

Beyond  
Achievement:  
Home, school  
and wellbeing  
findings from  
PISA 2018 for  
students in DEIS  
and non-DEIS  
schools

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# Preface

This report is a follow-up to the ERC's 2020 report *Reading, Mathematics and Science Achievement in DEIS schools: Evidence from PISA 2018* (Gilleece, Nelis, Fitzgerald, & Cosgrove, 2020) which detailed the reading, mathematics and science achievement of students in DEIS and non-DEIS schools. Achievement levels of students in DEIS schools were examined with reference to the targets set out in the national strategy to improve literacy and numeracy (DES, 2011). Findings show that in PISA 2018, the average reading score in DEIS schools was at the level of the OECD average. Although average reading achievement was lower in DEIS than in non-DEIS schools, the difference between the two was smaller in 2018 than in 2009. In PISA 2018 mathematics and science, students in DEIS schools scored below the OECD average. Average mathematics and science scores of students in DEIS schools were also significantly below those of students in non-DEIS schools.

This report builds on the earlier work by providing a detailed examination of differences in the home backgrounds of students in DEIS and non-DEIS schools. Also, we give consideration to some school contextual factors and examine broader student outcomes and dispositions, such as wellbeing, the value that students place on education, their motivation, and aspirations for future learning and employment. In focusing on the wider picture, we recognise that while achievement in reading, mathematics and science represent important outcomes of schooling, they offer a partial view of the purposes and outcomes of education.

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Finally, we appreciate the feedback provided by the Department of Education Social Inclusion Unit and Inspectorate on an earlier draft of this report.

## Disclaimer

Findings and opinions expressed in this document are those of the authors. While every effort has been made to ensure the accuracy of the analyses presented, we cannot guarantee the accuracy or completeness of the material. We make every effort to minimise disruption caused by technical errors. If errors are brought to our attention, we will try to correct them. Neither the authors nor the Educational Research Centre are liable for losses, damages, liability or expense arising from the work in this report.

# Acronyms and Abbreviations

ASTI	Association of Secondary Teachers, Ireland
CLM	Community Law & Mediation
DEIS	Delivering Equality of Opportunity in Schools
DoE	Department of Education (formerly Department of Education and Skills [DES])
EAL	English as an additional language
ESCS	Economic, Social and Cultural Status
ESRI	Economic and Social Research Institute
ERC	Educational Research Centre
GUI	Growing up in Ireland
HEA	Higher Education Authority
HP Index	Pobal HP Deprivation Index
HSCL	Home School Community Liaison
ISCED	International Standard Classification of Education
ISEI	International Socio-economic Index
NCCA	National Council for Curriculum and Assessment
NEPS	National Educational Psychological Service
OECD	Organisation for Economic Cooperation and Development
PISA	Programme for International Student Assessment
SCP	School Completion Programme
SE	Standard error
SEN	Special educational needs
SES	Socio-economic status
SVP	St. Vincent de Paul
STEM	Science, Technology, Engineering and Maths



# Executive Summary

The Programme for International Student Assessment (PISA) is a project of the Organisation for Economic Co-operation and Development (OECD). A key aim of PISA is the assessment of 15-year-olds' knowledge and skills in reading, mathematics and science. In addition, the programme gathers contextual data which can help explain differences in achievement and inform policy in various areas. PISA 2018 was conducted in a nationally representative sample of 157 Irish post-primary schools (41 DEIS schools; 116 non-DEIS schools).<sup>1</sup> Of all participating students in Ireland, 24% attended a DEIS school.<sup>2</sup>

The main purposes of the current report are: (1) to examine characteristics of students, their home environments and the involvement of their parents in education; (2) to consider school factors related to diversity of intake, resources, practices, and school climate; and (3) to present findings related to non-cognitive outcomes and dispositions (wellbeing, attitudes and aspirations). In this summary, findings of the report are presented by theme. Then, key strengths and challenges in the DEIS context are identified. Finally, implications for research, policy and practice are outlined.

## Student characteristics, home background and parental involvement in education

Student gender has been shown to influence the association between socio-economic status and educational outcomes. In this report, gender differences are examined for a number of indicators (value of schooling, student self-reported absenteeism, and expected future occupations). Several positive findings are noted regarding parental involvement in education although students in DEIS schools experience socio-economic disadvantage at home.

### Student home background

- Students in DEIS schools had access to fewer books at home than students in non-DEIS schools. Almost half of students in DEIS schools (46%) indicated that they had 25 books or fewer at home compared to a quarter in non-DEIS schools.
- Almost all students in DEIS and non-DEIS schools reported having their own smartphone (DEIS 92%; non-DEIS 94%). About three-quarters had their own laptop or tablet (DEIS 77%; non-DEIS 74%). A large majority had a computer they can use for schoolwork at home (DEIS 81%; non-DEIS 88%). Similar percentages had a desk for study at home (DEIS 83%; non-DEIS 93%) and most had their own room at home (DEIS 85%; non-DEIS 89%).

1 PISA was designed for monitoring the achievement of the population of 15-year-olds, rather than for the purposes of monitoring the achievement of sub-groups of the population such as students in DEIS schools. As there were comparatively fewer participating students in DEIS schools than in non-DEIS schools, the standard errors associated with estimates for students in DEIS schools are larger than those associated with estimates for students in non-DEIS schools. A larger sample of DEIS students would be required to obtain more precise estimates of achievement in DEIS schools. See Gilleece et al. (2020) for discussion.

2 In the academic year 2016/2017, 21.5% of 15-year-old students nationally attended a DEIS post-primary school. Analyses by the PISA national team in Ireland found no statistically significant difference in the percentage of assessed students in the PISA 2018 sample attending DEIS schools and the percentage of PISA-eligible students (i.e., 15-year-olds) in the population attending DEIS schools (see Table 1.6, McKeown et al., 2019).

- On overall indices of home possessions, home educational resources, cultural possessions and family wealth, students in DEIS schools had significantly lower mean scores than students in non-DEIS schools. The difference on the family wealth scale amounted to one-sixth of a standard deviation; differences on the other scales were about one-third of a standard deviation.
- Over half of students in non-DEIS schools, compared to less than one-third in DEIS schools, had at least one parent with a university degree (or higher level qualification such as a Masters or PhD). It was somewhat more common for students in DEIS schools to have parents whose highest level of formal education was the Leaving Certificate (DEIS 37%; non-DEIS 24%) or Junior Certificate (DEIS 8%; non-DEIS 3%).
- The mean score for parental occupational status was significantly lower in DEIS schools compared to non-DEIS schools. The difference corresponded to about half a national standard deviation.
- A large majority of students were categorised as native (i.e., had at least one parent born in Ireland) in both DEIS (83%) and non-DEIS (82%) schools. Just under one-in-ten students in both DEIS (9%) and non-DEIS (9%) schools reported speaking a language other than English or Irish at home as their main language.
- While two-fifths of students in DEIS schools had ESCS scores in the lowest quartile nationally, only one-fifth of students in non-DEIS schools had scores in this range. Conversely, just one-in-eight students in DEIS schools, compared to almost one-in-three in non-DEIS schools, had ESCS scores in the top quartile nationally.

### Parental involvement in education

- According to parents' reports, most families had a choice of post-primary schools in the locality. Parents of about four-fifths of students in DEIS and non-DEIS schools indicated that they had a choice of at least one other post-primary school in their locality.
- Very high percentages of students (90% and above) in both DEIS and non-DEIS schools had parents who indicated that 'important' or 'very important' criteria in choosing a school were: a safe school environment; a good reputation; students doing well academically; and, an active and pleasant school climate. Findings show that parents in DEIS schools placed a higher degree of importance on financial considerations when choosing a school. Over half of students in DEIS schools, compared to two-fifths in non-DEIS schools, had parents who reported that low costs were 'important' or 'very important' factors in selecting a school. Parents of 43% of students in DEIS schools and 28% in non-DEIS schools, selected as an 'important' or 'very important' factor the availability of financial aid (such as a school loan, scholarship or grant). While no detail is available on how financial aid is understood in the Irish context, parents may have been influenced by the availability of book rental schemes, school meals, or homework clubs.
- In line with DEIS school planning requirements to promote partnership with parents, students in DEIS schools had a significantly higher mean score on the index of school policies for parental involvement. This scale was based on parents' responses to items regarding the availability in the school of parent education or family support programmes; the school's provision of information on helping with homework and school activities; the existence of an inviting atmosphere in the school for parents; effective communication by the school; and parental involvement in decision-making. The mean score on this index in DEIS schools was about one-third of a standard deviation above the corresponding OECD average.
- In both DEIS and non-DEIS schools, there was limited participation by parents in local school governance structures such as the parents' council. Fewer than one-in-ten

students in Ireland, compared to one-in-six on average internationally, had parents who participated in activities of this nature.

- Attendance at parent-teacher meetings was reported by parents in Ireland to be high, with parents of 86% of students in DEIS schools and 88% in non-DEIS schools indicating that they had attended a scheduled parent-teacher meeting.
- Reasons most commonly selected by parents in Ireland as barriers to greater school involvement were not being able to get time off work; inconvenient meeting times; parents being unsure how to participate; and their child not wanting them to participate. Percentages of parents selecting each of these were very similar in DEIS and non-DEIS schools and broadly similar to the corresponding OECD averages, although inconvenient meeting times were perceived to be less of a barrier in Ireland than on average across the OECD.
- Three-quarters of students in non-DEIS schools, compared to just over half of students in DEIS schools, had parents who expect them to complete a university degree.
- Higher percentages of students in DEIS schools (29%) compared to non-DEIS schools (18%) were expected (by their parents) to complete a third-level qualification that is not at degree level (e.g., a certificate or diploma). Also, it was more common for parents of students in DEIS schools (8%) compared to non-DEIS schools (4%) to expect their child's highest level of qualification to be an apprenticeship or the Leaving Certificate (DEIS 5%; non-DEIS 2%).
- Compared to students in non-DEIS schools, students in DEIS schools had a statistically significantly lower score on the index of parental support for learning at home. Although the difference between students in DEIS and non-DEIS schools was statistically significant, mean scores in both contexts were quite close to the OECD average.
- There was no significant difference between DEIS and non-DEIS schools on the index of parents' emotional support, with positive values on the index in both contexts demonstrating high levels of emotional support by parents in Ireland.

## School diversity, practices, resources and climate

- According to principal reports, almost a quarter of students in DEIS schools (one-seventh in non-DEIS schools) had special educational needs (SEN). (The PISA items do not address the complexity of SEN or the supports offered to students with these needs).
- Three-fifths of students in DEIS schools (one-fifth in non-DEIS schools) were reported by principals to come from socio-economically disadvantaged homes.
- Similar percentages of students in DEIS (15%) and non-DEIS schools (11%) were reported by principals to have first languages other than English or Irish.
- The most commonly available school support for EAL students was reported by principals in Ireland and internationally to be additional periods of instruction provided in addition to regular classes. Principals of about two-thirds of students in DEIS and non-DEIS schools (and three-fifths on average across the OECD) indicated that this type of support was provided in their school. Principals of about one-third of students in DEIS and non-DEIS schools (and one-sixth on average across the OECD) indicated that class size was reduced to cater for the needs of EAL students.
- Based on principal reports, the average size of Third year English classes was significantly smaller in DEIS schools than in non-DEIS schools. While DEIS schools had an average of just over 22 students per English class, non-DEIS schools had almost 25 students per class. The average enrolment size of DEIS schools (492 students) was also significantly lower than that of non-DEIS schools (676 students) and the student-teacher ratio in DEIS

schools (10.6) was significantly lower than in non-DEIS schools (13.5).

- Ability grouping into *different* classes for some subjects (often called ‘setting’) was much more common in Ireland than on average across the OECD, with over 90% of students experiencing this in DEIS and non-DEIS schools (compared to 35% on average across the OECD). ‘Streaming’ was not used in Ireland (i.e., students grouped by ability into different classes for all subjects). About half of students in DEIS (54%), non-DEIS (45%) and on average across the OECD (49%) were in schools where principals reported that students were grouped by ability *within* classes for some subjects.
- There were no significant differences in the computer-student ratios between DEIS (0.81) and non-DEIS schools (0.71).
- Study rooms where students could do homework were reportedly available in the vast majority of DEIS and non-DEIS schools; almost 90% of students in both contexts were reported to have access to these. Students in DEIS schools (74%) were more likely than students non-DEIS schools (51%) to have access to staff for study support or help with homework.
- There was no significant difference between DEIS and non-DEIS schools on overall indices measuring shortage of educational staff or shortage of educational materials. However, principals of 55% of students in DEIS schools, compared to 41% in non-DEIS schools and 27% on average across the OECD, indicated that a lack of teaching staff hindered (‘to some extent’ or ‘a lot’) the school’s capacity to provide teaching. Having inadequately qualified staff was considered a hindrance by principals of 24% of students in DEIS schools, 7% in non-DEIS schools and 15% on average across the OECD. In reporting a lack of teaching staff or a lack of adequately qualified<sup>3</sup> staff, principals may have been influenced by the perceived adequacy of teacher-student ratios in the disadvantaged context, availability of substitute teachers, and availability of teachers with adequate experience of working in a DEIS school.
- Inadequacies with the physical infrastructure (e.g., building, grounds, heating/cooling, lighting and acoustic systems) were reported by principals of about half of DEIS students in PISA 2018. In non-DEIS schools, about two-fifths of principals identified this issue as a hindrance to teaching. A lack of educational material (e.g., textbooks, IT equipment, library or laboratory materials) was considered to hinder teaching ‘to some extent’ or ‘a lot’ by principals of two-fifths of students in DEIS schools, over one-quarter of students in non-DEIS schools and over one-quarter on average across the OECD.
- Principals’ perceptions of teacher-related behaviours hindering learning did not differ significantly between DEIS and non-DEIS schools overall; both were marginally above the OECD mean. Examining the individual items that comprised the overall scale, a higher percentage of students in DEIS schools (30%) than non-DEIS schools (16%) had principals who indicated that teacher absenteeism hindered student learning.
- Compared to principals in non-DEIS schools and on average across the OECD, principals in DEIS schools were more likely to indicate that aspects of student behaviour hindered learning. Over three-quarters of students in DEIS schools (compared to half in non-DEIS schools and over one-third on average across the OECD) had principals who reported that unauthorised student absence hindered learning. Students not being attentive (DEIS 67%; non-DEIS 34%; OECD 59%) was deemed a widespread hindrance in DEIS schools. Principals of about one-fifth of students in DEIS schools identified student use of alcohol and drugs, students lacking respect for teachers, and bullying as hindrances to learning.

3

Note, a separate analysis of the numbers of teachers in DEIS and non-DEIS schools with qualifications at various levels (Honour’s Bachelor’s degree, Masters, or Doctoral degree) shows no significant differences between DEIS and non-DEIS schools in the numbers of teachers with each qualification type.

- These problems were much less common in non-DEIS schools where principals of just one-in-twenty students identified these as hindrances to learning.
- There was little difference between DEIS and non-DEIS schools in the extent to which students reported skipping classes or whole days and percentages were broadly comparable with the corresponding OECD averages. About one-in-four students indicated that they had skipped class in DEIS (26%) and non-DEIS schools (26%) in the past two weeks (OECD average 27%). Slightly higher percentages in Ireland (DEIS 30%; non-DEIS 28%) had skipped a whole day (OECD average 21%). About one-third of students in Ireland had arrived late compared to almost half across the OECD.
- Students in DEIS schools were more likely than those in non-DEIS schools to have a principal who indicated that the school had a student attendance policy in place, made use of rewards to motivate students to attend and to arrive on time, and to have a reintegration process for students after prolonged absences.
- According to principals' reports, the provision of extracurricular activities was very similar between DEIS and non-DEIS schools. All students in both DEIS and non-DEIS schools were reported to have access to extracurricular sporting activities and three-fifths or more were reported to have access to lectures or seminars, music, mathematics competitions, art, or debating.
- Students' sense of school belonging did not differ significantly between students in DEIS and non-DEIS schools. However, students in both DEIS and non-DEIS schools felt a lower sense of belonging to their school than students on average across the OECD.

## Non-cognitive outcomes and dispositions

### Student wellbeing and attitudes

- There was no statistically significant difference between the mean scores of students in DEIS and non-DEIS schools on overall meaning in life. There was little difference between students in DEIS and non-DEIS schools in the percentages of students reporting 'always' feeling certain emotions (for example, 45% of students in both DEIS and non-DEIS schools reported 'always' feeling happy while just 5% in both contexts reported 'always' feeling sad). There was no significant difference between the mean score for overall positive feelings in the two contexts.
- There was no statistically significant difference between students attending DEIS and non-DEIS schools in mean self-efficacy, i.e., in students' self-beliefs about their resilience.
- Consistent with international trends of higher scores among more advantaged students, students in non-DEIS schools (mean score = 0.24) had a significantly higher mean score on a scale measuring fear of failure than students in DEIS schools (mean score = 0.09). In both DEIS and non-DEIS schools, female students had a significantly higher mean score on this index than their male counterparts.
- In terms of bullying, about one-in-six students in Ireland reported that other students had made fun of them a few times a month (or more frequently) in the previous 12 months. Other types of bullying were less prevalent with lower percentages of students indicating that they had been left out of things on purpose (DEIS 8%; non-DEIS 8%); had rumours spread about them (DEIS 8%; non-DEIS 7%); or threatened (DEIS 6%; non-DEIS 5%). There were no significant difference between students in DEIS and non-DEIS schools in mean scores on the overall index of bullying.
- In looking at reasons for studying, the most commonly-selected reasons provided by students in Ireland were because they had a homework assignment (DEIS 70%; non-DEIS 76%); they had a test coming up soon (DEIS 70%; non-DEIS 73%); and parents

think studying is important (DEIS 70%; non-DEIS 71%). About two-fifths of students in DEIS and non-DEIS schools indicated that they did not study because nobody told them they needed to. One-third of students in DEIS schools and one-quarter in non-DEIS schools indicated that they *never* study; the percentage in DEIS schools was significantly higher than in non-DEIS schools. Almost a third of students in DEIS schools (31%) and a quarter in non-DEIS schools (25%) indicated that none of their classmates study.

- Students' perceptions of the value of schooling was significantly lower in DEIS schools than in non-DEIS schools; the difference amounted to about one-tenth of a standard deviation. Although lower than that of non-DEIS schools, the mean score in DEIS schools was similar to the OECD average. In both DEIS and non-DEIS schools, male students placed a significantly lower value on schooling than females.
- Principals of virtually all students in both DEIS and non-DEIS schools indicated that there were school wellbeing policies in place, including having a whole-school plan for student wellbeing; having a student support team in place; providing mental and emotional health education; having a systematic approach to screening for social, emotional and behavioural difficulties; monitoring and recording of bullying; and liaising with and referring to external agencies where appropriate.

### Students' aspirations for the future

- Based on principal reports, career guidance was available in all schools in Ireland that took part in PISA 2018, with a designated counsellor in place. Students in DEIS and non-DEIS schools reported being actively engaged in career development activities. Three-in-four students reported that they searched the Internet for information about careers and over half of students in both school settings reported that they searched the Internet for information about third-level college or university courses.
- Compared to students in non-DEIS schools, students in DEIS schools reported a higher level of engagement in five activities designed to prepare for future career or work: work experience placements; job shadowing/work place visits; speaking to a guidance counsellor *inside* their school; speaking to a guidance counsellor *outside* of their school; and going on an organised tour to a third-level college or university.
- On an index measuring skills for finding out about future labour market opportunities, students in DEIS schools had a significantly higher mean score for skills acquired *inside* school compared to students in non-DEIS schools. In contrast, there were no significant differences between students in DEIS and non-DEIS schools in their mean scores on skills acquired *outside* school.
- Compared to students in non-DEIS schools, somewhat higher percentages of students in DEIS schools reported that they expect their highest level of educational qualification to be Junior Certificate (DEIS 5%; non-DEIS 2%), Leaving Certificate Applied (DEIS 6%; non-DEIS 2%), Leaving Certificate (General or Vocational) (DEIS 11%; non-DEIS 5%), or Apprenticeship (DEIS 11%; non-DEIS 7%).
- A substantially higher percentage of students in non-DEIS schools (62%) than DEIS schools (45%) indicated that they expect to attain a qualification at degree-level, and consistent with this, a higher percentage of parents in non-DEIS schools (74%) expected their child to achieve a degree-level qualification (DEIS 55%).
- Students reported their expectations of the level of subject completion at Leaving Certificate. Students in non-DEIS schools were more likely to indicate that they expect to take higher level for Maths (59%; DEIS 39%); Irish (55%; DEIS 40%); and English (87%; DEIS 67%). There was a similar pattern for Biology/agricultural science and other science subjects.

- Students were asked to indicate what they thought they will be doing in five years' time. While sizeable percentages of students reported that they expect to be studying for a university degree, the percentage associated with students in DEIS schools (37%) was significantly lower than for students in non-DEIS schools (50%). Students in DEIS schools were somewhat more likely than their non-DEIS counterparts to indicate that they will be working because the occupation they want does not require a degree or that they will be working because they need to be financially independent.
- Students indicated that important factors influencing their decision-making about future careers were: the school subjects they were good at, their school grades, employment opportunities, expected salary of the future occupation, and their own interests. At least 70% of students in DEIS and non-DEIS schools rated these as 'important' or 'very important'.
- When asked about their aspirations for the job they would be doing aged 30 years old, about half of students expected to have a professional occupation, such as health or teaching professional (DEIS 45%; non-DEIS 56%). About one-eighth of students in both DEIS and non-DEIS schools indicated that they aspire to work as a teaching professional.
- Students in DEIS schools were more likely than students in non-DEIS schools to choose manual, skilled and sporting professions (e.g., mechanic, athlete, or beautician), which traditionally do not require a university degree.
- About one-in-five students indicated that they did not know what their anticipated career would be in the future (25% DEIS; 21% non-DEIS).
- Some gender stereotyping was evident in the students' career expectations. For example, female students were more likely than males to expect healthcare-related careers and females in DEIS schools only included hairdressing in their top ten expected occupations. Male students more frequently cited manual jobs (e.g., mechanic or carpenter), sports players, and science or engineering professions. While mechanic appeared in the top ten list for males in DEIS schools, it did not feature in the top ten expected occupations for males in non-DEIS schools.

## Key strengths in DEIS contexts

- Compared to students in non-DEIS schools, students in DEIS schools had a significantly higher mean score on the index of school policies for parental involvement. This means that parents in DEIS schools held more positive perceptions of home-school communication; parental involvement opportunities; and the provision of parent education and supports. This is a very positive finding, given that improved parental engagement is a key target of DEIS (DES, 2017a).
- Although students in DEIS schools had a significantly lower mean score than their counterparts in non-DEIS schools on the index of current parental support for learning at home, the mean scores in both DEIS and non-DEIS schools were quite close to the corresponding OECD average. Also, there was no significant difference between students in DEIS and non-DEIS schools on the index for parents' emotional support. These findings suggest that despite differences in access to material resources, parents of students in DEIS schools provide similar levels of emotional support as parents of students in non-DEIS schools.
- Students in both DEIS and non-DEIS schools are reported to have access to a wide range of extra-curricular activities with a large majority of students in PISA 2018 reported by principals to have access to sports; lectures or seminars; band, orchestra or choir; and/or maths competitions. Given the emphasis placed on community linkages in the

DEIS plan (Department of Education and Skills, 2017a), it is positive that over half of students in DEIS schools were reported to have opportunities to engage in volunteering or service activities and half of DEIS students had principals who reported collaborations with local libraries.

- On most of the wellbeing indicators examined, there were no significant differences between the mean scores of students in DEIS and non-DEIS schools. Specifically, on measures of overall meaning in life, positive feelings, and self-beliefs about resilience, there were no statistically significant differences in the mean scores on students in DEIS and non-DEIS schools. Furthermore, no significant differences were noted in bullying between students in DEIS and non-DEIS schools.

## Key challenges in DEIS contexts

- Less than one-third of students in DEIS schools have a parent with a university-level qualification and may therefore lack role models for university attendance. Less than half of students in DEIS schools expected to complete a university-level qualification. Addressing the perception that university is not a viable or realistic option remains a key challenge for DEIS schools. This policy priority becomes even more apparent when one considers that the present report found similarities in the *career* aspirations of DEIS and non-DEIS students, yet lower *educational* aspirations in DEIS students compared with their non-DEIS counterparts. It would seem important to gain a better understanding of the relative weight given to financial factors as opposed to perceptual ones as drivers to this disparity.
- Despite very high levels of technology ownership in students' homes, 13% of students in DEIS schools indicated that they did not have a quiet place to study. A similar percentage (17%) did not have a desk for study at home while nearly one-fifth (19%) reported that they did not have a computer to use for schoolwork at home. It is likely to be very challenging for these students to complete homework and study at home.
- The percentage of students reported by principals to have SEN in DEIS schools (23%) was significantly higher than in non-DEIS schools (14%), with about one-quarter of students in DEIS schools reported to have SEN. It is likely a substantial challenge for teachers in DEIS schools to adequately cater for the diverse needs of the student population. In the current Special Education Teacher (SET) allocation model (Department of Education and Skills, 2019), DEIS schools receive a slightly higher weighting than non-DEIS schools. With further development of the DEIS identification and SET models, there may be merit in considering further linkages between the two in the future.
- Over half of students in DEIS schools (55%) had principals who indicated that a lack of teaching staff impacted on the school's capacity to provide teaching while principals of one-quarter of students in DEIS schools (24%) identified as a hindrance the issue of inadequate or poorly qualified teaching staff. Principals of nearly one-third of students in DEIS schools (30%) indicated that teacher absenteeism represented a problem. The corresponding values in non-DEIS schools were 41%, 7% and 16% respectively. These findings suggest that teacher retention and wellbeing may represent particular challenges in DEIS schools. This merits a considered policy response, since teacher retention and wellbeing may have a significant impact on the quality of teaching and learning as well as on the teachers themselves.
- Principals indicated that several student behaviours had a negative impact on teaching and learning in the school. It is concerning that about three-quarters of students in DEIS schools had principals who identified unauthorised student absenteeism as a hindrance

to learning. Two-thirds of students in DEIS schools had principals who indicated that students not being attentive was a barrier to learning. Principals of over one-fifth of students in DEIS schools identified student use of alcohol or illegal drugs as a hindrance to learning. Given the central importance of second-level education in providing future opportunities for study and work, it is undoubtedly an important challenge for DEIS schools if students are absent or present but not fully able to engage in their learning. This finding underlines the importance of the wellbeing framework (DES, 2018a), whose importance has increased after the onset of the COVID-19 pandemic.

- Students in DEIS schools had a significantly lower mean score on an index measuring students' attitudes towards the value of schooling, thus students in DEIS schools were less likely to agree with statements such as 'Trying hard at school is important'. In DEIS and non-DEIS schools, boys had a significantly lower mean score than girls, emphasising the ongoing need to support boys in DEIS schools to recognise the importance of education and the value of qualifications for future life opportunities.

## Implications for research, policy and practice

- In PISA 2018, principals of almost 90% of students in DEIS and non-DEIS schools indicated that their school provides a room where students can do their homework. Current findings show that one-in-eight students in DEIS schools do not have a quiet place to study at home and one-in-five does not have a computer for study at home, underlining the importance of ongoing school-based support for study outside of school hours.
- Lower rates of parental participation in university combined with lower expectations regarding progression to university amongst DEIS students themselves underscore the continued importance of university-access programmes, school-based career guidance, and opportunities for student work-placements with exposure to graduate roles. There is a continued need to develop links between post-primary schools and university access offices to provide equal opportunities for all students to realise their educational and career aspirations. While career guidance counsellors play an important role, it is important for all teachers to act as role models and to create a school culture of high expectations. In creating a culture of high expectations, there is a need to support boys in particular to recognise the importance of education and the value of qualifications for future life opportunities.
- Findings regarding the prevalence of special educational needs in DEIS post-primary schools lend further support to the continued inclusion of an indicator of socio-economic disadvantage in the Resource Allocation model for Special Education Teachers (DES, 2019). Furthermore, these findings illustrate the complex interrelationships between socio-economic disadvantage, educational outcomes, health outcomes, and school choice mechanisms and underscore the need for a cohesive policy response to social inclusion.
- Two-fifths of students in DEIS schools were in the lowest quartile on ESCS. One-fifth of students in non-DEIS schools have ESCS scores in this range. The rationale for providing supports under DEIS at the school level is based on the principle of the 'multiplier effect', according to which students attending a school with a concentration of students from disadvantaged backgrounds have poorer academic outcomes, even taking into account individual social background. There may be merit in future research using recent datasets with data for post-primary students (e.g., PISA 2018 and TIMSS 2019 [Trends in International Mathematics and Science Study]) to examine the extent of the social

context effect in Irish post-primary schools at the current time.

- Findings from PISA 2018 show that principals in DEIS schools consider a lack of adequately qualified staff to represent a barrier to effective teaching and learning. Given that PISA 2018 findings show no differences between DEIS and non-DEIS schools in the numbers of teachers with qualifications at various levels, further consideration should be given to principals' perceptions of inadequacies and how these may relate to teacher experience in the disadvantaged context.
- A large minority of students reported frequent disruption in English classes (PISA 2018 main domain) associated with students being inattentive. Although percentages in DEIS schools reporting various forms of disruption were comparable to the corresponding OECD averages, they were significantly above those in non-DEIS schools suggesting that there is an ongoing need for support for teachers in developing classroom management skills. At primary level, there is some evidence in the Irish context that teacher participation in evidence-based classroom management training is associated with reductions in self-reported levels of teacher burnout and improvements in teacher wellbeing and self-efficacy (Kennedy, Flynn, O'Brien, & Greene, 2021). Therefore, support for classroom management may represent a particularly useful professional development focus for teachers in DEIS post-primary schools.
- Given findings related to classroom management and principals' perceptions of teacher absenteeism, support for teacher wellbeing (e.g., as provided by the PDST [www.pdst.ie/teacher\\_wellbeing](http://www.pdst.ie/teacher_wellbeing)) should be continued and expanded with particular attention given to the wellbeing of teachers in DEIS schools.
- Student absence from school remains a key factor hindering learning according to principals. Therefore, DEIS Monitoring and Evaluation should continue to monitor attendance rates in DEIS schools. Retention and attendance should remain as important strands of a school's DEIS planning process, with due recognition given to the complex underpinnings of chronic absenteeism.
- There is an ongoing need for schools to focus on subject take-up at higher level in DEIS schools and to monitor take-up of higher-level subjects in DEIS and non-DEIS schools. This may form a useful component of the Department of Education's forthcoming DEIS Monitoring and Evaluation framework.
- Although there were no significant differences between DEIS and non-DEIS schools in students' sense of belonging to school, mean scores in Ireland on this index were lower than the corresponding OECD average. This underscores the continued need for schools to focus on student wellbeing and the inclusion of all learners in the school community. Future research may usefully examine characteristics of students with higher and lower scores for sense of belonging at school to consider if certain groups of learners feel a lower sense of belonging than others.

