by the school community.

Individuals tend to form relationships with those similar to themselves (Voelkl, 2012). Schools and classrooms serve as cohesive groups in which students are united by many shared characteristics (including physical and social characteristics and the common characteristics of the setting; Voelkl, 2012). In a school with higher retention rates, a portion of students are united by their shared experience of grade retention, and by shared values—e.g., the view that school and higher education have no personal or practical importance. Such a view has been observed in several studies on students retained, as mentioned earlier. These cohesive groups may pressure individuals to conform to group expectations (Voelkl, 2012), fostering disengagement with school and its activities, reducing student intentions to enrol in higher education. This effect may have consequences for other students by modelling behavioural disengagement, as observed by Gottfried (2013a, 2013b).

Moreover, grade retention could also create conspicuous dissimilarities among students, affecting their relationships with peers and their sense of belonging (Voelkl, 2012). The practice of grade retention removes individual students from the class group, interfering with their sense of identification. In contrast, keeping the same class together for several years can increase students' identification with the school (Voelkl, 2012). For example, Demanet and Van Houtte (2016) observed that students attending schools with a higher percentage of retained students had fewer same-grade friendships. The intensive use of grade retention fostered social isolation in retained and non-retained students, decreasing their enjoyment of school and their sense of belonging (Demanet & Van Houtte, 2016).

A feeling of being treated fairly and consistent support from the community are also essential for developing student engagement (Voelkl, 2012). Nevertheless, the intensive use of grade retention could raise inequities that affect these conditions. Studies have indicated that teachers hold expectations that disfavour disadvantaged students when making grade repetition decisions (e.g., Bastos & Ferrão, 2019; Ikeda & García, 2013; Nunes et al., 2018), which are administered unevenly across student groups. Therefore, students in a school with a high proportion of retention may perceive that the school community is biased against them based on personal characteristics, such as race, ethnicity, or ability. Furthermore, the stigma of retention may lead to lower expectations from teachers, parents, and peers, inducing the community to display differential treatment towards students based on their achievement levels, as observed by Lavy et al. (2011). The inconsistency in expectations and supportive environment based on previous achievements can reduce student trust in the school as a source of support, motivation, and engagement (Voelkl, 2012). Lower expectations from the school community may also discourage students from enrolling in higher education and teachers from offering students the support they need to prepare themselves for the admissions exams for higher education (e.g., Vieira, 2018).

Thus, the lack of fair treatment and the inconsistency in the supportive environment generated by the intensive use of grade retention could create barriers to the development of students' engagement and school identification (Voelkl, 2012), which could lead to a decrease in students' intention to enrol in higher education.

2.3 | Present study

In summary, the present study aimed to explore the impact of grade retention, both at the individual and school levels (proportion of retained students in the school), on student intention to enrol in higher education in Portugal. We also assessed the underlying mechanisms that link grade retention and higher education enrolment at the individual level, that is, the mediation effects of student identification with their school and behavioural engagement on the relationship between grade retention and student intentions to enrol in higher education.

Three hypotheses were tested:

Hypothesis 1. *Students who are retained are less likely to enrol in higher education.*

Hypothesis 2. *Students in schools where there is a higher proportion of retained students will have a lower probability of intent to enrol in higher education.*

Hypothesis 3. *Student identification with the school, and behavioural engagement, are mediators of the relation between grade retention and student intentions to enrol in higher education.*

3 | METHOD

3.1 | Research context and participants

In Portugal, basic and secondary education are compulsory and free. The basic education level is divided into three cycles: first (grades 1 to 4), second (grades 5 to 6), and third cycle (grades 7 to 9). After the first cycle, several teachers (no less than 10), specialised in one or two subjects, share the responsibilities for teaching and learning (Eurydice, 2019). Consequently, students from different classrooms of the same grade share most teachers. Our target population were students from public schools who attended the transitional years between study cycles (grade levels 6, 7, 9, and 10). We focused on the transitional years because inequalities do not manifest in the final years of secondary school, but have their origins much earlier in student school trajectories, affecting their educational expectations (Grodsky & Riegle-Crumb, 2010; Parker et al., 2016). In this sense, it is interesting to analyse student intentions to enrol in higher education not only when leaving secondary school, but also during other transitional moments in their school trajectories, and understand how grade retention can influence these intentions.

