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The decline in pupils' emotional engagement with school. How does England compare to other countries?

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Research has indicated how, in England, pupils' emotional engagement at school drops rapidly in the first stages of secondary education (Key Stage 3). But to what extent is a similar pattern observed in other countries, and is the fall steeper in England than elsewhere? This paper presents new comparative evidence on this issue, drawing on multiple waves of data from the Trends in Mathematics and Science Study (TIMSS). Our results show that between the end of primary and mid-secondary school, pupils' level of emotional engagement falls in almost every country with data available. The magnitude of this fall is, however, more pronounced in England than elsewhere. In several areas the drop is greater for girls than boys, though with little difference according to immigrant status. We also illustrate how secondary school pupils' emotional engagement with school has fallen significantly since the COVID-19 pandemic.

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Highlights

- Between the end of primary and mid-secondary school, pupils' level of emotional engagement falls in almost every country with data available.
- The magnitude of this fall in emotional engagement is more pronounced in England than other countries.
- Secondary school pupils' emotional engagement with school has fallen significantly since the COVID-19 pandemic. A much smaller decline is observed for primary pupils.
- The fall in emotional engagement with school since the COVID-19 has been sharper amongst girls than boys.

Why does this matter?

Pupil's emotional engagement with school is likely to be a key driver of pupil absences, which have sharply increased since the COVID-19 pandemic.

The decline in pupils' emotional engagement with school. How does England compare to other countries?

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Abstract

Research has indicated how, in England, pupils' emotional engagement at school drops rapidly in the first stages of secondary education (Key Stage 3). But to what extent is a similar pattern observed in other countries, and is the fall steeper in England than elsewhere? This paper presents new comparative evidence on this issue, drawing on multiple waves of data from the Trends in Mathematics and Science Study (TIMSS). Our results show that between the end of primary and mid-secondary school, pupils' level of emotional engagement falls in almost every country with data available. The magnitude of this fall is, however, more pronounced in England than elsewhere. In several areas the drop is greater for girls than boys, though with little difference according to immigrant status. We also illustrate how secondary school pupils' emotional engagement with school has fallen significantly since the COVID-19 pandemic.

1. Introduction

Since the COVID-19 pandemic, many English-speaking countries have seen a sharp spike in pupil absence from school (Anders et al., 2024; Fuller et al., 2023). This includes England, where approximately one-in-five pupils (19%) are classified as being persistently absent from school (DfE, 2024a). Educators and policymakers have obviously been alarmed by this increase, with high levels of school absence linked with lower levels of educational achievement (DfE, 2025; Klein & Sosu, 2024), worse mental health outcomes (John et al., 2022) and long-lasting impacts into adulthood (Dräger et al., 2024). It is hence little wonder that this is currently an active area of education policy, with various initiatives being put in place to bring these high pupil absence rates down (DfE, 2024b).

While the factors underpinning pupil absence are complex (Klein & Sosu, 2024), many believe this is likely to be linked to young people becoming increasingly emotionally detached and disengaged from school (Lester & Michelson, 2024). Indeed, England's Secretary of State for Education (Bridget Phillipson) has stated how "*If we want to tackle the epidemic of school absence, children need to feel that they belong in school*" and how building such emotional engagement amongst pupils is "*the key to so much of the change that we want to bring*" (Phillipson, 2024). In essence, when young people don't feel they have a positive connection with their peers and teachers, feel left out of activities and generally don't like being in school, then they will be less likely to attend. High levels of pupil absence are hence a consequence of declining levels of engagement with school more generally, representing a key area that must be addressed for educational standards to rise.

Recent research has also highlighted some concerning trends regarding children’s emotional engagement with school. This includes the OECD suggesting that pupils’ sense of school belonging falling significantly over time (OECD, 2023, p. 51). But perhaps the starkest finding from England is the dramatic drop in engagement that occurs during Key Stage 3 – between the ages of 11 and 14 – in the first stages of secondary school. This is highlighted in Figure 1, reproduced from Jerrim (2025), and is based on a sample of 80,000 children collected in November 2024. These data are drawn from The Engagement Platform (TEP) – a school improvement tool that helps schools collect termly data on their pupils’ cognitive, emotional and behavioural engagement (<https://www.tep.uk/>). Evidence from TEP demonstrates how responses to the statement “*I look forward to going to school on Monday*” plummets between Year 7 and Year 9, and then never fully recovers. Interestingly, the timing of this decline coincides with when levels of persistent pupil absence start to sharply increase (ImpactEd, 2024; FFT Education Datalab, 2024).

<< **Figure 1** >>

Yet we currently know little about how this change in young people’s emotional engagement with school in England compares to other national contexts. Do we see a similar decline in engagement in a host of other countries, and is it just as steep as the decline in England? The central aim of this paper is to provide a detailed assessment of this matter, providing the most in-depth comparative analysis of the decline in pupils’ emotional engagement between primary and secondary school to date.

What is emotional engagement with school and why does it matter?

Engagement at school refers to the level of attention, investment, interest, effort and enjoyment pupils show towards their life at school. The literature typically divides it into three interlinked components. The first – cognitive engagement – captures the extent to which young people value education, believe they have the capacity to influence their academic outcomes and are thus motivated to succeed. Emotional engagement – the focus on this paper – captures pupils’ relationships with others, their sense of belonging / inclusion and the extent to which they enjoy their time in school. Both cognitive and emotional engagement have then been conceptualised by some to influence pupils’ behavioural engagement; the actions and decisions young people take every day in school that will influence their academic outcomes. The focus of this paper is how key indicators of one of these forms of engagement (emotional engagement) declines between primary and secondary school, and how this compares across countries.

As noted by Fredricks et al. (2005), emotional engagement has been conceptualised by different authors in different ways. Some have focused more on emotional reactions to school such as their enjoyment (Lipnevich et al., 2012), while others have focused on within-school interpersonal relationships (Jerrim, 2025). It also encompasses pupils' sense of belonging within their school and their emotional reactions towards it (Fredricks et al., 2005). Thus, rather than being a single, unidimensional construct, pupils' emotional engagement with school has multiple components, with each potentially varying (over time, across groups, between countries) in subtly different ways.

Understanding pupils' emotional engagement is important due to its potential link with young people's subsequent academic outcomes, as depicted in Figure 2. For instance, when pupils are emotionally engaged at school, they will have good relationships with other pupils and teachers, have a strong sense of inclusion, attachment and belonging to school, and will subsequently enjoy everyday school life. Accompanied by their level of cognitive engagement, this will have an impact on their behaviours. Their good relationships with others will mean they follow the school rules, concentrate during lessons and exert the necessary effort to succeed. Moreover, as they enjoy being in school, they will have a better level of attendance. This all then culminates to boost young people's achievements at school and serve as a platform to flourish in later life.

<< Figure 2 >>

Prior research

Recent research highlights the critical role of school belonging in shaping students' academic, motivational, social-emotional, and behavioural outcomes. While the relationship between school belonging and academic achievement is generally positive, the strength and nature of this association vary across cultural and educational contexts, influenced by systemic factors such as school climate, assessment practices, and pupil's socio-economic background.

Findings from international large-scale assessments such as TIMSS and PISA consistently indicate a small to moderate positive correlation between school belonging and academic achievement, along with strong links to motivational and socio-emotional outcomes (Korpershoek et al., 2020). Students with a stronger sense of belonging tend to exhibit higher levels of self-concept and self-efficacy, contributing to more engaged learning behaviours. Conversely, school belonging is negatively associated with absenteeism and dropout rates, reinforcing its role as a protective factor in pupils' educational trajectories.

However, the relationship between school belonging and academic achievement is not uniform across different national and cultural contexts. For instance, Liu and Huang (2024) found that while school belonging directly influenced maths achievement in the United States, this effect was not observed in Japan and Korea. Instead, in these East Asian countries, attitudes toward maths (i.e., enjoyment, self-concept, and the perceived value of maths) played a mediating role in the relationship between school belonging and academic performance in the subject.

Cross-national research using data from PISA 2015 across 52 countries (Allen et al., 2023), has found that school belonging is shaped by variables at multiple levels, including individual characteristics (e.g., self-efficacy, motivation), the microsystem (e.g., teacher and peer support), and broader mesosystem factors such as school policies and climate. Importantly, teacher support emerged as a key predictor of school belonging, reinforcing the need for educators to foster inclusive and supportive learning environments.

Whilst school belonging among secondary school students has declined internationally, some countries have observed a particularly steep decline. This includes Sweden (Högberg et al., 2021), where the decline was most pronounced among foreign-born students, students from disadvantaged backgrounds, and lower-achieving students. Similarly, in Norway, between 2015 and 2019, students' performance in mathematics declined alongside reductions in school climate, motivation, and self-concept (Nilsen et al., 2022). A weakening of students' sense of belonging and perceptions of a safe school environment were found to mediate the drop in academic achievement.

Gender differences in the relationship between school belonging and academic attitudes have also been found, with the association of belonging with achievement in maths in some countries more pronounced for boys compared to girls (Liu & Huang, 2024; Smith et al., 2021). This suggests that gender may moderate how school belonging influences academic engagement in different cultural contexts.

Whilst prior research has consistently demonstrated that pupils with a strong sense of school belonging are more likely to engage cognitively and emotionally, the extent of the influence of varies depending on cultural, systemic, and demographic factors.

Research questions

The prior literature examining pupils' emotional engagement at school – including their sense of school belonging – have made a valuable contribution to education policy and debate. There are, however, also several areas where further insights are needed.

First, to what extent has pupils' emotional engagement at school changed over time (particularly since the COVID-19 pandemic), and how does this compare across the primary and secondary sectors? The common belief is that pupils' sense of belonging at school has – in particular – fallen in recent years, with the pandemic exacerbating an already established trend. This inference has been made largely based on the PISA study of 15-year-olds, rather than amongst those of younger ages. This is important, given that it is much earlier – between ages 11 and 13 – when school engagement really starts to tail off (Jerrim, 2025). Moreover, previous research has highlighted how trend analysis using PISA faces significant methodological difficulties, particularly related to shifts in delivery model (paper versus computer). These changes were first introduced in 2015 and coincides with the apparent drop in pupils' sense of belonging at school (OECD, 2019). We thus enrich the literature by documenting changes in primary (Year 5) and early secondary (Year 9) pupils' emotional engagement with school using data from the Trends in Mathematics and Science Study (TIMSS), including investigating the magnitude of the shift following the COVID-19 pandemic. Research question 1 thus sets the scene by asking:

- Research question 1. How has primary and secondary pupils' emotional engagement with school changed over time – particularly since the COVID-19 pandemic? How does this compare across countries?

Second, as illustrated in Figure 1, there is now good evidence in individual national contexts (including England) of how children's emotional engagement with school declines in the early stages of secondary education. Yet, consideration of this decline within an international comparative context is relatively sparse. For instance, is the decline between end of primary and into secondary school documented for England particularly sharp, or is it of a similar magnitude to elsewhere? Research question 2 takes up this issue by asking:

- Research question 2. To what extent does children's emotional engagement at school decline between grade 4 (Year 5 in England) and grade 8 (Year 9 in England)? How does the magnitude of this decline compare across countries?

Third, prior evidence has suggested that certain aspects of children's emotional engagement at school varies across demographic groups (e.g. gender, ethnicity), with gaps tending to widen between primary and secondary education. Jerrim (2025) for instance demonstrates how, in primary school, boys and girls are equally likely to trust their school peers. Then, while trust declines for both genders during secondary school, the fall is particularly sharp during Years 8 and 9 amongst girls. What we currently lack, however, is understanding whether the same pattern replicates internationally. Is this result generalisable, and emerges to some extent in school

systems across the world? Or is the pattern – or the magnitude – of such differences in England exceptional? Our final two research questions investigate such matters with respect to differences in emotional engagement at school amongst pupils of different genders and immigrant status:

- Research question 3. How do gender differences in children’s emotional engagement with school change between grades 4 and 8 (Years 5 and 9)? How does this compare across countries?
- Research question 4. How do immigrant differences in children’s emotional engagement with school change between grades 4 and 8 (Years 5 and 9)? How does this compare across countries?

2. Data and methodology

The data we draw upon comes from the Trends in Mathematics and Science Study (TIMSS). TIMSS is a four-yearly international study of 4th and 8th grade pupils, corresponding to Year 5 and Year 9 in the English school system. For both groups, a nationally representative probabilistic sample of schools is drawn as the primary sampling unit with probability proportional to size. Within each school, one or two classes are then randomly selected, with all pupils asked to complete a mathematics and science test, along with a background questionnaire. Response rates in most countries are relatively high, with further details available within the respective TIMSS technical reports (e.g. see von Davier et al., 2024, for information on TIMSS 2023). To account for the complex survey design, the TIMSS international database includes a set of pupil response and Jackknife replication weights. These are applied throughout our analysis, implemented via the STATA “repest” package (Avvisati & Keslair, 2014).

As part of the background questionnaire, pupils are asked the following questions using a four-point Likert response scale (strongly disagree to strongly agree):

- BEING. I like being in school (available 2003 - 2023)
- SAFE. I feel safe when I am at school (available 2011 – 2023)
- BELONG. I feel like I belong at this school (available 2011 – 2023)
- TEACHERS CARE. Teachers at this school care about me (available 2023)¹
- PROUD. I am proud to go to this school (available 2015 – 2023)

¹ In 2015 and 2019, a similar question was asked, though with a potentially important difference in the wording (“*Teachers at my school are fair to me*”).

One of these questions (“I like being in school”) has been asked across all six TIMSS waves between 2003 and 2023, while – as indicated above – others have only been asked in more recent waves. This selection of questions captures different (though related) aspects of children’s emotional engagement at school, including their relationship with their teachers (TEACHERS CARE), sense of inclusion (BELONG), whether they feel safe (SAFE) and whether they generally like being in school (BEING). Thus, while the TIMSS study organisers combine responses into an overall “sense of school belonging” scale, we believe each item captures an important – yet conceptually distinct – aspect of pupils’ emotional engagement with school.

Consequently, within our analysis, we proceed as follows. First, to provide a high-level summary across countries, we draw on the “sense of school belonging” scale constructed by the TIMSS survey organisers using pupils’ responses to the aforementioned items. These have been derived by the TIMSS team using item response theory (IRT), who have then derived a set of cut-points to divide pupils into low, average and high “sense of school belonging” groups (see Martin et al. 2016 for more details). To facilitate presentation and interpretation of results across several countries and over time, we focus on the percentage of pupils falling into the top group.

Second, given that each question captures a different aspect of pupils’ underlying emotional engagement, we perform a separate analysis of each item in turn. Specifically, we investigate the percentage of pupils that strongly agreed with each of the statements asked (Appendix C presents alternative estimates where we consider the percentage of pupils that agree versus disagree with each statement). The decision to dichotomise each item is based on our desire to facilitate straightforward interpretation of our results across many countries over time.

The pool of countries we include in our analysis of changes in emotional engagement between grades 4 and 8 are those that participated in both the 4th and 8th grade studies in TIMSS 2023. This selection includes a total of 33 jurisdictions², including 18 members of the OECD. Given our focus on putting results for England into a broad international context, we typically present results for all countries where relevant data is available.

To address our third and fourth research questions we also utilise information recorded on pupil gender and whether they are a first- or second-generation immigrant. The latter has been self-reported by pupils in response to the background survey, with the variable coded as one if the child or either of their parents were born outside of the country (and zero otherwise).

² In some countries, such as the United Arab Emirates, specific regions of the country (e.g. Dubai, Abu Dhabi) take part in TIMSS (sometimes in addition to the country as a whole). We include these sub-national entities within our analysis as separate jurisdictions.

3. Results

Changes over time

Figure 3 begins by presenting the percentage of pupils in England that strongly agreed with our four questions of interest. We start with the results for primary school (panel a) and responses to the statement “I like being in school”. The percentage of pupils strongly agreeing with this statement was broadly stable between 2003 and 2011, before a big spike up (from ~40% to ~50%) in 2015. However, by 2019, responses had reverted to their 2003 to 2011 levels. It is thus hard to conclude whether this 2015 spike was a genuine increase, or simply an outlying data point. There has then been a further post-pandemic decline – from 38% in 2019 to 31% in 2023 – in primary pupils strongly agreeing that they like being in school. A similar pattern emerges for the other three questions, with the pattern between 2011 and 2019 unclear, but a suggestion of a small decline in 2023 following the COVID-19 pandemic. Nevertheless, other than the unusual peak in 2015, changes in English primary pupils’ emotional engagement over time is relatively modest.

<< Figure 3 >>

A somewhat more striking change has emerged amongst secondary pupils. Prior to the COVID-19 pandemic, the responses to each of the four questions considered were broadly flat. Yet they have since declined dramatically. Take the percentage of secondary pupils strongly agreeing that they feel proud to go to their school. In England, this has dropped from 35% in 2019 to 20% in 2023. Similar declines are observed for secondary pupils’ feelings of school safety (42% strongly agreeing in 2019 versus 26% in 2023), whether they feel they belong in school (falling from 37% to 24%), and whether they like being in school (19% in 2019 to 11% in 2023). Together, Figure 3 panel (b) demonstrates how in England there has been a dramatic recent decline with secondary pupils’ emotional engagement at school. Appendix C illustrates how these findings are robust to dichotomising responses to the questions in different ways.

Figure 4 puts the change in emotional engagement amongst England’s pupils since the pandemic into an international comparative context. The figures along the horizontal axis illustrate the percentage of pupils reporting that they like being in school in 2019, with equivalent results from TIMSS 2023 on the vertical axis. The 45-degree line indicates where the two values are equal (i.e. no post-pandemic change). Countries sitting below this line – such as England – are those that have suffered a post-pandemic decline in pupils enjoying being in school. Analogous results for our other questions of interest are presented in Appendix A.

<< Figure 4 >>

Starting again with primary (grade 4 / Year 5) pupils, most data points sit slightly below the 45-degree line. This indicates that, in most countries with data available, there had been a small decline in the extent primary pupils like being in school since the COVID-19 pandemic. England (highlighted in a green circle) hence does not particularly stand out from most other countries in this respect; the decline observed here (as presented in Figure 3a) has been broadly replicated elsewhere. Similar results emerge for the other aspects of emotional engagement as reported in Appendix A, though with English primary pupils' sense of school safety particularly declining more since the pandemic than elsewhere.

Turning to the Grade 8 (Year 9) results in panel (b), most countries sit below the 45-degree line (indicating post-pandemic declines in children liking being in school) though with differences generally being of larger magnitudes. England has again been highlighted in a green circle, with two key findings standing out. First, the decline in secondary pupils' enjoyment of being in school since the pandemic is larger than most other countries with data available. Second, along with other Anglophone nations such as Australia and New Zealand, grade 8 (Year 9) pupils in England in 2023 had amongst the lowest levels of school belonging anywhere in the world (at least those with data available). Appendix A replicates these results for our other measures of emotional engagement, again highlighting how there has been a particular decline in secondary pupils' feelings of safety at school (along with their sense of school pride) between 2019 and 2023.

Table 1 concludes our analysis for Research Question 1 by comparing the magnitude of these declines in emotional engagement across boys and girls. Figures refer to the change between 2019 and 2023 (negative values indicate a decline). Red font with a star indicates where the change between 2019 and 2023 was significantly different between boys and girls at the 5% level. These estimates are for grade 8 (Year 9) pupils, with equivalent results reported for primary pupils in Appendix B.