# Chapter 1: Introduction

Educational disadvantage is a challenging social reality at all levels of the education system (Banerjee, 2016). Across many countries, levels of academic achievement have been linked to socio-economic status and immigrant background, with disparities in educational achievement between these groups increasing from childhood to early adulthood (OECD, 2018a; OECD, 2015). In Ireland, numerous studies have shown lower levels of achievement levels amongst students from disadvantaged backgrounds at primary and post-primary levels (Gilleece, Nelis, Fitzgerald, & Cosgrove, 2020; McKeown, Denner, McAteer, & Shiel, 2019; Shiel, Kavanagh, & Millar, 2014; Weir & Kavanagh, 2018). On average across OECD countries, there was an 89 point gap in PISA 2018 reading achievement between students from the highest and lowest socio-economic groups (OECD, 2019a). In Ireland, the gap between the two was lower than the OECD average but still substantial, at 75 points (McKeown et al., 2019). There was a moderate correlation ( $r = 0.33$ ) between socio-economic status and PISA 2018 reading achievement in Ireland (McKeown et al., 2019).

There is evidence that the performance gap between disadvantaged and advantaged students has narrowed over time across OECD countries, as well as within individual countries, suggesting that inequality is not static (OECD, 2018a). These findings support the contention that equitable policies and practices can reduce the effect of socio-economic background on educational outcomes (OECD, 2018a). In Ireland, positive findings have been reported regarding improvements in equity in education. At post-primary level, these include: improvements in student retention rates to both Junior and Leaving Certificate for students in DEIS schools (McAvinue & Weir, 2015); improved attendance rates (Millar, 2017); and, a narrowing over time of the gap in Junior Certificate achievement between DEIS and non-DEIS schools (Weir & Kavanagh, 2018; Weir, McAvinue, Moran, & O'Flaherty, 2014).

The routes to achieving equity vary across countries. In Ireland, current educational policy aimed at improving student outcomes and reducing inequalities associated with socio-economic disadvantage is delivered through the Delivering Equality of Opportunity in Schools (DEIS) programme (DES, 2005; DES, 2017a). DEIS aims to address issues of educational disadvantage in a multifaceted and targeted manner, through the provision of extra supports provided to schools serving the highest concentrations of students from disadvantaged backgrounds. Supports include additional teaching resources, financial payments, access to the Home-School Community Liaison and School Completion programmes, and additional psychological supports; full details are provided in DES (2017a). In addition to targets to improve literacy and numeracy, the DEIS Plan 2017 (DES, 2017a) targets improvements in: student retention rates, student wellbeing, student progression to further and higher education, teacher education, parental engagement, and community links.

The DEIS Plan 2017 (DES, 2017a) recognises that narrowing the gap in educational outcomes between students attending DEIS and non-DEIS schools is important, but also recognises the broader purposes of education. For example, student wellbeing, fostering a positive school climate, and developing community involvement are also emphasised. This is in line with the international trend of a growing recognition that non-cognitive outcomes and the fostering of social and emotional competencies are important goals of education (OECD,

2019b; Kautz, Heckman, Diris, & Borghans, 2014). These non-cognitive competencies include student attitudes, motivation, and aspirations. Student wellbeing is a more recent focus of research in international studies of education such as PISA, and nationally, this focus is apparent in Ireland's Wellbeing Policy Statement and Framework for Practice, 2019-2023 (Government of Ireland, 2018).

Contextual factors, including families, schools, areas and policies, have been shown to represent important influences on educational attainment (Banerjee, 2016). Also, equitable educational policy has been shown to be effective in reducing the achievement gap associated with socio-economic status. The Programme for International Student Assessment (PISA) provides a wealth of contextual data on students' homes and schools. It also provides outcome data related to student attitudes, dispositions and wellbeing. This report examines some characteristics of student home background; school factors related to diversity of intake, resources and climate; and non-cognitive outcomes related to wellbeing, attitudes and aspirations. The themes examined in this report were selected given their relevance to the DEIS plan 2017 (DES, 2017a). An advantage of PISA is that it offers the opportunity to examine student wellbeing outcomes in an international comparative context as well as permitting a detailed look at differences in wellbeing outcomes between DEIS and non-DEIS schools. Also, PISA permits a detailed examination of the differences in home backgrounds of students in DEIS and non-DEIS schools. Furthering our understanding of where differences exist is informative when considering how policy responses may be best targeted.

## **Structure of the report**

The remainder of this report is structured as follows: Chapter 2 provides a brief overview of the literature pertaining to the main themes of the report. These are: (1) student gender, home environment, and parental involvement; (2) school factors related to diversity of intake, resources and school climate; and (3) student outcomes and dispositions related to wellbeing, attitudes and aspirations. Chapter 3 provides details of the PISA programme and the data used for this report. Chapter 4 presents findings regarding the home environments of students in DEIS and non-DEIS schools. Chapter 5 describes findings related to parental involvement. Chapter 6 outlines findings regarding school characteristics, practices and climate. Chapter 7 summarises findings regarding students' wellbeing and attitudes. Chapter 8 describes students' aspirations for the future. Chapter 8 draws linkages between the main findings of the current report and other research and policy, highlighting the key strengths and challenges in DEIS schools and proposing implications for Irish policy and practice relating to educational disadvantage.

# Chapter 2: Relevant literature

This chapter describes some previous national and international research that examines the importance of selected student and school characteristics. Findings are situated within the Irish policy context for educational disadvantage and student wellbeing. There are three main sections in this chapter: (1) characteristics of students, their home environments, and the involvement of parents; (2) school factors related to diversity of intake, practices, resources, and school climate; and (3) student outcomes and dispositions related to wellbeing, attitudes and aspirations.

Topics explored in this chapter were identified on the basis of their representation in PISA and their relevance to the DEIS Plan 2017 (DES, 2017a). This chapter does not represent an exhaustive review of the school effectiveness literature nor a detailed explanation of the associations between socio-economic status and educational outcomes. Readers interested in more in-depth literature reviews are directed to, for example, (Broer, Bai, & Fonseca, 2019; Clerkin, Perkins, & Chubb, 2020; Gilleece, 2015; Kyriakides, Georgiou, Creemers, Panayiotou, & Reynolds, 2018; OECD, 2018a; OECD, 2019d; Scheerens, 2001). One notable omission from the current chapter (and report) is the topic of school leadership. In contrast to earlier PISA cycles, leadership received limited attention in PISA 2018. Earlier cycles of the study had given detailed consideration to the topic, including principals' use of instructional leadership practices (OECD, 2016a). School leadership is a key education priority in Ireland (King & Nihill, 2019) and elsewhere (Pont, Nusche, & Moorman, 2008). It has been shown to have an impact on many aspects of school life, including student outcomes (Day, Gu, & Sammons, 2016; Wu & Shen, 2019), school organisation and culture (Bush, 2021; Hallinger & Huber, 2012), and acts as an influence on teacher professional learning (Shengnan & Hallinger, 2021; Tschannen-Moran, 2009). Despite the recognised importance of school leadership, it is not further explored in this report as detailed data were not gathered in PISA 2018.

## Student gender, home environment and parental involvement in education

This section examines student gender, home background and parental involvement and considers how these factors are associated with educational outcomes.

### Student gender

Gender differences have been observed in the association between socio-economic status and educational outcomes. In Ireland and elsewhere, young males from working class backgrounds have been shown to be a group at particular risk of academic underperformance and school drop-out (Byrne & Smyth, 2010). In an examination of Junior Certificate achievement, boys have been shown to experience a greater impact of the 'social context effect' than girls (Sofroniou, Archer, & Weir, 2004). Boys have also been shown to have a higher likelihood than girls of getting caught up in a negative cycle of misbehaving and facing reprimands from teachers (Byrne & Smyth, 2010; Stamou, Edwards, Daniels, & Ferguson, 2014). Research from the USA and UK shows that boys are more likely to be excluded from school than girls (de Brey, et al., 2019; Stamou, Edwards, Daniels, &

Ferguson, 2014). Also, pupils with SEN, those who come from certain ethnic minorities and those from low socio-economic backgrounds are more at risk of school exclusions and when these factors intersect, a pupil's chance of being excluded increases (de Brey et al., 2019; Stamou et al., 2014).

Some attention has been given in the literature to possible reasons for the higher levels of disengagement on the part of boys. There is some evidence that young males from working class backgrounds tend to hold the belief that schoolwork is 'anti-masculine and not for real boys' (Stamou, Edwards, Daniels, & Ferguson, 2014, p. 10). In a review of gender and education, it has been suggested that 'a culture of laddishness' represents the most prominent explanation for the underachievement of boys in the British context (Smyth, 2007). According to this view, a masculine identity prioritises non-school activities such as sport, and also places a high value on 'effortless achievement' (Jackson, 2002). Findings from Irish research indicate that some groups of boys expect to secure jobs (e.g., in construction) through personal networks therefore placing less value on formal educational qualifications (Byrne & Smyth, 2010). In spite of the challenges faced by some low achieving boys from lower socio-economic groups, the authors caution that the negative consequences of early school leaving can be greater for females than males because of the fewer opportunities available in the labour market for females without formal qualifications (Byrne & Smyth, 2010).

It has been noted that Irish data on the use of reduced timetabling currently do not allow analysis by student gender (CLM, 2019). Furthermore, Irish reporting on attendance and absence currently does not provide a gender breakdown of students with 20 or more days of school absence (Denner & Cosgrove, 2020). Despite concerns that boys are at particular risk of suspension and expulsion (Hyland, 2018), it is currently difficult to quantify the extent of this risk given the available data.

Some analyses of achievement in DEIS schools have examined gender differences and found that the gender gap in achievement was of a similar magnitude in DEIS and non-DEIS schools (Gilleece, Nelis, Fitzgerald, & Cosgrove, 2020; Weir & Kavanagh, 2018), yet as previously noted, other findings have pointed to a greater impact of the 'social context effect' amongst boys (Sofroniou, Archer, & Weir, 2004). It is clear that social class interacts with gender in important ways that can influence educational outcomes and neither boys nor girls are homogenous groups. In considering how to address the underachievement of specific groups of boys, it is worth recognising that effective interventions need to be accompanied by general school improvement measures of the type that benefit both boys and girls (Smyth, 2007).

### Home environment

The home environment is an important influence on educational outcomes for a variety of reasons. Family income can affect the availability of educational resources in the home such as books, educational games, and learning materials (OECD, 2018a). In addition to providing material resources, the home can provide an appropriate environment in which to study (e.g., a quiet space and one's own desk). It also provides less tangible resources (such as parental education) which cultivate a supportive learning environment (Clerkin, Perkins, & Chubb, 2020). Research has shown that parents with higher socio-economic status are likely to have higher educational attainment and are also likely to provide a more stimulating home environment with more supports for learning (Thomson, 2018).

While associations between achievement and home background have been widely examined (Gilleece, Cosgrove, & Sofroniou, 2010; Weir & Kavanagh, 2018), there is also evidence that levels of absenteeism vary significantly by family characteristics. The highest levels of absenteeism amongst 13-year olds were found amongst those from households where the parent(s) or guardian(s) had never been employed (Williams, et al., 2018). Levels of education of primary carers and household income were also associated with absenteeism, with the highest absenteeism levels found amongst those whose primary caregiver had a lower secondary education (or less) and those in the lowest income group (Williams et al., 2018). (The issue of absenteeism is discussed further in the context of wellbeing later in this chapter).

At post-primary level, possession of a medical card has been used as a proxy indicator for socio-economic status and the percentage of students with a medical card was one of the criteria used in the original identification process for DEIS at post-primary level (Weir, 2006). Weir and Kavanagh (2018) show that the average percentage of students with medical cards in DEIS post-primary schools (62% in 2017) is considerably higher than the average in non-DEIS schools (34% in 2017). However, they note that medical card possession provides a limited picture of the socioeconomic profile of students in post-primary schools and argue that additional variables would be required to comprehensively account for achievement variation at the individual level (Weir & Kavanagh, 2018; see also Gilleece, 2014).

### Parental involvement in education

In the context of parental involvement in education, numerous definitions have been proposed. For example, it has been defined as “parents’ interactions with schools and with their children to promote academic success” (Hill, et al., 2004, p. 1491). The term school, family and community partnerships is preferred by Joyce Epstein, a key scholar in the field, who argues that it better recognises how parents, educators and others in the community share responsibility for students’ learning and development (Epstein & Sheldon, 2006). In a recent review, (O’Toole, Kiely, McGillicuddy, O’Brien, & O’Keeffe, 2019) note that the terms parental involvement, engagement and partnership remain contested. Also, they underscore the importance of avoiding a deficit model regarding particular groups of parents, i.e., viewing disengagement as disinterest.

Parents’ educational involvement takes many forms including parenting, supporting learning at home, communicating, decision-making, volunteering, and collaborating with the community. The key concept of transacting and transforming knowledge and material resources into cultural capital is therefore important here. Cultural capital has been operationalised in an educational context as the structures and activities of the home that are associated with it (Kellaghan, 2001). These are:

- Modelling (in the use of complex language and in planning and organisation);
- Stimulation to explore and discuss ideas and events;
- Providing motivation for, guidance in, and reinforcement of school-related activities and independence in decision-making;
- Holding and communicating high academic aspirations and expectations;
- Providing guidance on school matters and direct instruction and monitoring/helping with homework; and
- Ensuring that activities engaged in are developmentally appropriate.

In a review of empirical studies two types of home involvement and two types of school involvement have been distinguished (Sui-Chu & Willms, 1996). The first type of home involvement relates to discussing school activities; the second relates to monitoring the child's out-of-school activities. The first component of school involvement refers to contacts between parents and school personnel; the second relates to involvement in activities such as volunteering in the school and attending parent-teacher meetings and hence can be understood on a formal-informal continuum. Hill et al. (2004) argue that parent academic involvement may be interpreted differently and serve different purposes across sociodemographic backgrounds.

Numerous meta-analyses on the topic demonstrate a positive relationship between parents' educational involvement and student achievement, educational experiences, and outcomes (Castro, et al., 2015; Fan & Chen, 2001). A positive association has been found between school-based parental involvement and teacher, parent, and school practices, as well as community dynamics (Tan, 2019). Involvement that reflected academic socialization has also been found to have a strong positive relationship with achievement (Hill & Tyson, 2009), where academic socialization has been defined as "the variety of parental beliefs and behaviours that influence children's school-related development" (Taylor, Clayton, & Rowley, 2004, p. 163). Parental expectations of their child's school completion is positively associated with school completion level (Jeynes, 2007).

At primary level in Ireland, parental expectations that their child will 'do well in English reading this year' were associated with higher levels of reading achievement, even after controlling for other background and school-level variables (Gilleece, 2015; Kavanagh, Shiel, Gilleece, & Kiniry, 2015). Also in Ireland, recent findings regarding outcomes for 17-year-olds with special educational needs (SEN) show that parental educational expectations have long-term associations with socio-emotional and academic outcomes of young people with SEN (Mihut, McCoy, & Maitre, 2020).

While parental involvement is multifaceted, the importance of parental expectations as a key aspect of parental involvement has been highlighted (Jeynes, 2011; Kellaghan, 2001). In their review, Weir et al. (2017) underline the importance of parental expectations (in particular, maternal expectations) which have shown to act as a buffer against the impact of low teacher expectations (Benner & Mistry, 2007). The issue of teacher expectations is discussed further below in the section on school context, infrastructure and climate.

In Ireland, the importance of parental involvement and broader community partnerships is recognised through the inclusion of high-level targets in these areas in the DEIS plan 2017 (DES, 2017a). The plan aims to "improve the level of parental engagement in their school communities through better school planning and TUSLA service planning" (DES, 2017a, p. 8). It also strives to "improve linkages that help students engage in community activities through better school planning and improved engagement with local community development committees, and children and young people's services committees" (DES, 2017a, p. 8).

Since its initiation as a pilot project in 1990, the Home-School Community Liaison scheme (HSCL) was designed to promote partnership between parents and teachers (Department of Education and Science, 2006). The HSCL scheme, the School Completion Programme (SCP), and the Educational Welfare Service (EWS) are designed to work in an integrated

way to achieve better educational outcomes for children and young people at risk of educational disadvantage (DCYA; TUSLA; DES, 2019). At present, all DEIS primary schools in Urban Bands 1 or 2 and DEIS post-primary schools have access to a HSCL Coordinator (DES, 2017a).

The current report contributes to our understanding of the extent of socio-economic disadvantage for students attending DEIS and non-DEIS post-primary schools by profiling family wealth, home and cultural possessions, home educational resources, parental education levels and occupational status, immigration status, and language use at home. Furthermore, data are gathered on parent-school communication, parental volunteering, parental support for learning, and parental expectations for their children's education. Conducting a detailed examination of the differences in home background between students from DEIS and non-DEIS schools represents a first step towards a greater understanding of the 'multiplier effect' in Ireland. PISA is a rich source of data as data are available at the individual student level; the lack of data at the individual level has previously been noted as a challenge for the evaluation of DEIS (Smyth, McCoy, & Kingston, 2015). A further strength of the current report is that the different components of the socio-economic index are examined separately. Previous research has shown that in Ireland the components of PISA's socio-economic index are not strongly interrelated and it has been argued that different policy responses may be required to tackle disadvantage associated with the different components of the index (Gilleece, Cosgrove, & Sofroniou, 2010). The current report contributes to this understanding. Given the central importance of parental involvement to their children's academic progress and given the focus on parental involvement in the DEIS plan, this report contributes to a better understanding of parental involvement in DEIS schools.

## **School intake characteristics, school climate and practices**

Schools play a central role in addressing educational disadvantage, and it is important that educational policy development is informed by an understanding of how school-level factors such as school context, infrastructure, practices, and policies can support students from disadvantaged backgrounds (OECD, 2018a). It has been shown schools in disadvantaged areas in Ireland and internationally face increased challenges related to: teacher retention and turnover; lower levels of parental participation; and a higher prevalence of school absences (Crenna-Jennings, 2018; Weir, McAvinue, Moran, & O'Flaherty, 2014). In this section, we examine research findings regarding the diversity of student intake in disadvantaged schools and literature related to the influence of school climate and practices. School absence is discussed in the next section in the context of student wellbeing, as chronic absenteeism may reflect broader problems with student wellbeing.

### **Diversity of school intake**

Schools serving disadvantaged areas have been shown to have students with greater diversity and more complex needs than those in more affluent areas (Crenna-Jennings, 2018). In Ireland, research has shown that schools with a higher intake of disadvantaged pupils have higher numbers of students who speak languages other than English or Irish at home and higher percentages of students with SEN who may require additional supports (McCoy, et al., 2014; Smyth, McCoy, & Kingston, 2015).

The hypothesis of the ‘social context effect’ or ‘multiplier effect’ is that disadvantaged students who attend disadvantaged schools are doubly challenged (DES, 2017a). Internationally, it has been argued that disadvantaged students experience inequalities of learning opportunities due to their own socio-economic background but they are also more likely to be situated in more difficult learning environments which are more prevalent in schools with a lower socio-economic profile (OECD, 2018a).

### School climate and practices

School climate refers to the ‘quality and character of school life’ (Cohen, McCabe, Michelli, & Pickeral, 2009), and a positive school climate fosters learning and supports student and teacher wellbeing. Whether based on teacher reports (Gilleece, Shiel, Perkins, & Proctor, 2009) or on student self-reported misbehaviour (Smyth, Dunne, Darmody, & McCoy, 2007), significant differences in school disciplinary climate have been associated with school social mix in Ireland. It has been argued that the creation of a positive climate should be seen as a central component of school development planning (Smyth, McCoy, & Kingston, 2015). School culture (including school and classroom climate and culture) is now recognised in the Wellbeing policy statement and framework for practice (DES, 2018a) as one of the key areas for supporting wellbeing; further detail on this is provided in the next section.

The importance of school culture that sets high expectations for students has been emphasised in the literature as one mechanism of supporting students from disadvantaged backgrounds to reach their academic potential. Teacher expectations have been shown to be lower for students from disadvantaged backgrounds and teachers’ expectations appear to influence their teaching practices (Weir, Kavanagh, Kelleher, & Moran, 2017). In Smyth’s (2007) review, she cites findings of teacher expectations varying by gender with some evidence of teachers emphasising a lack of confidence among girls but poor behaviour and motivation among boys (Jones & Myhill, 2004). Teachers in DEIS primary schools are more likely to over-identify emotional-behavioural difficulties (Banks, Shevlin, & McCoy, 2012). Supporting teachers to recognise the ‘power of their expectations’ could be helpful in attempting to reduce the gap in achievement between disadvantaged and more advantaged students (Weir, Kavanagh, Kelleher, & Moran, 2017, p. 57). Internationally, it has been shown that teacher behaviours (including instructional strategies and approaches to interactions with students) and characteristics (including professionalism) have a significant influence on student outcomes (Christle, Jolivette, & Nelson, 2007).

The practice of ability grouping (placing students into different classrooms or in small instructional groups based on their initial achievement or skill levels) has been shown to be more prevalent in DEIS schools compared to non-DEIS schools (McCoy, et al., 2014). Research has shown that students in lower stream classes report more frequent negative teacher-student interactions and lower teacher expectations (Byrne & Smyth, 2010). This practice has been associated with a range of negative student outcomes such as greater student disengagement, higher levels of early school leaving and lower levels of achievement (Smyth, Dunne, Darmody, & McCoy, 2007). More flexible forms of ability grouping are encouraged and are likely to be more compatible with teaching and learning approaches arising out of reform to both Junior cycle and Senior cycle (Smyth, McCoy, & Kingston, 2015).

PISA 2018 provides several relevant measures of school climate and practice. These are: school disciplinary climate (operationalised as the extent to which students miss learning

opportunities due to disruptive behaviour); truancy; teacher and student behaviours hindering learning; and, student sense of belonging to school. Given the policy focus on wellbeing (DES, 2018a) and the role of school climate in supporting student wellbeing, it is timely to consider findings from PISA 2018 related to classroom climate.

## Student wellbeing, attitudes and future aspirations

The DEIS Plan (DES, 2017a) recognises the importance of fostering the personal development, health and wellbeing of all learners and suggests that the promotion of wellbeing is particularly important in the DEIS context, given the higher levels of complex needs among their student populations. Internationally, disadvantaged students experience less psychological wellbeing than advantaged students (OECD, 2018a). Students' expectations can influence their achievement (Nurmi, 2013). Disadvantaged students are less likely than their advantaged peers to expect to attend university and hold lower expectations regarding future employment prospects (Diemer & Ali, 2009; Dupriez, Monseur, Van Campenhoudt, & Lafontaine, 2012). This section reviews literature regarding wellbeing and attitudes and then turns to findings related to future aspirations.

### Student wellbeing and attitudes

Recent Irish educational policy has placed an increased emphasis on the importance of student wellbeing for all students, both in DEIS and non-DEIS schools (DES, 2018a). Holding positive attitudes as a learner and a belief that one can set and achieve goals are also central to the revised Junior Cycle curriculum (NCCA, 2012).

In the quality framework underpinning school self-evaluation and the work of the Inspectorate, student wellbeing has been recognised “both as an outcome of learning and as an enabler of learning” (DES, 2016). As part of the School Self-Evaluation (SSE) process, schools are required by 2023 to undertake a review of wellbeing promotion and this is underpinned by the Wellbeing Policy Statement and Framework for Practice 2018-2023 which defines wellbeing as being present when:

*A person realises their potential, is resilient in dealing with the normal stresses of their life, takes care of their physical wellbeing and has a sense of purpose, connection and belonging to a wider community. It is a fluid way of being and needs nurturing throughout life (DES, 2018a, p. 10).*

The Wellbeing Policy Statement and Framework for Practice recognises four key areas for wellbeing promotion in schools. These are: culture & environment; curriculum – teaching & learning; relationships & partnerships; and policy & planning. Amongst other constructs, culture & environment includes school and classroom climate and culture while curriculum includes both extra-curricular learning and co-curricular learning, along with other teaching and learning-related themes. Relationships & partnerships refers to not only student and staff relationships but also peer relationships, student voice, partnerships, and external supports. Policy & planning incorporates policies and plans relevant to wellbeing, as well as self-evaluation and continuing professional development.

Many of the six key skills underpinning the Junior Cycle are also relevant to the broad area of wellbeing (NCCA, 2012). The six key skills are: managing myself; staying well; communicating; being creative; working with others; and managing information and thinking. Focusing on

aspects of these skills that relate to wellbeing, managing myself incorporates setting and achieving personal goals, as well as being able to reflect on one's own learning. Staying well incorporates physical and mental health as well as positive attitudes towards learning. Working with others includes developing good relationships and dealing with conflict as well as co-operating and respecting difference. Managing information and thinking includes the ability to reflect on and evaluate one's own learning (NCCA, 2012).

School social mix (as measured by DEIS status) is significantly associated with socio-emotional wellbeing. Smyth et al. (2020) recorded significant differences in wellbeing between students who attend DEIS schools at both primary and post-primary levels and those who attend DEIS schools at one level only (Smyth, 2020). Specifically, students who attended Urban DEIS Band 1 schools at primary level and DEIS post-primary schools demonstrated higher levels of emotional difficulties, conduct problems, hyperactivity and peer problems. Moving from a non-DEIS primary school into a DEIS post-primary school was also associated with higher levels of conduct problems and hyperactivity (Smyth, 2020).

Findings from Growing up in Ireland (GUI) have also shown that students from socially disadvantaged backgrounds had lower life satisfaction scores at age 17/18, and were more likely to have a higher number of emotional and behavioural difficulties, than their counterparts from more advantaged backgrounds (Growing Up in Ireland Study Team, 2016). Focusing on young adolescents at age 13, recent findings show that most 13-year olds in Ireland were faring well in terms of social, emotional and behavioural outcomes (Nixon, 2021). There is some evidence of associations between household level variables (such as coming from a single-parent family, maternal education, and income quintile) and social and emotional outcomes. However, the nature of the associations vary between girls and boys and across the different outcomes examined and the author notes that the factors were not "strong and consistent predictors across models" (Nixon, 2021, p. 101). Nixon (2021, p. 101) emphasis in original) emphasises that: "socio-emotional and behavioural difficulties can affect youth across all social contexts, and it is not just those in contexts of disadvantage who are affected". This suggests that there is need for universal intervention and prevention programmes that can be targeted towards all youth". In terms of reporting antisocial behaviours, Nixon notes that data for GUI are not collected anonymously and one possible consequence of this is the under-reporting of such behaviours.

The issue of chronic absenteeism is also relevant to student wellbeing. Although its causes are complex (Childs & Lofton, 2021; Kipp & Clark, 2021), school attendance problems may be associated with internalising behaviour problems (such as anxiety, depression, and social isolation) as well as externalising behaviour problems (such as alcohol and drug use, oppositional defiant and conduct problems, impaired social functioning and poor relationships with peers) (Kearney, González, Graczyk, & Fornander, 2019). While a variety of terms is used in the literature regarding attendance, absenteeism, school refusal and truancy (with little consensus on their definitions), school absenteeism is often characterised as excused (or authorised) or unexcused (unauthorised). The term truancy represents one type of unexcused absence and may be distinguished from school-refusal; for a detailed review, see (Kearney, González, Graczyk, & Fornander, 2019).

Chronic absenteeism has a damaging impact on outcomes not only for those students who are absent themselves but also their classmates (Gottfried, 2019). A multi-tiered system of support has been advocated (Kearney & Graczyk, 2014). According to this model, Tier

1 comprises universal supports (e.g., school climate interventions, school-based mental health programmes, parental involvement initiatives, or school dropout prevention); Tier 2 represents targeted supports that are aimed at targeting mild to moderate absenteeism (e.g., psychological approaches for anxiety- and non-anxiety-based absenteeism, or mentoring programmes); and Tier 3 comprises intensive supports that are aimed at targeting chronic and severe absenteeism (e.g., alternative educational programmes and schools or second chance programmes) (Kearney, González, Graczyk, & Fornander, 2019). Drawing on longitudinal datasets and complex statistical modelling (sharp and fuzzy regression discontinuity designs), research has shown significant declines in chronic absenteeism in US schools that implemented a “breakfast-after-the-bell” programme, with particular success at high-school level (Kirksey & Gottfried, 2021). It has been argued that “the complicated ecosystem of school attendance/problems” can only be addressed by taking account of the varying perspectives of families, educators, researchers, policymakers and other stakeholders (Kearney, 2021).

In Ireland, truancy rates in disadvantaged schools have been found to be higher, with boys more likely to miss days (Byrne & Smyth, 2010). In annual reports of attendance, students in DEIS schools have higher rates of all forms of non-attendance, although there was some improvement between 2015/16 and 2016/17 in the number of days lost (Millar, 2017). A more recent report has also found that rates of non-attendance, 20-day absences, expulsions, and suspensions continue to be significantly higher in DEIS post-primary schools compared with non-DEIS schools (Denner & Cosgrove, 2020). The DEIS Plan 2017 (DES, 2017a) has a strong focus on improving attendance rates in DEIS schools and provides for DEIS post-primary schools to have access to Home-School Community Liaison services, priority access to the Schools’ Meals Programme, and access to the School Completion Programme all of which are intended to have a positive impact on student attendance.

### **Aspirations for the future**

Social background is a significant influence on career aspirations, with students from higher socio-economic backgrounds having more developed career aspirations and greater family experience with higher education (Diemer & Ali, 2009; Dupriez, Monseur, Van Campenhout, & Lafontaine, 2012). Educational aspirations of students from disadvantaged backgrounds and uptake of higher education by under-represented groups are viewed as important indicators of equity in education (OECD, 2018a).

Both nationally and internationally, sizeable numbers of disadvantaged young people have difficulties with transitioning from post-primary education to work or further study, and disadvantaged students are more likely to struggle with career choices and opportunities than their more advantaged counterparts (McCoy, Smyth, Watson, & Darmody, 2014; OECD, 2018a). Sixth year students in Ireland regard their parents as an important source of advice regarding their post-school plans, and for students from disadvantaged backgrounds, parental experience of higher education may be more limited (McCoy, Smyth, Watson, & Darmody, 2014; Smyth, Banks, & Calvert, 2011).

Schools play a key role in providing their students with reliable, relevant, and current information about options for further study and careers. In doing so, schools may be able to have some impact on unequal patterns of access to higher education whereby students from disadvantaged backgrounds are less likely to enter higher education, and less likely to enter particular faculties associated with traditional professions such as medicine and law (Higher

Education Authority, 2015; McCoy, Smyth, Watson, & Darmody, 2014). Schools with a higher level of guidance and counselling provision (reflected in the number of guidance hours available) have higher rates of student applications for higher education (Smyth & Hannan, 2007). Career development activities for students, such as work experience placements and effective career guidance, are key aspects of what schools can do to replicate the positive benefits of 'first-hand exposure' to the world of work (Mann, et al., 2020). Work experience opportunities are valued by students by helping them consider future career choices and also in the development of work-related skills (Clerkin, 2019). Furthermore, through the guidance process, schools can support the development of student confidence which has been shown to be a barrier to participation in higher education of young people from lower socioeconomic groups (Scanlon, Jenkinson, Leahy, Powell, & Byrne, 2019).

Post-primary schools in Ireland offer a range of career education and supports to their students (Department of Education and Science, 2009). The economic recession impacted on access to, and availability of, career guidance in schools (although a majority of the posts withdrawn in Budget 2012 were subsequently restored, (DES, 2018b). It has been argued that the decreased amount of guidance hours available to students, as well as constraints on schools' resources, resulted in 'significant role overload' for career guidance and counselling practitioners (ASTI, 2018), and it was suggested that the impact of cuts were felt most severely in DEIS schools (Society of St. Vincent de Paul, 2018).

The absence of research examining the extent to which schools differ in non-cognitive outcomes, particularly at post-primary level, is notable in work on the evaluation of DEIS (Smyth et al., 2015). PISA 2018 offers an opportunity to address this gap. In the initial PISA 2018 national report, it was reported that there were no significant differences between students in DEIS and non-DEIS schools on overall life satisfaction (McKeown et al., 2019). While 59% of students in DEIS schools indicated that they were satisfied with life, the corresponding percentage in non-DEIS schools was 62%. In this report, further attention is given to non-cognitive outcomes and dispositions of students in DEIS and non-DEIS schools, focusing on wellbeing, attitudes and motivation, and aspirations for the future.