Higher education in Portugal is pursued only by about 25% of adults, which is significantly lower than the average figure for the European Union (40%) and distant from the European Commission benchmarks for 2020 (the share of 30–34-year-olds with tertiary educational attainment should be at least 40%; Alves et al., 2017; OECD, 2019). Additionally, since 2010, there has been an observable decline in enrolments in higher education (Alves et al., 2017). This decrease is associated with an overall deterioration of the economic situation in Portugal (Alves et al., 2017). In the more recent academic years (2015/16, 2016/17 and 2017/18) a slight increase in the number of students enrolling in higher education has been registered. This trend coexists with less severe austerity policies and suggests that the improvement of the social and economic context is linked to a small increase in the number of enrolments in higher education. However, financial difficulties are not the sole reason for students opting to discontinue studies after completing compulsory secondary school. In 2018, 47.1% of the students in grade 9 and 45% of grade 12 students indicated that one of the reasons for not intending to enrol in higher education was that they did not like to study (Portugal Ministry of Education and Science, 2018, 2019).

The use of grade retention is widespread in Portugal and grade retention rates are higher than the average for other OECD countries (27% of fifteen-year-old students repeated at least once during primary or secondary schooling; European Commission, 2020). It is up to the teachers' council in each school to decide student grade retention on a case-by-case basis, so school retention rates vary greatly from school to school (European Commission, 2020; Nunes et al., 2018).

The sample was selected through a probabilistic, multi-stage sampling procedure in continental Portugal. Based on the number of students enrolled in the chosen grades by each Statistical Territorial Unit (NUTS II, five regions), we calculated the proportion of students to be selected to participate in the study. A list of schools located in the selected municipalities was then compiled, from which 5% of schools were randomly

selected for each grade level. Since students in the same grade share most of their teachers, only classrooms of the same grade were collected in each school, which allowed us to use the school instead of the classroom as our group level.

The final sample, collected in the academic year 2012–2013, consisted of 1,089 students spread over 45 schools in continental Portugal. Our comparison of the sample and the census population for the academic year 2012–2013 indicated similar patterns of distribution for the grade level and NUTS II region, which indicated that the sample was representative of the Portuguese population. Table 1 shows the overall sample characteristics, and Table 2 shows the correlation between variables.

3.2 | Procedures

Students completed a paper-and-pencil self-reported questionnaire during class time in the presence of a teacher. All students had to procure prior parental consent, and they were informed that their participation was voluntary and anonymous.

3.3 | Measures

3.3.1 | Students' identification with their school

The School Identification Scale (Conboy et al., 2015) was used to assess three dimensions of identification with the school: (1) perceptions about their intrinsic value as students (four items, e.g., "My skills make me confident about my future"); (2) about the practical value of the school (three items, e.g., "My grades in school determine my future"); and (3) about their feelings of belonging and wellbeing associated with their school (three items, e.g., "I am happy in this school"). Each item was answered on a four-point Likert scale ranging from 0 (completely disagree) to 3 (completely agree). We conducted confirmatory factor analyses (CFAs) to confirm the structural validity of the measure in our sample, using Mplus 8.4. We found evidence of the structural validity—$\chi^2(31) = 163.56$, $p < .001$; CFI = .968; TLI = .954; RMSEA = .063, CI 90% [.053, .072]; SRMR = .036. Internal consistency reliability estimates were adequate for all dimensions ($\omega = .72$ for intrinsic value and for belonging and wellbeing, $\omega = .81$ for practical value). Participant responses to the items were averaged to a total score for each dimension, so that higher values (close to 3) indicated a higher intrinsic value, practical value, and belonging and wellbeing. Descriptive statistics are presented in Table 1.

3.3.2 | Students' academic behavioural engagement

A nine-item scale by Carvalho et al. (2016) was used to assess the two dimensions of behavioural engagement suggested by Appleton et al. (2006): (1) academic work (six items, e.g., "I study the content of the lesson"), and (2) class participation (three items, e.g., "I actively participate in group discussions"). Each item was answered on a four-point Likert scale ranging from 0 (never) to 3 (always). Students were asked to think of a subject they liked. A CFA was used for confirming the structural validity of the measure—$\chi^2(26) = 54.37$, $p < .001$; CFI = .993; TLI = 989; RMSEA = .029, CI 90% [.017, .041]; SRMR = .022. Reliability estimates were acceptable for both dimensions ($\omega = .84$ for academic work and $\omega = .67$ for class participation). Participant responses to the items were averaged to a total score for each dimension. Higher values indicated higher levels of behavioural engagement.