<< Table 1 >>

There are two key points to note. First, across the pool of countries with data available, emotional engagement with school has fallen more since the pandemic amongst girls than boys. Take the percentage of secondary pupils strongly agreeing that they are proud to go to their school, for example. The bottom row of Table 1 illustrates how – on average across our pool of countries – this has fallen by ten percentage points amongst girls compared to just four percentage points amongst boys. Second, in England, there is evidence of some particularly sharp declines amongst girls in some specific measures. Perhaps the most prominent example is with respect to school safety. Between 2019 and 2023, Year 9 girls were 22 percentage points less likely to

strongly agree that they felt safe at school, a decline much larger than both the international average (13 percentage point decline) and the analogous figure for boys (10 percentage points). The results in Table 1 thus highlights how declining emotional engagement amongst secondary school girls is a particularly pressing issue that the English school system faces.

The change in school engagement between grade 4 (Year 5) and grade 8 (Year 9)

We now turn to how pupils’ emotional engagement with school changes between grades 4 and 8 in England, and how this compares to other countries. Figure 5 provides a broad overview of our headline results. This presents the percentage of pupils displaying high levels of engagement³ based on the scale derived by the survey organisers. The solid black line presents the results for England, while the international average (based on the pool of countries with both grade 4 and grade 8 TIMSS 2023 data available) is represented by the dashed grey line.

<< Figure 5 >>

The first key finding is that the results for England from TIMSS replicate the pattern observed in Figure 1 (which is based on national data); there are clear declines in pupils’ emotional engagement with school in this country between grade 4 and grade 8. Specifically, the percentage of pupils with high levels of emotional engagement with school falls from 52% to 14% over the course of these four academic years. Yet it is also clear that England is not unique in this respect; a similar decline occurs in the cross-country average as well. Importantly, though, the fall in engagement between grades 4 and 8 appears to be sharper in England than in the average country with data available. In particular, the 38-percentage point drop in England is substantially larger than the 29-percentage point fall across the TIMSS sample as a whole.

Table 2 builds on this result by focusing on the grade 4 (Year 5) to grade 8 (Year 9) decline in the percentage of pupils strongly agreeing with our five questions of interest. Red shading refers to larger declines, with stars indicating where the magnitude of the decline is greater than the cross-country average.

<< Table 2 >>

This table reiterates how – for several aspects of pupils’ emotional engagement – the grade 4 to 8 fall in England is particularly sharp. Take the statement “teachers at this school care about me”,

³ Details on how “high” levels are defined can be found at https://timss2023.org/wp-content/uploads/2024/11/6-1-1-5_con-stu-ssb_Part1.pdf. Based on pupils’ responses to seven statements, those with “high” levels of engagement “had a score at or above the cut score corresponding to ‘agreeing a lot’ with four of the seven statements and ‘agreeing a little’ with the other three statements, on average”.

for example. There is a sharp decline in pupils agreeing with this statement on average across all countries between grades 4 and 8 (-29 percentage points) and across OECD countries with data available (-32 percentage points). But the fall that occurs in England is particularly sharp (-46 percentage points), with no other country suffering a significantly larger fall. The grade 4 to 8 decline in the percentage of pupils feeling safe in school is also particularly large in England (-31 percentage points, compared to an OECD average of -23 percentage points), as is the percentage of pupils that take pride in their school (-39 percentage points in England versus -32 percentage points across the OECD).

Together, the results presented in Figure 5 and Table 2 thus convey a clear message. Between the end of primary and into mid-secondary school, pupils' emotional engagement falls more in England than elsewhere.

Gender differences in school engagement between grade 4 (Year 5) and grade 8 (Year 9)

Having established the magnitude of declines in engagement between end-of-primary and mid-secondary school, we now turn to how this varies by gender. These results are presented in Figure 6. Figures running along the horizontal axis display the grade 4 to 8 (Year 5 to 9) fall in pupils displaying high level of emotional engagement amongst boys. Analogous estimates for girls are presented on the vertical axis, with the 45-degree line illustrating where these values are equal (i.e. the decline in engagement is similar for boys and girls). The results for England have been highlighted in a green circle.

<< Figure 6 >>

An interesting, internationally generalisable result emerges – all countries (except Morocco) fall below the 45-degree line. This indicates that in (almost) every country, emotional engagement with school between grades 4 and 8 (Years 5 and 9) fall more amongst girls than boys. From an English perspective, the fall amongst girls (reflected by the vertical distance from the 45-degree line) is particularly pronounced.

Further detail to this result is provided in Table 3. For each of our five questions of interest, this table illustrates the magnitude of the gender gap in grade 4 (Year 5) and grade 8 (Year 9). Positive values indicate where boys are more likely to strongly agree with the statement than girls. Stars indicate where gender differences are statistically significant at the 5% level.

<< Table 3 >>

Starting with the grade 4 (Year 5) cross-country averages, each of the five coefficients are negative, albeit some are relatively small in magnitude. This indicates that, towards the end of

primary school, girls typically have higher levels of emotional engagement with school than boys. The difference is most pronounced for whether primary pupils like being in school and the extent to which they are proud to attend. Almost all the grade 4 country coefficients are negative for these outcomes, with the international averages indicating that boys are around seven percentage points less likely to agree with these statements than girls. The results for England broadly reflect this international pattern at grade 4, with coefficients similar to the cross-country averages. However, in this country (England), a statistically significant primary school gender difference only occurs for two of the five outcomes considered (whether the pupil likes being in school and whether they are proud to attend).

The situation in grade 8 is rather different. Starting with the cross-country averages, each of the coefficients have flipped from negative at grade 4 (Year 5) to positive at grade 8 (Year 9). This indicates that, in most countries, girls' higher levels of emotional engagement at primary school has reversed by mid-way through secondary education.

From an English perspective, the change in the gender gap is particularly stark. The extent to which boys and girls feel safe at school is a prime example. In primary school, girls are around 3.6 percentage points more likely to feel safe at school than boys (though this difference does not reach statistical significance at the 5% level). But, by Year 9, boys are ten percentage points more likely to feel safe at school than girls. The magnitude of this change in the gender difference in England (around 14 percentage points) is almost double that of the cross-country average (around seven percentage points). A similar finding emerges for the extent to which boys and girls feel they belong in school as well. Specifically, in England, there is almost no gender gap in pupils' sense of belonging at the end of primary school, but with boys 13 percentage points more likely to strongly agree they belong at school by the end of Year 9. Again, this ≈ 15 percentage point change in the gender gap between grades 4 and 8 (Years 5 and 9) is notably larger than the cross-country average (≈ 9 percentage points). Table 3 hence reiterates our finding that, particularly in England, progression from end of primary and through secondary is a period of declining emotional engagement at school, especially for girls.

Immigrant differences in school engagement between grade 4 (Year 5) and grade 8 (Year 9)

To conclude, Figure 7 compares the decline in emotional engagement between grades 4 and 8 (Years 5 and 9) for immigrant pupils (horizontal axis) to those born in the country (vertical axis). The 45-degree line again illustrates where these two values are equal.

<< Figure 7 >>

Most countries sit below the 45-degree line. This indicates that the decline in school engagement between grades 4 and 8 (Years 5 and 9) is typically smaller amongst immigrant pupils across the pool of countries considered. England, however, falls very close to the 45-degree line, with there being little clear difference in the grade 4 to grade 8 (Years 5 to 9) change in immigrants and natives' emotional engagement. Similar results also emerge for other English-speaking members of the OECD, such as Australia, New Zealand and (to some extent) the United States. Hence, while the end-of-primary to mid-secondary school decline in emotional engagement is particularly sharp in England, it is of similar magnitude across pupils whose families are born in this country versus other parts of the world.

4. Conclusions

In recent years, several countries across the world have been struggling to cope with many children regularly missing school (Anders et al., 2024). This includes England – the focus of this paper – where concern has more generally been raised over many children becoming academically disengaged following the COVID-19 pandemic (Klein & Sosu, 2024). Issues such as pupils' sense of belonging and – more generally – their emotional engagement at school has become an increasing area of policy and practical focus (DfE, 2024b; Gibbons et al., 2024; OECD, 2023).

Prior evidence for England has highlighted how there are some key points in young people's lives when their emotional engagement at school suffers a sharp decline. Jerrim (2025), for instance, illustrates how there are rapid drops in pupils peer relationships, perceptions of their relationship with staff, feelings of inclusion and general enjoyment of school between Year 7 (grade 6) and Year 8 (grade 7). The central aim of this paper has been to put this decline into an international comparative context; to what extent does this drop in engagement at school occur everywhere, and is the magnitude similar in England to elsewhere? In doing so, we have also probed in further detail the decline in pupils' emotional engagement over time, with a particular focus on change that has occurred since the COVID-19 pandemic.

Our results have shown how there has been a sharp decline in children's emotional engagement with school since the COVID-19 pandemic. This has particularly impacted pupils now in secondary school, with certain areas (e.g. whether young people feel safe and their sense of pride at school) seeing especially large declines. Indeed, in these specific areas, secondary pupils in England appear to have been affected more than their peers in other countries. Some clear differences across demographic groups have also emerged, with greater post-pandemic declines in secondary pupils' emotional engagement occurring amongst girls than boys.

Results from our study have also shown how the sharp decline in emotional engagement between grades 4 and 8 (Years 5 and 9) in England highlighted in previous research (Jerrim, 2025) occurs in other countries as well. Yet the magnitude of this grade 4 to grade 8 (Year 5 to Year 9) change also stands out as bigger in England than elsewhere. Engagement amongst girls seems to decline on entry into secondary school by more than for boys, particularly with respect to whether they feel safe and their sense of pride at school. Again, in these specific areas, the decline for girls in England between grades 4 and 8 (Years 5 and 9) is more pronounced than for their peers in other countries. On the other hand, we find little difference in the change in emotional engagement between pupils whose families were born in England compared to those from immigrant backgrounds.

How do these findings compare to the previous evidence on pupils' emotional engagement in England, and internationally? On the one hand, we have demonstrated how the decline in children's emotional engagement at school between Year 5 (grade 4) and Year 9 (grade 8) is universal – a similar pattern is observed in almost all countries where data is available. Broadly similar findings also emerge with respect to the pattern of the decline, with sharper drops for girls than boys (particularly the extent they enjoy being in school), though with notable differences between children of immigrants and those born in the country. Yet, in places, the primary-to-secondary fall in emotional engagement at school does appear to be more pronounced in England than elsewhere, such as whether they feel their teachers care about them and their sense of school safety. We also question the conventional wisdom – based on data from PISA – that children's emotional engagement and sense of belonging at school fell rapidly between 2012 and 2015 (OECD, 2019). In general, the same pattern is not particularly clear based on data from TIMSS. Rather, the precipitous fall in pupils' emotional engagement at school has been a more recent phenomena, with particularly sharp declines emerging following the COVID-19 pandemic.

These finding should be considered given the limitations of our work. First, the TIMSS data are cross-sectional, with all pupils surveyed at a single point in time. Thus, while our analysis can point to broad changes that occur to emotional engagement between primary and early secondary education, we are unable to undertake a detailed longitudinal analysis of the factors linked to its decline. Likewise, we are unable to explore in detail the likely link between school engagement and attendance within either England or in other countries. Second, the TIMSS surveys are conducted four school years apart. Thus, while previous research has pinpointed the spring and summer terms of Year 7 as a critical period for school engagement (Jerrim, 2025), we do not know how this precise timing compares to other countries, where the fall could occur much earlier or later. Finally, the TIMSS data for some countries – including England – do not

contain information on pupils' ethnicity, and with only rather limited indicators of socio-economic background (Jerrim & Micklewright, 2014). We have thus not been able to consider potential differences in the decline in school engagement by these specific characteristics. This is unfortunate as, in England, prior evidence has indicated that falls in certain aspects of pupils' emotional engagement between primary and secondary school may be particularly pronounced amongst certain ethnic and socio-economic groups.

Despite these limitations, our findings have important implications for education policy and practice – both in England and elsewhere. The declines in pupils' emotional engagement with school documented in this paper are likely to be linked to the rising levels of school absences seen in many countries across the world. Indeed, if pupils don't like being in school, don't feel safe in their environment and have poor relationships with others (peers and teachers) they will lack the motivation needed to attend. Interventions are thus likely required to help boost secondary pupils' emotional engagement with their school. This is particularly needed amongst girls, focused on specific issues such as supporting their sense of safety while at school and the strength of the relationships they have with others. Indeed, previous research has suggested that successful interventions that have promoted pupils' sense of belonging at school “promoted positive interactions between students and between school staff and students” (Allen et al., 2022; see also Archambault et al. (2019) for an overview of evaluation of programmes designed to boost pupil engagement). Such support is likely to need to be maintained throughout at least year 7 and 8, and not just focused on the immediate transition into secondary school. The urgency for such initiatives to be implemented in schools have only been heightened by the long shadow cast by the COVID-19 pandemic. Unless more is done now to support pupils' emotional engagement with school, absence rates may well remain stubbornly high, with teenagers' academic and personal development suffering as a result.

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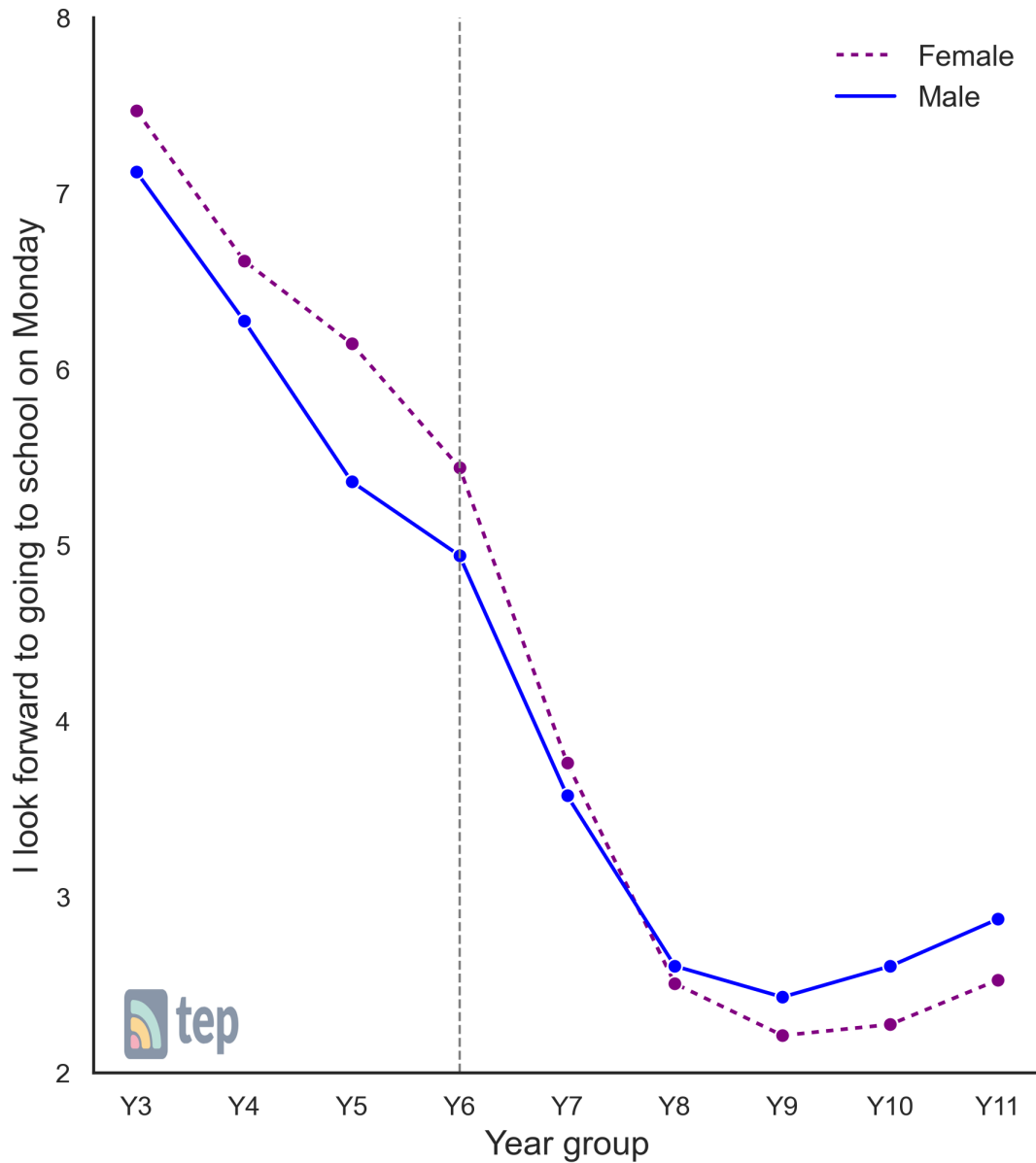
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Figure 2. The extent to which children look forward to going to school by academic year group. Evidence from England.



Notes: Pupils were asked to respond to the statement “I look forward to going to school on Monday” using a 0 to 10 scale. Values on the vertical axis refer to the average response provided by pupils. The horizontal axis refers to school year group (e.g. Y3 refers to pupils in Year 3). Estimates are presented separately for boys and girls. Source: Jerrim (2025).