# Chapter 3: What is PISA?

The OECD's Programme for International Assessment (PISA) is a triennial study which examines the outcomes of education attained at the age of 15. It examines achievement in reading, mathematics, and science (now done via computer-based tests) as well gathering contextual data pertaining to the family and school (OECD, 2019b). One subject area is designated as the major focus in each cycle of the study (reading in 2018). PISA is less concerned with the reproduction of knowledge and national curricula and focuses instead on the wider knowledge and skills of 15-year-olds.

## Sample

PISA is implemented in Ireland by the Educational Research Centre (ERC), on behalf of the Department of Education; see McKeown et al. (2019). In 2018, 5,577 students participated in Ireland aged between 15 years 3 months and 16 years 2 months at the time of the assessment. Participants came from 157 schools (41 DEIS schools and 116 non-DEIS schools).<sup>4</sup> Schools in PISA 2018 were classified as DEIS or non-DEIS according to their status in the academic year 2017/2018. Of participating students, 49.8% were female, and 50.2% were male.

In Ireland, *all* sampled schools (both DEIS and non-DEIS) agreed to participate in PISA 2018. This is relevant as in England, schools with higher percentages of students eligible for free school meals (i.e., those with higher percentages of students from lower socio-economic backgrounds) have been shown to be less likely to agree to participate in PISA (Schnepf, Durrant, & Micklewright, 2014).

The overall student exclusion rate in Ireland was less than 4% and met the PISA requirement that after all exclusions, the resultant population is required to cover at least 95% of the target population (OECD, 2020d). Across sampled schools in Ireland, 257 students were excluded and a further 59 were deemed ineligible (as a consequence of having a date of birth outside the PISA-eligible range). In line with PISA procedures, students were excluded for reasons of disability or for having insufficient experience of the language of the assessment (such as exchange students from other EU countries enrolled in post-primary schools in Ireland for part of the academic year). McKeown et al. (2019) report that overall in Ireland, 0.6% of students were excluded for reason of functional disability; 1.3% for reason of intellectual disability, behavioural or emotional disorder; 1.2% because of a specific learning disability (e.g., severe dyslexic difficulties); and 0.7% because of limited language proficiency.

Further analysis of the national dataset show limited differences between DEIS and non-DEIS schools in the percentages of students excluded from PISA for various reasons (Table 3.1). Unweighted numbers and percentages are presented for comparability with Table 1.4 from McKeown et al. (2019). Although the percentage of students excluded in non-DEIS schools (1.4%) for reasons of specific learning disability is somewhat higher than in DEIS schools (0.6%), the absolute numbers of students in each category in DEIS schools is very

<sup>4</sup> Although DEIS status is not a sampling variable for PISA in Ireland, the sample is designed to be representative by socio-economic status. Readers interested in further detail are advised to consult Gilleece et al. (2020) where further information is given on why it is reasonable to assume that the PISA sample is broadly representative of students in DEIS schools.

small. Half of exclusions in DEIS schools related to intellectual disability/behavioural or emotional disorder. Exclusion for this reason was more common in DEIS schools than in non-DEIS schools where students were more likely to be excluded as a result of a specific learning disability (Table 3.1). Given the small numbers involved, particularly in DEIS schools, tests of statistical significance are not conducted.

**Table 3.1. Numbers and percentages (unweighted) of students excluded in DEIS and non-DEIS schools from PISA 2018 as a result of functional disability; intellectual disability, behavioural or emotional disorder; specific learning disability; or limited language proficiency**

	N unweighted		Exemptions as a % of all sampled students		Exemptions as a % of all excluded students	
	DEIS	non-DEIS	DEIS	non-DEIS	DEIS	non-DEIS
Functional disability	11	28	0.7	0.6	17.7	14.4
Intellectual disability/behavioural or emotional disorder	31	59	1.8	1.2	50.0	30.3
Specific learning disability (e.g., severe dyslexic difficulties)	10	73	0.6	1.4	16.1	37.4
Limited language proficiency	10	35	0.6	0.7	16.1	17.9
Total	62	195	3.7	3.8	100	100

Turning to the percentages of students that were absent, about 15% of students in DEIS schools were absent for PISA testing compared to 12% in non-DEIS schools. Research from England shows that students with lower levels of achievement (based on Key Stage 4 public exams) were more likely to be absent from PISA than their higher achieving counterparts (Schnepf, Durrant, & Micklewright, 2014). In Ireland, students participating in PISA 2000 or PISA 2003 were found to have higher achievement in Junior Certificate examinations than their counterparts who were absent for PISA testing (Cosgrove, 2005). Similar findings have also been described in other countries participating in PISA (Anders, Has, Jerrim, Shure, & Zieger, 2021).

### Data Sources

PISA 2018 had two core questionnaires (student and school) which were designed to gather information on student home background and the school learning environment. Parents were also asked to complete a questionnaire. This report draws on data from each of these. (The teacher questionnaire was not administered in Ireland). Many of the questionnaire items are repeated over PISA cycles in order to look at trends over time and priority is given when selecting questionnaire items to those which are known to have links with educational policy priorities (OECD, 2019b).

### Students

Following computer-based testing in the cognitive domains, students were asked to complete a number of questionnaires. The first of these asked a series of questions about

their background and their family; attitudes towards school, learning and achievement; experiences at school; teacher-student relationships; disciplinary climate and learning time; and educational expectations. Ireland was one of the countries which also administered the optional Educational Career Questionnaire to students which explores the education and career expectations of 15-year-olds. Also, for the first time in PISA 2018, students completed a wellbeing questionnaire that asked about their perceptions of their health, life satisfaction, social connections, and in- and outside-of-school activities.

### Parents

This questionnaire was completed by a parent or other guardian of the student participating in PISA. In this report, the word 'parent' also denotes 'guardian'. Parents were asked about the family and home background; school choice; and educational and career expectations for their child. Items on parental involvement included both involvement in school-based activities and parental support for learning at home. In both DEIS (84.9%) and non-DEIS (85.3%) schools, the majority of parents who completed the questionnaires were mothers or other female guardians.

### School Principals

The school questionnaire covered topics including the school system, the learning environment, school policies and governance. It gathered school background information; data on student attendance; educational resources; availability of extra-curricular activities; school organisation and management; teacher and student behaviour; parental involvement; assessment; and school climate. In line with common practice for reporting on large-scale educational surveys, the student is the unit of interest and therefore the focus of this report is on the student, even when describing school characteristics. This means that responses from school principals are described in terms of the percentages of students who experience the phenomenon, rather than the percentage of principals who gave a particular response. Note that for some questionnaire items, principals were asked to respond with reference to students in Third Year (modal grade), rather than the full PISA sample of 15-year-olds (which comprised students from First to Fifth year; for details see Gilleece et al., 2020).

### Analyses in this Report

All analyses were conducted using the IEA International Database Analyzer (IDB Analyzer, [www.iea.nl/data-tools/tools](http://www.iea.nl/data-tools/tools)) V4.0.35, a programme designed for analysing large-scale educational assessment data. This report draws mainly on descriptive analyses, which typically examine differences in mean scores or percentages between students in DEIS and non-DEIS schools. Tests of statistical significance were conducted by computing a t-statistic (based on the difference between the two groups and the standard error of the difference) which was compared to a critical value of  $t$ , using 80 degrees of freedom. **Bold** text is used to indicate a statically significant difference ( $p < .05$ ). Readers' informed judgement should be used in the interpretation of differences as a statistically significant difference is not necessarily meaningful in practice or have substantive implications for policy or practice. Throughout the report, consideration is given not only to statistical significance but differences which are sufficiently large to be of practical importance. Due to rounding, some figures in tables may not add up exactly to the totals.

### Interpretation of OECD scores and terms

When interpreting PISA 2018 derived indices (e.g., scale scores for family wealth or classroom climate), readers should note that these have been standardised to have an international

mean score of 0 and standard deviation of 1. In this report, OECD averages that have been previously published are presented for comparison purposes (i.e., authors of the current report have not calculated OECD averages for previously unpublished results). Tests of statistical significance were *not* conducted on the differences between DEIS (or non-DEIS) and the OECD averages.

The OECD refers to 'advantaged' and 'disadvantaged' students on the basis of the PISA index of economic, social and cultural status (ESCS) according to which socio-economically disadvantaged students are those whose value on the ESCS is among the bottom 25% of students within their country or economy. Socio-economically advantaged students are those whose value on the ESCS is among the top 25% of students within their country or economy (OECD, 2019b).

### **Limitations of PISA**

The representative nature of the PISA sample and the high response rates contribute to PISA's importance for policy makers. Nonetheless, it should be borne in mind that PISA was not designed to specifically permit an in-depth examination of the achievement of sub-groups of the population (e.g., students in DEIS schools). As there were comparatively fewer participating students in DEIS schools than in non-DEIS schools, the standard errors associated with estimates for students in DEIS schools are larger than those associated with estimates for students in non-DEIS schools. A larger sample of DEIS students would be required to obtain more precise estimates of achievement in DEIS schools. See Gilleece et al. (2020) for discussion.

# Chapter 4: Student home background

This chapter provides a profile of the home backgrounds of students attending DEIS and non-DEIS schools. The first section outlines the home background variables used in PISA and the measurement of socio-economic status. Using data from the student and parent questionnaires, the remainder of the chapter considers differences between students in DEIS and non-DEIS schools on indicators relating to books in students' homes; home possessions and family wealth; parental education and occupational status; and student immigration status and language used at home.<sup>5</sup> The final section of the chapter examines differences between DEIS and non-DEIS schools in student ESCS.

## PISA measurement of socio-economic status

In PISA 2018, students were asked to indicate whether or not listed household items (including specified educational resources, cultural possessions, and books) were available to them at home and for some items, to estimate the numbers available. For example, students were asked to estimate the numbers of books in their homes (excluding magazines, newspapers and schoolbooks) and to select the relevant category (0-10 books; 11-25 books; 26-100 books; 101-200 books; 201-500 books; More than 500 books). Students were also asked to indicate whether or not their home had: a desk for study; a room of the student's own; a quiet place to study; and a computer. In each participating country, three items were added at the national level that were considered relevant to measuring family wealth in that particular national context. In Ireland, students were asked whether or not they had: their own MP3 player; their own laptop or tablet; and their own smartphone.

Students were also asked about their parents' education levels and occupations and invited to indicate their parents' highest levels of educational qualifications. The items presented at a national level (e.g., Junior Certificate and Leaving Certificate in Ireland) were underpinned by the levels of the International Standard Classification of Education (ISCED) which facilitated international comparisons (UNESCO Institute for Statistics, 2012). Data on parental occupation were gathered through open-ended items on the student questionnaire which were subsequently coded using 2008 version of the International Standard Classification of Occupation codes (ISCO), and then mapped to the international socio-economic index of occupational status (ISEI) (Ganzeboom & Treiman, 2003; OECD, 2020d). Higher ISEI scores indicate higher levels of occupational status. Where students provided information for both parents, the higher of the two is used for analysis. Where data were provided for one parent only, occupational status refers to that parent only.

PISA 2018 also collected information about the country of birth of students and their parents to determine whether country of birth was the same as the country in which the PISA assessment was completed (OECD, 2019b). Based on the country of birth of students and their parents, students were classified as either native (students who had at least one

<sup>5</sup> Information on the ethnic background of students/parents (e.g., Traveller status) was not collected in PISA 2018.

parent born in the country), second-generation (those born in the country of assessment but whose parents were born in another country) or first-generation (students born outside the country of assessment and whose parents were also born in another country). Students were also asked to report on the language they spoke most frequently at home, selecting either English/Irish or another language.

Responses to individual items were used to derive various composite indices (OECD, 2020d) and PISA provides a variety of interrelated measures related to family socio-economic status. These measures include an indicator of family wealth; educational resources in the home; cultural possessions; parental education and occupation; and an overall measure called economic, social and cultural status (ESCS).

Responses to a subset of items about home possessions, i.e., those related to educational resources, were combined to create an index of home educational resources (OECD, 2020d). Items contributing to this scale included a desk to study at; a quiet place to study; access to books; and a computer for school work. An index of cultural possessions was created from responses to five of the home possession items related to cultural possessions in students' homes. This scale comprised items measuring classic literature; books of poetry; works of art; books on art, music or design; musical instruments.

Family wealth is another summary measure derived from student responses to items on the availability of household items. Items contributing to the wealth index are a subset of all items contributing to the index of home possessions and include the country-specific wealth items. Note that many of the cultural possession items and home educational resources items do not contribute to the overall wealth scale. For example, having one's own desk for study, a quiet place to study, books to help with school work, classic literature, poetry books and works of art do *not* contribute to the overall wealth index. Conversely, the numbers of televisions, cars, bathrooms, and some digital devices (e.g., smartphones and e-book readers) in students' homes contribute to the wealth indicator but not to the index of cultural possessions or home educational resources (OECD, 2020d). Appendix 1 provides a summary of the items that contribute to the PISA scales measuring home possessions, wealth, cultural possessions and home educational resources.

As shown in Figure 4.1, ESCS is a composite score based on highest parental occupation, parental education, and home possessions (OECD, 2020d). It measures an individual's social and economic status relative to their peers in society and can be compared within and between countries and across PISA cycles. Higher scores on the ESCS index show higher student ESCS status. PISA 2018 questions about students' socio-economic backgrounds largely remain unchanged from previous PISA cycles. However, indicators which refer to the use of laptops and tablets are now considered to be less of a marker of socio-economic status, due to widespread ICT developments (OECD, 2019b). Home possessions, which includes the number of books and educational resources such as a computer/laptop for schoolwork and/or educational software, are still regarded as a reliable proxy measure of a family's economic status (OECD, 2018a). The final composite ESCS measure was transformed to have an OECD average of 0 and a standard deviation of 1.

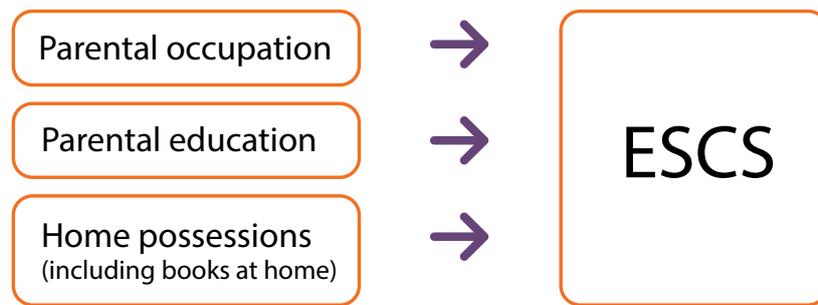


Figure 4.1: Components of ESCS (Based on Figure 16.4; OECD, 2020d)

As discussed in Chapter 2, the various components of ESCS make independent contributions to explaining variance in achievement and as such, the individual components of ESCS are examined in this chapter before results on the overall index are presented.

## Home possessions

This section presents findings on the numbers of books in students' homes, household possessions (including educational and cultural) and family wealth.

### Books in the home

Figure 4.2 shows the percentages of students in DEIS and non-DEIS schools with varying numbers of books at home. A considerably higher percentage of students in DEIS schools (25%), compared to non-DEIS schools (10%), reported having between 0 and 10 books at home. Looking at the bottom two categories combined, almost half of students in DEIS schools (46%) had 25 books or fewer at home compared to a quarter of students in non-DEIS schools. Conversely, higher percentages of students in non-DEIS schools reported having at least 201 books at home. While 23% of students in non-DEIS schools reported having 201 or more books at home, just 10% of students in DEIS schools indicated that they had access to this quantity of books.

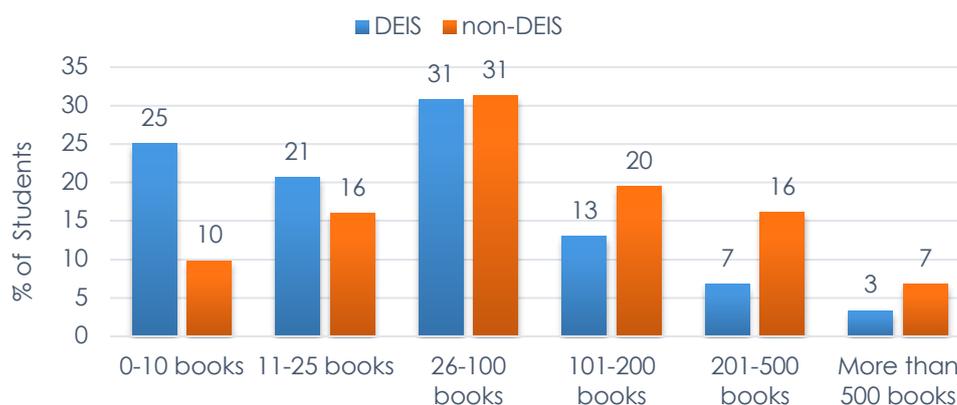


Figure 4.2: Percentages of students in DEIS and non-DEIS schools reporting various numbers of books at home

### Home possessions and family wealth

Virtually all students in Ireland reported having their own smartphone (DEIS 92%; non-DEIS 94%), a dictionary at home (DEIS 90%; non-DEIS 97%), and an internet link<sup>6</sup> (DEIS 98%; non-DEIS 99%). A large majority also reported having their own laptop or tablet (DEIS 77%; non-DEIS 74%). Large percentages of students in DEIS (83%) and non-DEIS schools (93%) indicated that they have a desk for study at home, although it is notable that there is a 10% gap between the percentages with a desk for home study in DEIS and non-DEIS schools. High percentages of students in Ireland indicated that they had a quiet place to study (DEIS 87%; non-DEIS 91%). Most students in Ireland also reported having a room of their own (DEIS 85%; non-DEIS 89%). High percentages in both DEIS (81%) and non-DEIS (88%) schools indicated that they had a computer at home that they could use for school work<sup>7</sup>.

Lower percentages of students in both DEIS and non-DEIS schools reported having classic literature (e.g., James Joyce) at home (DEIS: 31%; non-DEIS 44%), books of poetry (DEIS 27%; non-DEIS: 35%), or technical reference books (DEIS 32%; non-DEIS 38%). A higher percentage of students in non-DEIS schools reported having works of art such as paintings (DEIS 59%; non-DEIS 73%). About half to two-thirds of students reported having access to educational software at home (DEIS 57%; non-DEIS 63%) with higher percentages reporting that they had books at home to help with school work (DEIS 78%; non-DEIS 88%).

Turning to the overall index of home possessions, created from responses to individual items, findings show that students attending DEIS schools had a significantly lower mean score on the overall index of home possessions compared to students in non-DEIS schools. The difference amounted to about one-third of a standard deviation (Table 4.1).

**Table 4.1: Mean scores on indices of home possessions, home educational resources, cultural possessions, and family wealth (DEIS and non-DEIS schools)**

	DEIS		non-DEIS		Difference (non-DEIS – DEIS)
	Mean	SE	Mean	SE	
Home possessions	-0.11	0.05	0.25	0.02	<b>0.36</b>
Home educational resources	-0.45	0.04	-0.13	0.02	<b>0.32</b>
Cultural possessions	0.07	0.06	0.45	0.03	<b>0.38</b>
Family wealth	0.06	0.04	0.22	0.02	<b>0.17</b>

Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools

Students in DEIS schools had a significantly lower mean score than students in non-DEIS schools on the index of home educational resources. The magnitude of the difference on this scale was similar to the difference on overall home possessions and represents about one-third of a standard deviation.

6 Information was not gathered on the speed or quality of the internet link.

7 Note students were not asked if they had exclusive use of the computer or if it was shared with other family members. In contrast, the item about having a laptop or tablet asked if the student had a laptop or tablet of their own. Similarly, the item on smart phone ownership referred to the student's own smartphone.

Students in DEIS schools had a significantly lower mean score on the index of cultural possessions than students in non-DEIS schools. Again, the difference was about one-third of a standard deviation. Students in DEIS schools had a significantly lower score than students in non-DEIS schools on the index of family wealth, although the gap was smaller on this index than on overall home possessions, home educational resources and cultural possessions.

## Parental education and occupation

Figure 4.3 shows that while 52% of students in non-DEIS schools reported that at least one of their parents had a university degree (or higher-level qualification such as a Masters or PhD), the corresponding percentage in DEIS schools was considerably lower (31%). It was somewhat more common for students in DEIS schools (37%) compared to non-DEIS schools (24%) to indicate that the Leaving Certificate (General or Applied) or an Apprenticeship was the highest level of qualification achieved by their parents. Conversely, a higher percentage of students in DEIS schools (8%) than non-DEIS schools (3%) reported that the Junior Certificate (or below) was the highest level of education completed by their parents (Figure 4.3).

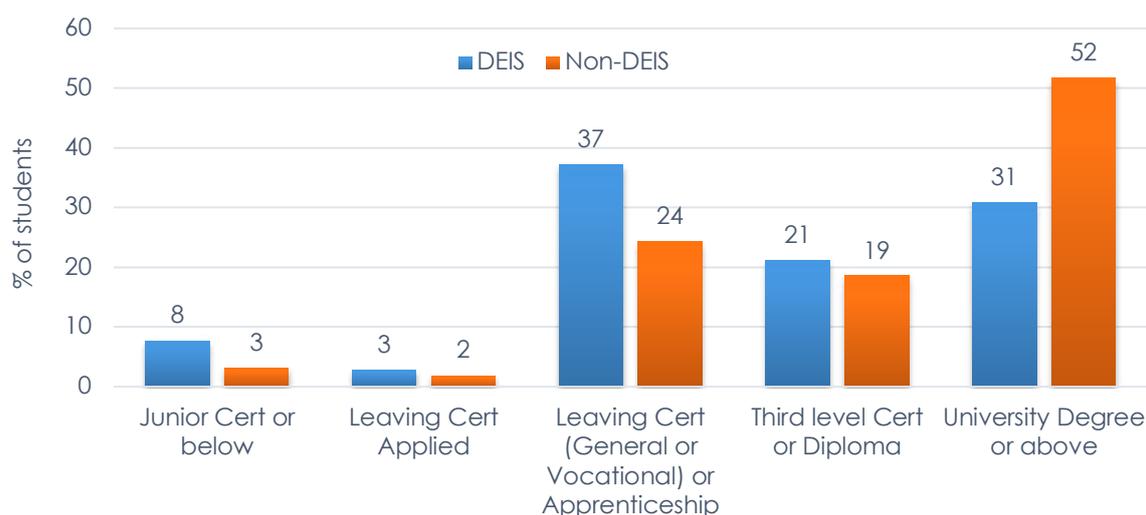


Figure 4.3: Percentages of students in DEIS and non-DEIS schools by highest level of parental education

The mean parental occupational status score of students in DEIS schools was significantly lower than the mean score in non-DEIS schools, with the difference corresponding to about half a national standard deviation on the index (Table 4.4). The finding of higher mean occupational status in non-DEIS schools is in line with the higher percentage of students in non-DEIS schools whose parents have university-level qualifications.

Table 4.4: Highest parental occupational status of parents (DEIS and non-DEIS schools)

	Mean	SE
DEIS	<b>44.0</b>	(0.94)
non-DEIS	55.4	(0.61)

Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools

## Immigrant background and home language

A large majority of students were categorised as native in both DEIS (83%) and non-DEIS schools (82%). Similar percentages of students were categorised as first generation in both school contexts (about 10% in each) and there was also little difference between DEIS and non-DEIS schools in the percentages categorised as second generation (DEIS 7%; non-DEIS schools 8%).

Overall, just under one-in-ten students in both DEIS and non-DEIS schools indicated that they mainly spoke a language other than English or Irish at home. Looking in more detail at the languages spoken most frequently by native and immigrant students shows that while a large majority in DEIS and non-DEIS schools are native students who speak English or Irish at home, immigrant students are split evenly between those who speak English or Irish at home and those who speak other languages (Table 4.5).

Table 4.5: Percentages of students classified as native and immigrant (first or second generation) by language spoken most frequently at home (DEIS and non-DEIS schools)

	English or Irish %		Other language %	
	DEIS	non-DEIS	DEIS	non-DEIS
Native	83	82	0.6	0.2
Immigrant	9	9	8	9

Differences between DEIS and non-DEIS schools are not statistically different

## ESCS index

There was a statistically significant difference in the mean ESCS scores of students in DEIS schools and non-DEIS schools with a gap of about three-fifths of a standard deviation in favour of students in non-DEIS schools (Table 4.6).

Table 4.6: ESCS mean scores (DEIS and non-DEIS schools)

	Mean	SE
DEIS	<b>-0.3</b>	(0.05)
non-DEIS	0.3	(0.03)

Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools

In international reporting of PISA, students are considered socio-economically *advantaged* if their ESCS score is in the top quartile nationally; students are classified as socio-economically *disadvantaged* if their ESCS score is in the bottom quartile nationally. Quartiles are constructed to have 25% of students nationally in each quartile. Figure 4.4 shows that while over 40% of students in DEIS schools have ESCS scores in the bottom quartile nationally, just 20% of students in non-DEIS schools are in this group. Conversely, nearly 30% of students in non-DEIS schools have ESCS scores in the top quartile nationally, compared to just 12% in DEIS schools.

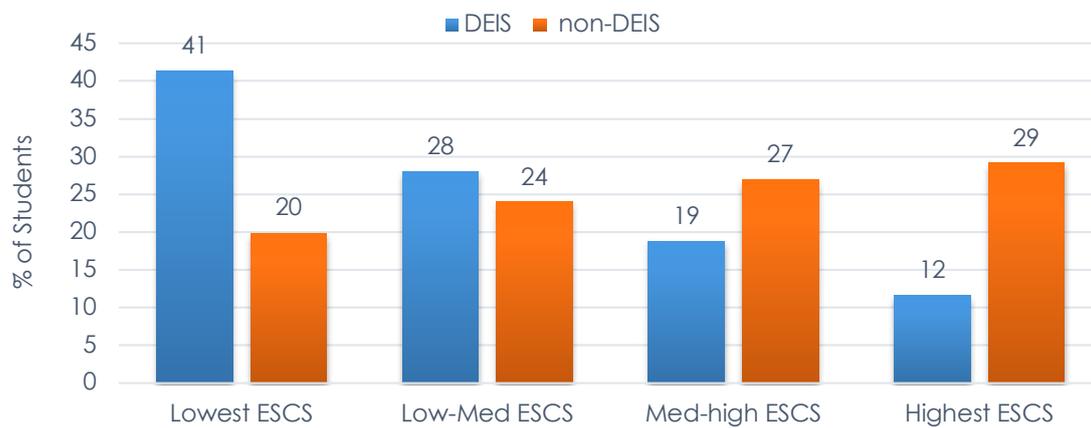


Figure 4.4: Percentages of students in each ESCS quartile, DEIS and non-DEIS schools

## Chapter highlights

- Students in DEIS schools had access to fewer books at home than students in non-DEIS schools. Almost half of students in DEIS schools (46%) indicated that they had 25 books or fewer at home compared to a quarter in non-DEIS schools.
- A large majority of students in both DEIS and non-DEIS schools reported having their own smartphone (DEIS 92%; non-DEIS 94%), their own laptop or tablet (DEIS 77%; non-DEIS 74%), and a computer they can use for schoolwork at home (DEIS 81%; non-DEIS 88%). Most students indicated that they have a desk for study at home (DEIS 83%; non-DEIS 93%). Similar percentages reported having their own room at home (DEIS 85%; non-DEIS 89%).
- On overall indices of home possessions, home educational resources, cultural possessions and family wealth, students in DEIS schools had significantly lower mean scores than students in non-DEIS schools. The difference on the family wealth scale amounted to one-sixth of a standard deviation; differences on the other scales were about one-third of a standard deviation.
- Over half of students in non-DEIS schools had at least one parent with a university degree or higher-level qualification such as a Masters or PhD. The corresponding percentage in DEIS schools was 31%. Conversely, it was somewhat more common for students in DEIS schools to have parents whose highest level of formal education was the Leaving Certificate (DEIS 37%; non-DEIS 24%) or Junior Certificate (DEIS 8%; non-DEIS 3%).
- The mean score for parental occupational status was significantly lower in DEIS schools compared to non-DEIS schools. The difference corresponded to about half a national standard deviation.
- A large majority of students were categorised as native (i.e., had at least one parent born in Ireland) in both DEIS (83%) and non-DEIS (82%) schools. Just under one-in-ten students in both DEIS (9%) and non-DEIS (9%) schools reported speaking a language other than English or Irish at home as their main language.
- While two-fifths of students in DEIS schools had ESCS scores in the lowest quartile nationally, only one-fifth of students in non-DEIS schools had scores in this range. Conversely, just one-in-eight students in DEIS schools, compared to almost one-in-three in non-DEIS schools, had ESCS scores in the top quartile nationally.



# Chapter 5: Parental involvement in education

## Overview

This chapter draws on the PISA parent and school questionnaires to provide a profile of parental involvement in their children's education in school and at home. In this report, the word 'parent' denotes parent or guardian. Four main topics are explored in this chapter: (1) factors influencing school choice and parents' perceptions about school quality; (2) school policies for parental involvement; (3) parental engagement in school-life from both the parent and principal perspective; and (4) parents' educational expectations and the supports for learning provided by parents at home. OECD averages are presented for comparison where available.

## School choice and perceived quality

### Availability of schools

As part of gathering information on factors influencing school choice, parents were asked to indicate the extent to which there was a choice of schools in their area by selecting one of three options: (1) there are two or more other schools in this area that my child could attend; (2) there is one other school in this area that my child could attend; and (3) there are no other schools in this area that my child could attend. Principals were also asked to provide comparable information about the number of schools in the area competing for students.

Table 5.1 shows that parents of students in DEIS and non-DEIS schools reported similar levels of school availability in the two contexts. About one-in-five students in both DEIS and non-DEIS schools had parents who indicated that they had no other choice of school to attend in their locality (Table 5.1). Parents of just over a quarter of students in DEIS and non-DEIS schools reported that they had one other school to choose from. Parents of about half of students in DEIS and non-DEIS schools reported that they had two or more schools to choose from.

Compared to parents, principals were more likely to report higher levels of school choice. Principals of over three-quarters of students reported that two or more schools compete for students in the area (Table 5.1). Just 5% of students in DEIS schools and 16% in non-DEIS schools had principals who indicated that there were no other schools in the area. Overall, 87% of students in Ireland and 78% of students on average across the OECD had principals who reported that there was at least one other school that competed for students in the same area (OECD, 2020a).

Table 5.1: Percentages of students whose parents and principals report that there are two or more schools in the locality, one other school, and no other school (DEIS and non-DEIS schools)

	Parent reports		Principal reports	
	DEIS %	non-DEIS %	DEIS %	non-DEIS %
Two or more other schools	52	55	83	74
One other school	28	26	12	10
No other schools	20	19	5	16

Differences between DEIS and non-DEIS schools are not statistically different

### Factors influencing school choice

Parents were presented with a list of 14 factors which might influence school choice and asked to indicate the importance of each as a reason for choosing their child's school. These criteria included geographical distance between the school and home; the school's approach to teaching and learning; course subjects on offer; school philosophy/religion; safety environment; and the academic achievement of students.