TABLE 1 Sample characteristics

Variable	Category	Missing	*N*	%	*M*	*SD*	Min	Max
Student level (n = 1,089)								
Gender	Total	0	1,089	100				
	Female		566	52.0				
Nationality	Total	10	1,079	99.1				
	Portuguese		1,035	95.0				
Age	Total	9	1,080	99.2	13.40	1.70	10	25
Mother's highest level of education	Total	67	1,022	93.8	3.32	1.27	1	5
	1st cycle		105	9.6				
	2nd cycle		177	16.3				
	3rd cycle		243	22.3				
	Secondary		278	25.5				
	Higher		219	20.1				
Grade level	Total	0	1,089	100	7.76	1.48	6	10
	6th		279	25.6				
	7th		346	31.8				
	9th		290	26.6				
	10th		174	16.0				
Intention to enrol	Total	54	1,035	95.0				
	Yes		722	66.3				
Grade retention	Total	21	1,068	98.1				
	Retained		185	17.0				
Intrinsic value	Total	1	1,088	99.9	2.08	0.56	0.3	3.0
Practical value	Total	1	1,088	99.9	2.34	0.60	0.0	3.0
Belonging	Total	1	1,088	99.9	2.24	0.52	0.0	3.0
Academic work	Total	14	1,075	98.7	2.43	0.49	0.0	3.0
Class participation	Total	15	1,074	98.6	2.25	0.57	0.0	3.0
School level (n = 45)								
Proportion of students with intention to enrol[a]	Total	0	45	100	66.79	18.56	5.9	100
Proportion of retained students[a]	Total	0	45	100	19.21	16.52	0.0	100
Proportion of non-Portuguese students[a]	Total	0	45	100	3.97	4.82	0.0	16.7
Average of mothers' level of education	Total	0	45	100	3.35	0.63	2.07	4.50
Number of students in grade level	Total	0	45	100	109.02	73.14	19	476
Population's years of education	Total	0	45	100	8.65	1.61	6.5	11.6

Source: Authors.

[a]Proportion of students in the school sample (%).

TABLE 2 Correlations for study variables

Student level correlations	1	2	3	4	5	6	7	8	9
1. Intention to enrol	–								
2. Grade retention	–	–							
3. Intrinsic value	.45***	−.27***	–						
4. Practical value	.19***	−.10**	.43***						
5. Belonging and wellbeing	.05	−.06*	.32***	.27***	–				
6. Academic work	.25***	−.17***	.43***	.33***	.22***	–			
7. Class participation	.14***	−.10**	.35***	.22***	.21***	.50***			
8. Age	−.06	−.30***	−.20***	−.22***	−.24***	−.14***	−.19***	–	
9. Mother's level of education	.30***	−.19***	.24***	.03	.02	.15***	.10**	−.01	
10. Grade level	.09*	.03	−.12***	−.21***	−.24***	−.09**	−.16***	.87**	.06
School level correlation	1	2	3	4	5				
1. Intention to enrol	–								
2. Grade retention	−.63***	–							
3. Nationality	−.12	.40***	–						
4. Mother's level of education	.64***	−.19	.074	–					
5. Number of students in grade level	.19	−.07	−.051	.19	–				
6. Population's years of education	−.01	.19	.178	.32*	.13	–			

Source: Authors.

*$p < .050$; **$p < .010$; ***$p < .001$.

3.3.3 | Grade retention and student intention to enrol in higher education

Students were asked about their intentions to enrol in higher education after secondary school graduation (0 for No, 1 for Yes). They were also asked if they were retained at any point in their school trajectory (0 for No, 1 for Yes).

3.3.4 | Sociodemographic characteristics

Students were asked about their age, gender (0 = female, 1 = male), grade level, mother's education level (1 = 1st cycle of basic education, 2 = 2nd cycle, 3 = 3rd cycle, 4 = secondary education, 5 = higher education), and nationality (0 for Portuguese, 1 for not Portuguese).

3.3.5 | Student composition by school

We used student reports of intention to enrol, grade retention, mother's education level, and student nationality to calculate school level variables that represented the proportion of students with the intention to enrol in higher education, those retained, and those who were non-Portuguese, as well as the average level of mothers' education. In Table 1, we present the descriptive statistics of the percentage of students from our sample who intended to enrol in higher education, who were retained, and who were not Portuguese. We also present the average education level for mothers of students in the school sample. Nonetheless, the observed proportion and average in our sample may be a highly unreliable measure of the unobserved real student composition of the school because only a small number of students were sampled from each school (Marsh et al., 2009). To correct this sampling error in our analyses, we aggregated individual reports at the school level using a manifest measurement-latent aggregation approach (Marsh et al., 2009). In this manifest-latent approach, we used student reports as observed variables for the individual level. We aggregated these variables at the group level, as unobserved latent variables, using structural equation modelling.