Figure 2. A conceptual model of school engagement

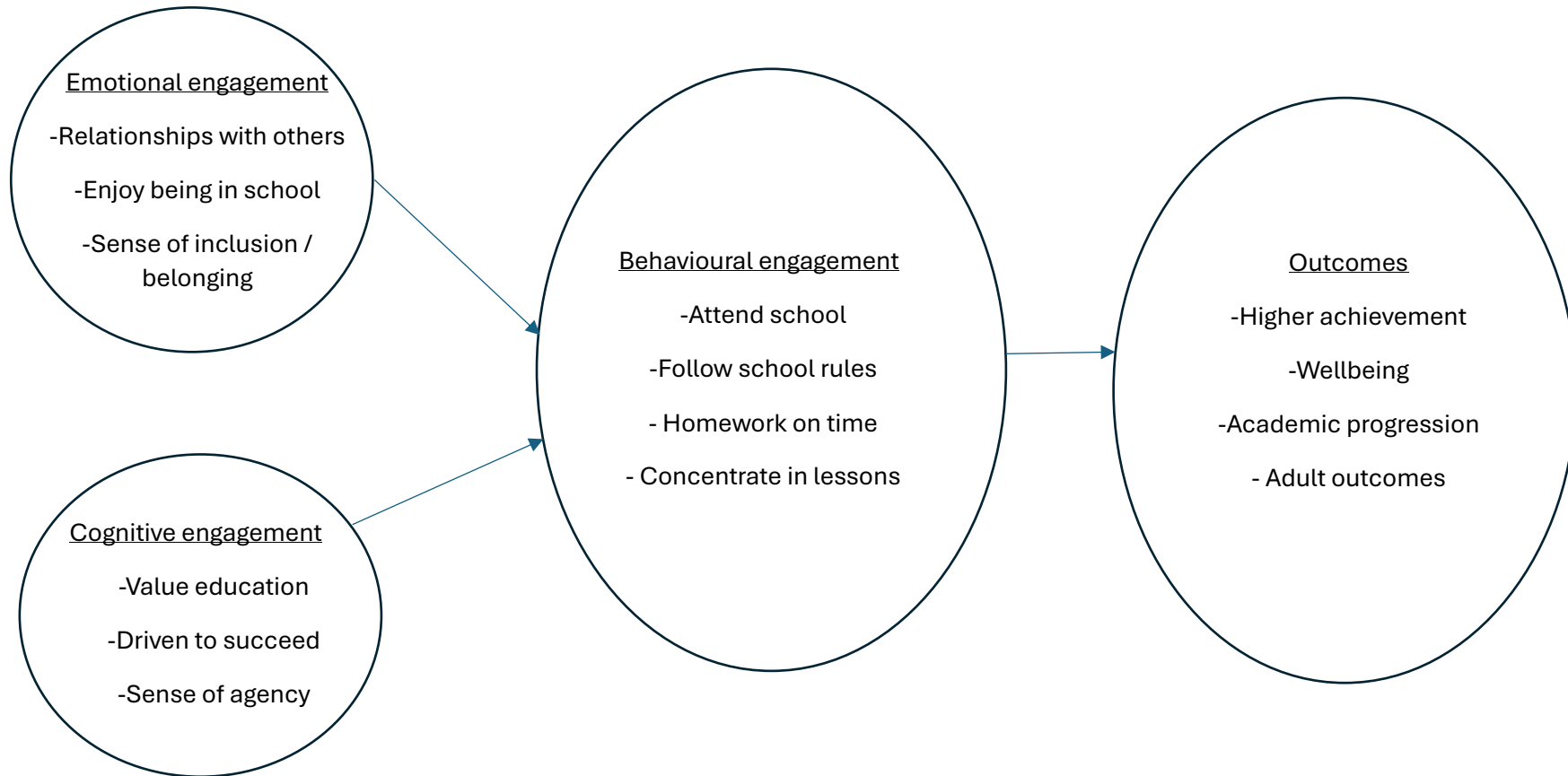
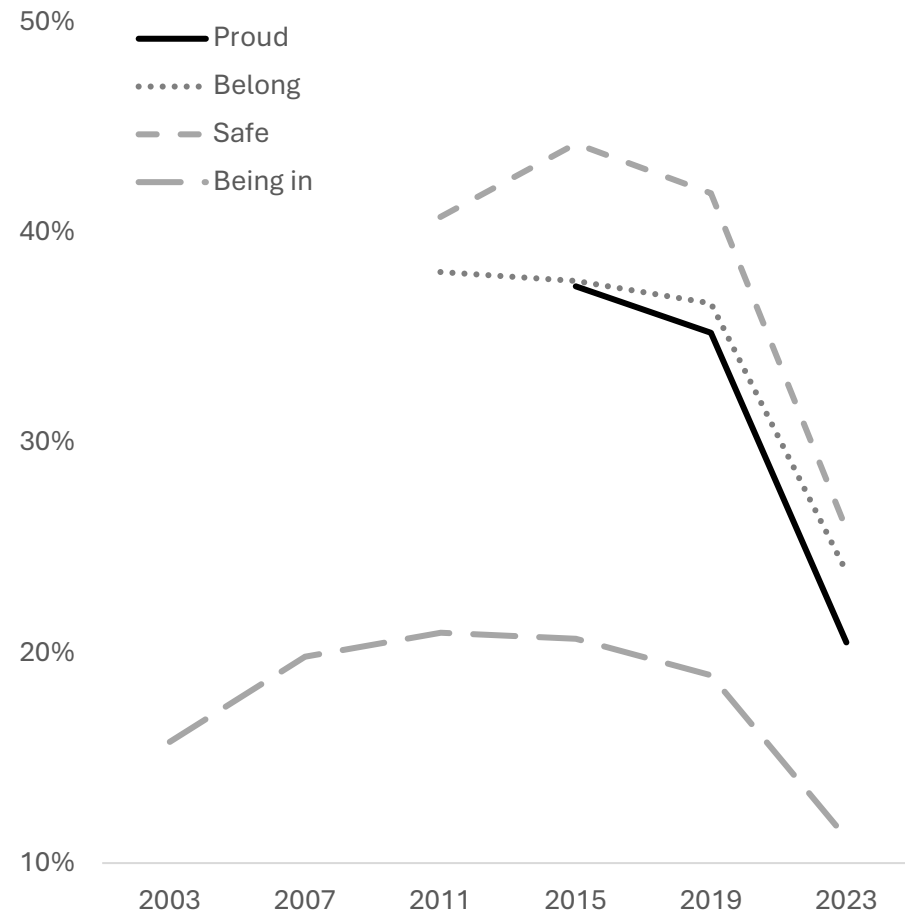
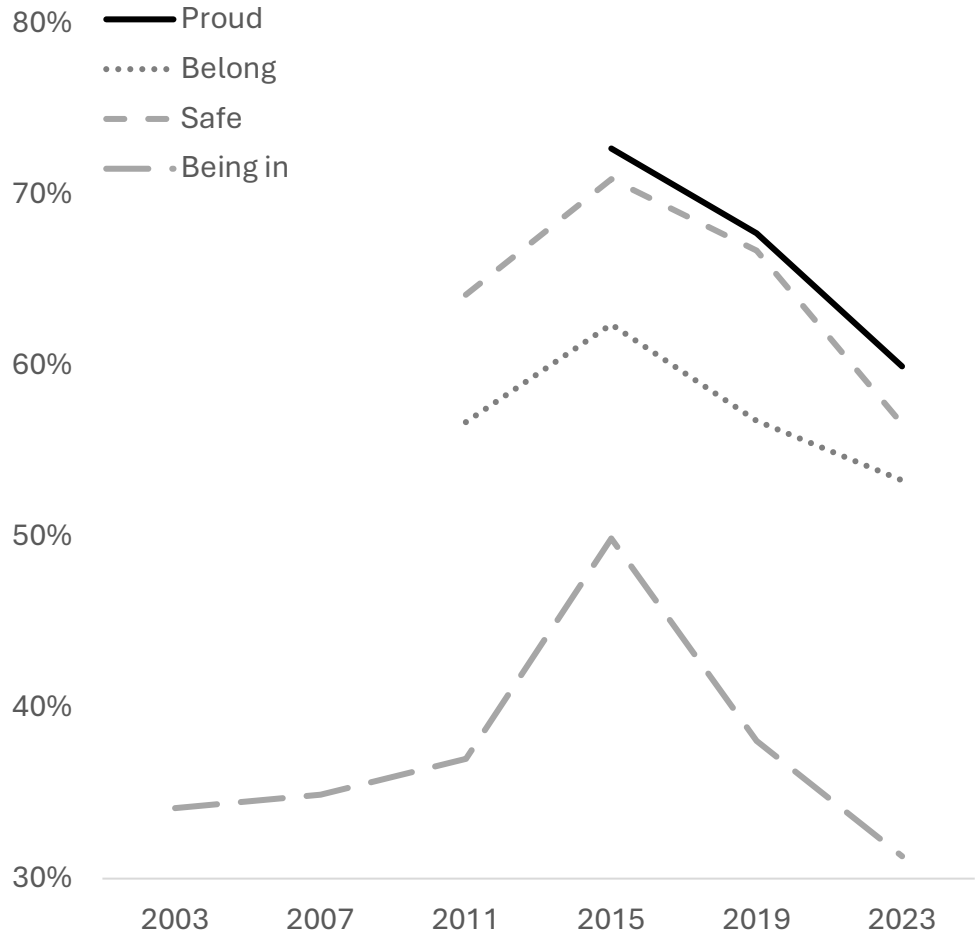


Figure 3. Change in pupils' emotional engagement in England over time

(a) Grade 4

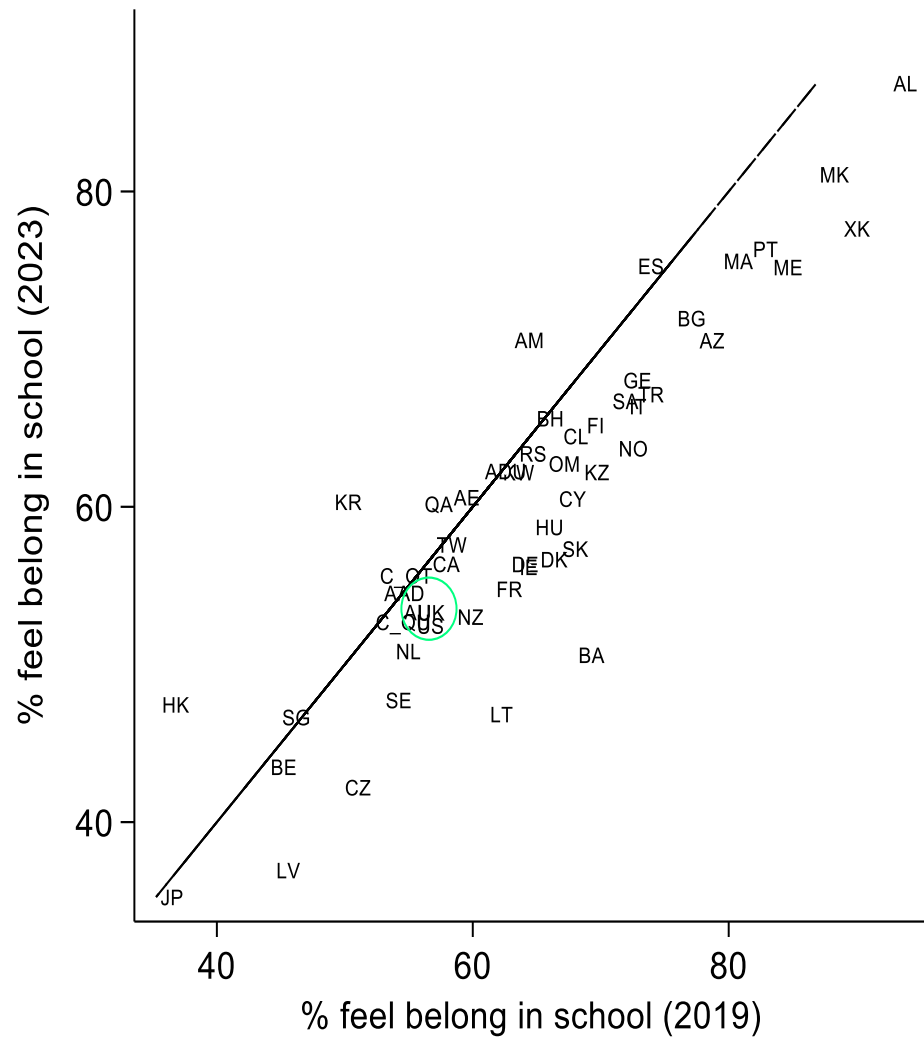
(b) Grade 8



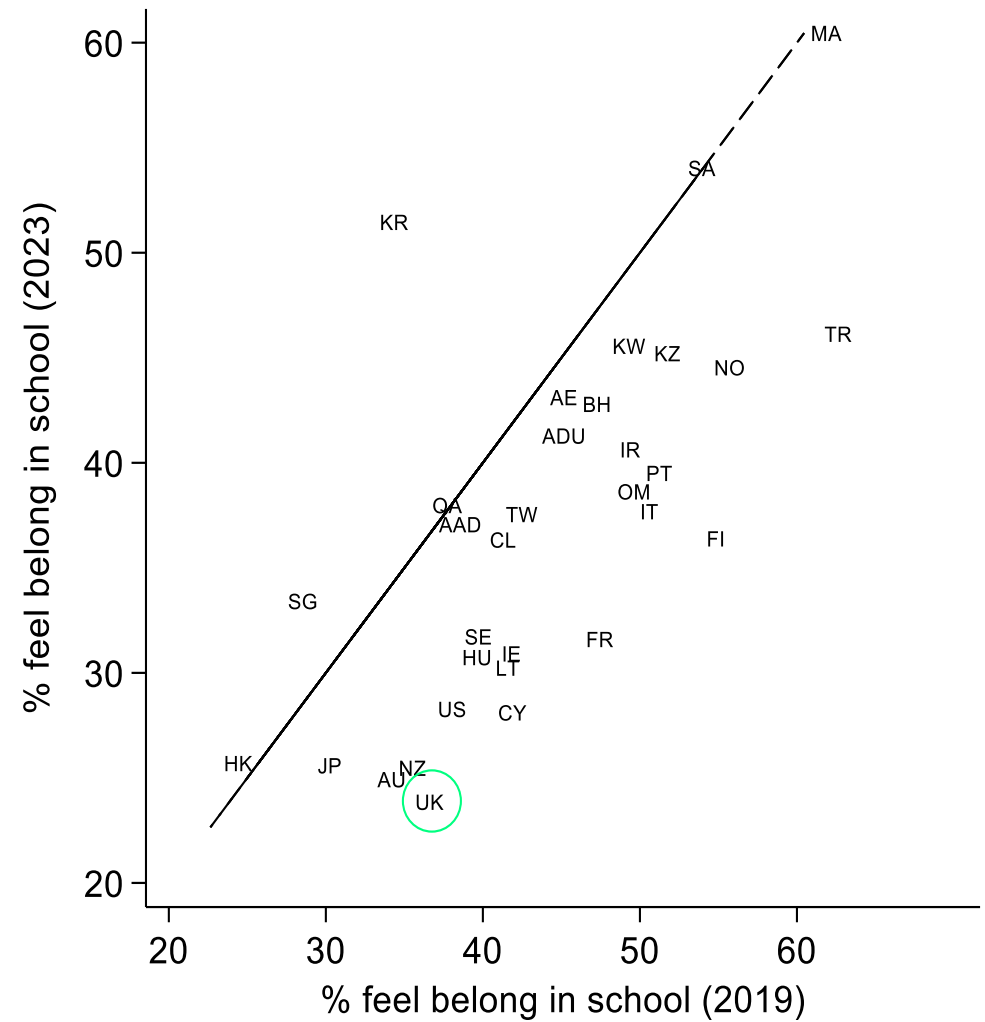
Notes: Figures refer to the percentage of pupils that strongly agree.

Figure 4. Change in pupils' feel they belong in school before (2019) and after (2023) the COVID-19 pandemic.

(a) Grade 4 (Year 5)

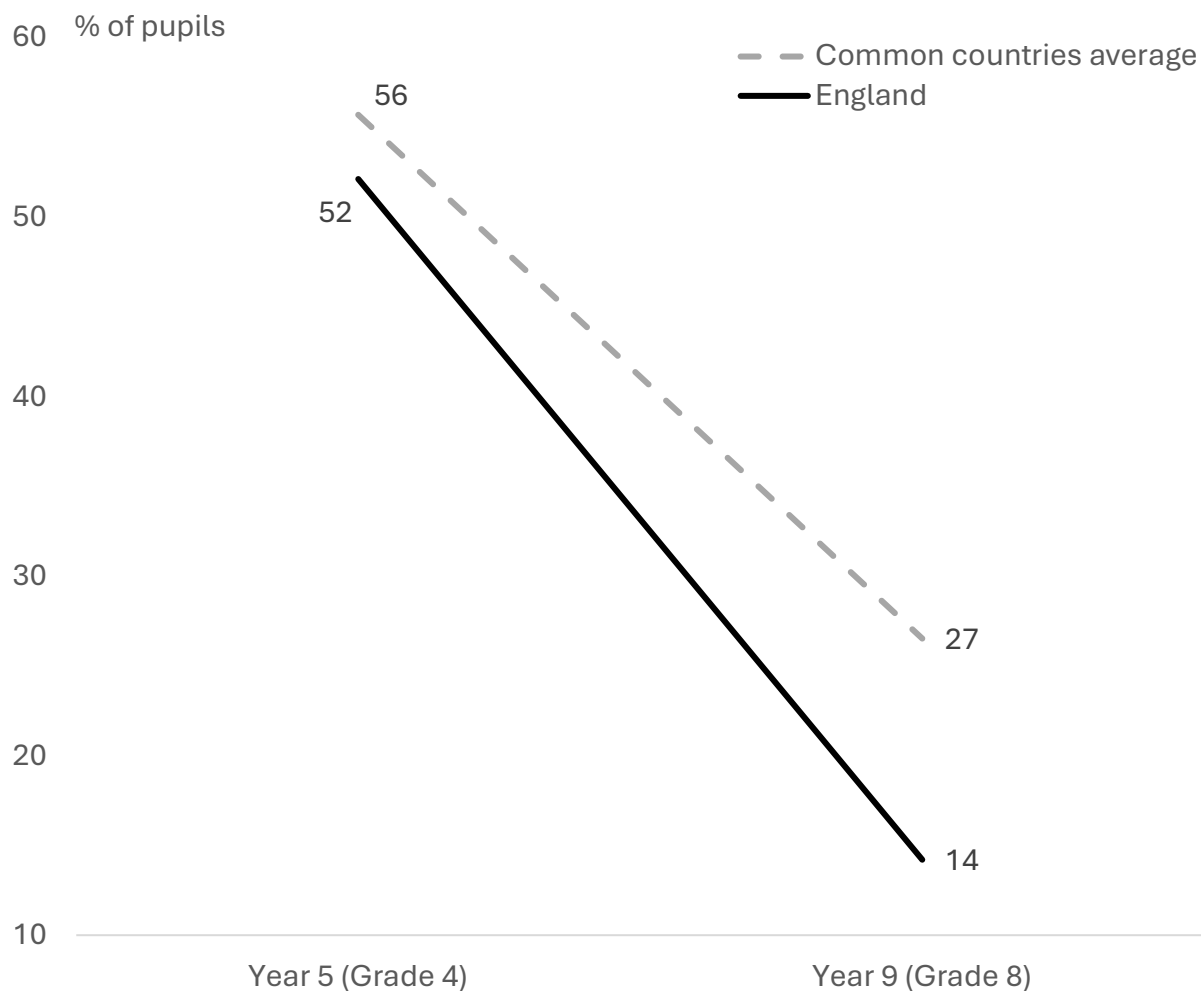


(b) Grade 8 (year 9)



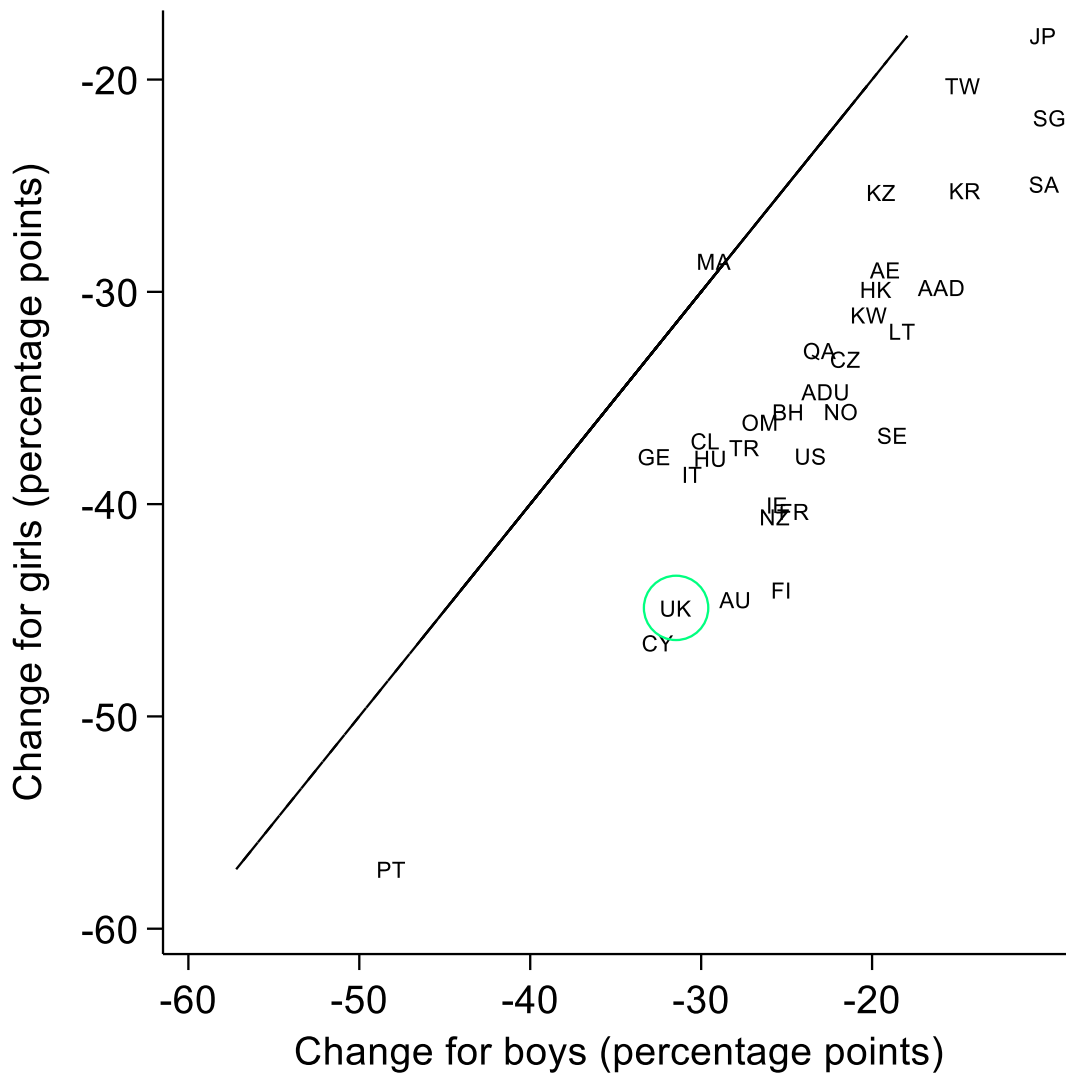
Notes: Figures refer to the percentage of pupils strongly agreeing that they feel they belong at school. Horizontal axis presents results from 2019, with the results from 2023 on the vertical axis. The 45 degree line illustrates where the two values are equal. England highlighted in a green circle. Countries denoted by their two-letter codes.