Table 5.2 shows that for almost all students in DEIS and non-DEIS schools, parents indicated that important or very important selection factors were: a safe school environment (DEIS 97%; non-DEIS 98%); a good reputation (DEIS 94%; non-DEIS 96%); students doing well academically (DEIS 91%; non-DEIS 92%); and an active and pleasant school climate (DEIS 89%; non-DEIS 91%). Parents of at least 90% of students across the OECD indicated that a safe school environment and a good reputation were important or very important reasons for selecting a school.

Parents in Ireland were more likely to indicate that a particular approach to teaching and learning, such as a student-centred approach, was an important factor influencing school choice. While parents of at least three-quarters of students in Ireland selected teaching approach as an important criterion, the corresponding percentage across the OECD was just 42%.

Lower percentages of students in Ireland had parents who indicated that important or very important criteria were low costs; varied student background; foreign language instruction; geographical distance; financial aid; foreign exchanges; previous family experience of the school; and religious ethos. A significantly higher percentage of students in DEIS schools had parents who indicated that low costs and the availability of financial aid were important factors. While 54% of students in DEIS schools had parents who reported low costs as important or very important, the corresponding percentage in non-DEIS schools was 40%, similar to the OECD average of 42%. The percentage of students in DEIS schools whose parents indicated that financial aid was important or very important (43%) was similar to the OECD average of 40% and significantly above the percentage in non-DEIS schools (28%).

Table 5.2: Percentage of student's parents who thought the following criteria were 'important or very important' in choosing a school

	DEIS %	non-DEIS %	OECD %
There is a safe school environment	97	98	92
The school has a good reputation	94	96	90
Students in the school do well academically	91	92	81
The school has an active and pleasant school climate	89	91	89
The school offers particular courses/school subjects	84	83	81
The school has a particular approach to learning	80	75	42
Costs are low (e.g., fees, books, boarding costs)	<b>54</b>	40	42
The school has students from a range of nationalities	52	49	34
The school has a focus on foreign language instruction	47	51	64
The school is a short distance from home	45	47	58
The school has financial aid available e.g., loan, scholarship or grant	<b>43</b>	28	40
Other family members attended the school	39	40	29
School offers exchange programmes with schools in other countries	30	28	37
The school has a particular religious ethos	25	30	22

Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools

## Perceived school quality

Parents were asked to rate school quality in terms of their perceptions of teacher competency; standards of achievement; teacher instructional methods and curriculum content; the disciplinary atmosphere in the school; and the school's monitoring and reporting of student progress. Scores were combined to form an overall index of parents' perceived school quality (OECD Mean = 0 and SD = 1). Higher values on the index indicate that parents perceive their schools to be of better quality than on average across the OECD. There was no statistically significant difference between DEIS and non-DEIS schools on the mean scores of perceived school quality (Table 5.3).

Table 5.3: Mean scores for parents' perceived school quality

	Mean	SE
DEIS	0.19	(0.05)
non-DEIS	0.11	(0.03)

Differences between DEIS and non-DEIS schools are not statistically different

## Parental involvement in school-life

### Index of school policies for parental involvement

Parents were asked to indicate their level of agreement with statements such as ‘My child’s school offers parent education or family support programmes’; ‘My child’s school informs families about how to help students with homework and other school-related activities’; ‘My child’s school provides an inviting atmosphere for parents to get involved’; ‘My child’s school provides effective communication between the school and families’; and ‘My child’s school involves parents in the school’s decision-making process’. Scores were combined to form an index of school policies for parental involvement (OECD Mean = 0 and SD = 1). Positive values reflect parents’ perceptions that these school policies for parental involvement exist to a greater extent than the OECD average.

Table 5.4: Mean scores on the index of school policies for parental involvement (DEIS and non-DEIS schools)

	Mean	SE
DEIS	<b>0.36</b>	(0.03)
non-DEIS	0.10	(0.02)

Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools

Compared to students in non-DEIS schools, a higher percentage of students in DEIS schools had parents who agreed or strongly agreed that schools offered parent education (86% DEIS; 67% non-DEIS). Overall, there was a statistically significant difference between DEIS and non-DEIS schools regarding parents’ perceptions of school policies that encourage their involvement in school-life. The mean score in DEIS schools was significantly higher, indicating that parents of students in DEIS held more positive views that policies existed to support parental involvement.

### Schools’ perception of parental involvement in school-life

Principals were asked to estimate what percentage of student’s parents (on a sliding scale of 0-100%) participated in school-related activities in the previous school year as a measure of parental involvement.

Principals reported that about two-fifths of parents discussed their child’s progress on the initiative of one of their child’s teachers during the last school year (Table 5.5). This was less common in Ireland than on average across the OECD (57%). According to principals, about one-third of parents in Ireland (both DEIS and non-DEIS schools) initiated discussions with teachers about their child’s progress. This was lower than the OECD average of about two-fifths of parents.

Table 5.5: Percentages of students whose parents participated in various activities according to principal reports (DEIS, non-DEIS, and OECD)

	DEIS %	non-DEIS %	OECD %
Discussed their child's progress on the initiative of teacher	46	43	57
Discussed their child's progress with a teacher on parent's initiative	35	31	41
Volunteered in physical or extra-curricular activities (e.g., building maintenance, gardening, school play, sports or trip)	11	7	12
Participated in local school government (e.g., parent council or school management committee)	7	9	17

**Differences between DEIS and non-DEIS schools are not statistically different**

The percentage of parents who volunteered in DEIS schools (11%) for physical or extra-curricular activities (e.g., building maintenance, gardening, school play, sports, field trip) was very similar to the OECD average (12%) and marginally higher than in non-DEIS schools (7%). Parental involvement in local school government (e.g., parents' council or school management committee) was less common in Ireland than on average across the OECD. In DEIS schools, principals reported that just 7% of parents in DEIS schools had been involved in this activity in the last school year. The corresponding percentage in non-DEIS schools was 9%.

### Parents' perceptions of parental involvement in school-life

Parents reported on their involvement in ten school-related activities in the last academic year, indicating for each whether they had done the activity, not done it, or whether the activity was not supported by the school. Four of the items were worded in the same way as items on parental involvement presented to principals, allowing comparisons to be made between parent and principal responses.

According to parent reports, the most common activities for parents were attendance at school meetings and talking with teachers to discuss supporting learning at home. A very large majority of students in both DEIS (86%) and non-DEIS (88%) schools had parents who reported that they had attended a scheduled parent-teacher meeting (Table 5.6). About 60% of students in DEIS and non-DEIS schools had parents who indicated that they had talked with teachers about how to support homework and learning at home. Higher percentages of students in DEIS schools, compared to non-DEIS schools, had parents who reported initiating contact with teachers in order to discuss their child's progress or behaviour. While 46% of students in DEIS schools had parents who indicated initiating contact with teachers to discuss progress, the corresponding percentage in non-DEIS schools was 36%. These percentages are higher than the corresponding percentages reported by principals (Table 5.5).

Higher percentages of students in DEIS schools (45%), compared to non-DEIS schools (35%), had parents who indicated discussing progress at the request of the teacher (Table 5.6). On this item, parent and principal responses are quite similar thus there appears to be greater consistency in parent and principal perceptions of teacher-initiated contact as compared to parent-initiated contact. Not more than 10% of students in DEIS and non-DEIS schools had parents who reported participating in school governing activities or volunteering at school. There were no differences between DEIS and non-DEIS schools in terms of the percentages of parents engaged in volunteering or school governance.

**Table 5.6: Percentage of students' parents who participated in school-related activities**

	<b>DEIS %</b>	<b>non-DEIS %</b>
Attended a scheduled meeting or conference for parents	86	88
Talked about how to support learning at home and homework with my child's teachers	61	60
Discussed my child's progress with a teacher on my own initiative*	<b>46</b>	36
Discussed my child's behaviour with a teacher on my own initiative	<b>44</b>	32
Talked about my child's progress at the request of one of his/her teachers*	<b>45</b>	35
Shared ideas on parenting, family support, or understanding of my child's development with my child's teachers	32	30
Talked about my child's behaviour at the request of one of his/her teachers	<b>32</b>	22
Participated in the Board of Management or Parents' Association*	8	9
Volunteered in physical or extra-curricular activities*	9	10
Volunteered to support school activities	6	8

**\*Principal reports of the percentages of parents who engaged in these activities were also collected.**

**Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools**

### Parental perceptions about the extent their involvement is hindered by issues

Parents were asked to select which, from a list of factors, may have hindered their involvement in school-related activities over the past academic year. There were no significant differences between parents of DEIS and non-DEIS students on any of 11 statements related to factors hindering parental involvement in school-life and percentages in Ireland were broadly similar to OECD averages (Table 5.7). The most frequently reported issues for parents were securing time off work and inconvenient meetings times; the same pattern was observed on average across OECD countries.

Other hindrances included lack of knowledge by parents as to how to participate in school activities (17%). Parents of about one-in-ten students indicated that a barrier to participation was students not wanting their parents to participate. Lack of childcare to allow parents to be involved was also an issue. It should be noted that parents generally felt comfortable and welcomed by schools.

**Table 5.7: Percentages of parents who reported that their participation in school activities was hindered by issues**

	DEIS %	non-DEIS %	OECD %
I was not able to get off from work	27	24	34
The meeting times were inconvenient	23	20	33
I was not sure how I could participate in school activities	17	17	14
My child does not want me to participate	<b>14</b>	10	12
I had no one to take care of my child/children	<b>13</b>	10	13
I didn't think it was relevant to my child's development to participate	7	8	13
My language skills are poor	5	4	8
I had problems with transportation	4	3	6
I generally feel uncomfortable in a school	4	3	4
I felt unwelcome at my child's school	<b>2</b>	1	4
The route to school is unsafe	<1	1	6

Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools

## Parents' educational expectations and supports

### Parents' expectations of their child's qualifications

Parents were asked about their expectations for the highest educational qualification they expect their child to attain, with Junior Certificate representing the lowest level of qualification and university qualifications representing the highest.

Parental educational expectations for students in DEIS schools were lower than those for students in non-DEIS schools. Very small percentages of students in DEIS (8%) and non-DEIS schools (4%) had parents who indicated that they expect their child to leave school with either Leaving Certificate Applied or Leaving Certificate (General or Vocational) as their highest qualification. However, the percentage in DEIS schools is about twice that in non-DEIS schools. Similarly, about twice the percentage of students in DEIS schools (8%) compared to non-DEIS schools (4%) had parents who reported expecting their child to

leave formal education with an apprenticeship or Post-Leaving Certificate course (Table 5.8). Higher percentages of students in DEIS schools had parents who indicated that they expect their child to complete a third-level qualification, not to degree level. In DEIS schools, 29% of students are expected to leave education with a non-degree third-level qualification compared to 18% in non-DEIS schools (Table 5.8). Conversely, significantly higher percentages of students in non-DEIS schools (74%) had parents who expected their child to complete a university degree. The corresponding percentage in DEIS schools was 55%.

Table 5.8: Parents' expectations of child's highest qualification level (% of students)

Qualification	DEIS %	non-DEIS %
Junior Certificate	<1	<1
Leaving Cert. Applied	<b>3</b>	1
Leaving Cert. (General or Vocational)	<b>5</b>	2
An apprenticeship (e.g., electrician, plumber) or Post-Leaving Certificate course (e.g., computer course)	<b>8</b>	4
A third-level certificate or diploma, NOT to degree level (e.g., from an Institute of Technology)	<b>29</b>	18
A university degree (e.g., Bachelor's Degree) or post-graduate degree (e.g., Master's Degree, Doctoral Degree)	55	<b>74</b>

Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools

### Current parental support for learning at home

Parents were asked to indicate, for seven different kinds of home learning support, the types of support they provided to their child at home. These were: (1) Talking with their child about what they are reading; (2) going to a bookstore/library with their child; (3) discussing political or social issues; (4) helping their child with reading/homework; (5) spending time chatting with their child; (6) eating a main meal together around a table; and (7) discussing how well their child is doing at school. Very high percentages of students in both DEIS (77%) and non-DEIS (81%) had parents who indicated that they talk with their child, every day or almost every day. Similarly, high percentages of students in both contexts had parents who reported eating meals with their child every day or almost every day (DEIS 68%; non-DEIS 71%). About half of students (DEIS 55%; non-DEIS 55%) had parents who reported discussing with their child on a daily or almost daily basis how well the child is doing at school. Substantially lower percentages of parents in both contexts reported parents and children together discussing politics, going to bookshops or libraries, helping with reading or talking about reading. Responses to individual items were combined to form an index of current parental support (OECD Mean = 0 and SD = 1).

Table 5.9: Mean scores for current parental support for learning at home by DEIS and non-DEIS parents

	Mean	SE
DEIS	<b>-0.03</b>	(0.03)
non-DEIS	0.05	(0.01)

Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools

Students in DEIS schools had a significantly lower mean score on the index of current parental support than students in non-DEIS schools. Although the difference is statistically significant, mean scores in both DEIS and non-DEIS schools are very close to the OECD average and the difference between the two school contexts amounts to less than one-tenth of a standard deviation.

### Parents' emotional support

Parents were asked to respond to statements about the emotional support they provided to their child, including: 'I support my child's efforts and achievements at school'; 'I support my child when he/she is facing difficulties at school'; and, 'I encourage my child to be confident'. Over 70% of students in both DEIS and non-DEIS schools had parents who strongly agreed with each of these statements.

Table 5.10: Mean scores for parent's emotional support perceived by DEIS and non-DEIS parents

	Mean	SE
DEIS	0.16	(0.03)
non-DEIS	0.19	(0.02)

Differences between DEIS and non-DEIS schools are not statistically significant

Positive values on this index of parents' emotional support mean that parents reported greater levels of emotional support than the average parent across OECD countries. Very similar mean scores are observed in DEIS (0.16) and non-DEIS schools (0.19), indicating that parents in Ireland consider themselves to be generally supportive of their children.

## Chapter highlights

- Most families had a choice of post-primary schools in the locality. Parents of about four-fifths of students in DEIS and non-DEIS schools indicated that they had a choice of at least one other post-primary school.
- Very high percentages of students (90% and above) in both DEIS and non-DEIS schools had parents who indicated that *important* or *very important* criteria in choosing a school were: a safe school environment; a good reputation; students doing well academically; and, an active and pleasant school climate. About half of students in DEIS schools, compared to two-fifths in non-DEIS schools, had parents who reported that low costs were *important* or *very important* factors in selecting a school. The availability of financial aid (such as a school loan, scholarship or grant) was selected as an important or very important factor by 43% in DEIS schools and 28% in non-DEIS schools.

- Students in DEIS schools had a significantly higher mean score on the index of school policies for parental involvement. This scale was based on parents' responses to various items including the availability of parent education or family support programmes in the school; information on helping with homework and school activities; an inviting atmosphere in the school for parents; effective communication by the school; and parental involvement in decision-making.
- In both DEIS and non-DEIS schools, there was limited participation by parents in local school governance structures (e.g., the parents' council). Fewer than one-in-ten students in Ireland, compared to one-in-six on average internationally, had parents who participated in such activities.
- Attendance at parent-teacher meetings was reported to be high in Ireland, with parents of 86% of students in DEIS schools and 88% in non-DEIS schools indicating that they had attended.
- Reasons most commonly selected by parents in Ireland as barriers to greater school involvement were not being able to get time of work; inconvenient meeting times; parents being unsure how to participate; and, their child not wanting them to participate. Percentages of parents selecting each of these were very similar in DEIS and non-DEIS schools and broadly similar to the corresponding OECD averages, although inconvenient meeting times were perceived to be less of a barrier in Ireland than on average across the OECD.
- Three-quarters of students in non-DEIS schools, compared to just over half of students in DEIS schools, had parents who expect them to complete a university degree.
- Higher percentages of students in DEIS schools (29%) compared to non-DEIS schools (18%) were expected (by their parents) to complete a third-level qualification that is not at degree level (e.g., a certificate or diploma). It was more common for parents of students in DEIS schools (8%) compared to non-DEIS schools (4%) to expect their child's highest level of qualification to be an apprenticeship or the Leaving Certificate (DEIS 5%; non-DEIS 2%).
- Compared to students in non-DEIS schools, students in DEIS schools had a statistically significantly lower score on the index of parental support for learning at home. Although the difference between students in DEIS and non-DEIS schools was statistically significant, mean scores in both contexts were quite close to the OECD average.
- There was no significant difference between DEIS and non-DEIS schools on the index of parents' emotional support, with positive values on the index in both contexts demonstrating high levels of emotional support by parents in Ireland.

# Chapter 6: School diversity, practices, resources and climate

## Overview

PISA 2018 offers the opportunity to examine contextual, organisational, policy, and resourcing issues in schools. This chapter draws on responses to the PISA school and student questionnaires to examine differences between DEIS and non-DEIS schools in the characteristics of their students; the learning opportunities that schools offer to their students after regular school hours (e.g., additional lessons, support with homework, extracurricular activities); school practices to support students; the infrastructure and resources (human and material) within schools; and, aspects of the school climate.

## Student diversity and school supports

This section will consider the characteristics of the school and the school population including the social composition of the school's intake. Consideration is given to indicators of school organisation such as class size and student-teacher ratios in DEIS and non-DEIS schools and to the grouping of students according to their academic ability within schools.

### School profile of student needs

Principals were asked to estimate the percentages of Third Year students in their school who had the following characteristics: students whose first language is different from English or Irish; students with special educational needs (SEN); and students from socio-economically disadvantaged homes. It was possible for a student to belong to more than one of these categories.

Consistent with Chapter 4 (which provides the percentages of PISA students whose first language is other than English or Irish), there were no significant differences between DEIS (15%) and non-DEIS (11%) schools in principals' reports of the percentages of *all* students in the school with first languages other than English or Irish (Figure 6.1). In both contexts, principals reported that an average of about one-in-eight students had first languages other than English or Irish.

The percentage of students reported to have SEN in DEIS schools (23%) was significantly higher than in non-DEIS schools (14%), with about one-quarter of students in DEIS schools reported to have SEN (Figure 6.1). Principals in DEIS schools reported a significantly higher prevalence of students from socio-economically disadvantaged homes. While 59% of students in DEIS schools were considered to come from socio-economically disadvantaged homes, the corresponding percentage in non-DEIS schools was 22%.

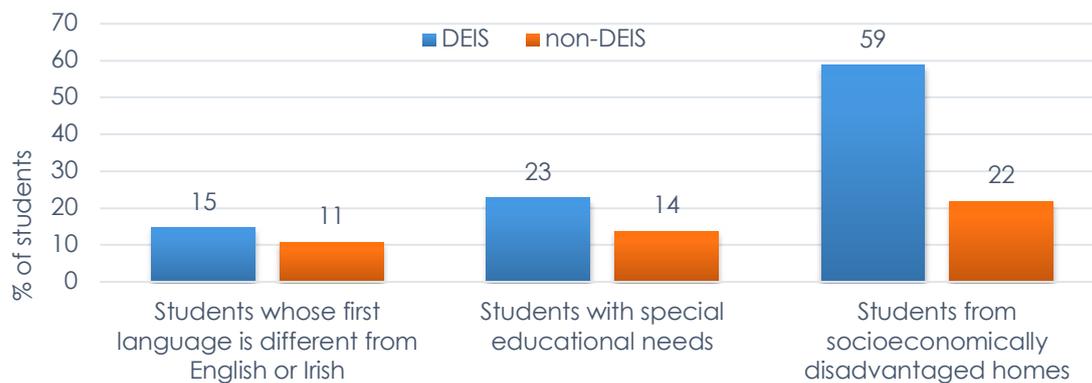


Figure 6.1: Principal reports of student home language, special educational needs, and socio-economically disadvantaged backgrounds (DEIS and non-DEIS schools)

### School support for English as an additional language (EAL)

Principals were asked to indicate how often their school offered a range of supports to students in Third Year whose first language was not English or Irish and how these students were integrated into mainstream classes. Table 6.1 shows the percentages of principals in DEIS and non-DEIS schools and on average across the OECD that responded 'Yes' to each of the statements regarding provision for EAL students.

Table 6.1: Types of school supports available for EAL (DEIS, non-DEIS, and OECD)

	DEIS %	non-DEIS %	OECD %
Attend regular classes and receive additional periods of instruction	70	65	58
Class size is reduced to cater for different needs	35	34	17
Before transferring to regular classes, these students attend a preparatory programme aimed at developing English skills	19	16	25
Students receive significant amounts of instruction in their first language aimed at developing proficiency in both languages	2	6	7
Before transferring to regular classes, these students receive some instruction in school subjects through their first language	0	<b>4</b>	9

Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools

The most frequently endorsed practice by principals in Ireland, and on average across the OECD, was the provision of additional periods of instruction for students. About two-thirds of students in Ireland were in schools where principals indicated that EAL students attend regular classes and receive additional periods of instruction. Reducing class size to cater to the different needs of students was comparatively more common in Ireland than on average across the OECD. While about 35% of students in Ireland, both in DEIS and non-DEIS schools, had principals who indicated that class sizes were reduced to cater for

students' needs, the corresponding OECD average was 17%. Practices which were much less commonly used in Ireland were providing instruction in their first language aimed at developing proficiency in both languages. Although not a widespread practice, principals of 4% of students in non-DEIS schools reported that they provided instruction in the students' first language before entry to regular classes; this was not offered in any DEIS school.

### Class size and Student-teacher ratio

School principals were asked about the average size of English classes in Third Year in their school. There were significantly lower numbers of students (approximately 2 students) per class in DEIS schools compared to non-DEIS schools. Across OECD countries, the average class size in disadvantaged schools was 24 students compared to 27 students in advantaged schools (OECD, 2019a).

Table 6.2: Average English class size (DEIS and non-DEIS schools)

	Mean number of students	SE
DEIS	<b>22.2</b>	0.61
non-DEIS	24.7	0.29

Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools

It should be noted that the average school size of DEIS schools was significantly lower than non-DEIS schools (492 students vs. 676 students respectively).

The student-teacher ratio was obtained by dividing the total number of students enrolled in the school by the total number of full-time equivalent teachers. Teachers referred to professional personnel directly involved in teaching students: classroom teachers, special education teachers and other teachers who work with students as a whole class in a classroom, in small groups in a resource room, or in one-to-one teaching inside or outside a regular classroom. There was a significantly more favourable ratio for students in DEIS schools, as on average there were 10.6 students for every teacher, compared with 13.5 students for every teacher in non-DEIS schools.

Table 6.3: Student-teacher ratio (DEIS and non-DEIS schools)

	Student-teacher ratio	SE
DEIS	<b>10.6</b>	0.27
non-DEIS	13.5	0.12

Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools

## Grouping of students

Principals were asked to give information on the grouping policies used by their school; i.e., to indicate whether students were allocated by ability into *different* classes and *within* classes. The grouping of students by ability into different classes for 'some subjects' was high at 92% in both DEIS and non-DEIS schools (Table 6.4). This was more common than across OECD countries generally; the OECD average was 35%. Grouping of students *within* classes was less frequent than grouping into *different* classes with approximately half of students in schools where the principal reported within class grouping for 'some subjects' (DEIS 54%; non-DEIS 45%); this was similar to the OECD average of 49%.

Table 6.4: Student grouping policies (DEIS, non-DEIS, and OECD %)

		DEIS %	non-DEIS %	OECD %
Students are grouped by ability into <i>different</i> classes	All subjects	-	1	8
	Some subjects	92	92	35
	Not for any	8	7	57
Students are grouped by ability <i>within</i> their classes	All subjects	2	6	5
	Some subjects	54	45	49
	Not for any	44	48	46

Differences between DEIS and non-DEIS schools are not statistically different

## School infrastructure and resources

PISA 2018 gathered school-level information on school infrastructure and resources, as these are relevant to teaching and learning. This section looks at staffing and educational resources including technology, school support with homework and study, and extracurricular activities.

### Availability of computers

Principals were asked to report the number of computers available at their school that were available to Third year students for educational purposes.<sup>8</sup> According to these reports, there was an average of just over 77 computers available for use by Third years in Irish schools participating in PISA 2018. The average number of computers in DEIS schools was 69 while the average in non-DEIS was 80. The higher numbers of computers in non-DEIS schools corresponds to the larger enrolment size of non-DEIS schools compared to DEIS. While non-DEIS schools had an average of 119 15-year-olds in Third year, DEIS schools had an average of 91 15-year-olds in Third year.

From the numbers of computers available and the total numbers of Third year students enrolled, PISA created an index of the availability of computers. This represents a ratio of the computers available to 15-year-olds for educational purposes to the number of students in the modal grade for 15-year olds (Third year in Ireland). A second index was calculated

<sup>8</sup> It has previously been noted that computers in Irish schools are commonly shared between classes (e.g., located in a central computer room). Therefore, all computers may be considered available for use by 15-year-olds which may present an inflated picture of computer resources available in Irish schools (Eivers, 2019).

as the ratio of the number of computers available to the number of these computers that were connected to the internet. Figure 6.2 presents mean scores for these two indices for DEIS and non-DEIS schools.

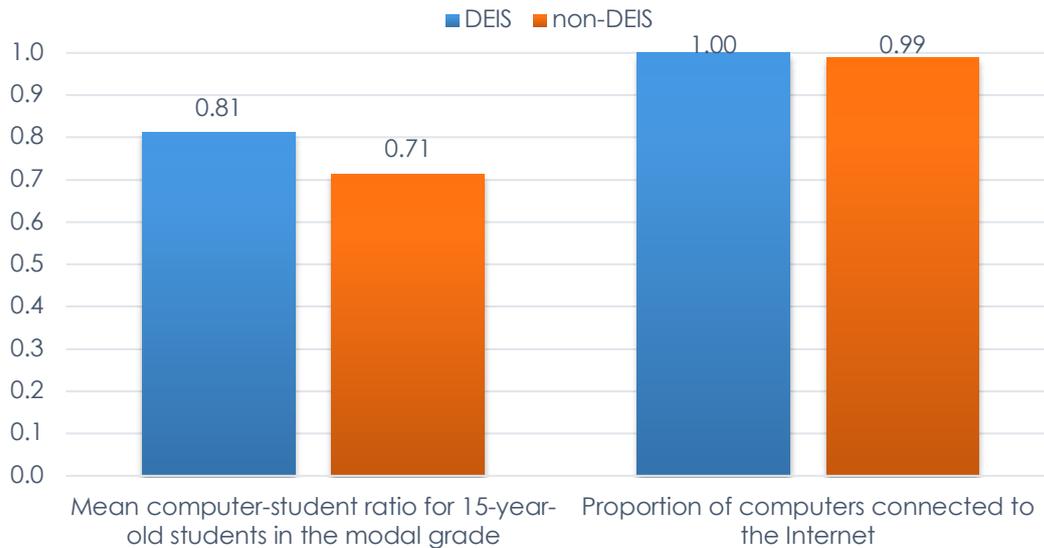


Figure 6.2: Computers at school (DEIS and non-DEIS schools)

There were no significant differences in the computer-student ratios across the school types with high levels of internet connectivity in both contexts. In Ireland, virtually all post-primary school computers have internet connection (Figure 6.2). On average across OECD countries, there is less than one computer for educational purposes available for each 15-year-old student at school; i.e., the computer-student ratio = 0.8 (OECD, 2020b). The computer-student ratios in Ireland are very similar to the OECD average with a ratio of 0.81 in DEIS schools and 0.71 in non-DEIS schools.

### School-provided study support

For each of three ways, principals were asked to indicate if their school used this approach to provide study support or help to students for completing homework and studying after school. The approaches were: peer-to-peer tutoring; staff help with homework; and, the provision of room(s) where the students can do their homework.

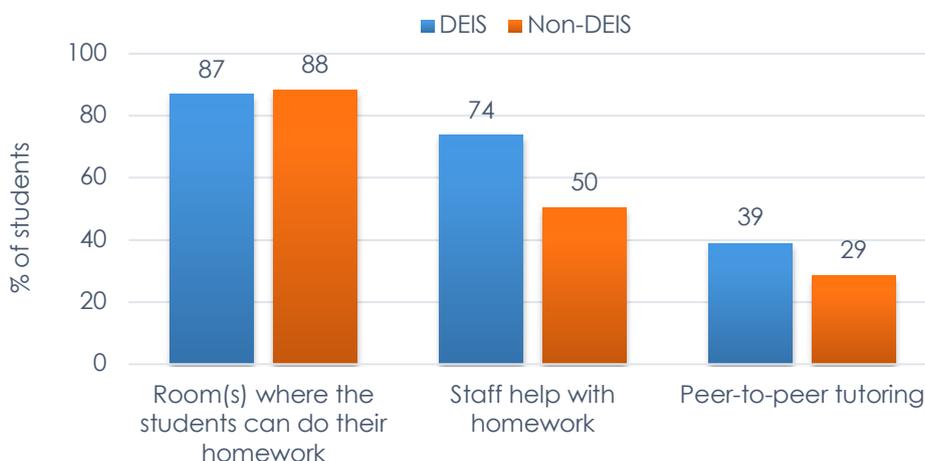


Figure 6.3: Study supports for 15-year-olds reported by principals (DEIS and non-DEIS schools)

According to principal reports, study rooms were offered by the vast majority of DEIS and non-DEIS schools; 86-88% of students were in schools where principals indicated that study rooms were available (Figure 6.3). On average across OECD countries in PISA 2018, three out of four students attended a school that provides a room where students can do their homework (OECD, 2020a).

Principals in DEIS schools were significantly more likely than their non-DEIS counterparts to indicate that staff helped with homework. While 74% of students in DEIS schools had principals who indicated that staff helped with homework, the corresponding percentage in non-DEIS schools was 51% (Figure 6.3). On average across OECD countries, 62% of students attended a school with this type of support (OECD, 2020a). Peer-to-peer tutoring was the least frequently offered support in Ireland, with principals of 29% of students in DEIS schools and 39% of students in non-DEIS schools indicating that this support was offered (Figure 6.3). On average across OECD countries, almost half of all students attended a school that provides this form of study help (OECD, 2020a).

### School resources: Shortage of educational staff and materials

School principals were asked eight items to gather their views on factors hindering instruction at school. Four of the eight items were combined by the OECD to create an index of staff shortages, and the remaining four items were combined to create an index of shortage of educational materials. Positive values on these two indices of resources indicate greater shortages while negative values indicate lesser shortages (the OECD average on both indices is about 0).

Table 6.5: Shortage of educational staff and materials (DEIS and non-DEIS schools)

	<b>Shortage of Educational Staff Mean (SE)</b>	<b>Shortage of Educational Materials Mean (SE)</b>
DEIS	0.27 (0.16)	0.44 (0.18)
non-DEIS	0.03 (0.08)	0.06 (0.09)

**Differences between DEIS and non-DEIS schools are not statistically different**

There were no statistically significant differences between the mean scores on either of these indices in DEIS and non-DEIS schools. However, it is notable that on both the index of shortage of educational staff and the index of shortage of educational materials, the scores in DEIS schools are somewhat higher than those in non-DEIS schools but given the comparatively large standard errors, differences between DEIS and non-DEIS schools are not statistically significant.

Turning to comparisons with the OECD average, the mean scores for DEIS schools on both the index of shortage of educational staff and the index of shortage of educational materials were significantly above the corresponding OECD averages. The mean scores in non-DEIS schools were not significantly different to the OECD averages. As the mean scores in DEIS schools on these indices are higher than the corresponding OECD averages and given the somewhat higher mean scores in DEIS schools compared to non-DEIS schools (although these differences are not statistically significant), the individual items contributing to each of the scales are explored. Table 6.6 shows the percentages of students attending DEIS and

non-DEIS schools where teaching was hindered to 'some extent or a lot' (in the principal's opinion) by a shortage of each resource.