To ensure the reliability of the aggregated school level variables as a measure of school composition, we calculated intraclass correlations ICC1 and ICC2 as described by Marsh et al. (2012). ICC1 values indicate the proportion of total variance that can be attributed to school differences, while ICC2 values provide an estimate of the reliability of school means and proportion reports (Marsh et al., 2012). The ICC1 of our aggregated school level constructs showed that a significant percentage of the total variance in student intentions to enrol (16.5%), grade retention (19.5%), and average level of mother's education (19.8%) were associated with school characteristics. Considering that the average cluster size was 24.2 students per school, the design effects were 4.83, 5.52, and 5.59, respectively, for these three variables. Muthén and Satorra (1995) have argued that design effects higher than 2.00 suggest systematic variation between schools that deviate from simple random sampling. Therefore, the ICC1 values confirm that multilevel analysis was advisable for these variables (Heck & Thomas, 2015). The ICC2 values were also above the critical value of .70, as suggested by Marsh et al. (2012), indicating that the school aggregation of these variables was reliable (ICC2 = .83 for the proportion of students with the intention to enrol in higher education, .85 for the proportion of students retained in the school, and .86 for the proportion of students by mother's education level). In contrast, only 1.1% of the total variance in student nationality was associated with school characteristics, with a design effect of 1.25. This value indicated that it was unnecessary to analyse student nationality at the school level. Therefore, this control variable was only analysed at the individual level.

3.3.6 | School context variables

We used publicly available statistics for the academic year 2012–2013 (CESNOVA, 2014) to collect information about the total number of students in the school in the target grade year and the average years of education in the local population (specifically, the average for the population between 25 and 65 years of age residing in the schools' municipality; CESNOVA, 2014).

3.4 | Data analyses

Missing data (1.8%) were handled by the default Mplus procedure—where missing data is allowed as a function of the observed covariates but not the observed outcomes (Muthén & Muthén, 1998–2017). We employed multilevel probit regression modelling with random intercepts and fixed slopes using the weighted least square mean and variance (WLSMV) estimator. We estimated three successive models that aimed to evaluate both individual and school effects on students' intention to enrol in higher education. For all the models tested, the predictor variables, except the dichotomous variables, were grand-mean centred. Each model fit was assessed using the indices and cut-off points suggested by Hu and Bentler (1999): values higher than .95 of the comparative fit index (CFI) and Tucker-Lewis index (TLI) as well as values lower than .08 of the root mean square error of approximation (RMSEA) and standardised root mean square residual (SRMR).

Using the manifest-latent approach, in Model 1, we propose that grade retention may have within- and between-group components that affect students' intention to enrol in higher education. This type of variable specification allowed us to assess the role of individual experiences of grade retention (observed variable). At the group level, it allowed us to assess the role of the proportion of retained students in a school (aggregated latent variable) in student intentions to enrol in higher education. We considered that there was a contextual effect of the proportion of retained students in a school, on student intentions, if there were group-level effects even after controlling for the effect on the individual-level (Marsh et al., 2009).

In Model 2, we added dimensions associated with students' identification with school (intrinsic value, practical value, and belonging) and behavioural engagement dimensions (academic work and class participation) at the individual level as mediators of the relationship between grade retention and student intentions to enrol in higher education. We also considered school identification dimensions as predictors of students' behavioural engagement, as suggested by Voelkl's (2012) theoretical model (see Figure 1).

In the third model, we added control variables that have been shown to be related to student enrolment in higher education and grade retention (Addi-Raccah & Ayalon, 2008; Almeida & Vieira, 2012; Bastos & Ferrão, 2019; Fine & Davis, 2003; Fraysier et al., 2020; Guèvremont et al., 2007; Kim & Nuñez, 2013; Lopes & Medeiros, 2010; Maxwell & Connell, 2013; Parker et al., 2016). At the individual level, we controlled for gender, grade level, mother's education level, and nationality. At the school level, we controlled for the total number of students in the school with the grade year and average years of education in the local population. We also included student self-reports about their mother's education level, aggregated at the school level using a manifest-latent approach.

4 | RESULTS

4.1 | Grade retention and student intention to enrol in higher education

In Table 3, we present the probit coefficients of the multilevel models tested. The results of the multilevel analyses of Model 1 indicate that grade retention is related to student intentions to enrol in higher education at both the individual and school levels (see Table 3), which supports Hypothesis 1 and 2. Being retained is negatively