Figure 5. The percentage of grade 4 (age 9/10) and grade 8 (age 13/14) pupils with high levels of emotional engagement towards school



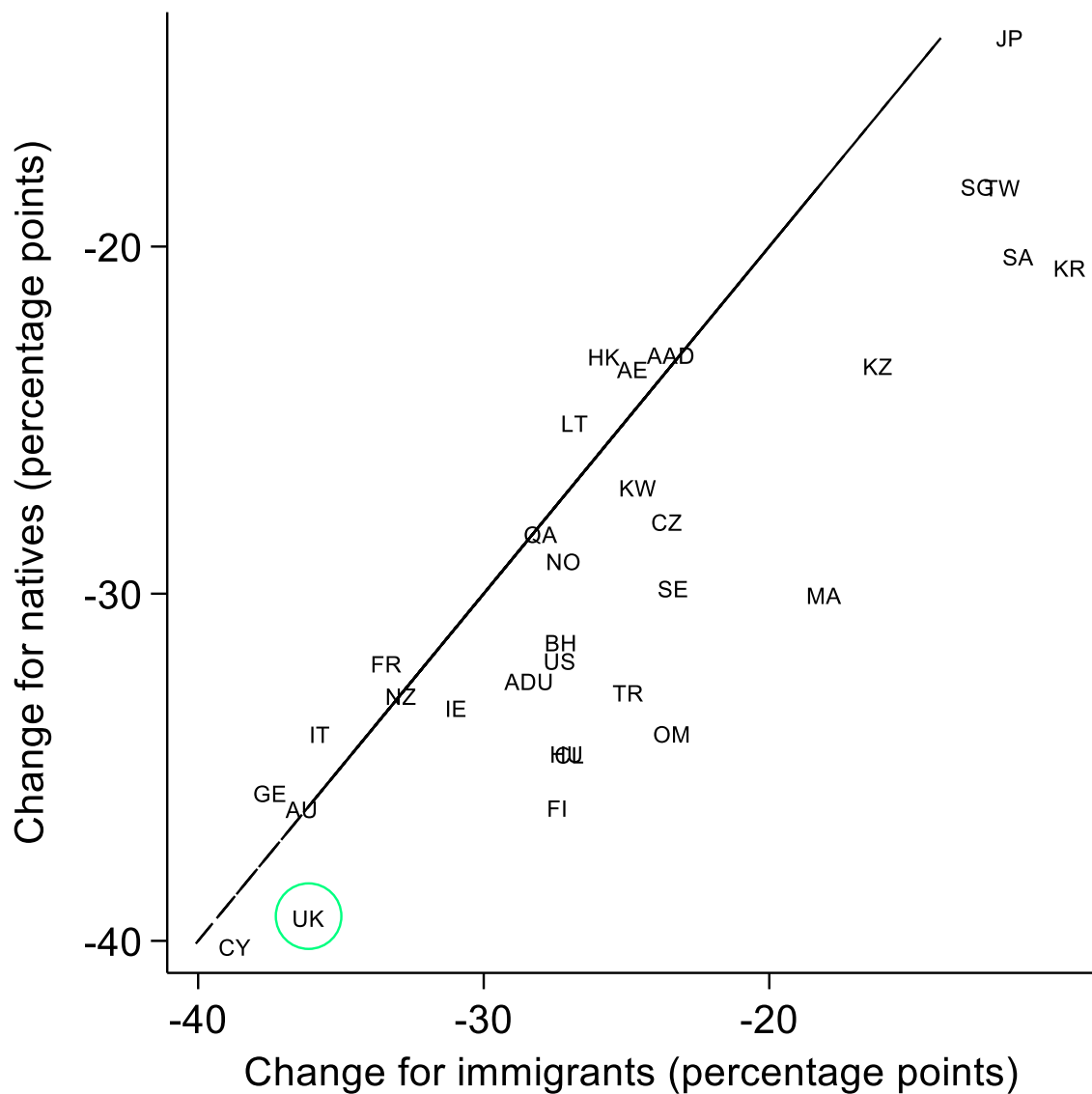
Notes: Data drawn from the TIMSS 2023. “Common countries average” refers to the pool of countries that participated in both the fourth and eighth grade TIMSS surveys. Details on how “high” levels are defined can be found at https://timss2023.org/wp-content/uploads/2024/11/6-1-1-5_con-stu-ssb_Part1.pdf. Based on pupils’ responses to seven statements, those with “high” levels of engagement “had a score at or above the cut score corresponding to ‘agreeing a lot’ with four of the seven statements and ‘agreeing a little’ with the other three statements, on average”.

Figure 6. Decline in emotional engagement at school between grades 4 and 8. Results for boys and girls.



Notes: Analysis based on TIMSS 2023. Figures on the horizontal axis illustrate the change in the percentage of boys with high levels of emotional engagement between grades 4 and 8. The vertical axis presents analogous figures for girls. The 45-degree line is where the two values are equal (change is the same for boys and girls). Results for England highlighted in a green circle. Countries denoted by their two-letter codes.

Figure 7. Decline in strong feelings of emotional engagement at school between grades 4 and 8. Results for immigrants versus natives.



Notes: Analysis based on TIMSS 2023. Figures on the horizontal axis illustrate the change in the percentage of pupils from an immigrant background with high levels of emotional engagement between grades 4 and 8. The vertical axis presents analogous figures for pupils born in the country. The 45-degree line is where the two values are equal (change is the same for immigrants and natives). Results for England highlighted in a green circle. Countries denoted by their two-letter codes.

Table 1. Change in Grade 8 (Year 9) pupils' emotional engagement with school before (TIMSS 2019) and after (TIMSS 2023) the COVID-19 pandemic

Country	Being		Safe		Belong		Proud	
	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys
Finland	-14%	-4%*	-28%	-16%*	-23%	-13%*	-22%	-8%*
Iran	-7%	-5%	-24%	-14%*	-12%	-6%*	-10%	-5%*
Turkey	-20%	-19%	-24%	-18%	-22%	-11%*	-18%	-12%*
Portugal	-9%	-3%*	-23%	-9%*	-20%	-4%*	-10%	-4%
England	-10%	-5%*	-22%	-10%*	-17%	-9%*	-20%	-10%*
Ireland	-8%	-1%*	-21%	-11%*	-16%	-7%*	-19%	-11%*
Lithuania	-5%	0%*	-21%	-15%	-14%	-8%*	-17%	-13%
Hungary	-3%	-3%	-20%	-11%*	-10%	-8%	-9%	-6%
Australia	-10%	-6%	-20%	-13%*	-12%	-7%*	-18%	-7%*
Oman	-10%	0%*	-20%	-9%*	-16%	-6%*	-16%	-8%*
New Zealand	-8%	-4%	-18%	-13%	-12%	-9%	-22%	-12%*
USA	-5%	-4%	-16%	-12%	-11%	-8%	-12%	-11%
Norway	-8%	-3%*	-16%	-8%*	-14%	-9%	-15%	-5%*
Italy	-5%	-1%*	-15%	-6%*	-17%	-9%*	-13%	-9%
Cyprus	-8%	-1%*	-15%	-6%*	-19%	-8%*	-15%	-5%*
Dubai	-10%	-2%*	-15%	-5%*	-9%	1%*	-12%	-3%*
Sweden	-5%	3%*	-14%	-6%*	-13%	-3%*	-9%	-3%*
Abu Dhabi	-2%	2%	-13%	1%*	-8%	5%*	-6%	4%*
Kuwait	-11%	-4%*	-13%	-6%*	-9%	2%*	-11%	-4%*
UAE	-6%	2%*	-11%	1%*	-8%	3%*	-9%	1%*
France	-7%	0%*	-9%	-4%*	-18%	-13%	-11%	-3%*
Kazakhstan	-10%	-7%	-9%	-9%	-10%	-3%*	-17%	-15%
Saudi Arabia	1%	6%	-6%	0%*	-3%	3%*	-2%	-3%
Japan	-2%	2%	-6%	-1%	-7%	-2%	-2%	1%
Qatar	2%	2%	-5%	-1%	1%	0%	1%	-1%
Chile	6%	9%	-4%	-1%	-7%	-3%	-7%	-5%
Taiwan	-2%	3%*	-4%	2%*	-8%	-2%*	-5%	-1%
Hong Kong	0%	1%	-3%	0%	0%	3%	-1%	1%
Bahrain	-2%	4%*	-3%	2%*	-9%	0%*	-7%	1%*
Morocco	-6%	-5%	-3%	-3%	-2%	-1%	-4%	-2%
Singapore	0%	5%*	-1%	3%	2%	7%	-1%	5%*
Korea	13%	10%	18%	13%*	19%	15%	13%	11%
Average	-5%	-1%	-13%	-6%	-10%	-3%	-10%	-4%

Notes: Figures refer the to change in the percentage that strongly agree with the statement between 2019 and 2023. Analogous results for Grade 4 (Year 5) pupils reported in Appendix B. * and red font indicates where the change between 2019 and 2023 is significantly different between boys and girls.

Table 2. Change in pupils' emotional engagement with school between grade 4 (age 9/10) and grade 8 (age 13/14)

Country	Teachers				
	care	Being	Safe	Belong	Proud
Cyprus	-47%*	-25%*	-32%*	-32%*	-36%*
England	-46%*	-20%	-31%*	-29%*	-39%*
Portugal	-44%*	-47%*	-37%*	-37%*	-48%*
Australia	-42%*	-22%	-27%*	-28%*	-36%*
Ireland	-39%*	-13%*	-24%*	-25%*	-34%*
New Zealand	-36%*	-24%	-24%*	-28%*	-33%*
Finland	-36%*	-17%*	-21%	-29%*	-26%
Italy	-34%*	-23%	-26%*	-29%*	-36%*
Norway	-34%*	-12%*	-13%*	-19%	-30%
Hungary	-34%*	-21%	-17%*	-28%*	-31%*
USA	-34%*	-19%*	-23%*	-24%*	-32%*
Lithuania	-32%*	-10%*	-14%*	-17%*	-29%
OECD average	-32%	-20%	-23%	-24%	-32%
Morocco	-31%*	-25%*	-20%	-15%*	-20%
Sweden	-31%	-15%*	-15%*	-16%*	-26%
Georgia	-31%	-41%*	-24%*	-21%	-30%
Dubai	-31%	-20%	-14%*	-21%	-29%
Common countries average	-29%	-22%	-20%	-22%	-28%
Qatar	-29%	-27%*	-16%*	-22%	-26%
All country average	-29%	-22%	-20%	-22%	-28%
Chile	-28%	-24%*	-29%*	-28%*	-31%*
France	-27%	-28%*	-22%	-23%	-35%*
Czech Republic	-26%*	-16%*	-21%	-20%*	-31%*
Oman	-26%*	-32%*	-23%*	-24%*	-21%*
Hong Kong	-26%*	-17%*	-26%*	-22%	-22%*
Kuwait	-25%*	-29%*	-20%	-17%*	-23%*
Bahrain	-25%*	-29%*	-20%	-23%	-24%*
UAE	-24%*	-21%	-12%*	-17%*	-23%*
Abu Dhabi	-24%*	-21%	-12%*	-17%*	-22%*
Kazakhstan	-20%*	-19%*	-14%*	-17%*	-22%*
Taiwan	-20%*	-17%*	-18%*	-20%	-17%*
Turkey	-19%*	-22%	-22%	-21%	-23%*
Singapore	-16%*	-8%*	-6%*	-13%*	-21%*
Japan	-15%*	-10%*	-18%	-10%*	-15%*
Korea	-13%*	-11%*	-18%	-9%*	-29%
Saudi Arabia	-12%*	-28%*	-12%*	-13%*	-11%*

Notes: Figures refer to the change in the percentage of children that strongly agree with each statement between grade 4 and grade 8. The shading of cells should be read vertically, with red shading indicating larger negative declines and green shading smaller negative declines. * indicates difference from all country average statistically significant at the 5% level.

Table 3. Gender gaps in children’s emotional engagement at school. Grade 4 compared to grade 8.

	Being		Safe		Belong		Teachers care		Proud	
	Grade 4	Grade 8	Grade 4	Grade 8	Grade 4	Grade 8	Grade 4	Grade 8	Grade 4	Grade 8
Cyprus	-12.4*	-0.9	-8.7*	2.3*	-7.7*	2.5*	-9.0*	-0.6	-14.2*	-0.1
Australia	-12.4*	3.9*	-5.1*	7.2*	-2.8*	10.5*	-11.1*	6.9*	-10.2*	7.6*
France	-12.0*	2.2*	-6.2*	5.9*	-2.9	12.3*	-7.0*	2.4	-9.8*	3.5*
Portugal	-11.6*	-2.1	-2.5	3.8*	-3.3*	8.4*	-5.4*	0.3	-6.9*	-0.6
Turkey	-10.5*	-7.3*	-1.8	-0.2	-2.4	2.3	-6.0*	-0.4	-10.2*	-1.5
Ireland	-10.0*	2.6	-7.4*	2.4	-4.6*	9.8*	-9.9*	3.5*	-9.3*	4.4*
Oman	-9.9**	5.2*	-7.2*	-0.7	-8.5*	1.1	-9.5*	-1.1	-11.5*	-0.7
Qatar	-9.7*	2.7	-7.0*	-3.5	-9.7*	0.4	-6.2*	0.7	-8.9*	0.4
Georgia	-8.9*	-4.5*	-1.1	4.9*	0.2	0.2	0.0	5.4*	-2.5	1.2
Dubai	-8.7*	4.4	-4.8*	1.2	-3.9*	8.1*	-8.8*	3.8*	-8.3*	4.5*
New Zealand	-8.6*	1.9	-2.4	5.8*	-4.3*	9.0*	-9.0*	5.8*	-10.8*	11.4*
Norway	-8.5*	3.5*	3.3	16.1*	3.3	12.6*	-4.1*	6.6*	-3.2	11.4*
Bahrain	-8.5*	-1.5	-10.2*	-8.9*	-9.9*	-1.3	-10.4*	-4.4*	-13.2*	0.1
Kuwait	-8.4*	0.8	-7.8*	-2.7	-7.6*	2.6	-9.8*	0.9	-11.9*	3.3
Italy	-8.2*	-2.4*	-2.5	3.6*	-1.4	7.0*	-9.7*	-4.8*	-8.3*	-0.4
Saudi Arabia	-8.1*	8.2*	-9.2*	1.5	-10.0*	3.8*	-12.5*	1.9	-13.1*	0.3
Hong Kong	-8.1*	2.9	-2.5	4.2*	-4.4*	4.6*	-2.7	2.4	-4.4*	2.5
Korea	-8.0*	3.1	-2.7	2.5	-0.8	-0.8	-7.2*	-0.1	-9.8*	5.8*
Hungary	-7.7*	-2.5*	-3.7	6.5*	2.3	3.5*	-2.6	1.8	-0.8	0.6
UAE	-7.6*	3.7*	-5.5*	-2.5*	-6.1*	3.6*	-7.9*	2.5*	-7.9*	2.1*
Abu Dhabi	-7.3*	6.9*	-6.7*	-0.7	-7.0*	6.5*	-8.3*	7.0*	-7.4*	4.1*
Finland	-7.1*	8.8*	2.4	18.6*	4.9*	20.5*	-5.0*	13.3*	-5.6*	8.9*
Kazakhstan	-6.6*	-4.2*	-0.2	-2.5	-3.0	-1.8	-5.6*	3.4*	-7.0*	-2.0
Czech Republic	-6.5*	2.2*	-1.7	11.2*	5.3*	13.5*	-2.7	4.6*	-7.3*	3.3*
Morocco	-6.5*	-13.8*	-6.7*	-10.1*	-6.9*	-8.8*	-8.8*	-3.7*	-6.4*	-10.5*
England	-6.3*	4.2*	-3.6	10.3*	-2.3	13.2*	-3.5	7.3*	-4.2*	7.7*
USA	-6.0*	3.0*	-4.8*	8.3*	-3.3*	8.7*	-4.6*	5.8*	-7.0*	7.0*
Sweden	-3.4	8.7*	6.6*	21.9*	-0.6	15.7*	-5.4*	12.3*	-5.5*	10.5*
Japan	-3.4	6.3*	1.4	6.7*	4.4*	9.2*	1.6	5.4*	-1.4	4.5*
Lithuania	-3.3*	4.0*	-4.1*	9.4*	-2.9	3.9*	-8.1*	3.7*	-10.3*	2.2
Chile	-2.4	6.4*	3.0	7.2*	3.0	9.9*	-4.7*	4.4*	1.7	9.1*
Singapore	-1.6	8.3*	-1.0	1.9	-3.7*	8.5*	-5.5*	11.1*	-6.7*	6.6*
Taiwan	-1.5	3.4*	1.8	4.5*	-1.9	2.5	-6.2*	1.6	-1.0	3.4*
Average	-7.6	2.1	-3.3	4.1	-3.0	6.1	-6.5	3.3	-7.4	3.4

Notes: Positive values indicate greater feelings of engagement amongst boys than girls. Negative values indicate girls have stronger feelings of engagement than boys. Anglophone countries have been highlighted in light green shading. * indicates the gender gap is significantly different from zero at the 5% level.

Appendix A. Changes in pupil's emotional engagement with school before and after the COVID-19 pandemic (2019 and 2023)

Figure A1. Change in pupil's like being in school before (2019) and after (2023) the COVID-19 pandemic.