Looking at staff resources, students in DEIS schools were more likely to have principals who reported a lack of teaching staff (55%) and inadequately qualified staff (24%) than their counterparts in non-DEIS schools (41% and 7%, respectively).<sup>9</sup> These percentages for DEIS schools were above the corresponding OECD averages. On average across the OECD, 27% of students had principals who reported that a lack of teaching staff hinders instruction while 15% had principals who reported that inadequately qualified staff hindered instruction. Problems associated with a lack of support personnel appear to be broadly similar in DEIS and non-DEIS schools with greater similarity in the percentages for these; percentages on these items in Ireland are also close to the corresponding OECD averages.

Turning to educational resources, higher percentages of students in DEIS schools, compared to non-DEIS schools, had principals who indicated that the specified resource hindered the school's capacity to provide teaching. For example, while a lack of educational material was indicated to hinder instruction 'to some extent' or 'a lot' by the principals of 43% of students in DEIS schools, the corresponding figure in non-DEIS schools was 27%; the OECD average was 28%. Physical infrastructure was identified as a problem for very similar percentages of students in DEIS (55%) and non-DEIS (41%) schools; the OECD average was lower at 33%.

**Table 6.6: Percentages of students whose principals reported that their school's capacity to provide teaching was hindered 'to some extent' or 'a lot' by each resource shortage (DEIS, non-DEIS, and OECD)**

<i>Staff resources</i>	<b>DEIS %</b>	<b>non-DEIS %</b>	<b>OECD %</b>
A lack of teaching staff	55	41	27
Inadequate or poorly qualified teaching staff	<b>24</b>	7	15
A lack of instructional support personnel	34	24	33
Inadequate/poorly qualified instructional support personnel	18	15	17
<i>Educational resources</i>			
A lack of educational material	43	27	28
Inadequate or poor quality educational material	30	26	25
A lack of physical infrastructure	55	41	33
Inadequate or poor quality physical infrastructure	48	38	33

**Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools**

<sup>9</sup> It should be noted that principals separately reported the total number of teachers in their school and the numbers of teachers who were fully certified; held an Honours Bachelor's degree (or equivalent); held a Master's degree (or equivalent); or held a Doctoral degree. Average numbers with each type of qualification did not differ significantly between DEIS and non-DEIS schools.

### School activities

Principals were asked to provide information about the extracurricular activities undertaken by the school with students throughout the academic year. Sporting activities were reported to be available across all DEIS and non-DEIS schools, with principals of all students in both contexts indicating that sport was available in the school (Table 6.7). Principals reported widespread provision of activities such as lectures or seminars (e.g., by guest speakers), musical activities, competitions in mathematics, and art activities. Debating was comparatively common in Ireland, with 62% of students in DEIS schools and 74% of students in non-DEIS having access to debating activities. Debating was more common in Ireland than on average across OECD countries, with an international average of 40%.

Conversely, volunteering was less common in Ireland than on average across the OECD, with little difference between DEIS (58%) and non-DEIS (51%) schools. Similarly, school plays or musicals and the production of a school yearbook was much less common in Ireland than on average internationally. The only significant difference which emerged between DEIS and non-DEIS schools in the range of activities offered was in the production of a school yearbook, newspaper or magazine. Principals in non-DEIS schools were significantly more likely to indicate that this activity was offered, although even in non-DEIS schools (29%), the percentage was well below the OECD average (50%). The average number of 'creative' extra-curricular activities offered by the school did not differ significantly between DEIS and non-DEIS schools (DEIS = 1.79; non-DEIS 1.53).

**Table 6.7: Percentages of students whose principals indicated school provision of various extra-curricular activities (with Third years) (DEIS and non-DEIS schools)**

<i>Activities</i>	<b>DEIS %</b>	<b>non-DEIS %</b>	<b>OECD %</b>
Sporting team or sporting activities	100	100	91
Lectures and/or seminars	97	92	74
Band, orchestra or choir	77	63	63
Mathematics competitions (e.g., Maths Olympics)*	73	75	-
Art club or art activities	69	63	66
Debating club or debating activities	62	74	40
Volunteering or service activities	58	51	74
Book club	58	47	37
Collaboration with local libraries	53	44	49
School play or school musical	34	29	60
Collaboration with local newspapers	16	17	27
School yearbook, newspaper or magazine	14	<b>29</b>	50

\*Administered in Ireland only – no OECD average available.

Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools

## School attendance and climate

This section examines some of the PISA 2018 measures of school climate, including truancy, student behaviour and disciplinary climate. Principal reports of teacher and student behaviour affecting learning in the school is examined. The student sense of belonging to school is also included.

### Absenteeism, truancy, and lateness

Students reported the the number of times (never, one or two times, three or four times, five or more times) they had *skipped some classes*, the number of times they had *skipped a whole day* of school, and the number of times they had arrived *late for school* during the two weeks of school prior to the PISA 2018 assessment.<sup>10</sup> The percentages of students who reported that they had skipped class, whole days, and had arrived late at least once in the previous two weeks are shown in Table 6.8.

Approximately 1-in-4 students had skipped class in DEIS (26%) and non-DEIS schools (26%) which was similar to the OECD average of 27%. Truancy rates (i.e., skipping a whole day of school) in Ireland were higher than on average across the OECD. In DEIS schools, almost one-third of students indicated that they had skipped a whole day of school in the past two weeks. About 30% of students in non-DEIS schools had skipped a whole day of school and the OECD average for this was 21%.

**Table 6.8: Percentages of students who skipped some classes, skipped a whole school day, or arrived late for school ‘at least once’ in the past two weeks (DEIS, non-DEIS, and OECD)**

	<b>DEIS</b> %	<b>non-DEIS</b> %	<b>OECD</b> %
Skipped some classes	26	26	27
Skipped a whole day of school	30	28	21
Arrived late for school	<b>36</b>	30	48

**Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools**

Arriving late for school was somewhat more prevalent than skipping classes or whole days. Almost two-fifths of students in DEIS schools, and nearly one-third in non-DEIS schools, indicated that they had arrived late for school at least once in the past two weeks. The percentages in Ireland were lower than on average across OECD countries where close to half of students had arrived late for school at least once in the two weeks prior to the PISA test.

There were no gender differences in reported truancy or lateness in the DEIS context. The percentages of male and female students in DEIS schools who skipped classes, skipped whole days or who arrived late did not differ significantly. In non-DEIS schools, significantly higher percentages of boys reported skipping classes or whole days on one or more occasions. However, girls were significantly more likely to report having been late for school.

<sup>10</sup> The PISA questions do not distinguish between authorised and unauthorised absences.

For a series of interventions, principals were asked to report on whether or not their school had such an intervention in place to improve student attendance/punctuality (Table 6.9). According to these reports, there was almost universal monitoring and evaluation of attendance records. Similarly, all students were in schools where principals reported referral to support services when persistent problems arose. Principals in DEIS schools were more likely to report having a student attendance policy in place. While 98% of students in DEIS schools had a principal who indicated that the school implemented an attendance policy,

the corresponding percentage in non-DEIS schools was 89%. Rewards for good attendance/punctuality were reported to be more widely used in DEIS compared to non-DEIS schools. While all students in DEIS schools had principals who indicated that such systems were in place, the corresponding percentage (76%) in non-DEIS schools was significantly lower.

A higher percentage of students in DEIS schools (99%) compared to non-DEIS (81%) had principals who reported that the school used a reintegration process after periods of longer student absence.

**Table 6.9: Percentages of principals who reported interventions to improve student attendance and punctuality (DEIS and non-DEIS schools)**

<b>School interventions to improve student attendance/punctuality</b>	<b>DEIS %</b>	<b>non-DEIS %</b>
Implemented student attendance policy	<b>98</b>	89
Sanctions for poor attendance/punctuality	75	80
Rewards for good attendance/punctuality	<b>100</b>	76
Monitoring and evaluation of attendance records	100	99
Monitoring of internal truancy (e.g., attending registration & then skipping class)	91	99
Follow up with parents if student is absent/late (e.g., same day call to parents)	92	94
Referral to support services (e.g., Educational Welfare Services) for persistent attendance/punctuality problems	100	100
Reintegration process after longer student absence	<b>99</b>	81
Developing a culture of attendance in school and community (e.g., newsletters)	87	80

**Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools**

### Disciplinary climate

Students were asked about the disciplinary climate in their English classes and to report how often each of five types of disruption occurred. The percentages of students who reported disruption in 'most or every' English class is shown in Table 6.10.

The most frequently occurring disruption according to students in Ireland was noise and disorder. Two-fifths of students in DEIS schools and one-third in non-DEIS schools reported that noise and disorder disrupted most or every English lesson. The corresponding OECD average was 31%. Students not listening to the teacher was a common disruption according to students in DEIS schools, with 38% of students (compared to 31% in non-DEIS schools) indicating that it occurred in most or every English lesson. While all five types of disruption were more frequent in DEIS schools than in non-DEIS schools, differences are comparatively small and percentages for DEIS schools are typically similar to the corresponding OECD averages.

Table 6.10: Percentages of students indicating that various types of disruption occurred in 'most or every' English lesson (DEIS, non-DEIS, and OECD)

	DEIS %	non-DEIS %	OECD %
There is noise and disorder	<b>40</b>	33	32
Students don't listen to what the teacher says	<b>38</b>	31	30
The teacher has to wait a long time for students to settle down	<b>30</b>	24	26
Students don't start working for a long time after lesson begins	<b>27</b>	20	24
Students cannot work well	<b>20</b>	13	19

Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools

### Teacher and student behaviour affecting school climate

School principals were asked to indicate the extent to which some teacher and student behaviours impacted on school climate and hindered student learning. Items included: 'Teachers not meeting individual students' needs' and 'Teacher absenteeism'. Items were collated to create the index of teacher behaviour hindering learning. An index of student behaviour hindering learning was based on items such as 'Unauthorised student absence from school' and 'Students not being attentive'.

Positive index values reflect a higher perceived hindrance while low (negative) values indicated lower perceived hindrance. (OECD, 2019d). In order to further understand teacher and student behaviours that principals consider to impact on learning each of the individual statements are also considered. The percentages of students in schools where principals indicated that particular behaviours hinder learning to 'some extent or a lot' are presented.

### Teacher behaviour

Perceptions of teacher-related behaviours hindering learning did not differ significantly between DEIS and non-DEIS schools; in Ireland, values on this index were about one-quarter to one-third above the OECD mean (Table 6.11).

Table 6.11: Means score (SE) on the index of teacher-related behaviour hindering learning (DEIS and non-DEIS schools)

	<b>Teacher behaviour hindering learning Mean (SE)</b>
DEIS	0.25 (0.13)
non-DEIS	0.31 (0.07)

**Differences between DEIS and non-DEIS schools are not statistically different**

According to principals, the most common hindrance to learning arising from teacher behaviour was teachers not meeting individual students' needs (34% in DEIS schools; 31% in non-DEIS schools). This was also the most common problem on average across the OECD, with 30% of students on average internationally in schools where the principal reported that learning was hindered 'a lot or to some extent' by this issue (Table 6.12).

Table 6.12: Teacher behaviour hindering learning (DEIS, non-DEIS, and OECD)

<b>Percentage of students in school where the principal reported that student learning is hindered to 'some extent or a lot' by the following:</b>	<b>DEIS %</b>	<b>non-DEIS %</b>	<b>OECD %</b>
Teachers not meeting individual students' needs	34	31	30
Teacher absenteeism	30	16	18
Staff resisting change	26	31	29
Teachers not being well prepared for classes	13	14	13
Teachers being too strict with students	10	9	12

**Differences between DEIS and non-DEIS schools are not statistically different**

Turning to teacher absenteeism, there is a notable difference between DEIS and non-DEIS schools. While the percentage in non-DEIS schools (16%) is similar to the OECD average (18%); the percentage in DEIS schools is considerably higher (30%).

For 26% to 31% of students in Ireland and on average across the OECD, principals identified staff resisting change as an issue that hindered learning to 'some extent or a lot'. A lack of teacher preparation or teachers being too strict with students were less commonly identified as problems, with percentages for DEIS and non-DEIS schools similar to the corresponding OECD averages.

### Student behaviour

The mean score for principals' perceptions of student-related behaviours hindering learning was significantly higher in DEIS schools compared to non-DEIS schools, with a difference of about half a standard deviation between the two. The mean score in DEIS schools for student behaviour hindering learning was also half a standard deviation above the OECD average.

Table 6.13: Means score (SE) on the index of student-related behaviour hindering learning (DEIS and non-DEIS schools)

	<b>Student behaviour hindering learning Mean (SE)</b>
DEIS	<b>0.50</b> (0.13)
non-DEIS	0.02 (0.06)

Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools

Turning to the components of the index measuring student behaviour that hinders learning, principals in Ireland were most likely to indicate that unauthorised student absence hinders learning to 'some extent or a lot'. Principals of over three-quarters of students in DEIS schools (77%) reported that unauthorised student absence was a hindrance to learning. This is higher than in non-DEIS schools (51%) and well above the OECD average of 38% (Table 6.14).

Table 6.14: Student behaviour hindering learning (DEIS, non-DEIS, and OECD)

<b>Percentage of students in school where the principal reported that student learning is hindered to 'some extent' or 'a lot' by the following:</b>	<b>DEIS %</b>	<b>non-DEIS %</b>	<b>OECD %</b>
Unauthorised student absence from school	<b>77</b>	51	38
Students not being attentive	<b>67</b>	34	59
Students skipping classes	<b>38</b>	17	34
Student use of alcohol or illegal drugs	<b>22</b>	7	10
Students lacking respect for teachers	<b>21</b>	4	22
Students intimidating or bullying other students	<b>20</b>	6	12

Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools

The problem of students not being attentive appears to be much higher in DEIS than non-DEIS schools. While 67% of students were in DEIS schools where the principal indicated that students not being attentive hindered learning to some extent or a lot, the corresponding figure for non-DEIS schools was 34%. The OECD average for this was 59%.

About one-fifth of students in DEIS schools were in schools where the principal indicated that hindrances to learning were caused by student use of alcohol or illegal drugs, students lacking respect for teachers, and students intimidating or bullying others. Percentages on these items are considerably higher in DEIS schools than in non-DEIS schools, with non-DEIS schools well below the corresponding OECD averages for each of these.

## Sense of belonging

Students were asked a series of questions about their sense of belonging to school. They were asked to what extent they agreed with items such as 'I feel like I belong at school' and 'I feel awkward and out of place in my school'; 'Other students seem to like me'; and 'I feel lonely at school'. Responses were combined to create an index of sense of belonging; the OECD average is 0 and standard deviation is 1. Positive values reflect a greater sense of belonging.

Table 6.15: Index of sense of belonging (DEIS and non-DEIS schools)

	<b>Sense of belonging to school Mean (SE)</b>
DEIS	-0.16 (0.03)
non-DEIS	-0.15 (0.01)

**Differences between DEIS and non-DEIS schools are not statistically different**

Students in both DEIS and non-DEIS schools had mean scores below the OECD average (OECD, 2019d) in their sense of belonging to school. There were no significant differences in the overall sense of belonging between students in DEIS and non-DEIS schools (Table 6.15).

## Chapter highlights

- According to school principals, almost a quarter of students in DEIS schools had SEN and three-fifths came from socio-economically disadvantaged homes. In non-DEIS schools, one-seventh of students reportedly had SEN, and one-fifth came from socio-economically disadvantaged homes.
- Similar percentages of students in DEIS (15%) and non-DEIS schools (11%) were reported by principals to have first languages other than English or Irish.
- The most commonly available school support for EAL students in Ireland and internationally was reported to be additional periods of instruction in addition to regular classes. Principals of about two-thirds of students in DEIS and non-DEIS schools (and three-fifths on average across the OECD) indicated that this type of support was provided in their school. Principals of about one-third of students in DEIS and non-DEIS schools (and one-sixth on average across the OECD) indicated that class size was reduced to cater for the needs of EAL students.
- Based on principal reports, the average size of Third year English classes was significantly smaller in DEIS schools than in non-DEIS schools. DEIS schools had an average of just over 22 students per English class; non-DEIS schools had almost 25 students per class. The average enrolment size of DEIS schools (492 students) was also significantly lower than that of non-DEIS schools (676 students). DEIS schools had a significantly lower student-teacher ratio (10.6) than non-DEIS schools (13.5).
- Ability grouping for some subjects was much more common in Ireland than on average across the OECD. While 92% of students in DEIS and non-DEIS schools were in schools where principals reported that students were grouped by ability into different classes for some subjects, the corresponding OECD average was just 35%. About half of students in DEIS (54%), non-DEIS (45%) and on average across the OECD (49%) were in schools where principals reported that students were grouped by ability within classes for some subjects.

- There were no significant differences in the computer-student ratios between DEIS (0.81) and non-DEIS schools (0.71).
- Study rooms where students could do homework were reported by principals to be offered by the vast majority of DEIS and non-DEIS schools with almost 90% of students in both contexts reported to have access to these. Students in DEIS schools (74%) were more likely than students non-DEIS schools (51%) to have access to staff for study support or help with homework.
- There was no significant difference between DEIS and non-DEIS schools on overall indices measuring shortage of educational staff or shortage of educational materials. However, principals of 55% of students in DEIS schools, compared to 41% in non-DEIS schools and 27% on average across the OECD, indicated that a lack of teaching staff hindered ('to some extent' or 'a lot') the school's capacity to provide teaching. Having inadequately qualified staff was considered a hindrance by principals of 24% of students in DEIS schools, 7% in non-DEIS schools and 15% on average across the OECD. (Principals' reports may have been influenced by the perceived adequacy of teacher-student ratios in the disadvantaged context, availability of substitute teachers, and availability of teachers with adequate experience of working in a DEIS school).
- Inadequacies with the physical infrastructure (e.g., building, grounds, heating/cooling, lighting and acoustic systems) were reported by principals of about half of DEIS students in PISA 2018. In non-DEIS schools, about two-fifths of principals identified this issue as a hindrance to teaching. A lack of educational material was considered to hinder teaching 'to some extent' or 'a lot' by principals of two-fifths of students in DEIS schools, over one-quarter of students in non-DEIS schools and over one-quarter on average across the OECD.
- According to principals' reports, the provision of extracurricular activities was very similar between DEIS and non-DEIS schools. All students in both DEIS and non-DEIS schools were reported to have access to extracurricular sporting activities and three-fifths or more were reported to have access to lectures or seminars, music, mathematics competitions, art, or debating.
- There was little difference between DEIS and non-DEIS schools in the extent to which students reported skipping classes or whole days and percentages were broadly comparable with the corresponding OECD averages. About one-in-four students indicated that they had skipped class in DEIS (26%) and non-DEIS schools (26%) in the past two weeks (OECD average 27%). Slightly higher percentages in Ireland (DEIS 30%; non-DEIS 28%) had skipped a whole day (OECD average 21%). About one-third of students in Ireland had arrived late compared to almost half across the OECD.
- Students in DEIS schools were more likely than their non-DEIS counterparts to have principals who reported that the school had a student attendance policy in place. Also, higher percentages of students in DEIS schools compared to non-DEIS schools had principals who reported that the school used rewards to motivate students to attend and to arrive on time. Principals in DEIS schools were also more likely to report having a reintegration system after periods of prolonged absences.
- Principals' perceptions of teacher-related behaviours hindering learning did not differ significantly between DEIS and non-DEIS schools; both were marginally above the OECD mean. Examining the individual items that comprised the overall scale, a higher percentage of students in DEIS schools (30%) than non-DEIS schools (16%) had principals who indicated that teacher absenteeism hindered student learning.
- Principals in DEIS schools were more likely than those in non-DEIS schools to indicate that aspects of student behaviour hindered learning. Over three-quarters of students

in DEIS schools (compared to half in non-DEIS schools and over one-third on average across the OECD) had principals who reported that unauthorised student absence hindered learning. Students not being attentive (DEIS 67%; non-DEIS 34%; OECD 59%) was deemed a widespread hindrance in DEIS schools. Principals of about one-fifth of students in DEIS schools identified student use of alcohol and drugs, students lacking respect for teachers, and bullying as hindrances to learning. In non-DEIS schools, principals of just one-in-twenty students identified these are hindrances to learning.

- Students' perceptions of school belonging did not differ significantly between students in DEIS and non-DEIS schools but mean scores in both were below the corresponding OECD average.

# Chapter 7: Student wellbeing and attitudes

This chapter examines a number of student wellbeing and attitudinal outcomes as measured in PISA 2018. The focus is on PISA indices measuring individual wellbeing and outcomes relevant to Junior Cycle key skills of setting and achieving goals and demonstrating positive attitudes to learning. Given the importance of peer relationships for student wellbeing, findings regarding bullying are also examined. The chapter concludes with some findings from the PISA school questionnaire regarding school policies to support student wellbeing.

## PISA measurement of student wellbeing

PISA views student wellbeing as a multi-dimensional construct, comprising both objective, material components and subjective, psychological facets. PISA recognises three main dimensions of wellbeing in addition to students' perceived quality of life as a whole. These are *self* (health; education and skills; psychological functioning); *school environment* (social connections; schoolwork); and *out-of-school environment* (social connections; material conditions; and, leisure time). The PISA wellbeing framework indicates that these domains can be measured by objective or subjective indicators (OECD, 2019b). A variety of objective and subjective indicators were included in the PISA 2018 questionnaire to examine wellbeing across the three dimensions. This chapter draws on data from the Educational Career Questionnaire (ECQ), Wellbeing Questionnaire, and School Questionnaire. In addition to the international questions, in Ireland, a national question was included in PISA 2018 asking students about sources of pressure, exam stress and test anxiety.

## Outcomes associated with general student wellbeing

This section examines similarities and differences in the responses of students in DEIS and non-DEIS schools to items examining sense of meaning in life; affective wellbeing; self-efficacy; and fear or failure.

### Eudaemonia – Sense of meaning in life

Eudaemonia is defined as 'a sense of meaning and purpose in life, which can increase one's sense of belonging' (OECD, 2019b, p. 230). In PISA 2018 students were asked to indicate the extent to which they agree with the following statements: 'My life has clear meaning or purpose'; 'I have discovered a satisfactory meaning in life'; and, 'I have a clear sense of what gives meaning to my life'. Responses to the three statements were combined to form the index of meaning in life. Positive values in this index show greater meaning in life than the average student across OECD countries (OECD, 2019d).

In Ireland, the percentages of students who agreed or strongly agreed with each of these were 60%, 53% and 60%, respectively, compared to the corresponding OECD averages of 68%, 62% and 66%. Substantial cross-country differences were noted with 90% or more

of students in Albania and Indonesia agreeing or strongly agreeing that 'My life has clear meaning or purpose'. Along with the Czech Republic, Japan, Macao (China), Sweden and the United Kingdom, Ireland is one of the countries where a lower percentage of students agreed or strongly agreed with this statement (OECD, 2019d). Across countries, differences in students' reported eudaemonia across to socioeconomic status and immigrant background groups were less pronounced than those related to gender (OECD, 2019d). In light of these international findings, it is not surprising that there was no statistically significant difference between the mean scores in DEIS and non-DEIS schools on overall meaning in life.

### Students' emotions and affective wellbeing

For the purposes of measuring affective wellbeing, PISA 2018 asked students to indicate how frequently ('never', 'rarely', 'sometimes', 'always') they felt happy, lively, proud, joyful, cheerful, scared, miserable, afraid and sad. Responses to items asking about three of the positive feelings - happy, joyful and cheerful - were combined to form an index of positive feelings. Positive values on this index mean that the student reported more positive feelings than the average student across OECD countries (OECD, 2019d).

McKeown et al. (2019) report that just over 45% of students in Ireland reported ('always') feeling happy all of the time; 36% reported 'always' feeling lively; and, 15% indicated that they were 'always' proud. These are similar to the averages across OECD countries (41%, 33% and 19% respectively). Low percentages of students in Ireland reported 'always' having negative emotions. Just 5% reported 'always' feeling sad. About 3% of students in Ireland were 'always' afraid; the same percentage indicated being 'always' miserable. The percentages in Ireland were lower than on average across the OECD (6.5%, 10.3%, and 5.5%, respectively).

Comparing DEIS and non-DEIS schools, there was little difference between the two in the percentages of students reporting 'always' feeling certain emotions and there was no significant difference between the mean score for overall positive feelings in the two contexts. While 45.3% of students in non-DEIS schools indicated that they were 'always' happy, the corresponding percentage in DEIS schools was 45.1%. Similar percentages in DEIS schools (18.5%) and non-DEIS schools (14%) reported 'always' feeling proud. Very low percentages of students (3% in non-DEIS and 2.3% in DEIS) reported 'always' feeling afraid while just 4.9% of non-DEIS students and 5.3% of DEIS students reported 'always' feeling sad.

### Self-efficacy

Students in PISA 2018 were asked to report their level of agreement with the following statements: 'I usually manage one way or another', 'I feel proud that I have accomplished things'; 'I feel that I can handle many things at a time'; 'My belief in myself gets me through hard times'; and, 'When I'm in a difficult situation, I can usually find my way out of it'. The PISA 2018 index of self-efficacy was created by combining responses on these five statements. Positive values on this index mean that the student reported higher self-efficacy than the average student across OECD countries (OECD, 2019d). This index can be interpreted as a measure of students' resilience self-beliefs, in contrast to earlier cycles of PISA which measured self-efficacy in mathematics (OECD, 2013) or in science (OECD, 2016b).

The percentages of students in Ireland who agreed or strongly agreed with these statements ranged between 66% (for 'My belief in myself gets me through hard times') and 94% (for

'I usually manage one way or another'). On average across OECD countries, percentages ranged from 70% (for 'I feel that I can handle many things at a time') to 89% (for 'I usually manage one way or another') (OECD, 2019d). In every school system, except Italy and the Netherlands, socio-economically advantaged students reported higher levels of self-efficacy/self-belief than their disadvantaged counterparts. International findings show the same pattern in Ireland; i.e., students from socio-economically advantaged backgrounds (those in the top quarter nationally on ESCS) had significantly higher self-efficacy than those from socio-economically disadvantaged backgrounds (those in the bottom quarter on ESCS); and female students had significantly lower levels of self-efficacy than male students. In 12 countries, including Ireland, immigrant students had significantly higher self-efficacy than non-immigrant students (OECD, 2019d). Although the difference between immigrant students and non-immigrants in Ireland is statistically significant, it is small (about one-tenth of a standard deviation).

Although international findings show a statistically significant difference in self-efficacy between Irish students in the top and bottom quartiles of ESCS, national analyses indicate that there is no statistically significant difference between DEIS and non-DEIS schools in mean self-efficacy. It is likely that this may relate to the OECD's finding of very low between-school variation in the index of self-efficacy (OECD, 2019d). On average, just 2% of the variation in self-efficacy lies between schools; therefore, the vast majority of variance is between students, within schools.

### General fear of failure

According to the OECD (OECD, 2019b), fear of failure represents "the tendency to avoid mistakes because they may be regarded as shameful..." (p. 188). It suggests that fear of failure may be more predictive of cognitive achievement in real-life situations than test anxiety (OECD, 2019e, p. 231). Students' fear of failure can lead them to be self-protective and to avoid challenging situations and opportunities that are essential for their development and learning (OECD, 2019e). Therefore, it is suggested that top learners tend to be high in work mastery and low in fear of failure (OECD, 2019e). However, cultural differences in response style complicate the interpretation of this relationship: findings from PISA 2018 show that students in many Asian countries expressed the greatest fear of failure, while students in many European countries expressed the least.

International findings also show that female students expressed greater fear of failure than male students in almost every education system. Also, in general, students who expressed a greater fear of failure scored higher in reading and reported less satisfaction with life than students expressing less concern about failing, after accounting for student and school socio-economic status (OECD, 2019d). An index of fear of failure was created based on students' reported levels of agreement three statements: 'When I am failing, I worry about what others think of me'; 'When I am failing, I am afraid that I might not have enough talent'; and, 'When I am failing, this makes me doubt my plans for the future'. Positive values in this index mean that the student expressed a greater fear of failure than did the average student across OECD countries (OECD, 2019d). On average across OECD countries, about 55% of students 'agreed' or 'strongly agreed' with each of these statements. In Ireland, nearly two-thirds of students 'agreed' or 'strongly agreed' with each (64%, 63% and 65%, respectively). Students in non-DEIS schools (mean score = 0.24) had a significantly higher mean score on fear of failure than students in DEIS schools (mean score = 0.09). In both DEIS and non-DEIS schools, female students had a significantly higher mean score than their

male counterparts. These findings are consistent with international trends of higher fear of failure amongst female students and higher fear of failure amongst students in advantaged schools (OECD, 2019d).

## Wellbeing in relationships

Relationships & partnerships is one of the four key areas for wellbeing promotion in schools identified in the Wellbeing Policy Statement and Framework for Practice (DES, 2018a). Peer relationships represent an important aspect of this area. In this section, student reports on bullying are examined.

### Bullying

Students in PISA were asked to indicate the frequency with which they experienced certain bullying behaviours in the past 12 months. Table 7.1 shows the percentages of students who indicated that they experienced certain types of bullying 'a few times a month' or more frequently in DEIS and non-DEIS schools, and on average across the OECD. According to students' reports, the most frequently experienced type of bullying across the OECD was students making fun of each other. For each of the types of bullying listed in Table 7.1, percentages in DEIS and non-DEIS schools are very similar. Given the very similar percentages in DEIS and non-DEIS schools, it is not surprising that there was no significant difference between the two contexts in the mean score on the overall index of bullying.

**Table 7.1: Percentage of students who indicated that they experienced certain types of bullying a few times a month or more frequently (DEIS, non-DEIS, and OECD average)**

	DEIS %	non-DEIS %	OECD %
Other students left me out of things on purpose	8	8	9
Other students made fun of me	16	14	14
I was threatened by other students	6	5	6
Other students took away destroyed things that belonged to me	6	5	7
I got hit or pushed around by other students	7	5	7
Other students spread nasty rumours about me	8	7	10

**Differences between DEIS and non-DEIS schools are not statistically different**

## Attitudes and motivation towards study, exams and tests

The PISA Educational Career Questionnaire asked students about reasons for studying, and reasons for not studying, before and after school. Table 7.2 shows the percentages of students who responded 'Yes' to a variety of reasons. In both DEIS and non-DEIS schools, a majority of students (at least 70%) indicated that having a test coming up soon, parental importance placed on studying, and having homework assignments, represented reasons for studying. Lower percentages of students indicated studying because they were interested in the content (41% in DEIS schools; 37% in non-DEIS schools) or because they always studied (25% in DEIS schools; 30% in non-DEIS schools). About one-fifth of students

in DEIS and non-DEIS schools indicated that they studied because all their classmates did so.

**Table 7.2: Percentages of students who selected various reasons for studying before/after school (DEIS and non-DEIS schools)**

	<b>DEIS %</b>	<b>non-DEIS %</b>
I had a homework assignment	70	<b>76</b>
We have a test coming up soon	70	73
My parents think studying is important	70	71
I was interested in the content	<b>41</b>	37
I always study	25	<b>30</b>
All my classmates study before / after school	22	21
Other reason	26	23

**Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools**

Students were most likely to indicate that they did not study because they had no homework assignment (59% of students in DEIS and non-DEIS schools). Other reasons commonly selected for not studying were not having a test coming up and not having time to study. About two-fifths of students indicated that they did not study because nobody told them they had to. One third in DEIS schools and one-quarter in non-DEIS schools indicated that they never study, and the percentage in DEIS schools was significantly higher than in non-DEIS schools. Similar percentages indicated that none of their classmates study (31% in DEIS schools, 26% in non-DEIS schools).