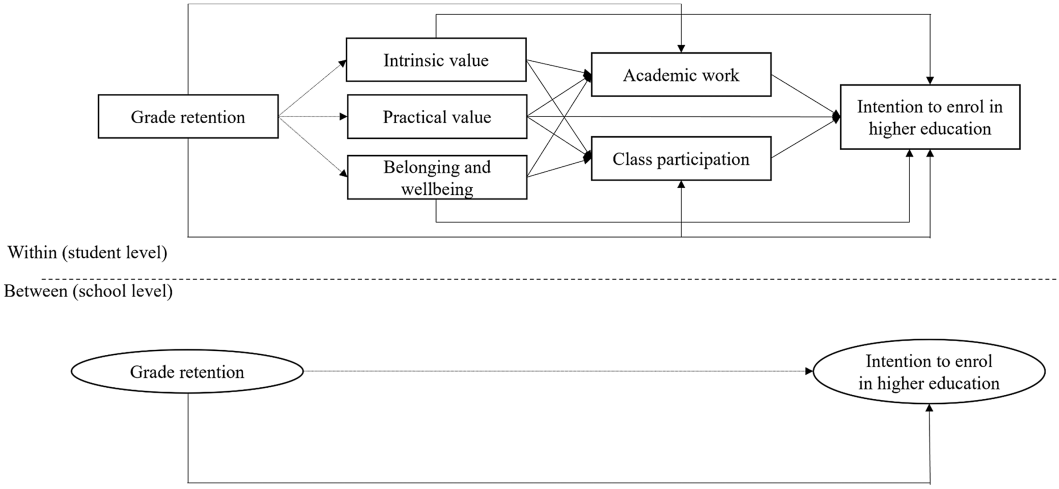

FIGURE 1 Conceptual model. Note: Latent school-level constructs are represented as circles, and student-level indicators of these latent variables are represented as squares. *Source*: Figure constructed by authors using concepts from Voelkl (2012).

related with students' intention to enrol in higher education. The proportion of retained students in the school is also negatively related to student intentions to enrol in higher education. These results indicated that there was a contextual effect of the proportion of retained students in the school: Students in a school with a higher proportion of retained students had a lower probability of intent to enrol in higher education, regardless of whether they were retained themselves.

4.2 | The role of identifying with the school and behavioural engagement

In Model 2, we examined whether dimensions of identifying with the school and behavioural engagement mediated the relationship between grade retention and student intentions to pursue higher education. The results of Model 2 (Table 3) show that grade retention was negatively related to student perceptions of their intrinsic value and practical value. Retained students tended to present lower perceptions of their intrinsic value as students and the practical value of school. The relation between grade retention and students' feelings of belonging and wellbeing was also negative but only marginally significant ($p = .058$). Results also indicated that only intrinsic value and students' feeling of belonging and wellbeing were predictors of students' intentions to enrol in higher education. Lower levels of intrinsic value decreased student probability of intent to enrol in higher education, while lower levels of belonging and wellbeing increased student probability of intent to enrol. The intrinsic value dimension alone was a mediator between grade retention and student intention to enrol. The indirect effect of grade retention on student intention through intrinsic value was significant ($b = -0.247$, $SE = .030$, $p < .001$).

All school identification dimensions predicted student engagement with academic work and class participation. No direct effect of grade retention on student behavioural engagement was observed but the student intrinsic value and practical value variables mediated between grade retention and student behavioural engagement. The indirect effect of grade retention on student engagement with academic work through intrinsic value ($b = -0.060$, $SE = .009$, $p < .001$) and practical value ($b = -0.027$, $SE = .008$, $p = .001$) was significant. Likewise, the indirect effect of grade retention on student class participation through intrinsic value ($b = -0.013$, $SE = .004$, $p = .002$) and practical value ($b = -0.005$, $SE = .002$, $p = .019$) was also significant. Thus, retained students saw less

intrinsic value and practical value in the school, decreasing their behavioural engagement. Nevertheless, student behavioural engagement was not related to student intention to enrol in higher education.

In the third model, we added control variables at the individual and school levels. To make the model parsimonious, we removed all non-significant paths that did not affect the model's fit or predictive power. Thus, both behavioural engagement dimensions were removed since they were not contributing significantly to student intentions to enrol. Three more variables were removed— two school level and one individual: (1) number of students in the grade level, (2) average years of education in the local population, and (3) students' nationality. In Table 3, we present the unstandardised estimates of the final model, and in Figure 2, we present the standardised estimates of the final model.

Model 3 indicated that the individual effects of grade retention on student intention to enrol in higher education remained significant after controlling for gender, grade level, mothers' education level and school identification levels. A retained student had an approximately 20.61% probability of intent to enrol in higher education, while the probability of a non-retained student was approximately 34.46%. These results confirmed our first hypotheses.

The context effect of grade retention also remained significant after controlling for all other variables. While holding all other variables fixed, in a school with a proportion of retained students close to the mean on the sample (i.e., approximately 19%), students had a 34.6% probability of intent to enrol in higher education. Students from a school with a higher proportion of retained students, that is, with one standard deviation above the mean (approximately 36%), had only an approximately 13.57% probability of intent to enrol in higher education. In contrast, students from a school where the proportion of retained students was very low, that is, with one standard deviation below the mean (close to 3%), had up to a 61.79% probability of intent to enrol in higher education. Therefore, our second hypothesis was also confirmed.