(a) Grade 4 (Year 5)

(b) Grade 8 (year 9)

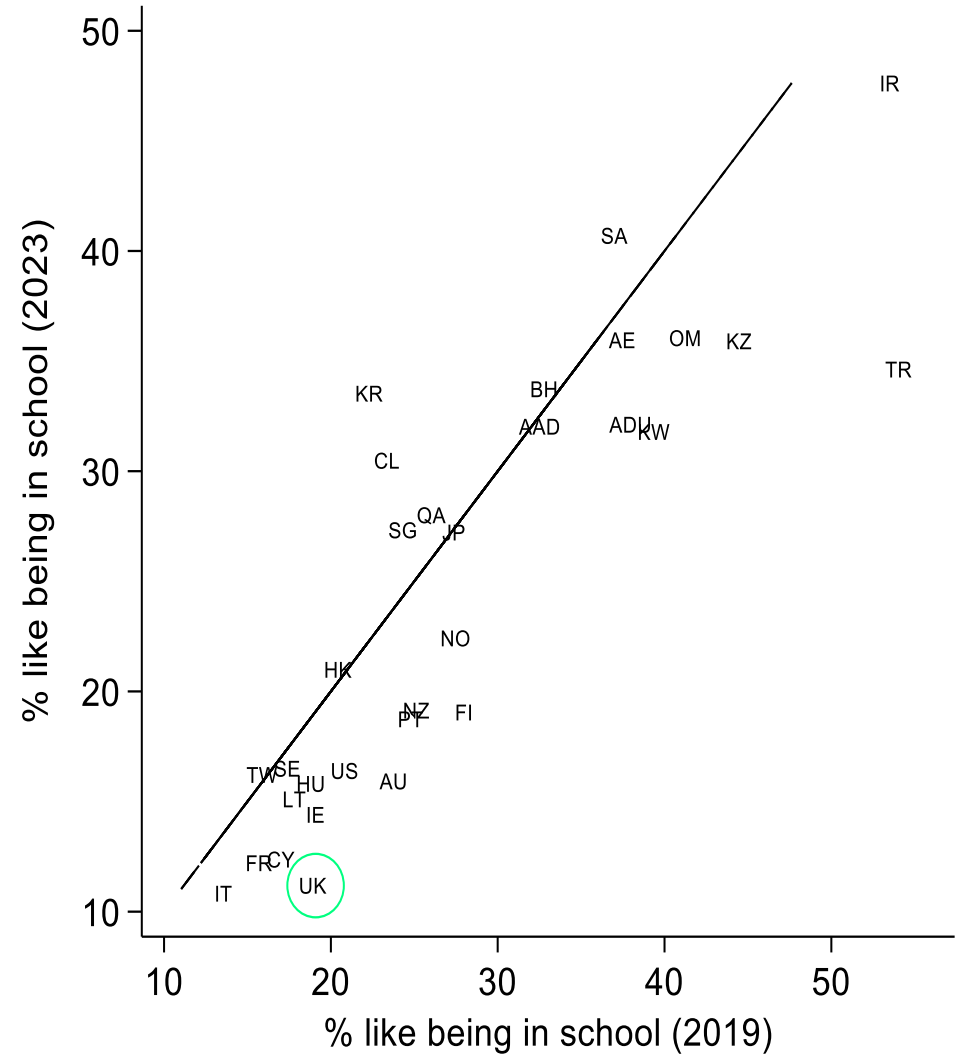
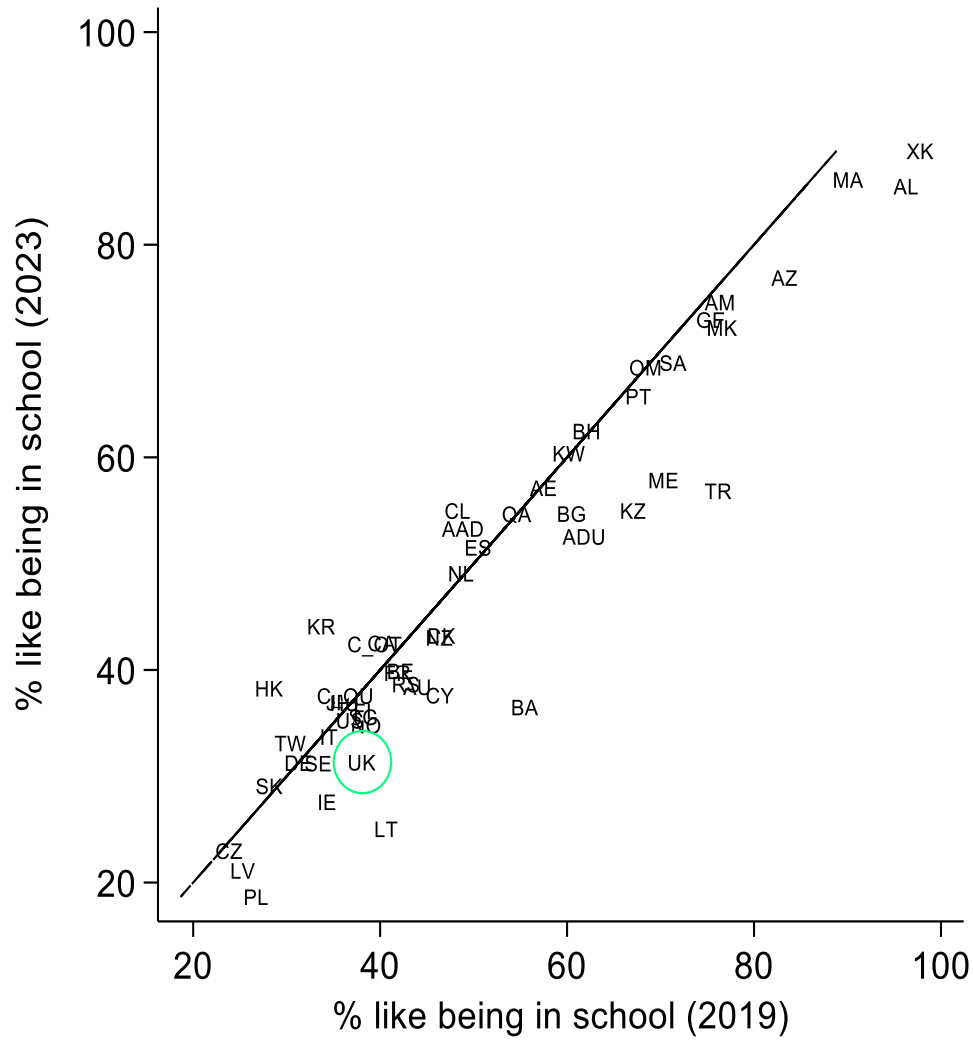


Figure A2. Change in pupil's feel safe in school before (2019) and after (2023) the COVID-19 pandemic.

(a) Grade 4 (Year 5)

(b) Grade 8 (year 9)

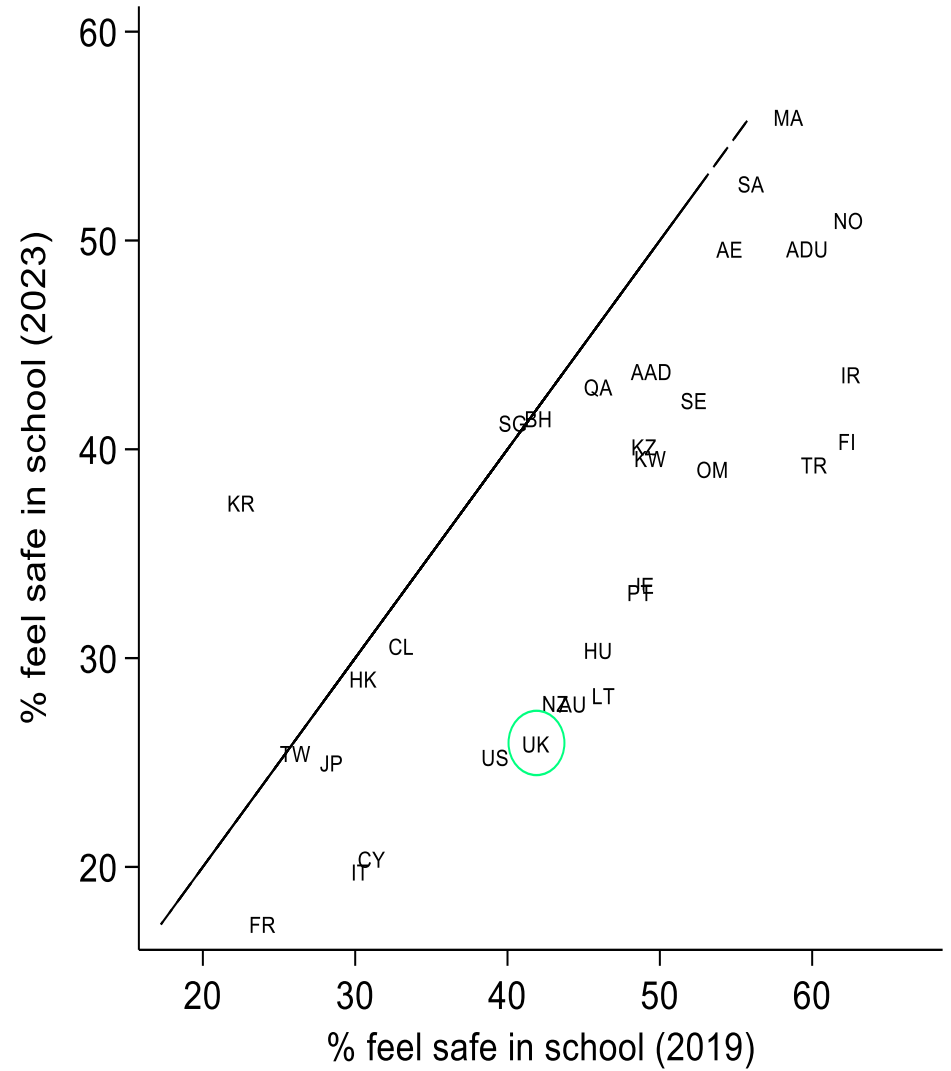
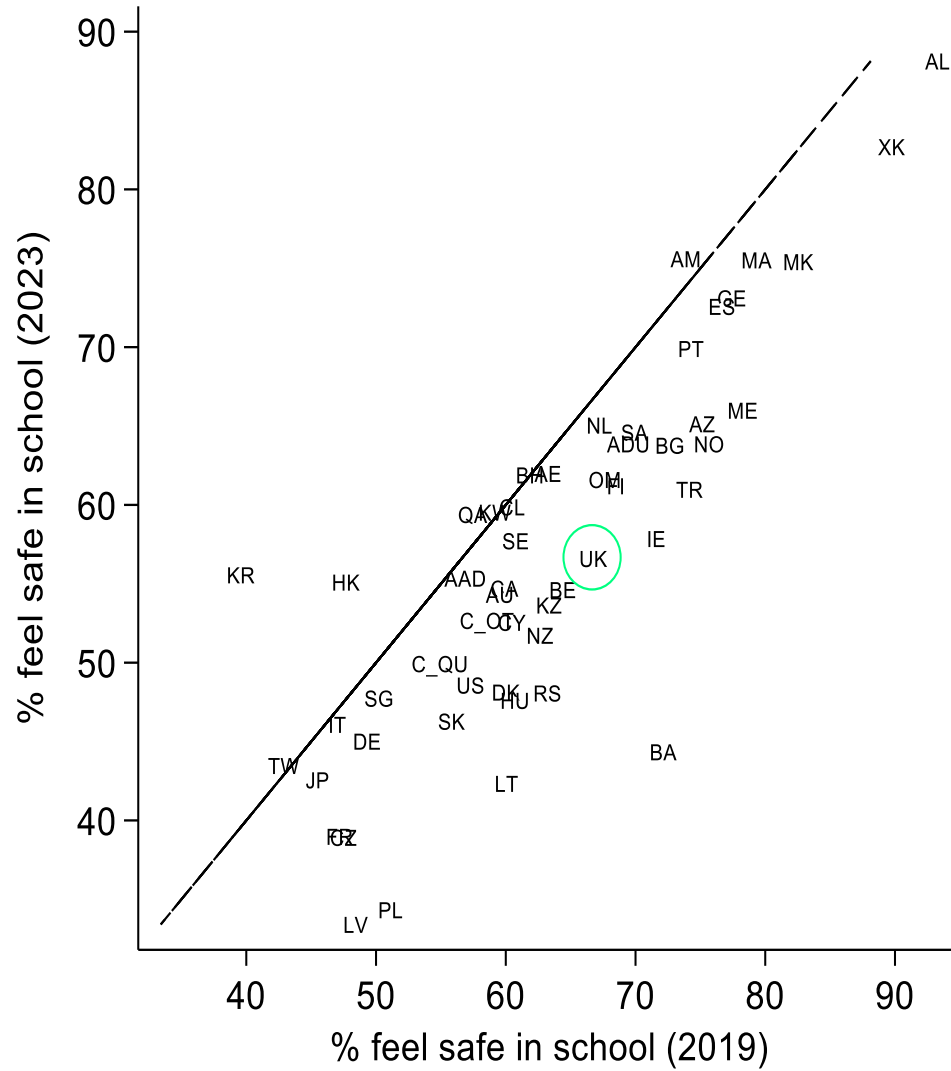


Figure A3. Change in pupil's feel they belong in school before (2019) and after (2023) the COVID-19 pandemic.

(a) Grade 4 (Year 5)

(b) Grade 8 (year 9)

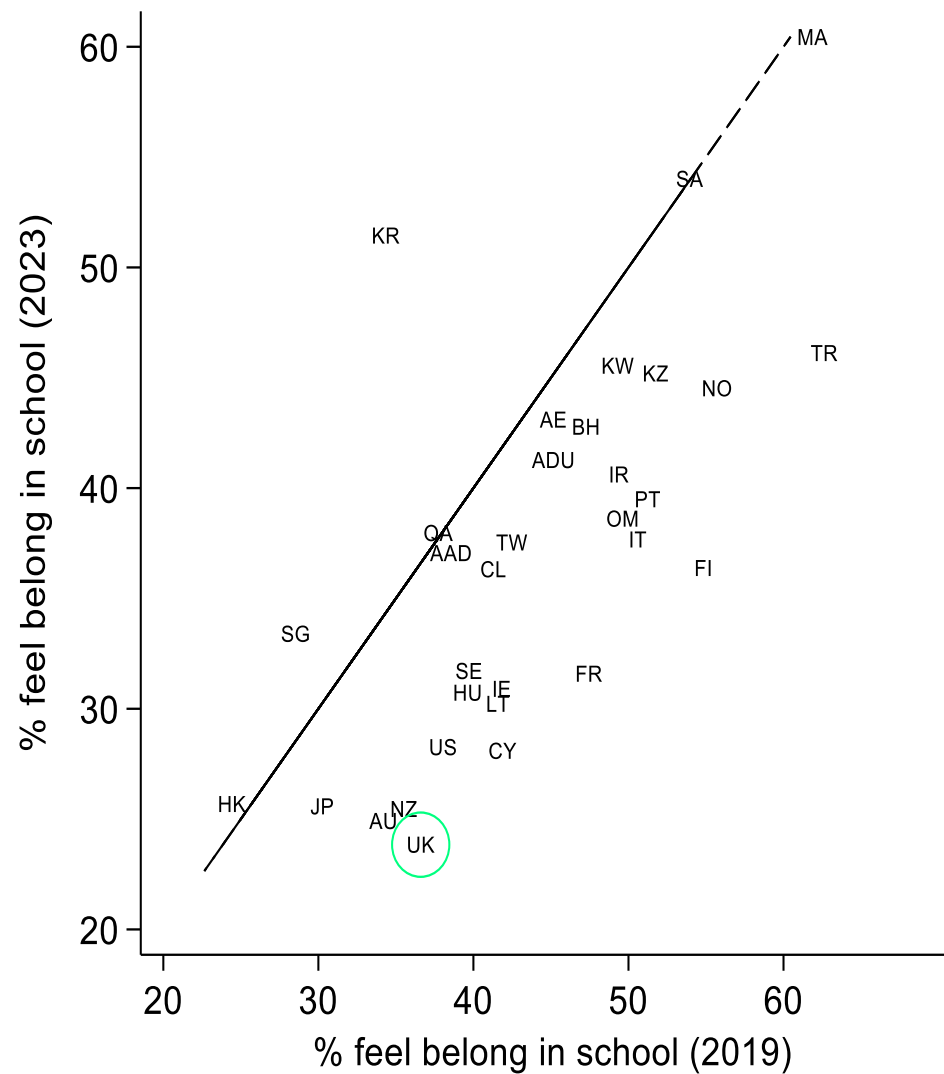
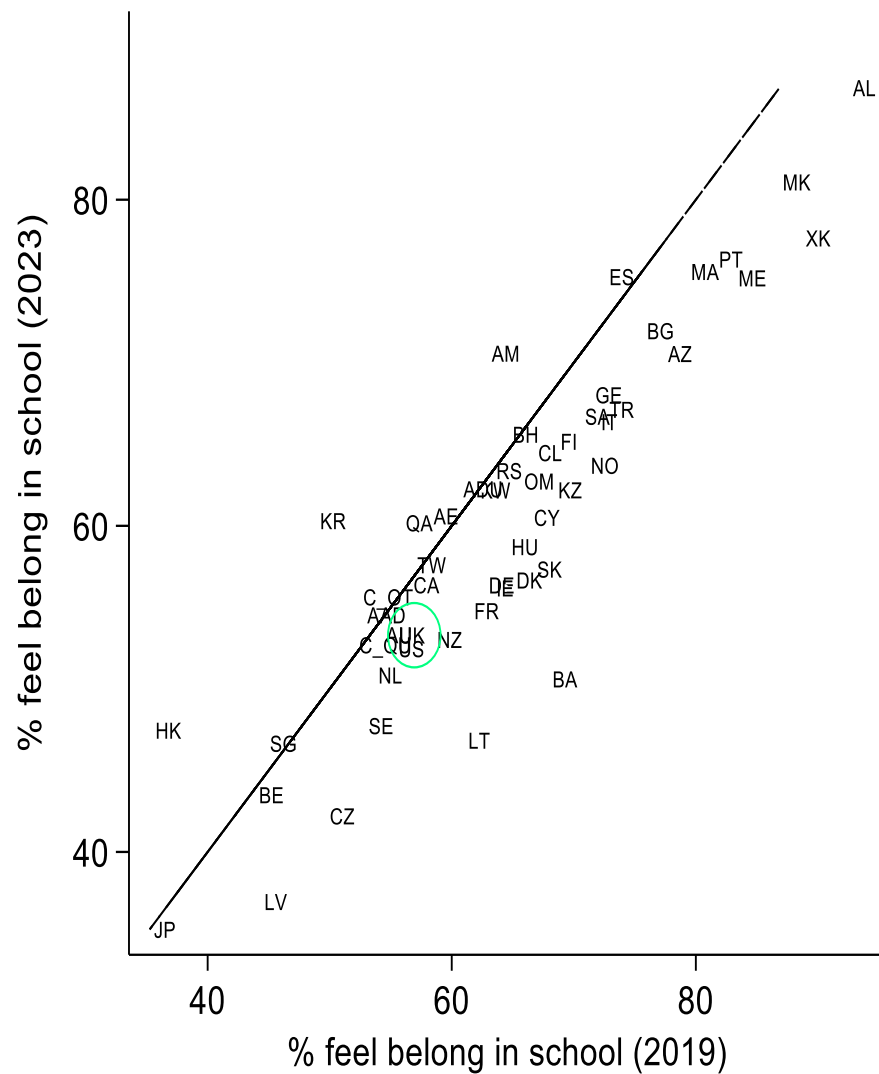
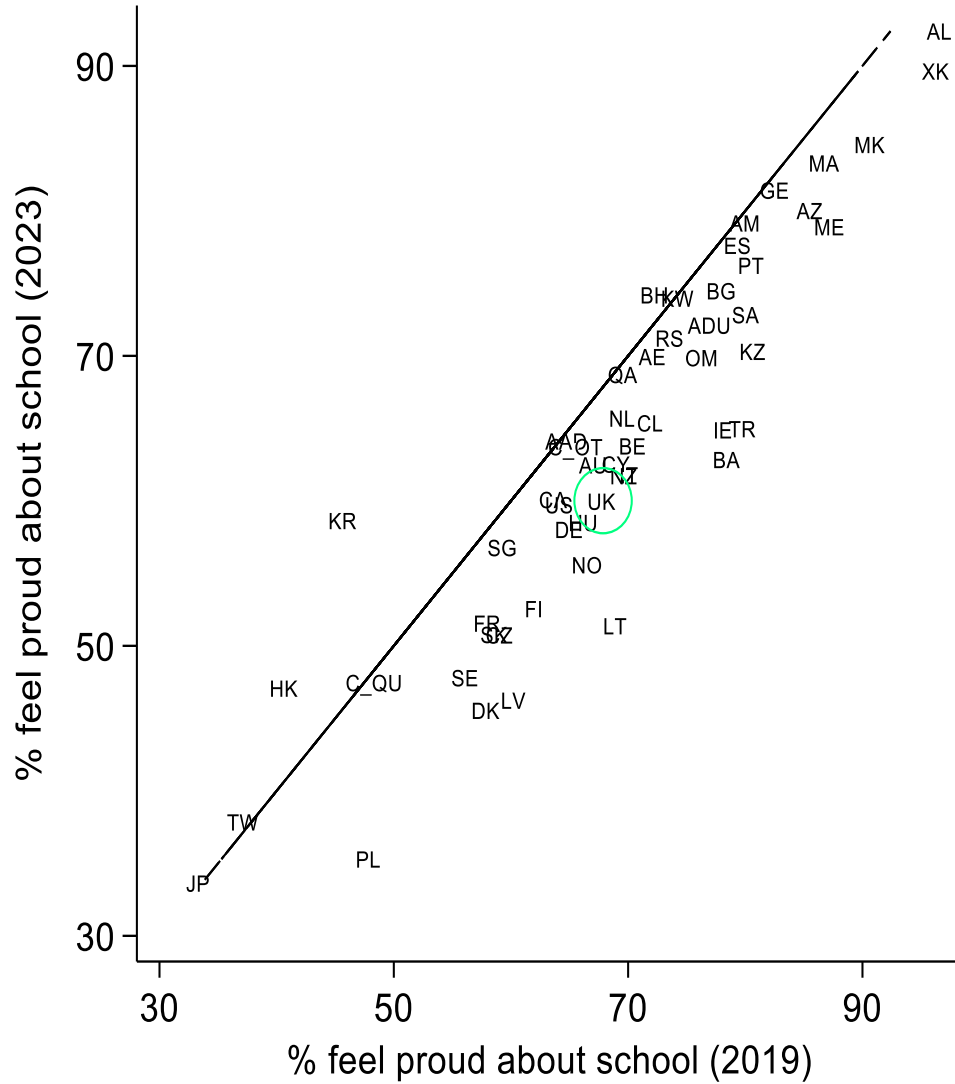
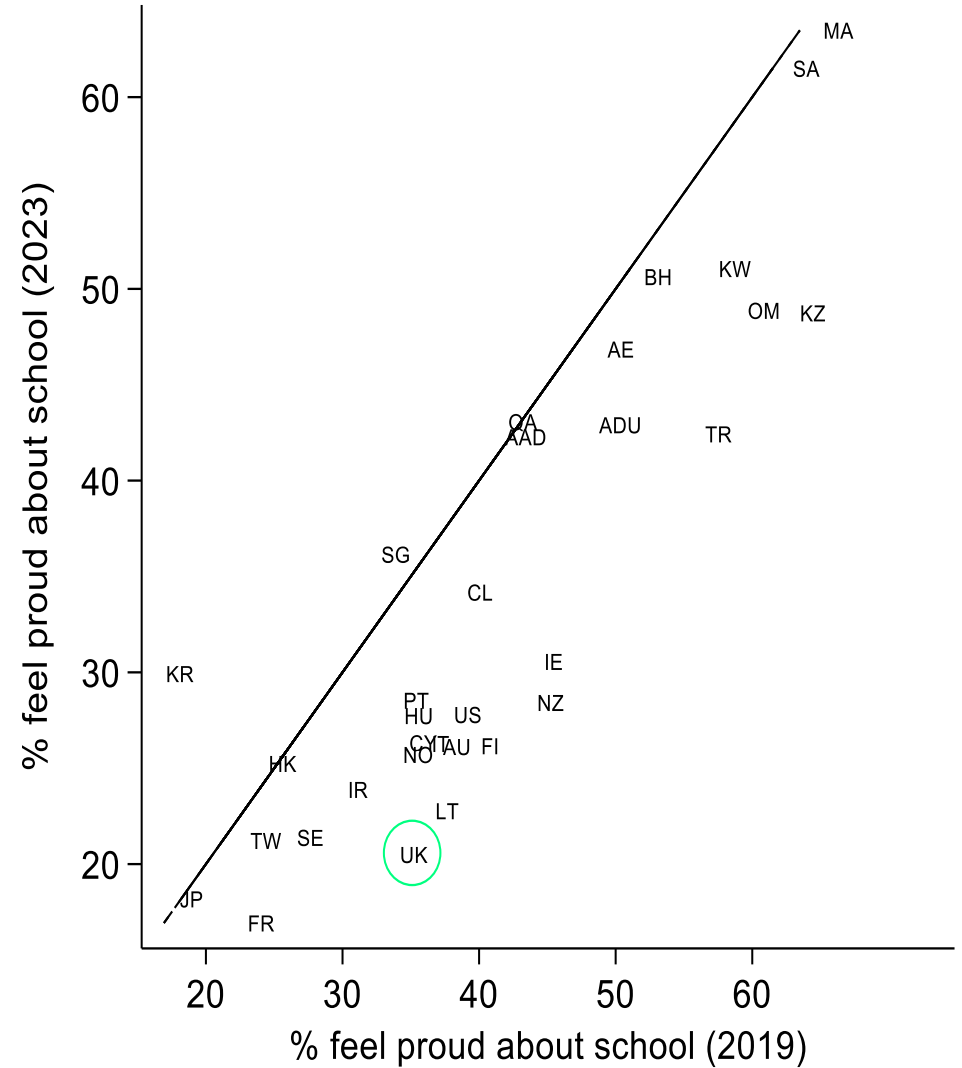