**Table 7.3: Percentages of students who selected a variety of reasons for not studying before/after school (DEIS and non-DEIS schools)**

	<b>DEIS %</b>	<b>non-DEIS %</b>
I had no homework assignment	59	59
There is no test coming up soon	54	51
I had no time to study	51	53
Nobody told me I have to study	43	38
I never study	<b>35</b>	28
None of my classmates study before/after a test	31	26
Other reason	33	28

**Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools**

### Exam stress and test anxiety

Table 7.4 shows the percentages of students in DEIS and non-DEIS schools who responded that they ‘always’ have particular feelings about exams and tests. Other response options were never, sometimes and often. This question was administered in Ireland only so internationally comparative data are not available.

About 38% of students in non-DEIS schools indicated that they ‘always’ care about how well they do in exams and tests compared to 29% in DEIS schools. A sizeable minority of students in both DEIS and non-DEIS schools reported ‘always’ feeling under pressure to do well in exams and tests, whether pressure they put on themselves, pressure from their parents or pressure from teachers. For each of these, about one-quarter of students in DEIS and non-DEIS schools reported always feeling pressure. One of the questions about attitudes to exams and tests related to feeling like a failure if the student failed an exam or test. This item refers specifically to failure in exams or tests rather than the broader measure of fear of failure discussed above.

**Table 7.4: Percentage of students indicating that they ‘always’ have certain feelings about exams and tests (DEIS and non-DEIS schools)**

	DEIS %	non-DEIS %
I care about how well I do in exams and tests	29	<b>38</b>
I feel under pressure from my teachers to do well in exams and tests	19	21
I put pressure on myself to do well in exams and tests	19	<b>26</b>
I worry about what would happen if I fail an exam or test	18	<b>24</b>
If I failed an exam or test, I would feel like a failure	<b>26</b>	18
I feel under pressure from my parents to do well in exams and tests	<b>23</b>	19
I am easily distracted when preparing for exams and tests	17	17
I feel like I will never do as well as other students in exams or tests	16	<b>18</b>
I worry about upcoming exams and tests in school	15	<b>20</b>
I feel confident about my ability to cope with exam and test situations	15	17
I feel nervous and stressed when thinking about or doing exams and tests	14	<b>17</b>
I feel confident in my ability to prepare for exams and tests	14	16
I am happy how well I do in exams and tests	14	13
I avoid studying for exams and tests	<b>13</b>	10
I like testing my knowledge and ability through exams and tests	10	11
I feel physically unwell thinking about or doing exams and tests	9	9

Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools

### Student attitudes towards value of schooling

The PISA 2018 index of value of schooling was created from student responses indicating their levels of agreement with three school-related statements: ‘Trying hard at school will help me get a good job’; ‘Trying hard at school will help me get into a good college’; and, ‘Trying hard at school is important’. Positive values on this scale mean that the student valued

schooling to a greater extent than the average student across OECD countries (OECD, 2019d). Students in DEIS schools had a significantly lower mean score than students in non-DEIS schools on the index of value of schooling, although the size of the difference is small (one-tenth of a standard deviation) ( $t = 2.63$ ). In both DEIS and non-DEIS schools, female students had significantly higher mean scores than males (Figure 7.1).

Table 7.5: Mean scores for student's value of schooling (DEIS and non-DEIS schools)

	Mean	SE
DEIS	<b>0.04</b>	0.03
non-DEIS	0.14	0.02

Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools



Figure 7.1 Mean scores for value of schooling, by gender and DEIS, non-DEIS schools

### Schools' policies to support student wellbeing

Principal teachers were asked to report 'Yes' or 'No' to eight statements referring to their school's policies and practices to support students' wellbeing. Statements referred to the school having a whole-school plan for student wellbeing; having a student support team in place; the provision of mental and emotional health education; the existence of a systematic approach to screening for social, emotional and behavioural difficulties; monitoring and recording of bullying; and liaison with and referrals to external agencies where appropriate. In each case, principals of virtually all students in both DEIS and non-DEIS schools indicated that the school had each of these policies in place.

### Chapter highlights

- There was no statistically significant difference between the mean scores of students in DEIS and non-DEIS schools on overall meaning in life.
- In examining students' reports on their feelings, there was little difference between students in DEIS and non-DEIS schools in the percentages of students reporting 'always' feeling certain emotions; for example, 45% of students in both DEIS and non-DEIS schools reported 'always' feeling happy while just 5% in both contexts reported 'always' feeling sad. There was no significant difference between the mean score for overall positive feelings in the two contexts.

- There was no statistically significant difference between students attending DEIS and non-DEIS schools in mean self-efficacy, i.e., in students' self-beliefs about their resilience.
- Consistent with international trends of higher scores among more advantaged students, students in non-DEIS schools (mean score = 0.24) had a significantly higher mean score on a scale measuring fear of failure than students in DEIS schools (mean score = 0.09). In both DEIS and non-DEIS schools, female students had a significantly higher mean score on this index than their male counterparts.
- In terms of bullying, about one-in-six students in Ireland reported that other students had made fun of them a few times a month (or more frequently) in the previous 12 months. Other types of bullying were less prevalent with lower percentages of students indicating that they had been left out of things on purpose (DEIS 8%; non-DEIS 8%); had rumours spread about them (DEIS 8%; non-DEIS 7%); or threatened (DEIS 6%; non-DEIS 5%). There were no significant difference between students in DEIS and non-DEIS schools in mean scores on the overall index of bullying.
- In looking at reasons for studying, the most commonly selected reasons provided by students in Ireland were because they had a homework assignment (DEIS 70%; non-DEIS 76%); they had a test coming up soon (DEIS 70%; non-DEIS 73%); and parents think studying is important (DEIS 70%; non-DEIS 71%). Reasons selected by at least half of students in DEIS and non-DEIS schools for not studying were: not having a homework assignment; not having a test coming up, and not having time to study. About two-fifths of students in DEIS and non-DEIS schools indicated that they did not study because nobody told them they needed to. One-third of students in DEIS schools and one-quarter in non-DEIS schools indicated that they *never* study; the percentage in DEIS schools was significantly higher than in non-DEIS schools. Similar to the percentages who reported never studying, almost a third of students in DEIS schools and a quarter in non-DEIS schools indicated that none of their classmates study (31% in DEIS schools; 25% in non-DEIS schools).
- Students' perceptions of the value of schooling were significantly lower in DEIS schools than in non-DEIS schools; the difference amounted to about one-tenth of a standard deviation. The mean score in DEIS schools was similar to the OECD average. In both DEIS and non-DEIS schools, male students placed a significantly lower value on schooling than females.

Principals of virtually all students in both DEIS and non-DEIS schools indicated that there were school wellbeing policies in place, including having a whole-school plan for student wellbeing; having a student support team in place; providing mental and emotional health education; having a systematic approach to screening for social, emotional and behavioural difficulties; monitoring and recording of bullying; and liaising with and referring to external agencies where appropriate.

# Chapter 8: Students' aspirations for the future

## Overview

This chapter provides an indication of schools' approaches to career guidance and students' expectations for their future education and career choices. Firstly, it looks at school career guidance provision; student engagement in activities associated with career development; and, student's self-reported skills in sourcing information on future study and work. Secondly, the educational expectations of students are explored, focusing on students' expectations for qualifications they will attain; expectations regarding subject level choices at school; their expected destinations five years into the future; and, influences on their decision-making. Finally, the longer term career aspirations of students are considered.

## Career supports for students in school

### Availability of career guidance at school

School principals were asked whether career guidance was available for Third Year students in their school and on what basis it was provided. According to principal reports, career guidance was available for students in all schools; i.e., no students were in schools where the principals indicated that career guidance was unavailable in the school (Table 8.1).

Principals of almost all students (96%–97%) reported that career guidance was the responsibility of one or more career guidance counsellors. For virtually all students, responsibility for providing career guidance was reported to be allocated to a designated career guidance counsellor employed at the school. For a very small minority of students (4% in DEIS schools; 11% non-DEIS schools), principals indicated that all teachers share the responsibility for career guidance.

Table 8.1: Personnel responsible for career guidance provision in schools (DEIS and non-DEIS schools)

Who has the main responsibility for career guidance?	DEIS %	non-DEIS %
Not applicable – career guidance is not available in this school	0	0
All teachers share the responsibility for career guidance	4	11
Certain teachers have the main responsibility for career guidance	13	17
We have one or more career guidance counsellors employed at school	97	96
We have one or more career guidance counsellors who regularly visit the school	0	2

**Note: multiple responses were permitted. No statistically significant differences**  
Differences between DEIS and non-DEIS schools are not statistically different

Principals reported that career guidance was sought voluntarily by about one-third of Third year students (35% DEIS; 36% non-DEIS). For 65% of students in DEIS schools and 64% in non-DEIS schools, principals indicated that career guidance was formally scheduled into students' time at school.

### Information about future work and study

Students were asked if they had participated in a range of activities (e.g., did an internship; attended job shadowing or work-site visits; visited a job fair; spoke to a career adviser at school; or, spoke to an adviser outside of school) to find out more about future study or types of work. Students were most likely to report using the Internet to research careers (DEIS 72%; non-DEIS 74%) and to find out information on third-level courses (DEIS 54%; non-DEIS 56%; Table 8.2).

Compared to students in non-DEIS schools, a significantly higher percentage of students in DEIS schools had engaged in five of the career developing activities. Higher percentages of students in DEIS schools reported that they had: spoken to a guidance counsellor *inside* their school (DEIS 50%; non-DEIS 40%) or *outside* of their school (DEIS 15; non-DEIS 9%); completed work experience placements (DEIS 43%; non-DEIS 28%); completed job shadowing or work place visits (DEIS 33%; non-DEIS 29%); and gone to an organised tour of a third-level college or university (DEIS 30%; non-DEIS 20%). In contrast, the percentage of students who had completed an aptitude test in school was significantly higher in non-DEIS (40%) compared to DEIS (33%) schools.

Table 8.2: Percentages of students' who engaged in career developing activities (DEIS and non-DEIS schools)

Have you done any of the following to find out about future study or types of work? I...	DEIS %	non-DEIS %
researched the Internet for information about careers	72	74
researched the Internet for information about third-level college or university courses	54	56
completed a questionnaire to find out about my interests and abilities	53	54
spoke to a guidance counsellor at my school	<b>50</b>	40
completed a work experience placement	<b>43</b>	38
completed job shadowing or work place visits	<b>33</b>	29
completed an aptitude test in school to see what areas I am best at	33	<b>40</b>
went on an organised tour to a third-level college or university	<b>30</b>	20
visited a job fair	21	19
spoke to a guidance counsellor outside of my school	<b>15</b>	9

Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools

### Skills to find information on the labour market: inside and outside of school

Students provided information about the skills (such as finding information about jobs and financial supports for further or higher education; writing a Curriculum Vitae; and, preparation for job interviews) that they have developed both inside and outside of school. Students' responses were summarised to create two indices measuring whether students considered themselves as having acquired a set of skills at school or outside of school.

Students in DEIS schools were significantly higher in skills acquired *inside* school compared to students in non-DEIS schools (mean scores DEIS = 0.10; non-DEIS = -0.14). There were no significant differences in the mean scores on skills acquired outside school (DEIS = -0.30; non-DEIS = -0.35).

A breakdown of the skills acquired is provided in Table 8.3. For each of the skills acquired *inside* school, higher percentages of students in DEIS schools compared to non-DEIS schools reported that they had developed these: skills to find information about jobs they are interested in (+5%); search for a job (+7%); write a CV/summary of qualifications (+7%); prepare for a job interview (+8%); and, find information on financial support for further or higher education (+8%).

**Table 8.3: Percentages of students' who acquired skills in finding information about the labour market (DEIS and non-DEIS schools)**

Have you developed skills in how to....	Inside school %		Outside school %	
	DEIS	non-DEIS	DEIS	non-DEIS
find information on jobs I am interested in	<b>40</b>	35	52	55
search for a job	<b>33</b>	26	49	48
write a CV or a summary of your qualifications	<b>40</b>	33	27	27
prepare for a job interview	<b>30</b>	22	28	26
find information on financial support for further or higher education (e.g., student loans or grants)	<b>26</b>	18	28	26

Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools

Students reported that the skills they needed for finding a job or information about jobs were more likely to be developed outside of school than inside school. About half of all students indicated that they had developed skills outside of school to enable them to find information on jobs that were of interest; a similar percentage reported having gained skills outside school which enabled them to search for a job.

## Educational expectations of students

### Students' expectation of qualifications

Students were asked about their expectations for the highest educational qualification they expect to attain, with Junior Certificate representing the lowest level of qualification

and university qualifications representing the highest. There is some evidence that the educational expectations of students in DEIS schools were lower than those of students in non-DEIS schools. For example, Table 8.4 shows that higher percentages of students in DEIS schools indicated that their highest expected qualification is Junior Certificate (DEIS 5%; non-DEIS 2%); Leaving Certificate Applied (DEIS 6%; non-DEIS 2%); or Leaving Certificate (General or Vocational) (DEIS 11%; non-DEIS 5%). Despite these differences between DEIS and non-DEIS schools, a minority of students expect to leave formal education with Leaving Certificate or lower (DEIS 22%; non-DEIS 9%).

Turning to qualification at further and higher education, about one-in-ten students in DEIS schools expect to complete an apprenticeship or Post-Leaving Certificate (PLC) course while about one-in-five expects to complete a Third-level diploma or certificate (Table 8.4). The percentage of students expecting to complete an apprenticeship or PLC course is significantly higher in DEIS (11%) compared to non-DEIS schools (7%). Percentages for non-degree courses at third level are equivalent in DEIS and non-DEIS schools. A significantly higher percentage of students in non-DEIS schools (62%), compared to DEIS schools (45%) reported that they expect to complete a university degree (or higher-level university qualification). It was noted in Chapter 5 that parents of 74% of students in non-DEIS schools and 55% of students in DEIS schools expect their child to complete a university degree or post-graduate qualification. The issue of educational expectations is discussed further in Chapter 9.

Table 8.4: Percentages of students expected highest qualification level (DEIS and non-DEIS schools)

Qualification	DEIS %	non-DEIS %
Junior Certificate	<b>5</b>	2
Leaving Cert. Applied	<b>6</b>	2
Leaving Cert. (General or Vocational)	<b>11</b>	5
An apprenticeship (e.g., electrician, plumber) or Post-Leaving Certificate course (e.g., computer course)	<b>11</b>	7
A third-level certificate or diploma, NOT to degree level (e.g., from an Institute of Technology)	22	22
A university degree (e.g., Bachelor's Degree) or post-graduate degree (e.g., Master's Degree, Doctoral Degree)	45	<b>62</b>

Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools

### Subject completion level for Leaving Certificate

Students were asked to report the level (Higher, Ordinary, or Foundation Level) at which they expected to sit their Leaving Certificate examinations in specific subjects. Students' expectations for subject levels differed significantly between DEIS and non-DEIS schools. In the core subjects, students in non-DEIS schools were significantly more likely to take the

higher-level option for Maths (non-DEIS 59%; DEIS 39%), Irish (non-DEIS 55%; DEIS 40%), and English (non-DEIS 87%; DEIS 67%).

There was a similar pattern for the science subjects with higher percentages of students in non-DEIS schools indicating that they expect to take higher level examinations in Biology/agricultural science (non-DEIS 69%; DEIS 58%), and other science subjects (non-DEIS 56%; DEIS 41%). There were no significant differences in expected levels for applied maths. However, lower percentages of students indicated that they would be taking this subject for their Leaving Certificate.

Table 8.5: Percentages of students' expected level of subject completion for Leaving Certificate examination (DEIS and non-DEIS schools)

What level do you expect to sit your Leaving Certificate examination in...?		Higher Level %	Ordinary Level %	Foundation Level* %
Mathematics	DEIS	39	55	6
	non-DEIS	<b>59</b>	40	1
Irish	DEIS	40	46	5
	non-DEIS	<b>55</b>	37	2
English	DEIS	67	30	-
	non-DEIS	<b>87</b>	12	-
Applied Mathematics	DEIS	21	21	3
	non-DEIS	27	11	<1
Biology/Agricultural Science	DEIS	58	18	-
	non-DEIS	<b>69</b>	7	-
Another science subject (e.g., chemistry, physics)	DEIS	41	19	-
	non-DEIS	<b>56</b>	7	-

\*Note: Foundation level is available for Maths and Irish only

Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools

### Students' future work and study expectations – 5 years later

Students were asked to indicate what they thought they will be doing five years after participating in PISA 2018. A higher percentage of students attending DEIS schools (15%; non-DEIS 10%) indicated that they expect to be working because the occupation they want does not require a degree (Table 8.6). Also, higher percentages of DEIS students (20%; non-DEIS 12%) reported that they will be working because they need to be financially independent. Lower percentages of students in DEIS schools (37%), compared to Non-DEIS schools (50%), indicated that they will be studying because the occupation they want requires a third-level qualification (e.g., diploma or university degree).

Table 8.6: Percentages for students' expectations for 5 years' time (DEIS and non-DEIS schools)

What do you see yourself doing in 5 years?	DEIS %	non-DEIS %
I will be working because the occupation I want does not require a study degree (e.g., diploma or university degree)	<b>15</b>	10
I will be working because I need to be financially independent	<b>20</b>	12
I will be studying because I do not know what I would like to do yet	12	14
I will be studying because the occupation I want requires a study degree (e.g., diploma or university degree)	37	<b>50</b>
I will be studying or working for other reasons	7	6
I will be doing something else	10	8

Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools

### Decision making about their future career/occupation

The Education and Career Questionnaire also gathered information about factors that influence students' decision making about their future career/occupation. Students were asked to report the level of importance they placed on a list of factors that may affect their decisions about their future occupation/career. In Table 8.7, percentages are provided for students who reported that the factors were *important* or *very important* in their decision making.

According to student reports, the most important influences in Ireland were school subjects that students are good at, school grades, and employment opportunities. For each of these statements, at least four out of five students in both DEIS and non-DEIS schools indicated that these were 'important' or 'very important' influences. Very high percentages of students also indicated that an 'important' or 'very important' influence is the expected salary of the occupation, the student's own interests, education or training options, hobbies, and the availability of financial supports. For each of these statements, 70-86% of students in both DEIS and non-DEIS schools indicated that they are 'important' or 'very important' influences on their decisions about future careers.

Lower percentages of students (DEIS 53%; non-DEIS 54%) consider the expectations of their parents or guardians to be 'important' or 'very important' influences. Similarly about half of students consider the social status of the occupation to be 'important' or 'very important'. Of least importance were the plans of close friends, although one-third of students indicated that friends' plans were an 'important' or 'very important' influence.

Table 8.7: Percentages of students who considered factors that influence their career expectations as important or very important (DEIS and non-DEIS schools)

How important are the following things in the decisions you make about your future occupation?	DEIS %	non-DEIS %
The school subjects I am good at	77	<b>86</b>
My school grades	76	<b>84</b>
The employment opportunities for the occupation I want	73	<b>82</b>
The expected salary of the occupation I want	73	<b>78</b>
My special interests	72	<b>76</b>
The education/training options for the occupation I want	68	<b>75</b>
My hobbies	67	<b>71</b>
The availability of financial support for education /training	66	67
My parent's /guardian's expectations about my occupation	53	54
The social status of the occupation I want	53	51
The plans my close friends have for their future	<b>35</b>	29

Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools

## Career expectations of students

### Students' expected occupation

Students were asked about their aspirations for the job they would be doing aged 30 years old. Responses were coded using the International Standard Classification of Occupations (ISCO-08)<sup>11</sup> classification structure for organising information on labour and jobs (International Labour Office, 2012). Analyses in this section draw on methods used for by the OCED (OECD, 2019a). As a result, it is possible to draw some broad comparisons between national and international findings.

Students' career expectations, classified into ISCO-08 major categories, are shown in Table 8.8. The majority of students expected to have a professional occupation (45% DEIS; 56% non-DEIS). This category includes science and engineering professionals, health professionals, teaching professionals, and business and administration professionals. About one-in-four students did not respond or did not know what type of job they may have in the future (25% DEIS; 22% non-DEIS). About one-quarter of students on average across OECD countries gave vague answers (e.g., "a good job") or explicitly indicated that they were undecided (OECD, 2019a).

<sup>11</sup> ISCO-08 classifies jobs into 436 unit groups. These unit groups are aggregated into 130 minor groups, 43 sub-major groups and 10 major groups, based on their similarity in terms of the skill level and skill specialisation required for the jobs.

Table 8.8: Percentages of students with expected occupations in each of the major ISCO-08 groups (ordered in descending order) (DEIS and non-DEIS schools)

	DEIS %	non-DEIS %
Professionals	45	<b>56</b>
Technicians and Associate Professionals	<b>10</b>	8
Services and Sales workers	<b>8</b>	5
Craft and Related Trades Workers	<b>8</b>	4
Managers	2	3
Skilled Agricultural, Forestry and Fishery Workers	2	1
Armed Forces Occupations	1	1
Plant and Machine Operators and Assemblers	1	<1
Elementary Occupations	<1	<1
Clerical Support Workers	<1	<1
Housewife, student, unemployed	<1	<1
<i>Don't know or vague response</i>	10	9
<i>Invalid or no response</i>	15	13

Values in bold indicate a statistically significant difference between DEIS and non-DEIS schools

For DEIS and non-DEIS schools separately, Table 8.9 shows the top ten occupations and the percentages of students who reported one of these. About two-fifths of students in DEIS schools (39%) and a similar percentage in non-DEIS (44%) schools chose one of the occupations in the top 10, highlighting the variety of occupations represented amongst responses. These percentages are similar to the corresponding OECD average (36%), which shows that on average across OECD countries, more than one-in-three students cited one of the top 10 most popular occupations in their country (OECD, 2019a).

International analyses (OECD, 2019a) show that 31.6% of disadvantaged students in Ireland (i.e., students with low ESCS) selected careers in the top 10 compared to 39.7% of advantaged students (i.e., those with high ESCS). The difference is statistically significant showing that advantaged students have expectations of careers within a somewhat narrower range than their disadvantaged counterparts.

One-eighth of students in Ireland overall and in DEIS and non-DEIS contexts expect to have a career in teaching (Table 8.9). Careers in healthcare appear frequently on the list but while medical doctor was selected by 3.6% of non-DEIS students, this category does not appear in the top ten for DEIS students. Careers in nursing were in the top ten for both DEIS and non-DEIS students with 3% in each context indicating that they expect to be a nurse.

There are notable similarities between the career expectations of students in DEIS and non-DEIS schools as both groups have cited many of the same jobs, although some of these are ranked differently in the Top 10 (e.g., veterinarians 5<sup>th</sup> in non-DEIS and 10<sup>th</sup> in DEIS). There was somewhat greater diversity in the top 10 expected careers in DEIS schools with at least three careers in the top 10 which typically do not require university qualifications (mechanic, athlete, beautician). The top 10 careers cited by non-DEIS students typically all require a university degree.

**Table 8.9: Percentages of students with expected occupations ranked in top ten DEIS and non-DEIS schools (in descending order)**

Rank	DEIS		non-DEIS	
	Occupation	%	Occupation	%
1	Teaching Professionals	12.2	Teaching Professionals	13.7
2	Motor Vehicle Mechanics	4.0	Lawyers	4.8
3	Athletes and Sports Players	3.2	Accountants	4.7
4	Engineering Professionals*	3.1	Health Professionals	3.6
5	Lawyers	3.1	Veterinarians	3.5
6	Accountants	2.8	Physiotherapists	3.1
7	Physiotherapists	2.8	Nursing Professionals	3.0
8	Nursing Professionals	2.7	Engineering Professionals*	2.8
9	Beauticians and related Workers	2.6	Psychologists	2.7
10	Veterinarians	2.5	Science/Engineering Professionals*	2.1
Total		39.0		44.0

\* Science/engineering professional was coded as an ISCO-08 major category (e.g., meteorologists, chemists, geologists, and mathematicians). Engineering professional (excluding electro technology) was coded as a minor ISCO-08 category (e.g., civil engineer, mechanical engineers, and chemical engineers). For details, see Annex A1 (OECD, 2019a, p. 214).

### Gender difference in expected occupation

Over half of the careers cited by female students in Ireland were represented by the top 10 expected occupations (54% DEIS; 57% non-DEIS) suggesting their career aspirations were narrower in range compared to male students (41% DEIS; 42% non-DEIS).

International analyses<sup>12</sup> have examined trends over time in the expected occupations of girls and boys (Mann, et al., 2020). Findings show that in Ireland, while 55% of girls in PISA 2000 had an expected occupation in the top 10, by 2018, this had increased to 60%. In PISA 2000 in Ireland, 53% of boys had an expected occupation in the top ten; in 2018, the corresponding percentage was 49% (Mann et al., 2020). These findings suggest that the career expectations of girls in Ireland have narrowed somewhat between 2000 and 2018 while career expectations of boys have widened a little.

<sup>12</sup> Note that the methodology used by Mann et al. (2020) is not directly comparable to that used in OECD (2019a) as the approach used by Mann et al. was designed to allow for comparisons with the coding system used for PISA 2000.

Focusing on the occupations selected by boys and girls in 2018, there were gender differences in the expected occupations of female and male students with gender stereotyping evident in their choices. Teaching professionals topped the list for all students; the percentages were about twice as high for female students compared with males in both DEIS and non-DEIS schools (Table 8.10). Female students focused on healthcare occupations, with medicine, nursing, physiotherapy, psychology, veterinarian and social work featuring in the top 10 lists. While science and engineering careers featured in the top 10 lists for males in both DEIS and non-DEIS schools, they were not in the top 10 list for females in either DEIS or non-DEIS schools. Hairdressing featured in the top 10 list for females in DEIS schools only while motor vehicle mechanic featured in the top 10 list for males in DEIS schools only.

Table 8.10: Expected occupations ranked in top ten by female and male students attending DEIS and non-DEIS schools (in descending order)

	<b>Female DEIS</b>	%	<b>Female non-DEIS</b>	%	<b>Male DEIS</b>	%	<b>Male non-DEIS</b>	%
1	Teaching professionals	17.9	Teaching professionals	17.3	Teaching professionals	7.8	Teaching professionals	9.3
2	Nursing professionals	6.3	Lawyers	6.4	Motor vehicle mechanics	6.9	Accountants	6.1
3	Beauticians	5.6	Medical doctors	5.3	Engineering professionals	4.8	Engineering professionals	5.3
4	Lawyers	5.1	Nursing professionals	5.3	Athletes & sports players	4.6	Athletes & sports players	4.3
5	Veterinarians	4.8	Veterinarians	5.2	Carpenters & joiners	3.5	Physiotherapists	3.5
6	Physiotherapists	3.4	Psychologists	4.1	Accountants	3.2	Carpenters & joiners	2.8
7	Hairdressers	3.3	Beauticians	3.6	Building electricians	3.1	Lawyers	2.8
8	Social work/Counselling	3.3	Accountants	3.5	Medical doctors	2.5	Science/engineering	2.8
9	Accountants	2.4	Medical practitioners	3.1	Physiotherapists	2.4	Building/electricians	2.5
10	Medical doctors	2.3	Physiotherapists	2.7	Science/engineering	2.1	Police officers	2.4
Total		54.4		56.5		40.8		41.8

**Note:** Engineering professionals (excluding electro technology) was coded as an ISCO-08 minor category (e.g., civil engineer, mechanical engineers, and chemical engineers). Science/engineering professional was coded as an ISCO-08 major category (e.g., meteorologists, chemists, geologists, and mathematicians).

## Chapter highlights

- According to principals, career guidance was available in all schools in Ireland that took part in PISA 2018, with a designated counsellor in place. Students in DEIS and non-DEIS schools reported being actively engaged in career development activities. Three-in-four students reported that they searched the Internet for information about careers and over half of students in both school settings reported that they searched the Internet for information about third-level college or university courses.
- Compared to students in non-DEIS schools, students in DEIS schools reported a higher level of engagement in five activities designed to prepare for future career or work: work experience placements; job shadowing/work place visits; speaking to a guidance counsellor *inside* their school; speaking to a guidance counsellor *outside* of their school; and going on an organised tour to a third-level college or university.
- On an index measuring skills for finding out about future labour market opportunities, students in DEIS schools had a significantly higher mean score for skills acquired *inside* school compared to students in non-DEIS schools; in contrast, there were no significant differences between students in DEIS and non-DEIS schools in their mean scores on skills acquired *outside* school.
- Compared to students in non-DEIS schools, somewhat higher percentages of students in DEIS schools reported that they expect their highest level of educational qualification to be Junior Certificate (DEIS 5%; non-DEIS 2%), Leaving Certificate Applied (DEIS 6%; non-DEIS 2%), Leaving Certificate (General or Vocational) (DEIS 11%; non-DEIS 5%), or Apprenticeship (DEIS 11%; non-DEIS 7%). A substantially higher percentage of students in non-DEIS schools (62%) than DEIS schools (45%) indicated that they expect to attain a University degree qualification.
- Students reported their expectations of the level of subject completion at Leaving Certificate. Students in non-DEIS schools were more likely to indicate that they expect to take higher level for Maths (59%; DEIS 39%); Irish (55%; DEIS 40%); and English (87%; DEIS 67%). There was a similar pattern for Biology/agricultural science and other science subjects.
- Students were asked to indicate what they thought they will be doing in five years' time. While sizeable percentages of students reported that they expect to be studying for a university degree, the percentage associated with students in DEIS schools (37%) was significantly lower than for students in non-DEIS schools (50%). Students in DEIS schools were somewhat more likely than their non-DEIS counterparts to indicate that they will be working because the occupation they want does not require a degree or that they will be working because they need to be financially independent.
- Students indicated that important factors influencing their decision-making about future careers were: the school subjects they were good at, their school grades, employment opportunities, expected salary of the future occupation, and their own interests. At least 70% of students in DEIS and non-DEIS schools rated these as '*important*' or '*very important*'.
- When asked about their aspirations for the job they would be doing aged 30 years old, about half of students expected to have a professional occupation, such as health or teaching professional (DEIS 45% DEIS; non-DEIS 56%). About one-eighth of students in both DEIS and non-DEIS schools indicated that aspire to work as a teaching professional.
- Students in DEIS schools were more likely than students in non-DEIS schools to choose manual, skilled and sporting professions (e.g., mechanic, athlete, or beautician), which traditionally do not require a university degree.

- About one-in-five students indicated that they did not know what their anticipated career would be in the future (25% DEIS; 21% non-DEIS).
- Some gender stereotyping was evident in the students' career expectations. For example, female students were more likely than males to expect healthcare-related careers and females in DEIS schools only included hairdressing in their top ten expected occupations. Male students more frequently cited manual jobs (e.g., mechanic or carpenter), sports players, and science or engineering professions. While mechanic appeared in the top ten list for males in DEIS schools, it did not feature in the top ten expected occupations for males in non-DEIS schools.



# Chapter 9: Conclusions and implications

This chapter provides an overview of the main findings and situates the PISA 2018 findings within other research evidence and relevant policy literature. The chapter concludes by drawing together some key strengths and challenges in DEIS schools as well as implications for policy and practice.