Finally, we also confirmed that the indirect effect of grade retention ($b = -.196$, $SE = .029$, $p < .001$) on students' intention to enrol in higher education through intrinsic value remained significant after including the control variables. Retained students perceived lower levels of intrinsic value in being a student, which decreased their intention to enrol in higher education. Students with scores of intrinsic value one standard deviation above the mean (approximately 2.64) had close to a 75.17% probability of intent to enrol in higher education. In contrast, students with scores of intrinsic value one standard deviation below the mean (approximately 1.52) only had close to a 6.94% probability of intent to enrol in higher education. Hence, our third hypothesis was only partially confirmed. The only school identification dimension variable to partially mediate the relation between grade retention and student intentions was *intrinsic value*.

We also confirmed a negative relationship between student belonging and wellbeing and intentions to enrol in higher education, although the effect was minimal. After controlling for all other variables, students with higher belonging and wellbeing scores (one standard deviation above the mean, i.e., close to 2.76) only had a 25.5% probability of intent to enrol in higher education. In contrast, students with lower levels (close to 1.72) had a 44.4% probability.

The final model presented good indicators of model fit: $\chi^2(8) = 3.545$, $p = .896$; CFI = 1.00; TLI = 1.02; RMSEA = .000; SRMR = .035 (within), <.001 (between). The model explained 47.3% of the variance in student intentions to enrol in higher education, at the individual level, and almost all the variance (96.0%) at the school level.

5 | DISCUSSION

The study on which this article reports investigated the implications of grade retention for student intentions to enrol in higher education. The study builds on the existing literature on the role of grade retention in student enrolment in higher education. Specifically, we tested a multilevel model for analysing the spill-over effect that retained students may have on their classmates. This study contributes to research on school engagement, as few

TABLE 3 Probit coefficients of the multilevel model

	Model 1		Model 2		Model 3	
Effect	***b***	***SE***	***b***	***SE***	***b***	***SE***
Intercept/Thresholds						
Intention to enrol	−0.665	.081	−0.769	.081	0.390	.927
Retention	1.010	.111	1.010	.111	1.556	.750
Intrinsic value			0.000	.012	0.821	.059
Practical value			0.000	.015		
Belonging and wellbeing			0.000	.007		
Academic work			0.000	.010		
Class participation			0.000	.010		
Within level						
Grade retention → Intention to enrol	−0.623***	.063	−0.344***	.041	−0.434***	.060
Grade retention → Intrinsic value			−0.396***	.039	−0.187***	.030
Grade retention → Practical value			−0.156***	.039		
Grade retention → Belonging and wellbeing			−0.085†	.045		
Grade retention → Academic work			−0.078†	.040		
Grade retention → Class participation			−0.022	.041		
Intrinsic value → Academic work			0.309***	.029		
Intrinsic value → Class participation			0.287***	.026		
Intrinsic value → Intention to enrol			0.458***	.040		
Practical value →Academic work			0.176***	.021		
Practical value → Class participation			0.064**	.021		
Practical value → Intention to enrol			0.040	.042		
Belonging and wellbeing → Academic work			0.063**	.019		
Belonging and wellbeing → Class participation			0.101***	.026		
Belonging and wellbeing → Intention to enrol			−0.124**	.043		
Academic work → Intention to enrol			0.055	.065		
Class participation → Intention to enrol			−0.036	.048		
Gender → Grade retention					0.274**	.100
Gender → School identification					0.058	.040
Gender → Intention to enrol					−0.215*	.102
Grade level → Grade retention					0.038	.089
Grade level → School identification					−0.099***	.017
Grade level → Intention to enrol					0.207**	.076
Mothers' education level → Grade retention					−0.309***	.048
Mothers' education level → School identification					0.045**	.018
Mothers' education level → Intention to enrol					0.152***	.045

TABLE 3 (Continued)

Effect	Model 1		Model 2		Model 3	
	b	*SE*	*b*	*SE*	*b*	*SE*
Between level						
Grade retention → Intention to enrol	−0.766***	.139	−0.721***	.115	−0.606***	.136
Mothers' education level → Grade retention					−0.208	.199
Mothers' education level → Intention to enrol					0.631***	.150

Note: Unstandardised estimates.

Source: Authors.

†$p < .100$.

*$p < .050$; **$p < .010$; ***$p < .001$.