Figure A4. Change in pupil's pride about school before (2019) and after (2023) the COVID-19 pandemic.

(b) Grade 4 (Year 5)



(b) Grade 8 (year 9)



Appendix B. Change in Grade 4 (Year 5) pupils' emotional engagement with school before (TIMSS 2019) and after (TIMSS 2023) the COVID-19 pandemic

Country	Being		Safe		Belong		Proud	
	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys
Bosnia and Herzegovina	-22%	-17%	-27%	-29%	-19%	-19%	-13%	-19%
Poland	-9%	-7%	-19%	-15%	-19%	-14%*	-15%	-10%
Latvia	-7%	-1%*	-19%	-11%*	-11%	-6%	-18%	-10%*
Serbia	-5%	-4%	-18%	-12%	-4%	1%	-3%	-2%
Lithuania	-20%	-12%*	-17%	-18%	-18%	-13%	-18%	-17%
Ireland	-10%	-3%*	-16%	-12%	-10%	-6%	-15%	-12%
Hungary	-1%	2%	-14%	-12%	-10%	-5%*	-11%	-5%*
Turkey	-20%	-17%	-14%	-12%	-8%	-5%	-13%	-16%
Norway	-7%	-1%*	-14%	-9%	-11%	-7%	-14%	-8%*
New Zealand	-7%	-1%*	-14%	-8%*	-8%	-6%	-9%	-8%
Denmark	-5%	-1%	-13%	-11%	-12%	-8%	-16%	-9%*
Montenegro	-13%	-12%	-13%	-12%	-8%	-11%	-8%	-9%
England	-7%	-6%	-12%	-7%	-6%	-1%	-10%	-6%
Azerbaijan	-5%	-8%	-11%	-9%	-7%	-9%	-5%	-6%
Kazakhstan	-12%	-12%	-11%	-8%	-9%	-6%	-11%	-10%
Bulgaria	-6%	-5%	-11%	-7%	-5%	-5%	-5%	-2%
Belgium (Flemish)	-5%	1%	-10%	-9%	-3%	0%	-8%	-5%
Finland	-2%	-2%	-10%	-5%*	-7%	-2%*	-12%	-7%*
USA	-4%	1%*	-10%	-8%	-5%	-3%	-6%	-3%*
Slovakia	1%	1%	-9%	-10%	-9%	-12%	-7%	-9%
Czech Republic	-2%	0%	-9%	-8%	-10%	-7%	-10%	-7%
Saudi Arabia	-7%	2%*	-9%	-2%*	-9%	-2%*	-8%	-7%
Germany	-1%	2%	-8%	-1%*	-8%	-7%	-8%	-6%
France	-3%	-2%	-7%	-10%	-8%	-8%	-7%	-6%
Cyprus	-12%	-5%*	-7%	-9%	-8%	-6%	-7%	-5%
Australia	-7%	-5%	-6%	-5%	-4%	-1%	-5%	-4%
North Macedonia	-5%	-4%	-6%	-8%	-6%	-9%	-6%	-7%
Ontario	3%	2%	-6%	-6%	-1%	2%	-2%	-2%
Kosovo	-7%	-11%*	-6%	-8%	-13%	-12%	-5%	-8%*
Oman	-1%	1%	-6%	-6%	-5%	-4%	-6%	-7%
Canada	1%	3%	-6%	-5%	-3%	0%	-5%	-3%
Qubec	0%	2%	-6%	-5%	-3%	-1%	-3%	1%
Singapore	-4%	-1%	-5%	0%*	-2%	3%*	-4%	-1%
Portugal	-4%	0%	-5%	-4%	-7%	-6%	-6%	-3%
Georgia	-2%	-3%	-5%	-3%	-4%	-5%	-3%	0%
Chile	6%	7%	-5%	3%*	-7%	0%*	-10%	-4%*
Japan	-1%	4%	-4%	-1%	-3%	1%	-3%	3%*
Dubai	-6%	-13%*	-4%	-7%	0%	-1%	-3%	-7%*
Spain	-1%	2%	-4%	-4%	0%	3%	-3%	-1%
Netherlands	-1%	2%	-4%	0%	-4%	-5%	-2%	-6%
Albania	-11%	-10%	-4%	-6%	-6%	-8%	-4%	-4%
Morocco	-5%	-3%	-4%	-4%	-5%	-5%	-4%	-3%
Abu Dhabi	4%	5%	-4%	1%*	-2%	1%	-4%	3%*

Sweden	-2%	-3%	-2%	-4%	-6%	-7%	-6%	-11%
Kuwait	0%	0%	-2%	2%	-4%	1%	-1%	0%
UAE	0%	0%	-2%	0%	1%	2%	-3%	-1%
Bahrain	-1%	1%	-1%	1%	-1%	0%	3%	1%
Italy	-2%	1%	-1%	-1%	-7%	-6%	-9%	-7%
Taiwan	0%	5%*	0%	1%	-2%	0%	-1%	2%
Armenia	-1%	-2%	2%	1%	7%	5%	0%	-2%
Qatar	1%	-1%	3%	1%	5%	1%	-1%	-1%
Hong Kong	12%	8%	6%	8%	12%	9%	7%	6%
Korea	14%	7%*	18%	14%*	11%	9%	16%	10%*
Average	-5%	-3%	-8%	-6%	-6%	-4%	-7%	-5%

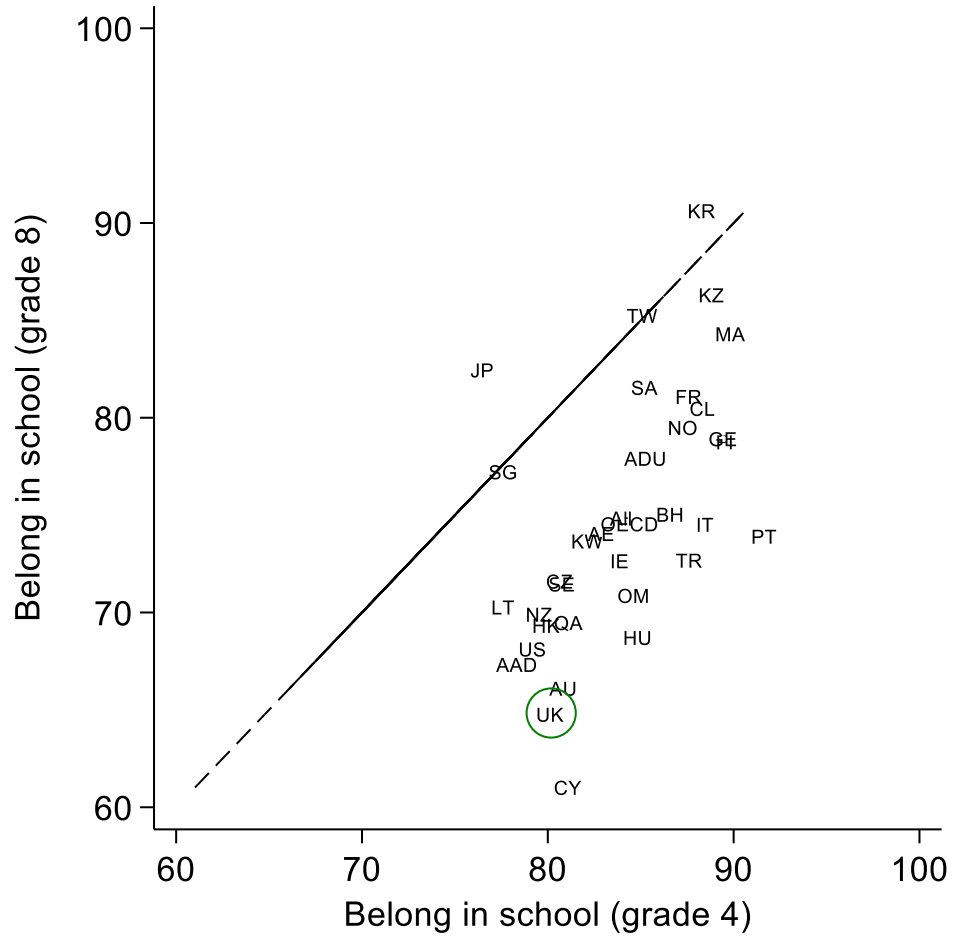
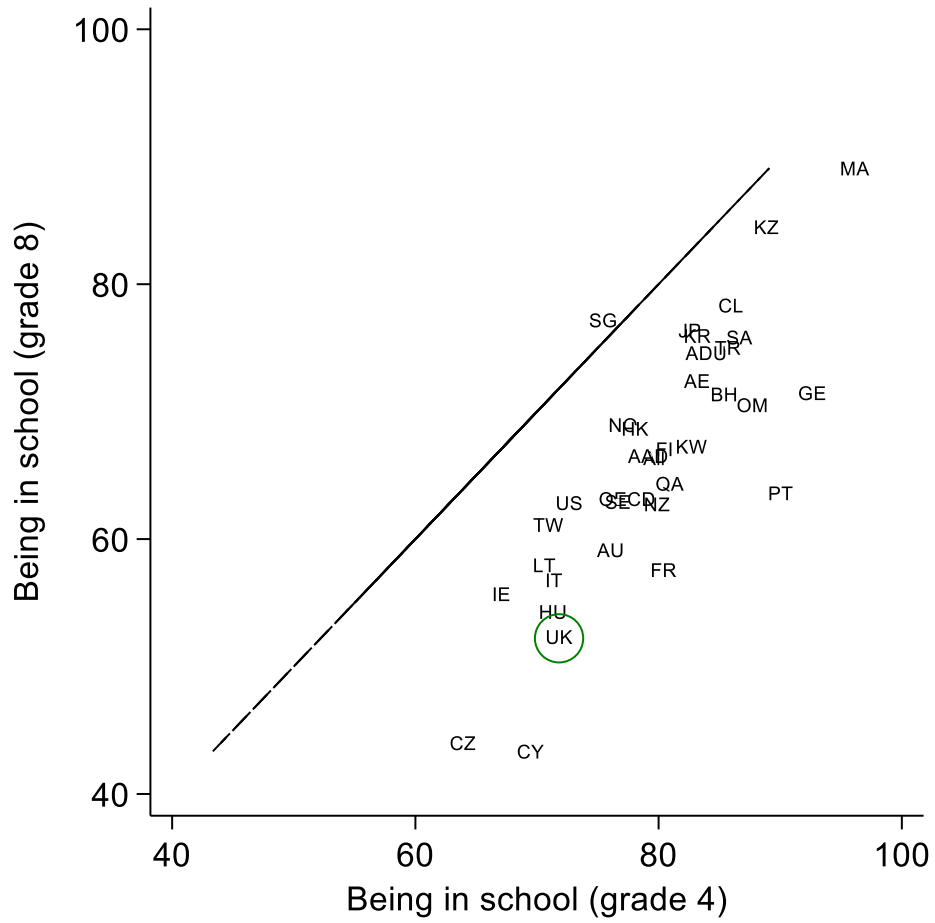
Notes: Figures refer to the change in the percentage that strongly agree with the statement between 2019 and 2023. * indicates where the change between 2019 and 2023 is significantly different between boys and girls.