## Student home background

Analyses of the socio-economic profile of students in DEIS schools show that over 40% of students in DEIS schools are categorised as socio-economically disadvantaged, on the basis of having an ESCS score in the bottom quartile nationally. In non-DEIS schools, just 20% of students were in this category. These findings are to be expected given the nature of the DEIS programme which, premised on the existence of a 'multiplier effect', aims to support schools with the highest concentrations of students from disadvantaged backgrounds (DES, 2017a). The impact of concentrated disadvantage, over and above individual student background, has been demonstrated empirically at primary and post-primary levels (Smyth, 1999; Sofroniou, Archer, & Weir, 2004). However, future research may usefully examine the continued existence of this effect and examine if achievement levels of low ESCS students differ depending on the socio-economic context of their schools.

The planned rollout of the revised identification system for DEIS (DES, 2017a) is likely to lead to more accurate identification of schools serving the highest concentrations of students from disadvantaged backgrounds. Therefore, it is likely that in future cycles of PISA, the percentages of students in DEIS schools with low ESCS scores may be higher. Challenges in this regard with using PISA for monitoring achievement trends in DEIS schools were identified in Gilleece et al. (2020).

It was noted that in PISA 2018 the gap between the mean ESCS score in DEIS and non-DEIS schools was about three-fifths of a standard deviation. This gap is of a similar magnitude to that in 2009, which was also about three-fifths of a standard deviation (McKeown et al., 2019). These findings show that there is little evidence of a narrowing over time of the socio-economic gap between DEIS and non-DEIS schools. Evidence from other sources suggests that the gap may be widening. For example, it has been shown that while the percentage of medical card holders in all post-primary schools increased between 2002 and 2014, the increase was greater in DEIS schools than in non-DEIS schools (McAvinue & Weir, 2015). Weir and Kavanagh (2018) show very high rates of medical card possession in DEIS schools by 2017 with an average of 62% of students classified as medical card holders (compared to 34% in non-DEIS schools and 41% across all schools).

As noted in Gilleece et al. (2020), the PISA sampling process in Ireland uses the percentage of students in the school with a medical card as a proxy for school socio-economic status where the DEIS identification process is currently moving towards using the HP deprivation

index (Haase & Pratschke, 2017) for this purpose. While medical card status has been shown to be strongly correlated with the HP index (Haase, 2017), there may be merit in conducting further examination of the association between HP and ESCS, given that ESCS is a rich and detailed measure at the individual student level.

National and international research has shown that ESCS is a strong correlate of students' overall educational outcomes. In Ireland, there is a moderate relationship ( $r = .33$ ) between performance on PISA reading and the PISA index of ESCS at the student level (McKeown et al., 2019). Examination of the individual component elements of the PISA ESCS allow us to see more precisely where the differences in economic, social and cultural capital exist between students in DEIS and non-DEIS schools. There were statistically significant differences in the mean scores of students in DEIS and non-DEIS schools on the indices of household possessions, cultural capital and educational resources, with higher levels of each available in the homes of students in non-DEIS schools.

Large percentages of students in DEIS (83%) and non-DEIS schools (93%) indicated that they have a desk for study at home, although it is notable that there is a 10% gap between the percentages with a desk for home study in DEIS and non-DEIS schools. High percentages of students in Ireland indicated that they had a quiet place to study (DEIS 87%; non-DEIS 91%). While a majority of students in DEIS and non-DEIS schools had a desk for study at home, a quiet place to study, and/or a computer for use at home, a sizeable minority reported that they did not have access to these resources. These deficits are likely to have a particular impact in the context of increased reliance on technology and distance learning.

Although internet access at home has been found to be close to universal in some PISA 2018 countries, including Ireland (OECD, 2020b), the quality and speed of the internet was not assessed. The COVID-19 pandemic has raised concerns over the digital divide, with students from disadvantaged backgrounds found to be more likely to experience problems with broadband and device access than their more advantaged peers. For example, a recent report looking at the connectivity in relation to COVID-19 remote learning found that limitations in broadband connectivity were higher in DEIS schools and in areas with lower household incomes (Mohan, et al., 2020). Similar to the PISA 2018 findings, results for the 13-year old cohort in GUI point to very high levels of internet access (98%) and widespread access to a computer at home (84%). A much smaller percentage of students (34%) had a computer in their bedroom which may indicate that computers in the home are often a shared resource (Williams, et al., 2018). Comparable findings have been reported in the UK literature where concerns have been raised about disengagement from remote learning by disadvantaged students and those with limited access to IT (Lucas, Nelson, & Sims, 2020).

The ICT-related challenges faced by students from disadvantaged backgrounds were recognised in funding schemes announced in mid-2020. ICT funding for schools of €10 million was announced in April 2020 to support the purchase of technology and digital devices for disadvantaged students – €7 million for post-primary schools and €3 million for the primary sector (Government of Ireland, 2020a). Schools were asked to prioritise students in examination classes when determining student need for devices. For students in further and higher education, the COVID-19 once-off emergency grant provides for a payment of €250 to students in receipt of the SUSI grant. It is intended to support students with purchasing a laptop or equipment for home study (Government of Ireland, 2020b).

In PISA 2018, students in non-DEIS schools were more likely to have higher numbers of books in their homes, and less likely to report having ten or fewer books. While a quarter of students in DEIS schools indicated that they had ten or fewer books, just one-in-ten students in non-DEIS schools reported such limited access to books. The OECD notes that the numbers of books at home differentiates clearly between students of different economic status, with advantaged students reporting the greatest numbers of books (OECD, 2019c). Access to books has been shown to be a strong predictor of educational outcomes. The number of books students can access at home has been shown to have positive associations with achievement in reading, mathematics, and science independent of other socio-economic variables (Cosgrove & Cunningham, 2011; Cosgrove, Shiel, Sofroniou, Zastrutzki, & Shortt, 2005; Perkins, Cosgrove, Moran, & Shiel, 2012; Shiel, Cosgrove, Sofroniou, & Kelly, 2001; Shiel, McHugh, Denner, Delaney, & McKeown, 2021).

Analysis of PISA 2018 data shows that 31% of students attending DEIS schools reported that at least one of their parents had a university degree (or postgraduate qualification) in comparison with 52% in non-DEIS schools. Parental occupational status also differed significantly between the two school contexts and parents of students in non-DEIS schools had significantly higher occupational status than parents of students in DEIS schools. These results mirror the pattern of results across OECD countries where parents of socio-economically advantaged students are more highly educated, a large majority attained tertiary education, and have skilled, white-collar occupations (OECD, 2019c).

Other evidence from the Growing Up in Ireland (GUI) study shows a similar pattern of differences in income and parental education for students in DEIS schools (Smyth, McCoy, & Kingston, 2015). There is most likely an interplay between occupational status, wealth, and subsequent access to home resources for learning. Parental education has been shown to correlate with the number of books in the home; for example, evidence from Growing up in Ireland (GUI) shows that 76% of children whose mothers had third-level education had access to 30+ books in the home compared with 41% per cent of children whose mothers had a lower secondary education (McNamara, O' Mahony, & Murray, 2020).

Analysis of the immigrant background of students showed that the majority of students in both DEIS (83%) and non-DEIS (82%) schools were categorised as native students. The percentages of students categorised as first generation were similar in both school contexts (10%) and for second generation, percentages were also similar (DEIS 7%; non-DEIS 8%). The majority of students attending DEIS and non-DEIS schools reported speaking English or Irish as their main home language.

Differences in reading literacy achievement were found in PISA 2009 between non-immigrant (native) students and immigrant students who spoke a language other than English or Irish at home (Perkins, Cosgrove, Moran, & Shiel, 2012). Immigrants who spoke English or Irish at home had mean achievement scores in print and digital literacy that did not differ significantly from those of native Irish students. However, immigrant students who spoke a language other than English or Irish had mean achievement scores on both literacy assessments that were significantly lower than the mean scores of non-immigrant students. These findings emphasise the importance of considering not only immigration status but also the language(s) spoken in students' homes.

## Parental involvement in education

### School choice and perceived quality

Information on the availability of local schools showed that parents had choices about where to send their children to school. About one-in-five parents of students in both DEIS and non-DEIS schools indicated that they had no other choice of school to attend in their locality. Just over a quarter of DEIS and non-DEIS students had parents who reported that they had one other school to choose from. The majority of DEIS (52%) and non-DEIS students (55%) had parents who reported that they had two or more schools to choose from.

Parents were asked in PISA to rate the quality of their child's school in terms of teacher competency and dedication, standards of achievement, teacher instructional methods, the disciplinary atmosphere in the school, and monitoring of student progress by the school. Parents of students in DEIS and non-DEIS schools held similarly positive perceptions of the quality of their child's school.

The main factors influencing parental school choice in Ireland were: school safety; school reputation; the academic achievement of students in the schools; and, school climate, with similar factors ranked highly across OECD countries (OECD, 2019d). Financial matters influenced school choice for parents of students in DEIS schools to a greater extent when compared to parents of students in non-DEIS schools. In DEIS schools, greater importance was given by parents to costs being low (54% DEIS; 40% non-DEIS), and to the availability of financial aid (43% DEIS; 28% non-DEIS). Geographical distance between the student's home and school was less of a consideration for parents in Ireland (45% DEIS; 47% non-DEIS) compared to other OECD countries where 58% of students had parents who were concerned about the distance to school.

In Ireland, lower percentages of parents (one-quarter to two-fifths) considered the following criteria as important or very important: whether other family members attended the same school; opportunities for exchange programmes with schools in other countries; and the religious philosophy of the school. Previous examination of factors informing parental school choice in Ireland noted that perceived reputation was the main factor. Other factors included being a local school, the perceived quality of teaching in the school, and the disciplinary climate of the school (Darmody & Smyth, 2013).

Although there may be other schools in their locality, it is not clear whether parents can access these schools, for example, admission criteria or fee-paying status may represent barriers to access. The DEIS status of other schools in the parents' locality was not recorded in PISA 2018. School competition for students is commonplace in Ireland; previous research has shown that 83% of post-primary schools had another school in the same area (Smyth, McCoy, & Darmody, 2004). It has been argued that parental school choice plays a role in concentrating social disadvantage within particular post-primary schools (Smyth, 2017).

### Parental involvement in school-life

Parents' perceptions about school policy can have an impact on their involvement in school-based activities and in their overall engagement with the school. Parents of students in DEIS schools held more positive perceptions of the school policies to encourage their involvement suggesting that policies existed to a greater extent than for parents in non-DEIS schools. Of

note was that parent education was more frequently offered to parents of students in DEIS schools compared to parents of students in non-DEIS schools. These policy differences may reflect the additional provisions offered under DEIS (DES, 2017a). For example, the HSCL scheme plays a key role in building and maintaining home-school relationships such as keeping the lines of communication open between the school and parents and targets particularly those from the most disadvantaged backgrounds (Childhood Development Initiative, 2018; Weir, Kavanagh, Kelleher, & Moran, 2017). Parental involvement in school-based activities has been reported to have increased due to the supports and targeted interventions offered as part of the HSCL scheme (Weir, Kavanagh, Moran, & Ryan, 2018).

Both principals and parents were asked about parental involvement in school life and given that some common items were presented to both, some broad comparisons can be drawn between responses from the two groups. According to parent reports, parent-teacher meetings were widely attended by parents in both DEIS and non-DEIS schools. A large majority of students (DEIS 86%; non-DEIS 88%) had parents who indicated that they had attended a scheduled meeting or conference for parents.

Findings from previous surveys of principals at post-primary level show a very strong culture of attendance at parent-teacher meetings in Ireland, with a majority of principals indicating that all or nearly all parents attend (Cosgrove & Gilleece, 2012; Darmody & Smyth, 2013). In a survey of Second years in 2009, the percentage of students in Ireland whose principals indicated that all, nearly all, or most parents attended parent-teacher meetings (97%) was well above the international average of 79% (Cosgrove & Gilleece, 2012).

Findings in the current report show that over two-fifths of students in DEIS (46%) and non-DEIS (43%) schools were reported by principals to have parents who discussed their child's progress on the initiative of one of their child's teachers; the percentages in DEIS and non-DEIS schools were somewhat lower than the corresponding OECD average (57%) (OECD, 2019d). Based on parent reports, 45% of students in DEIS schools and 35% of students in non-DEIS schools had parents who discussed the child's progress at the request of a teacher. These findings suggest that the main means of communication between parents and teachers is at the scheduled parent-teacher meeting which is typically very well attended by parents.

According to principal reports, lower percentages of parents discussed their child's progress with a teacher on the parent's initiative (DEIS 35%; non-DEIS 31%; OECD 41%) whereas when parents were asked a very similar item, percentages were higher as compared to those for discussion at the request of a teacher. According to parent reports on whether or not they had discussed their child's progress with a teacher on the initiative of the parent, this was comparatively more common in DEIS schools compared to non-DEIS schools. In DEIS schools, 46% of students had parents who indicated that they had discussed their child's progress with a teacher on their own initiative; the corresponding percentage in non-DEIS schools was 36%. In non-DEIS schools, percentages on this item are very similar for principals (31%) and parents (36%) whereas in DEIS schools, parent percentages (46%) are higher than principal percentages (36%). Data used in the current study do not allow further exploration of the discrepancy between principal and parent perceptions of parent discussions although findings are a reminder of the need for the voice of parents to be at the heart of the operation and evaluation of the HSCL scheme (Mulkerrins, 2007; O'Toole, Kiely, McGillicuddy, O'Brien, & O'Keeffe, 2019). It has been suggested that discrepancies

between principals' and parents' reports of activities may occur as principals often do not see all the interactions between parents and teachers (OECD, 2019d).

Based on principal reports, lower percentages of students had parents who volunteered in physical or extra-curricular activities, although percentages in DEIS (11%) and non-DEIS (7%) schools were similar to the corresponding OECD average (12%). Very similar percentages emerged from parent responses to items on volunteering, ranging between 6% and 10% across DEIS and non-DEIS schools and for items regarding volunteering in extra-curricular activities and volunteering in school support activities. Parental involvement in local school government was also lower in Ireland than on average across the OECD. While 7% of students in DEIS schools and 9% in non-DEIS schools were reported by principals to have parents who had participated in local school government, the corresponding OECD average was 17%.

Findings of lower levels of formal involvement in the current analyses are in line with previous research which shows that despite high levels of informal parental involvement in Ireland (e.g., helping with homework, providing encouragement and attendance at parent-teacher meetings (Byrne & Smyth, 2011; Cosgrove & Gilleece, 2012), there are typically lower levels of formal parental involvement (e.g., participation in the Parents' Association). In a 2009 survey, just 6% of post-primary students in Ireland (compared to 33% on average internationally) had principals who indicated that all, nearly all or most parents took part actively in the school's parent association. In Ireland, 21% of students had principals who indicated that all, nearly all, or most parents voted for parent representatives for the Board of Management; on average internationally, 40% of students were in this group (Cosgrove & Gilleece, 2012). Current findings show that levels of participation of parents in Ireland in formal school governance structures remain low by international standards and there may be merit in further exploration by HSCL coordinators of methods to increase these rates.

Parental involvement in education has been shown to vary by social class with less meaningful involvement by parents from lower socio-economic groups (Hanafin & Lynch, 2002; O'Brien & Ó Fathaigh, 2005). Based on a measure combining parental participation in formal activities such as the Board of Management, participation in school projects in the community, and attendance at parent-teacher meetings, Cosgrove and Gilleece (2012) showed significantly lower levels of parental participation in DEIS schools compared to non-DEIS schools (as assessed by school principals); the difference amounted to about three-fifths of a standard deviation. Findings in the current report show little difference in parental participation between DEIS and non-DEIS schools as assessed by principals. The erosion of the earlier difference may likely be explained by a number of factors, not least the positive impact of the HSCL programme, but also differences in the measures used by PISA and by those described by Cosgrove and Gilleece.

Parents were asked about the factors that hindered their involvement in school-related activities. The most frequently reported issues for parents in both DEIS and non-DEIS schools were securing time off work (DEIS 27%; non-DEIS 24%) and managing inconvenient meetings times (DEIS 23%; non-DEIS 20%). Although these were selected as the most common hindrances, percentages in Ireland were below the corresponding OECD averages (34% and 33% respectively). Since the 2004/2005 school year, post-primary schools in Ireland have been required to hold parent-teacher meetings from 4.15pm up to 6.45pm and to show flexibility for parents who cannot attend at that time (DES, 2004) so it is likely that the majority of parents in Ireland are accommodated to attend a meeting at a convenient time.

Other hindrances selected by parents included a lack of knowledge by parents as to how to participate in school activities (DEIS 17%; non-DEIS 17%; OECD 14%) and students not wanting their parents to participate (DEIS 14%; non-DEIS 10%; OECD 12%). Lack of childcare to allow parents to be involved was an issue for about one-in-ten (DEIS 13%; non-DEIS 10%; OECD 13%). On a more positive note, very few parents in Ireland reporting feeling uncomfortable (DEIS 4%; non-DEIS 3%; OECD 4%) or unwelcome (DEIS 2%; non-DEIS 1%; OECD 4%) at their child's school.

### Parents' educational expectations and supports

Parental educational expectations for students in DEIS schools were lower than for those in non-DEIS schools. Students themselves were also asked to report their educational expectations and findings show that in DEIS schools, higher percentages of students expect their highest qualifications to be the Leaving Certificate Applied, Leaving Certificate General or Vocational, or an Apprenticeship or Third-level certificate or diploma. Significantly higher percentages of students in non-DEIS schools are expected by their parents to complete a university degrees. Similarly, in student reports, higher percentages of students in non-DEIS (62%), compared to DEIS (45%), schools expect to complete a university degree or post-graduate qualification.

A positive aspect of these findings is that large percentages of parents of students in DEIS schools expect their child to finish post-primary schooling. Only about one-in-twelve students in DEIS schools have parents who expect their child to leave formal education with secondary-level qualifications only. Conversely, over two-fifths of students in DEIS schools have parents who expect them to complete a degree or above. Given that there is a wealth of evidence on the important influence of parental expectations on academic achievement (Jeynes, 2007), there is a need for a continued focus on raising expectations amongst parents in DEIS schools.

The extent of parental supports for learning was examined and findings show that compared to students in non-DEIS schools, students attending DEIS schools had a significantly lower mean score on an index of parental support for learning. Both DEIS and non-DEIS mean scores are similar to the OECD average. Parents also responded to statements about the emotional supports they provided to their child in terms of their efforts at school, when they are facing difficulties at school, and to encourage their child's confidence. Parents of students in DEIS and non-DEIS schools held similar perceptions about their level of provision of emotional supports to their child. These parental supports provided at home are important in helping students' learning, in developing their confidence, stress management, and other socio-emotional characteristics that are considered important for academic and non-academic achievements (OECD, 2019f).

## School factors related to diversity, practices, resources and climate

### Diversity in student intake

In examining the profile of student needs in schools, it was noted that the percentages of students (according to principals) with a main language other than English or Irish were comparable in DEIS (15%) and non-DEIS schools (11%). However, based on principal reports, the average percentage of students in DEIS schools (23%) with identified special educational needs was higher than in non-DEIS schools (14%). The PISA items do not

address the complexity of educational needs or the supports offered to students with these needs. Although based on small absolute numbers, there was some evidence that the most likely reason for excluding students from PISA 2018 in DEIS schools was a result of intellectual disabilities; half of excluded students in DEIS schools were members of this group. In non-DEIS schools, specific learning disabilities accounted for over one-third of exclusions while intellectual disabilities accounted for a further 30%.

Findings of higher prevalence of special educational needs in DEIS schools have previously been reported in Ireland (McCoy, et al., 2014), although a departure from earlier research is the finding in the current report that languages other than English or Irish are equally prevalent in DEIS and non-DEIS schools. The link between the prevalence of special educational needs and socio-economic disadvantage has also been reported in the UK, whereby higher incidences of special educational needs were found in schools serving higher concentrations of students from socio-economically disadvantaged backgrounds. Students with special educational needs were more likely to be entitled to free school meals (i.e., to come from low income families) compared to students without special educational needs (Department for Education, 2017).

Principals in DEIS schools reported a higher average percentage of students from socio-economically disadvantaged homes (DEIS 59%; non-DEIS 22%). This is to be expected given that the purpose of the DEIS scheme is to provide supports to schools with the highest concentrations of disadvantage. On average across non-DEIS schools, over one-fifth of students were considered by principals to come from socio-economically disadvantaged homes, showing that disadvantage is not confined to DEIS schools. Similar findings have been reported previously highlighting the need to consider the types of supports that may be needed by disadvantaged students in non-DEIS schools (Smyth, McCoy, & Kingston, 2015). The profile of student needs in PISA 2018 related specifically to the Third years in the school, and percentages of students with needs may be greater when all students in these schools are considered (if, for example, some students with the highest levels of need drop out before reaching Third year).

### **School support for English as an additional language (EAL)**

School's equity-oriented policies to support students for whom English is an additional language (EAL) were also examined. According to principals' reports, similar levels of supports were offered in DEIS and non-DEIS schools. The most frequently used practices were the provision of additional periods of instruction for students, and class size reduction to meet the needs of students. Supports for EAL students are a priority in *The National Strategy to Improve Literacy and Numeracy among children and Young People* (DES, 2011) and equity of provision across the DEIS and non-DEIS schools is encouraging.

### **Class size and student-teacher ratio**

There were significantly lower numbers of students (about 2 students) per Third Year class in DEIS schools compared to non-DEIS schools. There was a significantly more favourable student-teacher ratio for students in DEIS schools with 10.6 students for every teacher, compared with 13.5 students for every teacher in the non-DEIS schools. Across OECD countries, the student-teacher ratio in PISA 2018 was smaller by one student in disadvantaged schools than in advantaged schools (OECD, 2019a).

International as well as national research has focused on the issue of class size in disadvantaged schools, with a particular focus at primary level in Ireland (Weir, Kavanagh, Kelleher, & Moran, 2017). Smaller class sizes can be of benefit, particularly for students from disadvantaged backgrounds and especially in the early years of primary school (Weir et al., 2017). Some benefits of smaller class sizes at post-primary level have also been noted (Blatchford, Bassett, & Brown, 2011). The OECD recognises that despite the PISA findings of smaller class sizes in disadvantaged schools, the achievement gap in reading and other domains persists (OECD, 2019a). It should be noted that the average school enrolment size of DEIS schools was significantly lower than that in non-DEIS schools and this may also contribute to the smaller class sizes and more favourable student-teacher ratios found in PISA 2018.

## School infrastructure and resources

### Availability of computers

There were no significant differences in the computer-student ratios between DEIS and non-DEIS schools with less than 1 computer available for educational purposes for every 15-year-old (Third year) student in DEIS schools (ratio = 0.81) and non-DEIS schools (ratio = 0.71). This was similar to the average across OECD countries (ratio = 0.8). On average across the OECD, socio-economically disadvantaged schools tended to have more computers per student (ratio = 0.89) than advantaged schools (ratio = 0.76) (OECD, 2020a).

The percentages of school computers with internet connectivity were high in both DEIS and non-DEIS schools. Access to the internet was widespread in most education systems across the OECD, with 9 out of 10 computers connected (OECD, 2020a). Ireland has worked to improve the Information and Communications Technology (ICT) infrastructure in schools through policies such as the *Digital Strategy for Schools 2015-2020 Enhancing Teaching Learning and Assessment* (DES, 2015b) and the linked introduction of a grant scheme (€210m) for ICT equipment. These initiatives are likely to have improved the ICT infrastructure in schools, and the results from PISA 2018 suggest equity in computer resources across school contexts.

### Study support

School-provided study support for 15-year-old students was examined in three ways: peer-to-peer tutoring, staff help with homework, and the provision of room(s) where the students could do their homework. Peer-to-peer tutoring was least common in both DEIS and non-DEIS schools, while study rooms were offered to a majority of students in both DEIS and non-DEIS schools (86-88%). The availability of study rooms is salient for students in the DEIS context who may not have a quiet study space in their homes. Students in DEIS schools (74%) were more likely than students in non-DEIS schools (51%) to have access to study support from staff.

Offering study support outside of school time is linked with the school's human and financial resources to supply staff after hours (OECD, 2020a). Additional resources for post-primary schools offered under DEIS, such as HSCL access and the School Completion Programme (see the DEIS Plan 2017; DES, 2017a), may allow DEIS schools to facilitate homework support.

### School resources: Shortage of educational staff and materials

Principals were asked to indicate the extent to which the school's capacity to provide instruction was hindered by various staff and resource issues. There were no statistically significant differences between DEIS and non-DEIS schools on overall indices measuring shortages of educational staff or shortages of educational materials. However, for a number of items contributing to the scale, higher percentages of students in DEIS schools had principals who indicated that a shortage of that resource hindered the school's capacity to provide instruction. Differences were not statistically significant, given the large standard errors associated with estimates for DEIS schools. Nonetheless, it is noteworthy that 51% of DEIS students compared to 44% of non-DEIS students (OECD average 27%) had principals who reported that a lack of teaching staff hindered ('to some extent' or 'a lot') the school's capacity to provide instruction. Furthermore, 27% of students in DEIS schools (compared to 7% in non-DEIS schools and 15% on average across the OECD) had principals who identified inadequate or poorly qualified teaching staff as a factor that hindered instruction 'to some extent' or 'a lot'.

A lack of support staff was the most commonly reported hindrance to teaching on average across the OECD with one-third of students in schools where principals indicated that this represented a hindrance; the percentage was similar in DEIS schools (34%) and somewhat lower in non-DEIS schools (24%). Across OECD countries, principals of disadvantaged schools were more likely than principals of advantaged schools to report a shortage of teachers or a shortage of support staff (OECD, 2020a).

It should be noted that principals separately reported the numbers of teachers in their school who were teacher certified, held (Honours) Bachelor degrees, Master's degrees, or Doctoral degrees. The average number of teachers with each did not differ between DEIS and non-DEIS schools. (Note that the average number of years of teaching experience was not available as the PISA 2018 teacher survey was not administered in Ireland). Therefore, in reporting a lack of teaching staff or a lack of adequately qualified staff, principals may have been influenced by the perceived adequacy of teacher-student ratios in the disadvantaged context, availability of substitute teachers, and availability of teachers with adequate experience of working in a DEIS school. The PISA dataset does not provide any further opportunities to explore principals' perceptions in this regard and future research may usefully pursue this issue.

Teaching in disadvantaged schools is often perceived to be more challenging and as a result, there can be difficulties in attracting and retaining teachers. In the UK, higher teacher turnover rates have been noted in schools serving disadvantaged communities (Social Market Foundation, 2016). Across OECD countries, teachers in disadvantaged schools have been found to have lower levels of qualifications on average and to have less experience than teachers in advantaged schools (OECD, 2018a; OECD, 2018b). In the Irish primary school context, differences between DEIS and non-DEIS schools have been noted in teachers' years of experience, with more recently qualified teachers in DEIS schools than in non-DEIS schools (Smyth, McCoy, & Kingston, 2015). The OECD identifies the provision of additional training opportunities, mentoring, and informal support as representing potentially useful supports for teachers working in disadvantaged schools (OECD, 2018b). The DEIS plan (DES, 2017a) also recognises the importance of these issues and grants priority access to teachers in DEIS schools to a range of professional development supports as well as providing priority access to the Centre for School Leadership.

Compared to non-DEIS schools, higher percentages of students in DEIS schools had principals who reported issues with access to educational materials (such as textbooks, IT equipment, library or laboratory materials). While two-fifths of students in DEIS schools had principals who identified a lack of educational materials as a hindrance to teaching, the corresponding value in non-DEIS schools was 27% (very similar to the OECD average of 28%). Inadequacies with the physical infrastructure (e.g., building, grounds, heating/cooling, lighting and acoustic systems) were reported in PISA 2018 by principals of about half of DEIS students and principals of two-fifths of non-DEIS students. There was a similar trend across the OECD countries as socio-economically disadvantaged schools were more likely than advantaged schools to experience shortages of material resources (OECD, 2020a). Further research could usefully examine access to educational materials and challenges associated with infrastructural problems in DEIS and non-DEIS schools.

### School activities

Principals were asked to indicate for a range of extra-curricular activities whether or not these were available to Third years in the school. According to principal reports, all students in Ireland had access to sporting activities at school and there was no significant difference in the number of 'creative' extra-curricular activities offered in DEIS and non-DEIS schools. Compared to the corresponding OECD averages, lower percentages of students in Ireland had access to activities related to volunteering; school plays and musicals; or the production of a school yearbook, newspaper or magazine. The question on extra-curricular activities advised principals to refer to activities for Third years so it is possible that yearbooks would be more commonly available to students at other points in their post-primary education.

There were high percentages of students in Ireland whose principals indicated that schools offered activities such as lectures or seminars; band, orchestra, or choir; competitions in mathematics; or art activities. Between three-fifths and all students were reported to have access to these in DEIS and non-DEIS schools. While provision of activities was generally very similar between DEIS and non-DEIS schools an exception was the production of a school yearbook, newspaper or magazine. This was more commonly available to non-DEIS students (29%; DEIS 14%).

### School climate and practices

#### Absenteeism, truancy, and lateness

About one-in-four students indicated that they had skipped some classes in DEIS (26%) and non-DEIS schools (26%) in the past two weeks. These percentages were similar to the OECD average of 27%. Students in Ireland (DEIS 30%; non-DEIS 28%) were somewhat more likely than on average across the OECD (21%) to report having skipped a whole day of school in the two weeks prior to the PISA test. Almost two-fifths of students in DEIS schools and one-third in non-DEIS schools reported that they had arrived late for school at least once in the two weeks prior to the PISA test. Arriving late was somewhat less common in Ireland than on average across OECD countries where close to half of students reported arriving late for school at least once in the two weeks prior to the PISA test. There was no gender effect for truancy or lateness in the DEIS context. In contrast, in non-DEIS schools, boys were significantly more likely than girls to report skipping classes and skipping days.

Across the OECD, students who reported lateness and truancy had poorer average reading achievement in PISA 2018 (OECD, 2019d). In Ireland, there was a similar trend as students who had *not* skipped a whole school day in the previous two weeks scored significantly

higher on reading than those who had skipped a day (Shiel et al., 2021). Findings presented in the current report show that students in DEIS schools were more likely than those in non-DEIS schools to have a principal who indicated that the school had a student attendance policy in place, made use of rewards to motivate students to attend and to arrive on time, and to have a reintegration process for students after prolonged absences. Given its highly complex underpinnings, there may be merit in detailed further research of absenteeism in the Irish post-primary context. The forthcoming DEIS Monitoring and Evaluation strategy may usefully give detailed consideration to those interventions which are most successful in supporting student attendance.

### **Disciplinary climate**

The disciplinary climate in English classes was reported by students. All five types of disruption were more frequent in DEIS schools than non-DEIS and compared to the OECD averages. Noise and disorder in the class was the most frequent disruption in DEIS schools, cited by 40% of students in DEIS schools compared to 33% in non-DEIS schools (OECD average 31%). One-in-five students in Ireland reported that they could not work well due to these disruptions; this was similar to the corresponding OECD average (OECD, 2020a).

Previous Irish research has reported similar classroom climate issues in DEIS schools, with greater amounts of noise in the classroom and greater time lost to students' interruptions (Gilleece, Shiel, Perkins, & Proctor, 2009). A more positive disciplinary climate has also been found in socio-economically advantaged schools compared to disadvantaged schools (OECD, 2016a; OECD, 2019d). The importance of school climate is now increasingly emphasised as part of the promotion and enhancement of wellbeing in schools (DES, 2018a) and the recent Wellbeing Policy Statement and Framework for Practice recognises culture and environment as one of four areas key to wellbeing promotion.