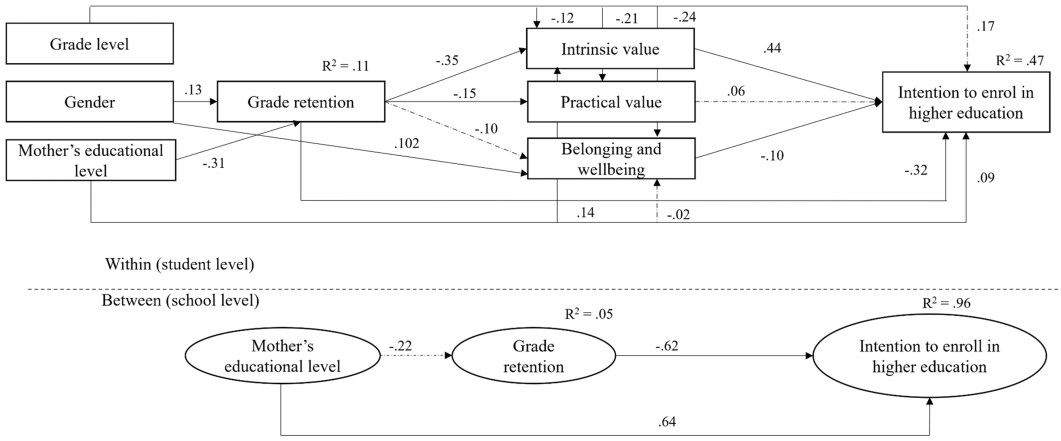

FIGURE 2 Path analysis model predicting students' intention to enrol in higher education. Note: Latent school-level constructs are represented as circles, and student-level indicators of these latent variables are represented as squares. Dotted lines represent nonsignificant relations. *Source*: Authors.

studies have examined the role of identification with the school and behavioural engagement for student intentions to enrol in higher education.

The analyses showed that retained students had a lower probability of intent to enrol in higher education, supporting the assumption that retention has consequences for student academic trajectories. This finding aligns with previous research (Fine & Davis, 2003; Fraysier et al., 2020; Jimerson, 1999; Ou & Reynolds, 2010). A key finding of the current study is that identification with the school—specifically, a perception that participating at school was an intrinsic value—appears to be the underlying mechanism that explains the association between grade retention and student intention to enrol in higher education. The internal value dimension reflects student appreciation of the school and school outcomes that can evolve from an internal sense of fulfilment, valuing their own academic achievement (Voelkl, 2012). Retained students in this study demonstrated lower levels of this internal sense of fulfilment as students. Previous studies have indicated that the undervaluing of academic competence is comparatively more prevalent among students who have been retained (Peixoto et al., 2016). Retained students believe they are not competent as students and have a lower academic self-concept when compared to students who have not been retained (Peixoto et al., 2016; Van Canegem et al., 2021). To protect their self-esteem, they devalue academic-related activities (Peixoto et al., 2016). They show less interest in learning and develop a

more negative attitude towards school (Jimerson, 2001; Martin, 2011). This, in turn, affects their higher education enrolment and participation, as observed in the present study and in previous research (e.g., Fraysier et al., 2020; Hillman, 2010). However, the relationship between grade retention, intrinsic value, and student intentions to enrol in higher education can be attributed to pre-existing differences in emotional engagement between promoted students and retained students (e.g., Yang et al., 2018). Differences that can be attributed to risk factors before retention include poor social and interpersonal skills (Bear et al., 2019). Longitudinal studies are necessary, to control for student characteristics before retention, to confirm our findings.

Our study also showed that grade retention did not seem to affect students' feelings of belonging and wellbeing. Students felt happy and satisfied with the school and easily made friends, regardless of their previous retention experience. This was surprising since previous studies indicated that retained students present a lower sense of belonging (e.g., Van Canegem et al., 2021), although some studies found no difference between at-risk and successful students (Fredricks et al., 2004). However, our results indicate that in Portugal retained students received the social support they needed to feel as socially accepted in schools as students who had not been retained.

It was also surprising to find a negative relation, although small, between student belonging and wellbeing and the intention to enrol in higher education. Students with higher levels of belonging had a lower probability of enrolling in higher education. The relation between students' belonging and the intention to enrol in higher education has not been studied thoroughly. However, research on school identification and dropout suggests that belonging has a positive indirect effect on graduation and school dropout, usually through behavioural engagement (Korpershoek et al., 2020; Voelkl, 2012). Although non-significant effects had been observed previously (Voelkl, 2012), we did not find studies where negative relations between the variables were reported. However, most of these studies did not control for school-level variance. It is possible that, in the present study, another variable at the contextual level moderated the relation between belonging and intention to enrol. For example, the intention of peers to enrol at the school could moderate this relation. If peers have no intention of enrolling in higher education, students with high levels of belonging could feel pressure to conform to group expectations, thus also having a low probability of intent to enrol in higher education themselves (Voelkl, 2012). Similar decisions among school members regarding enrolment in higher education can foster student identification and sense of belonging with peers (Voelkl, 2012). Another hypothesis is that student belonging is associated with a more relaxed sphere, with less academic competition and better interpersonal relations, as Cemalcilar (2010) has suggested. This could also explain why retention experiences were not relevant for students' sense of belonging. Further research is needed to understand how sense of belonging may be related to student intentions to enrol in higher education.