Appendix C. Alternative estimates based on the percent of pupils that strongly disagree/disagree vs agree/strongly agree

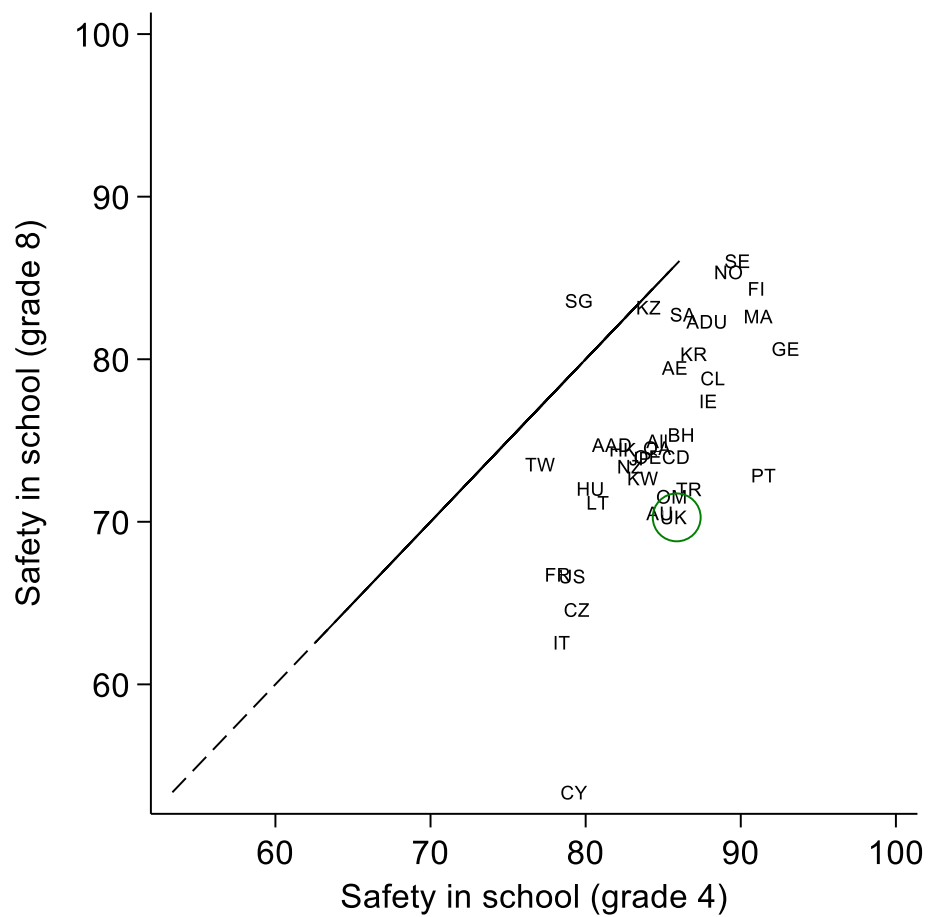
Figure C1. Change in pupils' emotional engagement between Grade 4 and Grade 8 (strongly disagree/disagree vs agree/strongly agree)

Like being in school

Feel belong in school



Feel safe at school



Feel proud about school

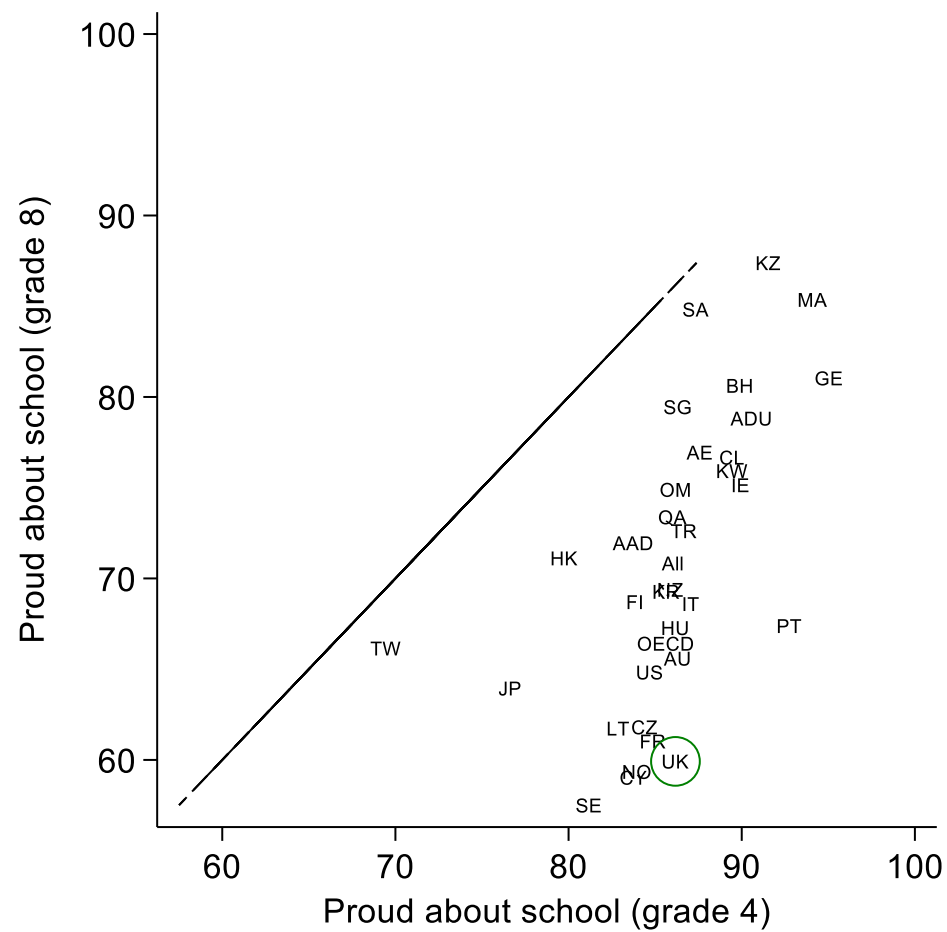
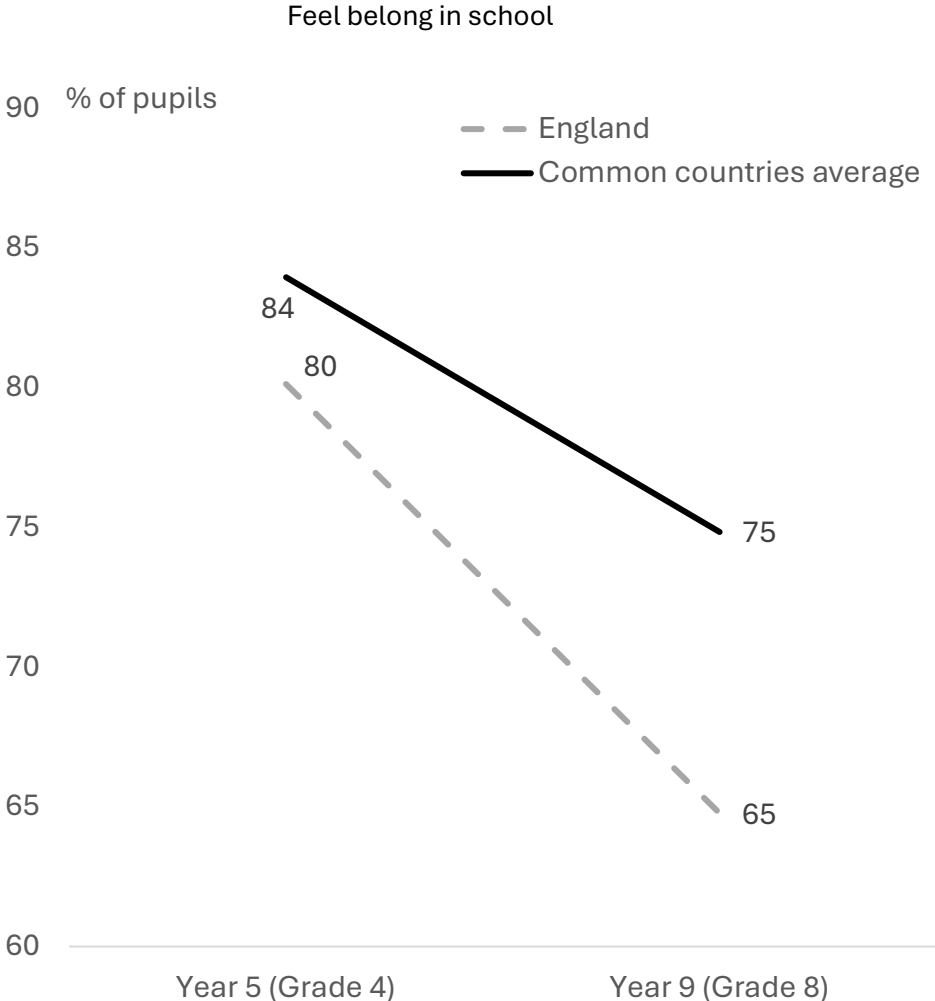
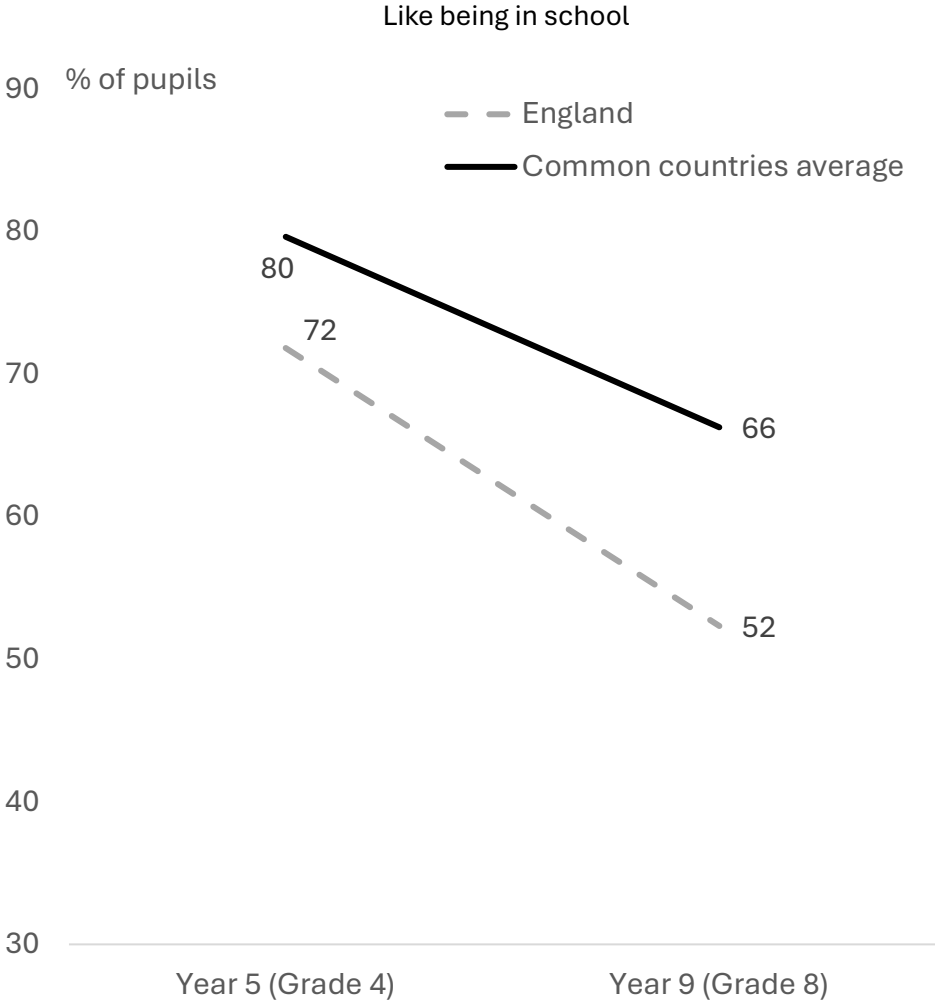


Figure C2. Change in pupils' emotional engagement between Grade 4 and Grade 8 (strong disagree/disagree vs agree/strongly agree). England versus cross-country averages.



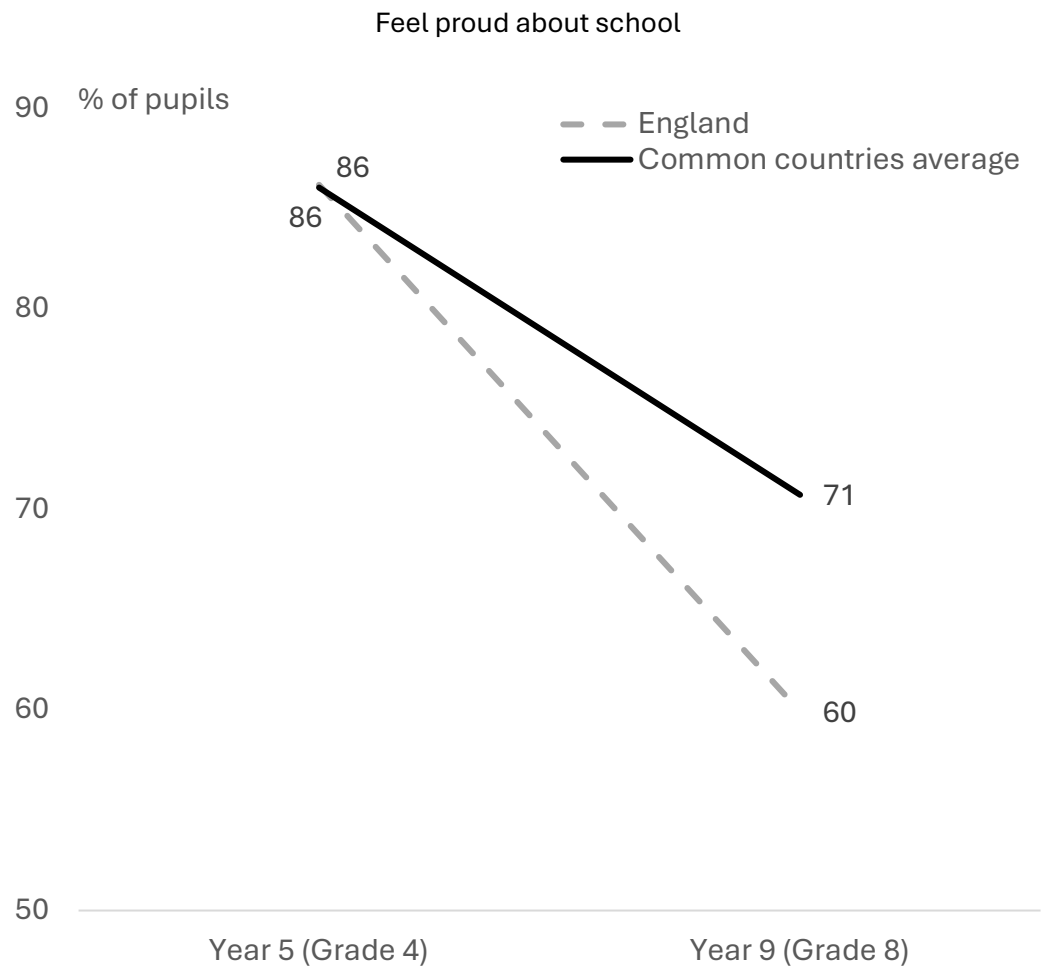
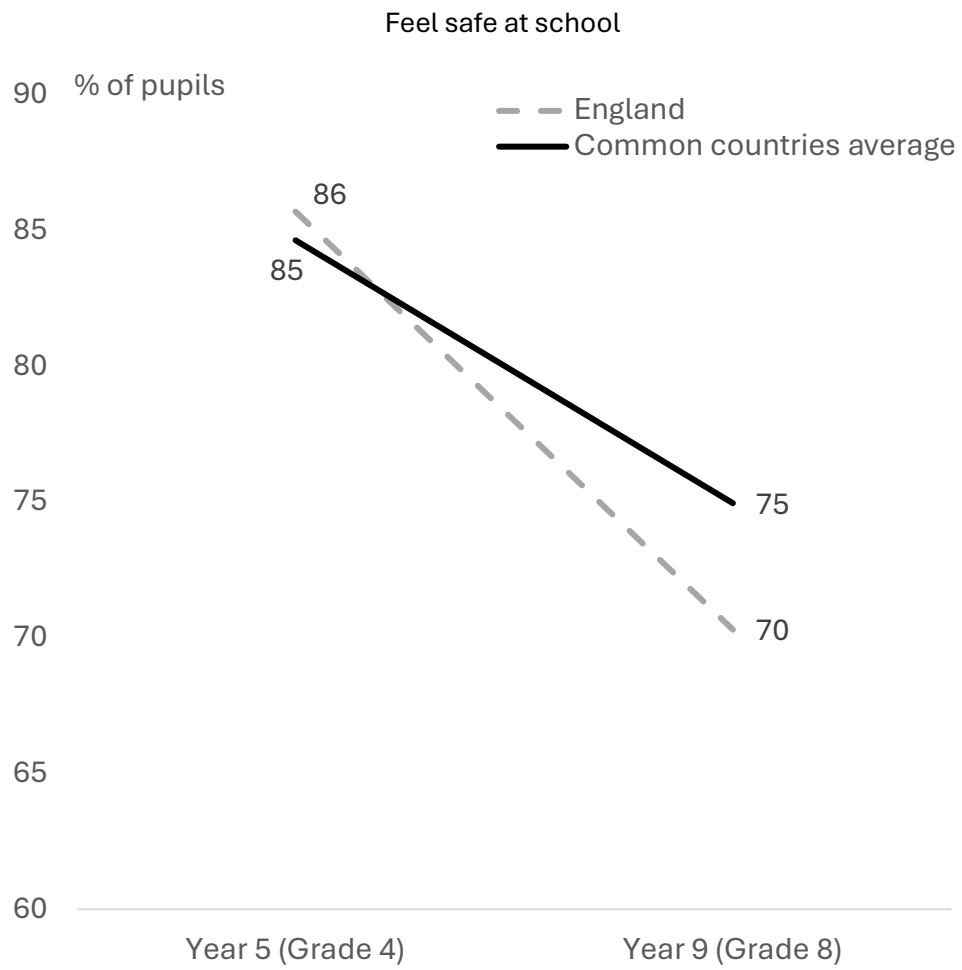
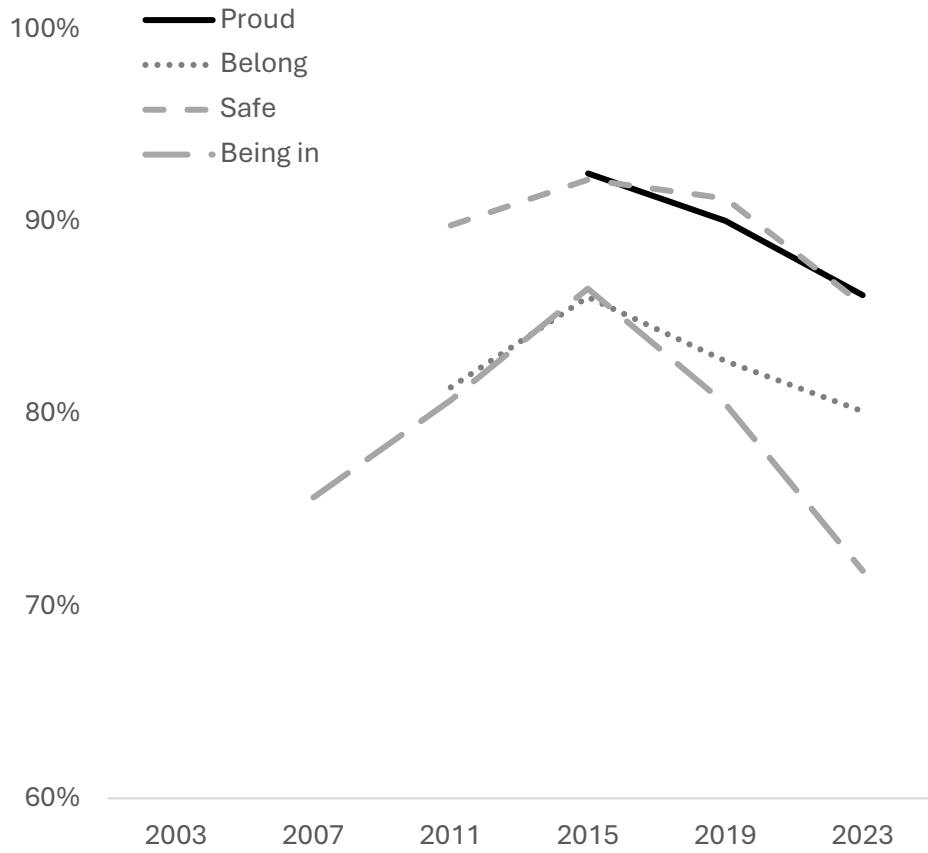
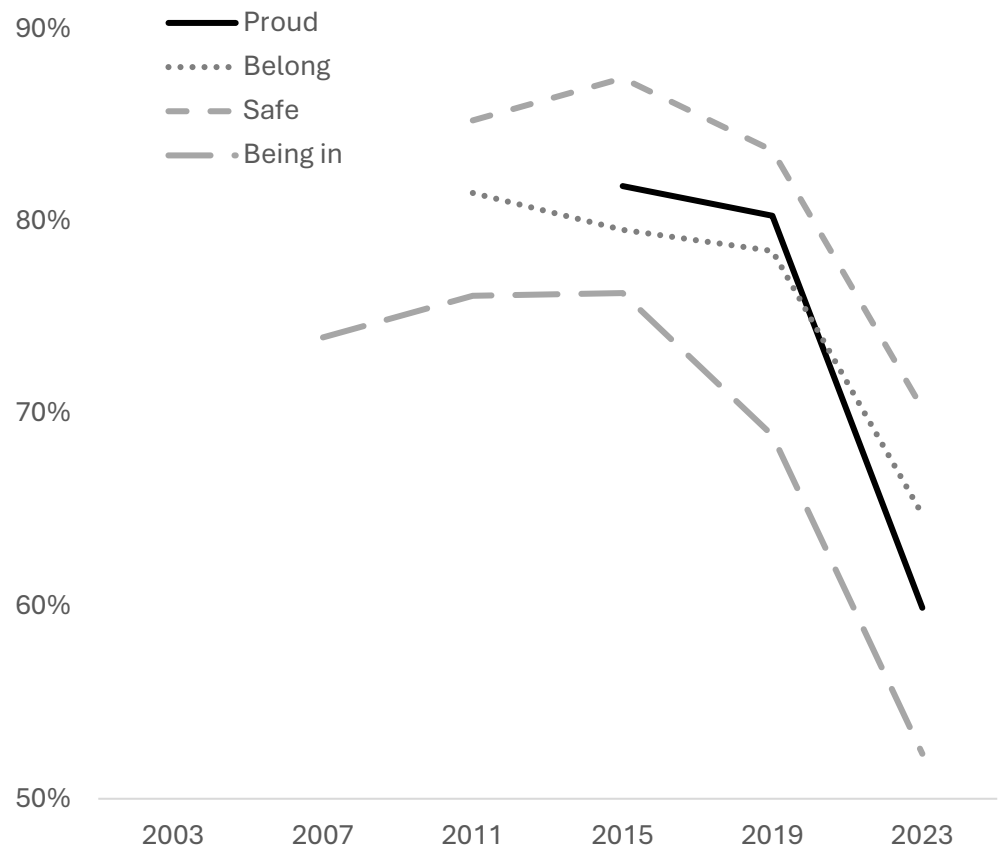