### **Teacher and student behaviour hindering learning**

Perceptions of teacher-related behaviours hindering learning did not differ significantly between DEIS and non-DEIS schools; both were marginally above the OECD mean. Considering teaching behaviour, the most common hindrance was teachers not meeting individual pupils' needs (DEIS 36%; non-DEIS 31%); the OECD average was similar at 30%. Teacher absenteeism was higher in DEIS schools (30%) compared to non-DEIS schools (16%); the OECD average was lower at 18%.

Principals' perceptions of student-related behaviours hindering learning was higher in the DEIS schools compared to non-DEIS schools and compared to the OECD average (half a standard deviation above). According to principals, the student behaviour most likely to represent a hindrance to learning was unauthorised student absence. Principals of 77% of students in DEIS schools and 51% in non-DEIS schools (compared to an OECD average of 38%) indicated that unauthorised student absence hindered learning 'to some extent' or 'a lot'.

Student and principal items regarding the skipping of classes and days are not directly comparable as students were asked if they had skipped classes or days in the two weeks prior to the PISA assessment whereas principals were asked about the extent to which unauthorised student absence represented a hindrance to learning. Levels of truancy as reported by students may have been under-reported as they were asked to report on the previous two weeks only.

Students not being attentive was reportedly a much greater problem in DEIS schools than in non-DEIS schools. Principals of two-thirds of DEIS students (compared to one-third of non-DEIS students and three-fifths on average across the OECD) reported that students not being attentive hindered learning 'to some extent' or 'a lot'. Reasons for inattentiveness may vary widely, ranging from disengagement from schooling generally, mental health or trauma, inadequate diet and sleep, and/or use of alcohol/drugs. About one-fifth of students in DEIS schools had principals who reported that student use of alcohol or illegal drugs hindered learning 'to some extent' or 'a lot'. This compares to 10% on average across the OECD and 7% in non-DEIS schools.

Previous research has highlighted similar issues in DEIS post-primary schools. For example, students in DEIS schools were considered by their principals to be less well-behaved and believed to show less respect for their teachers than students in non-DEIS schools (Smyth & McCoy, 2009). A difficult learning environment has been reported by principals in DEIS schools, with about one-fifth of principals indicating that it was a major problem (Weir, McAvinue, Moran, & O'Flaherty, 2014).

### Sense of belonging

Sense of belonging gives students feelings of security, identity and community and in the school setting, this can support student learning and achievement (OECD, 2019d). No significant differences were noted between DEIS and non-DEIS schools in average student sense of belonging, although mean scores in both contexts were about one-sixth of a standard deviation below the OECD average. Across the OECD, students in socio-economically advantaged schools expressed a stronger sense of school belonging than disadvantaged students (OECD, 2019d).

Although findings regarding sense of belonging were generally favourable in Ireland, it should be noted that about one-in-four students disagreed that they made friends easily, and a similar percentage of students felt like an outsider (or left out of things) in both DEIS and non-DEIS schools. About one-in-six students did not feel they belonged at school. Students with a strong sense of belonging have been shown to have better academic achievement and a lower rate of school absence demonstrating the importance to students of feeling accepted and connected (Korpershoek, Canrinus, Fokkens-Bruinsma, & de Boer, 2019). Student wellbeing is currently a priority in the Irish education system (Government of Ireland, 2018) and one of the key principles includes fostering student belonging and connectedness to the school's community.

### Grouping practices

Student allocation by ability into *different* classes and *within* classes was examined. The findings indicate negligible use of 'streaming' in Irish post-primary schools ('streaming' refers to ability grouping for all subjects). Virtually no students were in schools where principals reported grouping students by ability for *all* classes. Previous research found higher use of streaming in DEIS schools than in non-DEIS schools (Smyth, McCoy, & Kingston, 2015). It has been shown that children from lower socio-economic status backgrounds were more likely to be placed in lower ability groups, sets or streams (Henry, 2015). Evidence on the impact of streaming has shown a range of negative outcomes for students in the lower attainment groups, including lower exam grades and higher rates of early school leaving (Smyth, McCoy, & Kingston, 2015). It is therefore a positive finding that streaming was not used by schools participating in PISA 2018.

Although there was no evidence of streaming, the grouping of students by ability into different classes for 'some subjects' was high at 92% in both DEIS and non-DEIS schools. The term 'setting' refers to grouping students for some subjects and this was a much more common practice in Ireland than across OECD countries where only 35% of students on average were in schools where the principal indicated that this approach was adopted. On the basis of current findings, use of setting can be considered widespread in Ireland in both DEIS and non-DEIS schools.

Grouping of students *within* classes was less frequent than grouping into *different* classes with approximately half of the principals reporting *within* class grouping for 'some subjects' (DEIS 54%; non-DEIS 45%); this was similar to the OECD average of 51%.

## Wellbeing

Recent years have seen an increased policy focus on wellbeing across all levels of the education system. At post-primary level, the Framework for Junior Cycle provides for a new area of learning called Wellbeing. In addition, wellbeing is one of eight principles guiding the new junior cycle and staying well is one of eight key skills (DES, 2015a). Elements of 'staying well' include constructs such as being confident, being positive about learning, and being safe (DES, 2015a). The curricular aspect of wellbeing is just one of four aspects of wellbeing in schools. The other elements refer to school culture, relationships and policy and planning.

Previous research shows that school social mix (as measured by DEIS status) has a significant association with socio-emotional wellbeing, with differences between students who attend DEIS schools at both primary and post-primary levels and those who attend DEIS schools at one level only (Smyth, 2020). Students who attend Urban DEIS Band 1 schools at primary level and DEIS post-primary schools demonstrate greater emotional difficulties, greater conduct problems, greater hyperactivity and more peer problems. Moving into a DEIS post-primary school is associated with greater conduct problems and greater hyperactivity. Furthermore, findings from GUI show that students from socially disadvantaged backgrounds had lower life satisfaction scores at age 17/18, and were more likely to have a higher number of emotional and behavioural difficulties, than their counterparts from more advantaged backgrounds (Growing Up in Ireland Study Team, 2016). However, recent GUI findings relating to social-emotional and behavioural outcomes at age 13 emphasise that problems in these domains affect young people across social contexts and underscore the need for universal intervention and prevention programmes.

PISA offers the opportunity to examine individual wellbeing outcomes in an international comparative context as well as taking a detailed look at differences in wellbeing outcomes between DEIS and non-DEIS schools. A number of broad indicators of wellbeing, students' experiences of bullying, motivations for studying, and anxiety around tests were examined. In general, findings were very similar in DEIS and non-DEIS schools with few statistically significant differences between the two contexts. An exception was value of schooling with students in DEIS schools found to have a significantly lower score on the value of schooling index. In both DEIS and non-DEIS schools, male students placed a significantly lower value on schooling than females.

International research (OECD, 2019d) has shown much lower between-school variance in wellbeing measures when compared with achievement outcomes and as such, considerable variation within schools (rather than between) can be expected. This underscores the importance of emphasising wellbeing for all students in all schools as is currently the aim of Irish educational policy. It is encouraging to see that virtually all PISA 2018 students were in schools where principals reported having in place policies and practices to support student wellbeing. These were: a whole-school plan for student wellbeing; having a student support team in place; the provision of mental and emotional health education; the existence of a systematic approach to screening for social, emotional and behavioural difficulties; monitoring and recording of bullying; and, liaison with and referrals to external agencies where appropriate.

Although on the wellbeing measures examined, there were few differences between students in DEIS and non-DEIS schools, it is noteworthy that between 20% and 30% of students in both contexts indicated that they 'always' feel under pressure regarding exams and tests, whether they put pressure on themselves, or pressure from parents and teachers. The issue of exam stress has been noted in the context of senior cycle education in Ireland (NCCA, 2019; OECD, 2020c). As just 8.5% of PISA 2018 students in Ireland were in Fifth year at the time of testing (with a further 27.9% in Transition year, McKeown et al., 2019), it appears that stress and anxiety around examinations are not confined to the Senior Cycle. Just over 60% of PISA students were in Third year at the time of testing; thus it is likely that these students experienced exam pressure associated with Junior Certificate examinations.

Clarke (2020) highlights the importance of considering the different aspects of wellbeing that are important for children of different ages. She notes that hedonic wellbeing appears particularly important for pupils' achievement between ages 7 to 12 whereas amongst older age groups, eudemonic wellbeing appears important for achievement. She argues that students' eudemonic wellbeing is underexplored, especially in relation to academic pressures. In monitoring wellbeing outcomes which are multidimensional in nature, it is important to give detailed consideration to the particular components that are of greatest relevance during different developmental periods (Clarke, 2020). The forthcoming DEIS Monitoring and Evaluation framework may usefully examine both measures of implementation (e.g., the numbers of learners who have access to the Incredible Years programme or the Friends programme) and appropriate outcome measures, drawing both on research findings related to developmental differences in wellbeing at different ages and national policy priorities, such as the suggested measures for success in monitoring outcomes of a wellbeing promotion process (DES, 2018a).

## Aspirations for the future

### Career supports and information

Schools play a vital role in supporting, guiding and informing students about further education, training, and job opportunities available to them when they leave post-primary school. Principals of one-in-three students in Ireland indicated that career guidance was voluntarily sought by students. It was more formally scheduled into students' time at school for the majority of students in both DEIS and non-DEIS schools. Across OECD countries, there was a similar pattern of provision where two-in-three students attended a school where career guidance was formally scheduled into the students' time (OECD, 2019a). Also,

across the OECD, almost all students were in schools where responsibility for providing career guidance was allocated to a designated career guidance counsellor employed at the school.

The DEIS plan (DES, 2017a) allows for all post-primary schools in the School Support Programme to have access to a dedicated career guidance counsellor by the end of 2017 and requires school plans to provide for formal engagement between guidance counsellors, HSCL coordinators and access officers in Further and Higher Education. Furthermore, the plan allows for an enhanced guidance allocation of 1.25 of the Pupil Teacher Ratio for DEIS post-primary schools (compared to 0.5 in non-DEIS schools). There has been a reported decrease in the amount of guidance hours available to students (ASTI, 2018). While the results from PISA 2018 results show that career guidance was available in all schools, it provides limited information on the amount of time available to students.

Students were asked the ways in which they find out about future study and potential careers. Students in DEIS and non-DEIS schools were actively engaged in career developing activities. Three-in-four students reported that they searched the Internet for information about careers. Over half of students in both school settings reported that they searched the Internet for information about third-level college or university courses. For five activities regarding future career preparation, students in DEIS schools reported greater engagement than students in non-DEIS schools. There were: completed work experience placements; job shadowing/work place visits; speaking to a guidance counsellor *inside* school; speaking to a guidance counsellor *outside* of school; and, organised tours to a third-level college or universities. Students in non-DEIS schools were more likely to have completed an aptitude test in school to see what areas they were best at compared to students in DEIS schools.

Higher percentages of students in DEIS schools, compared to non-DEIS schools, indicated that they had engaged in a number of activities designed to help students develop their knowledge of future careers; for example, 50% of students in DEIS schools, compared to 40% in non-DEIS schools, had spoken to a guidance counsellor at school. However, it is useful to note that in DEIS schools, a somewhat higher percentage of students (13%) were in Fifth year than in non-DEIS schools (7%). Conversely, the percentage of PISA 2018 students who were in Third year students was higher in non-DEIS (63%) than in DEIS (57%) schools. It is likely that engagement in career developing activities increases in later grades so the slightly higher percentage of DEIS students in Fifth year may account for the higher engagement of DEIS students in career-development activities.

These findings differ from the trend across OECD countries where disadvantaged students were *less* likely than advantaged students to browse the Internet for information and were also less likely to report that they had worked as interns, shadowed workers in their jobs or visited a job fair (OECD, 2019a). At post-primary level in Ireland, DEIS schools have access to enhanced guidance counselling; this may explain why engagement in activities such as internships were higher in DEIS schools.

Career development activities such as work experience placements and job shadowing are effective in that can replicate the positive benefits of 'first-hand exposure' to the world of work (Mann, et al., 2020). Providing these types of experiences would help all students in planning for their future (OECD, 2019a). Under the DEIS action plan, schools are encouraged to establish links between 'third-level specialists in education and/or relevant industry or

community groups' (DES, 2017a, p. 30). A current example of such a link between post primary DEIS schools and industry is the Irish P-TECH Pilot programme which commenced in three inner-city DEIS post-primary schools in 2019. P-TECH is a public education initiative that combines second-level school education with elements of third level education and work experiences such as mentorship and internships provided by industry partners (P-TECH Schools in Ireland, 2020).

Students were asked report on their skills in finding information about the labour market and asked whether these skills were acquired inside or outside of school. Compared to students in non-DEIS schools, students in DEIS schools were more likely to report skills acquired inside school in the following areas: skills to find information about jobs they are interested (+5%); search for job (+7%); write a CV/summary of qualifications (+7%); prepare for job interview (+8%); and skills to find information on financial support for further or higher education (+8%). Most students were in Third Year at school and these skills may be further developed as students near school completion.

Across OECD countries, disadvantaged students were also more likely than advantaged students to have acquired (at school) the skills that may be useful for the transition from school to work. Of concern for the OECD was the low percentage of disadvantaged students who knew how to find information on financial support for further or higher education (OECD, 2019a). In Ireland, about one-in-four students had developed that skill which may impact on their future plans.

The (then) Department of Education and Skills commissioned a review of career guidance in Ireland which makes a number of recommendations which are useful to consider in the context of the PISA findings (Indecon, 2019). Firstly, the review recommended greater provision of career guidance through technology-based services. Students in PISA reported using online resources for accessing information on study and careers, and there may be scope for further development in this regard. Findings from PISA 2018 indicate that attendance at careers fairs was low in Ireland, although it may be expected that attendance at such events would increase in Fifth and Sixth year (students who are typically not eligible for PISA). The Indecon review recommended the expansion of careers events and greater parent and student involvement.

### Students' educational expectations

Students were asked about their expectations for the highest qualification they would achieve. Students in DEIS schools were more likely than those in non-DEIS schools to report that their highest expected qualification was Junior Certificate; Leaving Certificate Applied; Leaving Certificate General or Vocational; or an Apprenticeship. Conversely, lower percentages of DEIS students (45%; non-DEIS 62%) expected to achieve a university degree. The expectations of students in Ireland are somewhat lower than on average across OECD countries (OECD, 2019a), where 69% of students on average reported that they expect to complete a tertiary degree (51% of disadvantaged students and 86% of advantaged students).

Mirroring current findings, data from Growing up in Ireland show that the Leaving Certificate Applied programme was favoured more by students in DEIS schools compared to students in non-DEIS schools (18% vs 5% respectively) (McNamara, Murphy, Murray, Smyth, & Watson, 2020). It should be noted that the Leaving Certificate Applied programme is not a direct route into university.

At the policy level, the National Plan for Equity of Access to Higher Education 2015-2019 (Higher Education Authority, 2015) and various programmes and initiatives (e.g., the SUSI grants scheme, the Student Assistance Fund [SAF], and the Programme for Access to Higher Education [PATH]) aim to enable students from socio-economically disadvantaged background to access higher education. Progress has been made in raising the number of new entrants to higher education from DEIS schools (Higher Education Authority, 2018) although recent data show that in Irish third-level institutions, there are just 4.9 students from disadvantaged areas for every 10 students from affluent areas (Higher Education Authority, 2020). Furthermore, there are considerable differences by field of study, with 4% of students enrolled in medicine from disadvantaged areas compared to 19% of students in childcare courses (Higher Education Authority, 2020).

Students in PISA 2018 reported the level at which they expected to take various subjects for their Leaving Certificate examinations. Students in non-DEIS schools were more likely than those in DEIS schools to expect to take the higher level option for Maths (+20%), Irish (+15%), and English (+20%). There was a similar pattern for Biology/agricultural science (+11%), and other science subjects (+15%). While no differences were apparent for Applied Maths, this may relate to the lower percentages of students taking that subject. The level at which a subject is taken in Leaving Certificate examinations is likely to impact on the Leaving Certificate points attained, which in turn impact on opportunities for further and higher education and subsequent careers. Differences in higher level-uptake of subjects at Junior Certificate level have been noted with students in DEIS schools less likely to choose higher-level subjects (McNamara et al., 2020).

The National Strategy to Improve Literacy and Numeracy among Children and Young People 2011-2020 (DES, 2011) aimed to increase the numbers of students taking higher-level mathematics in the Leaving Certificate examination. The percentage has improved from 16% to 30% by 2017 (DES, 2017b). Although the results from PISA 2018 offer some indication that students may increasingly opt for this higher-level option (39% DEIS; 59% non-DEIS), students in Second or Third year may be less able to reliably indicate the level they will take compared to their Senior Cycle counterparts. Also, early examination of the impact of the revised Leaving Certificate grading scheme suggests that while there has been an increase in the number of students taking higher level subjects for Leaving Certificate, the increase is less pronounced in DEIS schools (McCoy, Byrne, O'Sullivan, & Smyth, 2019). Over time, this may result in a widening gap between DEIS and non-DEIS schools in the percentages of students taking higher level subjects.

Students in PISA 2018 were asked to indicate what they thought they will be doing in five years' time. A sizeable percentage of students expect to be studying for a degree, although the percentage of students in DEIS (37%) schools with this expectation was significantly lower than in non-DEIS (50%) schools. The Growing up in Ireland study found that intentions to proceed to higher education after school were higher for students from working class backgrounds in non-DEIS schools compared to students in DEIS schools (McNamara, Murphy, Murray, Smyth, & Watson, 2020).

One-sixth of students in DEIS schools expected that they will be working because the occupation they want does not require a degree while one-fifth indicated that they expect to be working because they need to be financially independent. The corresponding values in non-DEIS schools were 10% and 12%, respectively.

The most important factors that influenced students' decision making about their future career included the school subjects they were good at and school grades; with four-in-five students considered these as important. Employment opportunities and expected salary of the future occupation were also considered important. Half of the students considered parents' expectations about their occupation as an important factor. One third of students thought the plans of their close friend influenced their decision making. Both intrinsic factors (e.g., personal fulfilment, pursuing a subject of interest) and extrinsic factors (e.g., job security, income) have been found to be important for students in deciding what to do after school (McCoy, Smyth, Watson, & Darmody, 2014).

### Students' career aspirations

When asked about their aspirations for the job they would be doing aged 30 years old the majority of students expected to have a professional occupation (45% DEIS; 56% non-DEIS). Teaching professional was the most commonly selected occupation for all students, and careers in healthcare were also popular. There were similarities between DEIS and non-DEIS students job aspirations where both groups cited the same jobs, albeit these were ranked differently in some instances. Students in DEIS schools were also more likely to indicate manual, skilled and sporting professions (i.e., mechanic, athlete, beautician) which traditionally do not require a university degree. Up to a quarter of PISA students did not know what their anticipated career would be in the future (25% DEIS; 21% non-DEIS).

Students' choice of career options was narrow, notably so for females where over half of chose one of the top 10 occupations. Gender stereotyping was evident in the students' career expectations. Female students were somewhat more likely to focus on healthcare occupations. Also, female students in DEIS schools were the only group to include hairdressing in the top ten expected occupations. Male students were more likely than females to cite manual jobs and sports players. Science and engineering professions were also popular choices with male students, and noticeably absent from the female lists. This pattern was similar across the OECD countries where female students chose health- and teaching-related professions, and male students chose engineering, mechanics, and police officers as future occupations (OECD, 2019a).

Student choices have not changed much across the 20 years of PISA cycles. The preferred occupations, such as doctor and teacher, can be considered traditional and may not represent more current labour market needs (Mann, et al., 2020). These gendered findings raise two issues. Firstly, male students from disadvantaged backgrounds have expectations of jobs that have a high risk of being automated (Mann, et al., 2020), and they may need help and support in broadening their scope of potential careers. Secondly, attracting female students into STEM based occupations has been challenging and continued policy effort, such as the STEM Education Policy 2017-2026, is required to support females in choosing STEM subjects to study and as careers (DES, 2017b). Initiatives such as P-TECH, aimed at providing students with experience of technology-related subjects and relevant work experience, are to be welcomed in this regard (P-TECH Schools in Ireland, 2020).

## Key strengths in DEIS contexts

- Compared to students in non-DEIS schools, students in DEIS schools had a significantly higher mean score on the index of school policies for parental involvement. This means that parents in DEIS schools held more positive perceptions of home-school communication; parental involvement opportunities; and the provision of parent education and supports. This is a very positive finding, given that improved parental engagement is a key target of DEIS (DES, 2017a).
- Although students in DEIS schools had a significantly lower mean score than their counterparts in non-DEIS schools on the index of current parental support for learning at home, the mean scores in both DEIS and non-DEIS schools were quite close to the corresponding OECD average. Also, there was no significant difference between students in DEIS and non-DEIS schools on the index for parents' emotional support. These findings suggest that despite differences in access to material resources, parents of students in DEIS schools provide similar levels of emotional support as parents of students in non-DEIS schools.
- Students in both DEIS and non-DEIS schools are reported to have access to a wide range of extra-curricular activities with a large majority of students in PISA 2018 reported by principals to have access to sports; lectures or seminars; band, orchestra or choir; and/or maths competitions. Given the emphasis placed on community linkages in the DEIS plan (Department of Education and Skills, 2017a), it is positive that over half of students in DEIS schools were reported to have opportunities to engage in volunteering or service activities and half of DEIS students had principals who reported collaborations with local libraries.
- On most of the wellbeing indicators examined, there were no significant differences between the mean scores of students in DEIS and non-DEIS schools. Specifically, on measures of overall meaning in life, positive feelings, and self-beliefs about resilience, there were no statistically significant differences in the mean scores on students in DEIS and non-DEIS schools. Furthermore, no significant differences were noted in bullying between students in DEIS and non-DEIS schools.

## Key challenges in DEIS contexts

- Less than one-third of students in DEIS schools have a parent with a university-level qualification and may therefore lack role models for university attendance. Less than half of students in DEIS schools expected to complete a university-level qualification. Addressing the perception that university is not a viable or realistic option remains a key challenge for DEIS schools. This policy priority becomes even more apparent when one considers that the present report found similarities in the *career* aspirations of DEIS and non-DEIS students, yet lower *educational* aspirations in DEIS students compared with their non-DEIS counterparts. It would seem important to gain a better understanding of the relative weight given to financial factors as opposed to perceptual ones as drivers to this disparity.
- Despite very high levels of technology ownership in students' homes, 13% of students in DEIS schools indicated that they did not have a quiet place to study. A similar percentage (17%) did not have a desk for study at home while nearly one-fifth (19%) reported that they did not have a computer to use for schoolwork at home. It is likely to be very challenging for these students to complete homework and study at home.

- The percentage of students reported by principals to have SEN in DEIS schools (23%) was significantly higher than in non-DEIS schools (14%), with about one-quarter of students in DEIS schools reported to have SEN. It is likely a substantial challenge for teachers in DEIS schools to adequately cater for the diverse needs of the student population. In the current Special Education Teacher (SET) allocation model (Department of Education and Skills, 2019), DEIS schools receive a slightly higher weighting than non-DEIS schools. With further development of the DEIS identification and SET models, there may be merit in considering further linkages between the two in the future.
- Over half of students in DEIS schools (55%) had principals who indicated that a lack of teaching staff impacted on the school's capacity to provide teaching while principals of one-quarter of students in DEIS schools (24%) identified as a hindrance the issue of inadequate or poorly qualified teaching staff. Principals of nearly one-third of students in DEIS schools (30%) indicated that teacher absenteeism represented a problem. The corresponding values in non-DEIS schools were 41%, 7% and 16% respectively. These findings suggest that teacher retention and wellbeing may represent particular challenges in DEIS schools. This merits a considered policy response, since teacher retention and wellbeing may have a significant impact on the quality of teaching and learning as well as on the teachers themselves.
- Principals indicated that several student behaviours had a negative impact on teaching and learning in the school. It is concerning that about three-quarters of students in DEIS schools had principals who identified unauthorised student absenteeism as a hindrance to learning. Two-thirds of students in DEIS schools had principals who indicated that students not being attentive was a barrier to learning. Principals of over one-fifth of students in DEIS schools identified student use of alcohol or illegal drugs as a hindrance to learning. Given the central importance of second-level education in providing future opportunities for study and work, it is undoubtedly an important challenge for DEIS schools if students are absent or present but not fully able to engage in their learning. This finding underlines the importance of the wellbeing framework (DES, 2018a), whose importance has increased after the onset of the COVID-19 pandemic.
- Students in DEIS schools had a significantly lower mean score on an index measuring students' attitudes towards the value of schooling, thus students in DEIS schools were less likely to agree with statements such as 'Trying hard at school is important'. In DEIS and non-DEIS schools, boys had a significantly lower mean score than girls, emphasising the ongoing need to support boys in DEIS schools to recognise the importance of education and the value of qualifications for future life opportunities.

## Implications for research, policy and practice

- In PISA 2018, principals of almost 90% of students in DEIS and non-DEIS schools indicated that their school provides a room where students can do their homework. Current findings show that one-in-eight students in DEIS schools do not have a quiet place to study at home and one-in-five does not have a computer for study at home, underlining the importance of ongoing school-based support for study outside of school hours.
- Lower rates of parental participation in university combined with lower expectations regarding progression to university amongst DEIS students themselves underscore the continued importance of university-access programmes, school-based career guidance, and opportunities for student work-placements with exposure to graduate roles. There

is a continued need to develop links between post-primary schools and university access offices to provide equal opportunities for all students to realise their educational and career aspirations. While career guidance counsellors play an important role, it is important for all teachers to act as role models and to create a school culture of high expectations. In creating a culture of high expectations, there is a need to support boys in particular to recognise the importance of education and the value of qualifications for future life opportunities.

- Findings regarding the prevalence of special educational needs in DEIS post-primary schools lend further support to the continued inclusion of an indicator of socio-economic disadvantage in the Resource Allocation model for Special Education Teachers (DES, 2019). Furthermore, these findings illustrate the complex interrelationships between socio-economic disadvantage, educational outcomes, health outcomes, and school choice mechanisms and underscore the need for a cohesive policy response to social inclusion.
- Two-fifths of students in DEIS schools were in the lowest quartile on ESCS. One-fifth of students in non-DEIS schools have ESCS scores in this range. The rationale for providing supports under DEIS at the school level is based on the principle of the ‘multiplier effect’, according to which students attending a school with a concentration of students from disadvantaged backgrounds have poorer academic outcomes, even taking into account individual social background. There may be merit in future research using recent datasets with data for post-primary students (e.g., PISA 2018 and TIMSS 2019 [Trends in International Mathematics and Science Study]) to examine the extent of the social context effect in Irish post-primary schools at the current time.
- Findings from PISA 2018 show that principals in DEIS schools consider a lack of adequately qualified staff to represent a barrier to effective teaching and learning. Given that PISA 2018 findings show no differences between DEIS and non-DEIS schools in the numbers of teachers with qualifications at various levels, further consideration should be given to principals’ perceptions of inadequacies and how these may relate to teacher experience in the disadvantaged context.
- A large minority of students reported frequent disruption in English classes (PISA 2018 main domain) associated with students being inattentive. Although percentages in DEIS schools reporting various forms of disruption were comparable to the corresponding OECD averages, they were significantly above those in non-DEIS schools suggesting that there is an ongoing need for support for teachers in developing classroom management skills. At primary level, there is some evidence in the Irish context that teacher participation in evidence-based classroom management training is associated with reductions in self-reported levels of teacher burnout and improvements in teacher wellbeing and self-efficacy (Kennedy, Flynn, O’Brien, & Greene, 2021). Therefore, support for classroom management may represent a particularly useful professional development focus for teachers in DEIS post-primary schools.
- Given findings related to classroom management and principals’ perceptions of teacher absenteeism, support for teacher wellbeing (e.g., as provided by the PDST [www.pdst.ie/teacher\\_wellbeing](http://www.pdst.ie/teacher_wellbeing)) should be continued and expanded with particular attention given to the wellbeing of teachers in DEIS schools.
- Student absence from school remains a key factor hindering learning according to principals. Therefore, DEIS Monitoring and Evaluation should continue to monitor attendance rates in DEIS schools. Retention and attendance should remain as important strands of a school’s DEIS planning process, with due recognition given to the complex underpinnings of chronic absenteeism.

- There is an ongoing need for schools to focus on subject take-up at higher level in DEIS schools and to monitor take-up of higher-level subjects in DEIS and non-DEIS schools. This may form a useful component of the Department of Education's forthcoming DEIS Monitoring and Evaluation framework.
- Although there were no significant differences between DEIS and non-DEIS schools in students' sense of belonging to school, mean scores in Ireland on this index were lower than the corresponding OECD average. This underscores the continued need for schools to focus on student wellbeing and the inclusion of all learners in the school community. Future research may usefully examine characteristics of students with higher and lower scores for sense of belonging at school to consider if certain groups of learners feel a lower sense of belonging than others.

In conclusion, this report used PISA 2018 contextual data to describe the broader home and school contexts of students in DEIS and non-DEIS schools, as well as a number of attitudinal and wellbeing outcomes. Focusing on broader purposes of education such as educational expectations, student attitudes to learning, and wellbeing, aligns well with the DEIS plan 2017 (DES, 2017a) which emphasises the need for all children to get the best possible opportunities to fulfil their potential in life. Reflecting this aim, targets in the DEIS plan include measures for not only literacy and numeracy achievement but also retention, wellbeing, progression to further and higher education, teacher education, parental engagement, and community links. Together with the previously published PISA-DEIS achievement report (Gilleece et al., 2020), the current report makes an important contribution to the overall monitoring and evaluation of DEIS.



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# Appendix 1: Overview of items used to measure four components of ESCS

This table provides an overview of the items used for the PISA ESCS components i) home possessions (HOMEPOS), ii) family wealth (WEALTH), iii) cultural possessions (CULTPOSS) and iv) home educational resources (HEDRES)

Item	Description	Item is used to measure index			
		HOMEPOS	WEALTH	CULTPOSS	HEDRES
ST011Q01TA	A desk to study at	X			X
ST011Q02TA	A room of your own	X	X		
ST011Q03TA	A quiet place to study	X			X
ST011Q04TA	A computer you can use for school work	X			X
ST011Q05TA	Educational software	X			X
ST011Q06TA	A link to the internet	X	X		
ST011Q07TA	Classic literature (e.g. <Shakespeare>)	X		X	
ST011Q08TA	Books of poetry	X		X	
ST011Q09TA	Works of art (e.g. paintings)	X		X	
ST011Q10TA	Books to help with your school work	X			X
ST011Q11TA	<Technical reference books>	X			X
ST011Q12TA	A dictionary	X			X
ST011Q16TA	Books on art, music, or design	X		X	
ST011Q17TA	<Country specific wealth item1>	X	X		
ST011Q18TA	<Country specific wealth item2>	X	X		
ST011Q19TA	<Country specific wealth item3>	X	X		
ST012Q01TA	Televisions	X	X		
ST012Q02TA	Cars	X	X		
ST012Q03TA	Rooms with a bath or shower	X	X		
ST012Q05NA	<Cell phones> with internet access (e.g. smartphones)	X	X		
ST012Q06NA	Computer (desktop computer, portable laptop, or notebook)	X	X		
ST012Q07NA	<Table computers>(e.g. Ipad®, <Blackberry®>, <Playbook™>)	X	X		
ST012Q08NA	E-book readers (e.g. Kindle™, <Kobo>, <Bookeen>)	X	X		
ST012Q09NA	Musical instruments (e.g. guitar, piano)	X		X	
ST013Q01TA	How many books are there in your home?	X			

Table 16.4 (OECD, 2020d).







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