Although behavioural engagement was indirectly related to grade retention, it was not related to student intention to enrol in higher education. Therefore, for students in Portugal, enrolment in higher education appears to be related more to affective engagement with school activities than with behavioural engagement. This was not expected, since the few studies that examine the role of engagement on student enrolment in higher education had found that both affective and behavioural engagement were good predictors of enrolment (Fraysier et al., 2020; Hillman, 2010). The different results may be related to the age range of the sample used in the study. The studies of Fraysier et al. (2020) and Hillman (2010) included students from grade 9 to 12. Our study included a much younger sample. Our results were consistent with the Rumberger and Lim (2008) review on secondary school completion, that showed that behavioural engagement was a more powerful predictor at this level, compared to earlier grades.

Our study also confirmed a contextual effect of the number of retained students on student probability of intent to enrol in higher education. Students in schools with a higher number of retained students had a lower probability of intent to enrol in higher education, regardless of whether they were retained themselves. Gottfried (2013a, 2013b) suggested that retained students might prompt classmates' disengagement from school by creating a disruptive and disengaging environment through individual-level behavioural issues driven by having been retained. Further research is needed to confirm this potential explanation, analysing the student composition of a school

in terms of student engagement levels. Student composition in terms of engagement levels could also impact student enrolment in higher education. Some studies found that students at schools with higher attendance rates or where students dedicate more hours to homework (both measures of engagement) were less likely to drop out (Rumberger & Thomas, 2000) and more likely to pursue higher education (Kim & Nuñez, 2013). Students in schools with a higher average level of school identification and engagement have a higher probability of intent to enrol in higher education because their peers are committed to academic efforts, fostering attitudes and behaviours conducive to higher education enrolment (Kim & Nuñez, 2013). However, our sample was too small at the school level to detect significant effects of the contextual effect of engagement in the population. As Marsh et al. (2012) indicate, the power to detect moderate or small effects in group sizes under 50 is minimal. Therefore, further research is needed to replicate and expand on our results, identifying variables at the school level that can help explain student intention to enrol in higher education.

As this study used a cross-sectional and correlational design, causal relationships between grade retention, school identification, and student intention to enrol in higher education cannot be inferred. We also did not control for the timing of retention, nor student abilities, or other pre-existing differences between students who were retained and those who were promoted—these are possible additional determinants of student intention to enrol in tertiary education. Moreover, as intentions cannot be equated with actions, longitudinal studies are necessary to confirm the effects of grade retention and school identification on student enrolment, participation, and completion of higher education. Although our measures had a good indicator of reliability, we relied only on student self-reports. The inclusion of teacher perceptions and observations of student engagement may be desirable for a valid assessment of the variables in the study. Still, our study expands on higher education enrolment research by using a multilevel perspective to explore how student composition affected academic outcomes, something that until recently, research literature has ignored (Marsh et al., 2012; Rumberger & Palardy, 2004). Future research should sample individual classrooms and schools to focus on teacher, classroom, and school effects, to better understand the factors that could enhance higher education enrolment and persistence.

Altogether, our results provide promising information on the role that grade retention and school identification play for student intentions to continue studying and potential means of identifying students at risk of not enrolling in higher education. Although Portugal has made some improvements since the collection of our data in increasing the attainment rate in tertiary education and decreasing grade retention, these values are still far from OECD and EU recommendations (European Commission, 2020). Our findings offer evidence for the necessity to find alternative strategies that can be used to mitigate grade retention practices in schools, including: identifying struggling students for early intervention programmes; using formative, research-based interventions for the development of learning resource programmes; promoting as many students as possible; exposing students to new challenging learning content; using team decision making approaches to minimise teacher bias about struggling students; and finally, pay considerable attention to students subjected to retaining decisions (more detailed descriptions of alternatives for grade retention can be found in Lynch, 2013; Range et al., 2011). The results also demonstrate the importance of fostering students' identification with school, especially intrinsic value, to overcome some of the adverse effects of grade retention. Some studies have proven that mentoring programmes can increase both the engagement (Maxwell & Connell, 2013) and identification of students with their school (Curtis et al., 2012), also increasing their intention to pursue university education (Curtis et al., 2012; Maxwell & Connell, 2013). Mentoring can also be used to help re-engage students who are at risk of being retained because they have become disengaged from the education process (Lynch, 2013).

In sum, increased participation in higher education should be supported with new alternatives to the use of grade retention—in particular, at secondary schools with higher rates of retention. We also recommend the use of supportive classroom environments, to boost student affective engagement with both school and school outcomes, as suggested by the meta-analyses of Allen et al. (2018). It is expected that interventions that target student engagement will make higher education, and the accompanying benefits, accessible to a greater number of at-risk-students.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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