Figure C3. Change in pupils' emotional engagement in England over time

(a) Grade 4



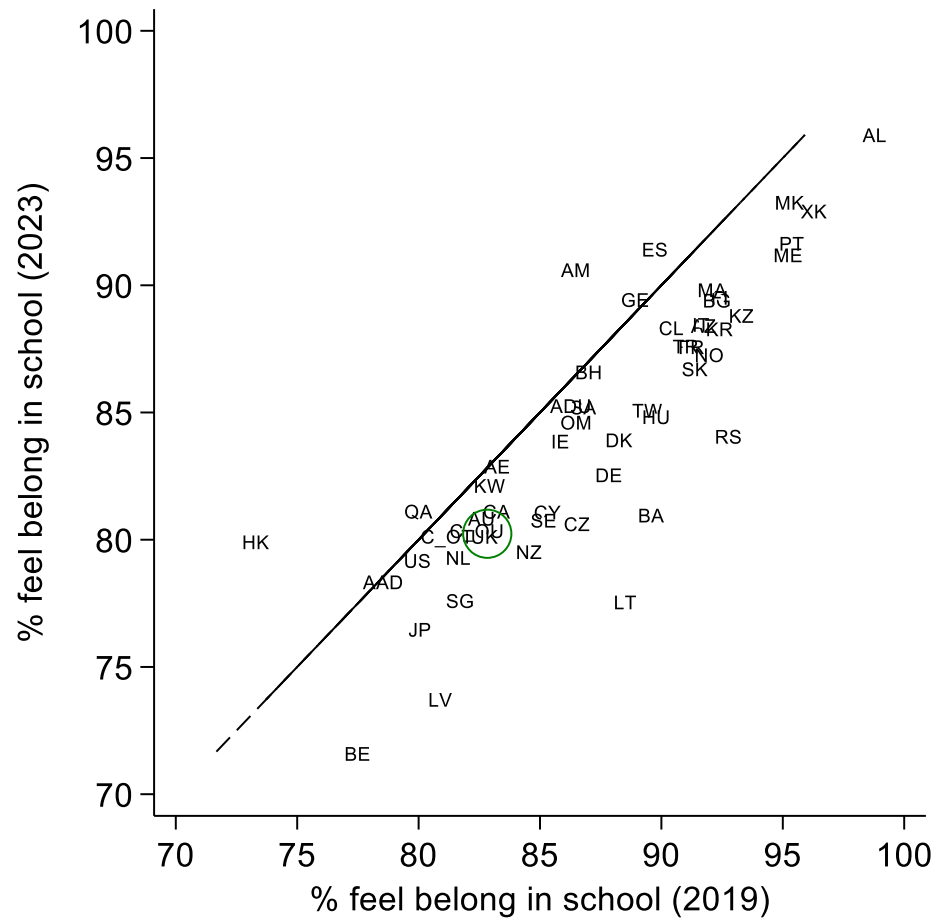
(b) Grade 8



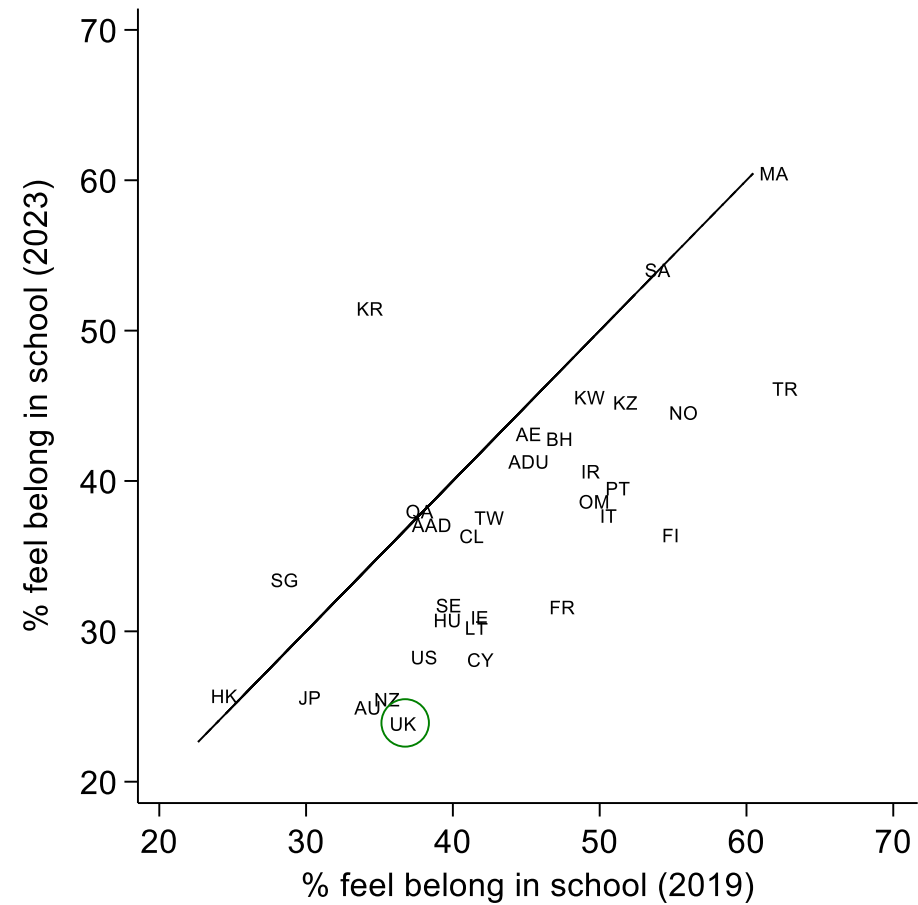
Notes: Figures refer to the percentage of pupils that agree or strongly agree.

Figure C4. Change in pupils' feel they belong in school before (2019) and after (2023) the COVID-19 pandemic.

(c) Grade 4 (Year 5)



(b) Grade 8 (year 9)



Notes: Figures refer to the percentage of pupils strongly agreeing that they feel they belong at school. Horizontal axis presents results from 2019, with the results from 2023 on the vertical axis. The 45-degree line illustrates where the two values are equal. England highlighted in a green circle. Countries denoted by their two-letter codes.

Table C1. Change in Grade 8 (Year 9) pupils' emotional engagement with school before (TIMSS 2019) and after (TIMSS 2023) the COVID-19 pandemic

Country	Being		Safe		Belong		Proud	
	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys
Lithuania	-23%	-16%*	-22%	-13%*	-14%	-11%	-22%	-19%
Italy	-13%	-5%*	-20%	-11%*	-16%	-8%*	-15%	-11%
Australia	-17%	-9%*	-20%	-9%*	-13%	-6%*	-18%	-7%*
Iran	-8%	-5%	-19%	-10%*	-15%	-5%*	-14%	-4%*
England	-25%	-8%*	-19%	-8%*	-19%	-9%*	-26%	-15%*
Portugal	-16%	-7%*	-18%	-7%*	-18%	-4%*	-13%	-6%*
Turkey	-13%	-16%	-18%	-16%	-16%	-12%	-12%	-13%
New Zealand	-14%	-11%	-18%	-10%*	-16%	-7%*	-20%	-10%*
Cyprus	-20%	-9%*	-18%	-11%*	-18%	-13%*	-14%	-8%*
Hungary	-14%	-8%*	-17%	-12%*	-13%	-7%*	-10%	-9%
France	-20%	-14%*	-17%	-12%*	-15%	-9%*	-21%	-12%*
USA	-7%	-3%	-16%	-11%*	-9%	-5%*	-12%	-7%
Oman	-14%	-11%*	-15%	-11%	-13%	-10%	-12%	-10%
Finland	-20%	-10%*	-14%	-7%*	-15%	-6%*	-21%	-11%*
Ireland	-14%	-8%*	-12%	-8%	-8%	-6%	-10%	-8%
Kuwait	-12%	-3%*	-11%	-4%*	-7%	-1%*	-10%	-3%*
Abu Dhabi	-7%	-3%	-11%	-2%*	-11%	2%*	-8%	2%*
Dubai	-12%	-4%*	-9%	-3%*	-7%	0%*	-9%	-1%*
Japan	-5%	1%*	-9%	-1%*	-5%	-1%	-8%	1%*
UAE	-9%	-1%*	-9%	-1%*	-9%	2%*	-8%	0%*
Chile	-2%	1%	-8%	-5%	-5%	-3%	-7%	-5%
Hong Kong	-9%	-3%*	-8%	2%*	-6%	1%*	-6%	0%
Kazakhstan	-8%	-5%	-8%	-7%	-8%	-4%*	-8%	-6%
Norway	-10%	-7%	-8%	-5%	-8%	-7%	-19%	-12%*
Sweden	-13%	-7%*	-8%	-4%*	-13%	-6%*	-19%	-8%*
Singapore	-7%	-3%*	-7%	-1%*	-5%	1%*	-7%	-1%*
Saudi Arabia	-6%	2%*	-7%	1%*	-4%	1%*	-4%	-2%
Taiwan	-10%	-2%*	-6%	-1%*	-6%	-3%*	-13%	-5%*
Bahrain	-9%	-6%	-6%	0%*	-8%	-3%*	-5%	0%*
Qatar	-6%	-4%	-4%	-6%	-4%	-2%	-3%	-2%
Morocco	-2%	-5%*	-4%	-3%	-4%	-4%	-3%	-4%
Korea	-4%	-1%	3%	-1%	-3%	-3%	-4%	-4%
Average	-12%	-6%	-12%	-6%	-10%	-5%	-12%	-6%

Notes: Figures refer to the change in the percentage that agree with the statement between 2019 and 2023. * and red font indicates where the change between 2019 and 2023 is significantly different between boys and girls.

Table C2. Change in pupils' emotional engagement with school between grade 4 (age 9/10) and grade 8 (age 13/14)

Country	Teachers				
	fair	Being	Safe	Belong	Proud
Cyprus	-30%	-26%	-26%	-20%	-25%
England	-28%	-19%	-15%	-15%	-26%
Czech Republic	-25%	-20%	-15%	-9%	-23%
Ireland	-22%	-11%	-10%	-11%	-15%
Australia	-22%	-17%	-14%	-15%	-21%
Italy	-20%	-15%	-16%	-14%	-18%
Lithuania	-20%	-13%	-10%	-7%	-21%
New Zealand	-18%	-17%	-9%	-10%	-16%
Finland	-18%	-13%	-7%	-11%	-15%
Portugal	-18%	-26%	-19%	-18%	-25%
Hungary	-17%	-17%	-8%	-16%	-19%
OECD average	-16%	-14%	-11%	-10%	-19%
Sweden	-15%	-14%	-4%	-9%	-24%
Qatar	-15%	-17%	-10%	-12%	-13%
Oman	-14%	-17%	-14%	-14%	-11%
Norway	-13%	-8%	-4%	-8%	-25%
Common countries average	-13%	-13%	-10%	-9%	-15%
All country average	-13%	-13%	-10%	-9%	-15%
France	-13%	-23%	-11%	-6%	-24%
USA	-12%	-10%	-12%	-11%	-20%
Georgia	-12%	-21%	-12%	-11%	-14%
Dubai	-12%	-9%	-6%	-7%	-12%
Kuwait	-12%	-15%	-11%	-8%	-14%
Abu Dhabi	-12%	-13%	-7%	-11%	-12%
Morocco	-11%	-7%	-8%	-6%	-9%
UAE	-11%	-11%	-6%	-9%	-11%
Turkey	-11%	-11%	-15%	-15%	-14%
Bahrain	-10%	-14%	-11%	-12%	-9%
Chile	-8%	-8%	-9%	-8%	-13%
Hong Kong	-6%	-9%	-8%	-11%	-9%
Kazakhstan	-5%	-4%	-1%	-3%	-4%
Japan	-3%	-6%	-10%	6%	-13%
Saudi Arabia	-2%	-11%	-4%	-4%	-3%
Korea	-1%	-7%	-7%	2%	-16%
Singapore	0%	2%	4%	0%	-7%
Taiwan	2%	-10%	-4%	0%	-3%

Notes: Figures refer to the change in the percentage of children that agree with each statement between grade 4 and grade 8. The shading of cells should be read vertically, with red shading indicating larger negative declines and green shading smaller negative declines. * indicates difference from all country average statistically significant at the 5% level.

Table C3. Gender gaps in children’s emotional engagement at school. Grade 4 compared to grade 8.

	Being		Safe		Belong		Teachers care		Proud	
	Grade 4	Grade 8	Grade 4	Grade 8	Grade 4	Grade 8	Grade 4	Grade 8	Grade 4	Grade 8
Cyprus	-16.8*	-7.7*	-9.8*	-0.6	-8.6*	-1.3	-6.9*	-1.8	-10.7*	-3.9*
Czech Republic	-14.6*	0.9	-6.4*	12.0*	-0.8	12.5*	-6.9*	2.0	-6.2*	4.3*
France	-14.1*	-4.3*	-9.1*	1.1	-3.4*	6.9*	-4.8*	-4.4*	-10.7*	2.3
Ireland	-13.2*	1.5	-3.9*	1.4	-6.6*	3.6	-3.6*	1.9	-5.7*	0.4
Hungary	-12.0*	-2.0	-7.1*	2.3	-0.5	5.0*	-2.0	1.1	-3.3*	-2.2
Lithuania	-11.8*	2.5	-6.6*	8.4*	-7.1*	1.0	-7.2*	1.5	-9.0*	3.0
Italy	-11.6*	-6.2*	-4.3*	4.0	-2.6*	6.4*	-7.3*	-3.3	-5.8*	1.3
Hong Kong	-10.3*	0.4	-7.0*	2.5	-8.1*	2.4	-4.6*	-1.2	-6.0*	2.1
Australia	-10.2*	7.1*	-3.1*	9.3*	-1.8	11.4*	-4.2*	7.1*	-5.5*	8.7*
Kuwait	-9.8*	-0.7	-6.0*	-3.7*	-7.2*	1.0	-6.8*	-1.2	-7.1*	1.6
Norway	-9.8*	0.8	1.7	5.2*	2.0	7.1*	-2.0	0.4	-3.5*	7.5*
Turkey	-9.7*	-5.3*	-4.3*	-2.5	-4.6*	-0.4	-5.9*	-2.9	-8.3*	-5.7*
Sweden	-9.0*	8.3*	0.1	7.8*	-3.3*	12.2*	-4.2*	6.0*	-5.4*	13.8*
Abu Dhabi	-8.7*	3.6*	-5.8*	-0.1	-4.6*	5.8*	-5.1*	4.3*	-6.3*	4.4*
New Zealand	-8.3*	0.9	-3.4*	9.7*	-4.2*	13.0*	-6.2*	8.0*	-9.2*	10.5*
Qatar	-8.0*	-1.9	-5.0*	-6.9*	-6.8*	-0.2	-5.4*	-2.2	-6.1*	-0.8
Taiwan	-7.9*	-2.0	-4.8*	-2.3	-5.6*	-1.9	-6.8*	-4.8*	-6.1*	-2.4
USA	-7.5*	4.4*	-4.1*	7.2*	-2.8*	8.8*	-2.9*	2.5	-4.2*	7.6*
Finland	-7.4*	9.4*	0.7	8.3*	1.2	14.1*	-3.2*	9.5*	-5.7*	8.5*
Bahrain	-7.4*	-7.0*	-9.9*	-8.8*	-7.1*	-5.6*	-6.6*	-5.5*	-6.9*	-3.1*
Portugal	-7.1*	-5.6*	-3.7*	3.2*	-2.7*	8.0*	-3.2*	-3.5*	-4.6*	0.8
Oman	-7.0*	-1.8	-4.7*	-4.8*	-5.2*	-3.4*	-5.3*	-7.6*	-8.0*	-3.9*
UAE	-6.9*	2.4*	-5.0*	-1.1	-4.5*	3.8*	-4.5*	1.7*	-5.5*	2.4*
England	-6.9*	13.9*	-1.6	9.3*	-2.1	14.4*	-3.6*	11.5*	-4.9*	10.1*
Korea	-6.8*	4.0*	-3.0*	-0.2	-2.5*	-1.4	-1.4	-2.1*	-7.0*	2.0
Singapore	-6.7*	4.0*	-4.2*	1.8	-6.1*	4.5*	-4.9*	0.8	-7.1*	1.9
Dubai	-6.7*	4.8*	-5.5*	0.8	-3.5*	6.3*	-4.5*	4.1*	-4.5*	4.7*
Saudi Arabia	-6.6*	4.4*	-5.6*	0.6	-6.3*	2.1	-8.2*	1.8	-8.5*	0.7
Georgia	-4.9*	-5.8*	-4.8*	0.6	-0.9	-1.6	-3.4*	0.1	-4.0*	0.4
Kazakhstan	-4.8*	-0.5	-1.7	-1.9	-3.0*	-1.0	-3.9*	1.7	-4.0*	0.3
Japan	-3.1	8.2*	-1.0	7.2*	4.2*	5.5*	0.3	4.6*	-3.4*	2.2
Chile	-2.9*	4.5*	-1.5	4.0*	0.8	5.4*	-4.5*	1.3	-1.4	6.1*
Morocco	-2.9*	-7.0*	-4.2*	-6.1*	-4.8*	-5.1*	-2.9*	-5.2*	-2.6*	-5.8*
Average	-8.5	0.9	-4.4	2.1	-3.6	4.2	-4.6	0.8	-6.0	2.4

Notes: Positive values indicate greater feelings of engagement amongst boys than girls. Negative values indicate girls have stronger feelings of engagement than boys. Anglophone countries have been highlighted in light green shading. * indicates the gender gap is significantly different from zero at the 5% level.

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