

Motivation and study intensity among university students

Abridged version

This is an abridge version of the original Danish language report. For more details about the study please consult the Danish language version or contact Chief Economist Claus Seidelin clas@dea.nu.

CONCLUSIONS

In this report, we present and summarize the findings of a major international survey of university students and their implications in the Danish context.

Denmark is unlike other countries when it comes to students' choice of subject

Personal interest is far more important to Danish students' choice of subject than income prospects – especially compared to German and British students, who assign relatively greater importance to their future earnings.

In general, Danish men tend to be more motivated by future earnings in their choice of subject, and less so by personal interest, compared to their female fellow students. However, the overall difference in priorities between the genders remains limited in Denmark compared to other countries.

Interest in the subject is associated with more hours spent studying

After controlling for country, a selection of background variables, and time spent in class, we found a positive association between listing “personal interest” as the motivation for choice of subject on the one hand and on the other, time spent on preparation and assignments.

On average, Danish students reported spending more hours preparing for classes than students in the other surveyed countries, while the Germans spent the most time in the classroom.

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British and German students are more likely to believe grades matter to future income

The proportion of students in Britain and Germany who report that grades are "important" or "very important" for future income is approximately twice as high as in Denmark and Sweden.

Gap years more common among Danish students

The proportion of Danish students who spent time working, traveling, pursuing extracurriculars or similar activities in the year before enrolling at university is considerably higher than in the other surveyed countries – 32% versus 6-12%.

The findings describe between-country differences, but do not address the underlying causes

It should be noted that our analysis does not speak to the root causes of the observed differences between the countries, which differ both in terms of culture and institutions. The present data does not allow us to determine whether the differences observed are culturally or institutionally founded. We would however suggest that both types of factors influence students' motivations, study habits, and attitudes to life as a student.

Findings

This chapter presents the key findings of the report.

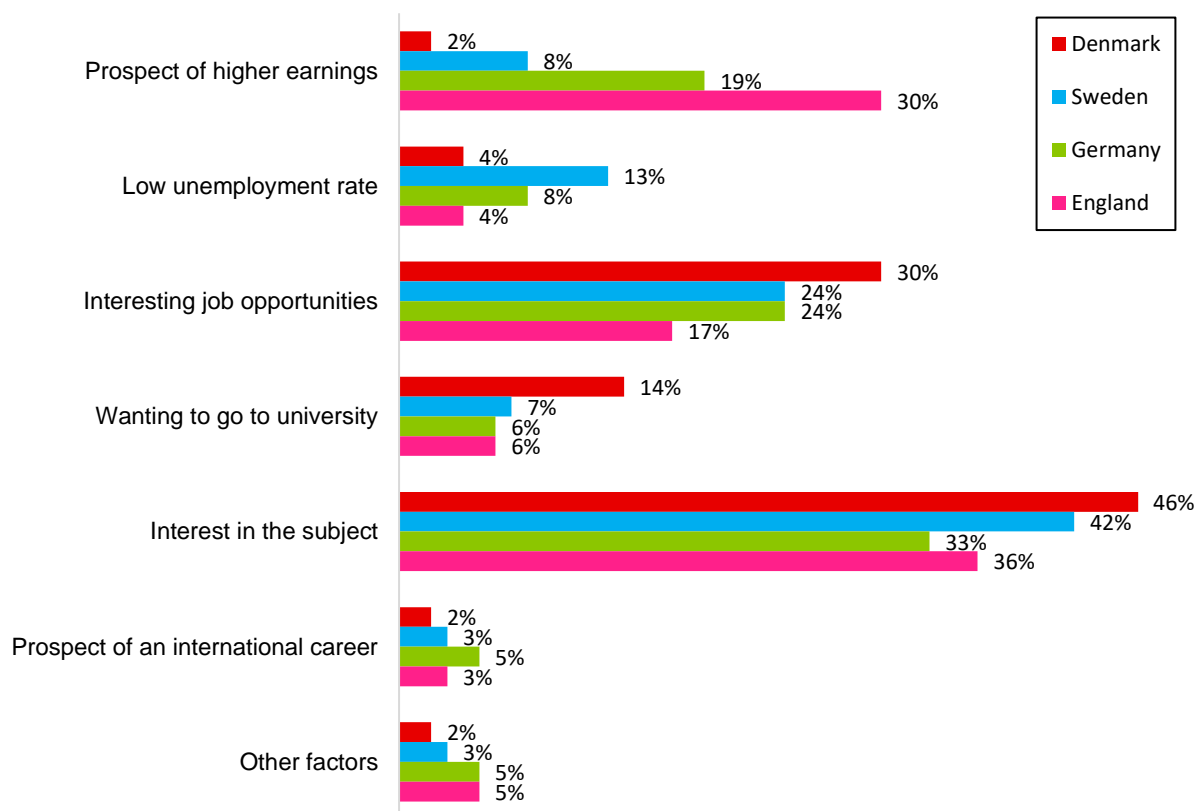
Motivation for choice of subject

Academic interest is the main motivating factor for students' choice of subject

All survey participants were asked to rate the importance of a range of factors for their choice of subject, such as average salaries and personal interest in the subject. They were then asked to rank the three factors that ultimately had the greatest importance for their choice. Chart 1 shows the distribution of first priorities.¹

Personal interest in the subject stands out as the main driver behind students' choice of degree; It is the single highest rated factor in each of the countries surveyed.

Chart 1: Percentage of students who rated the following as their main motivation for choice of subject (all respondents)



Note: "Other Factors" refers to "prestige", "parents/others' expectations", "prospect of being self-employment"

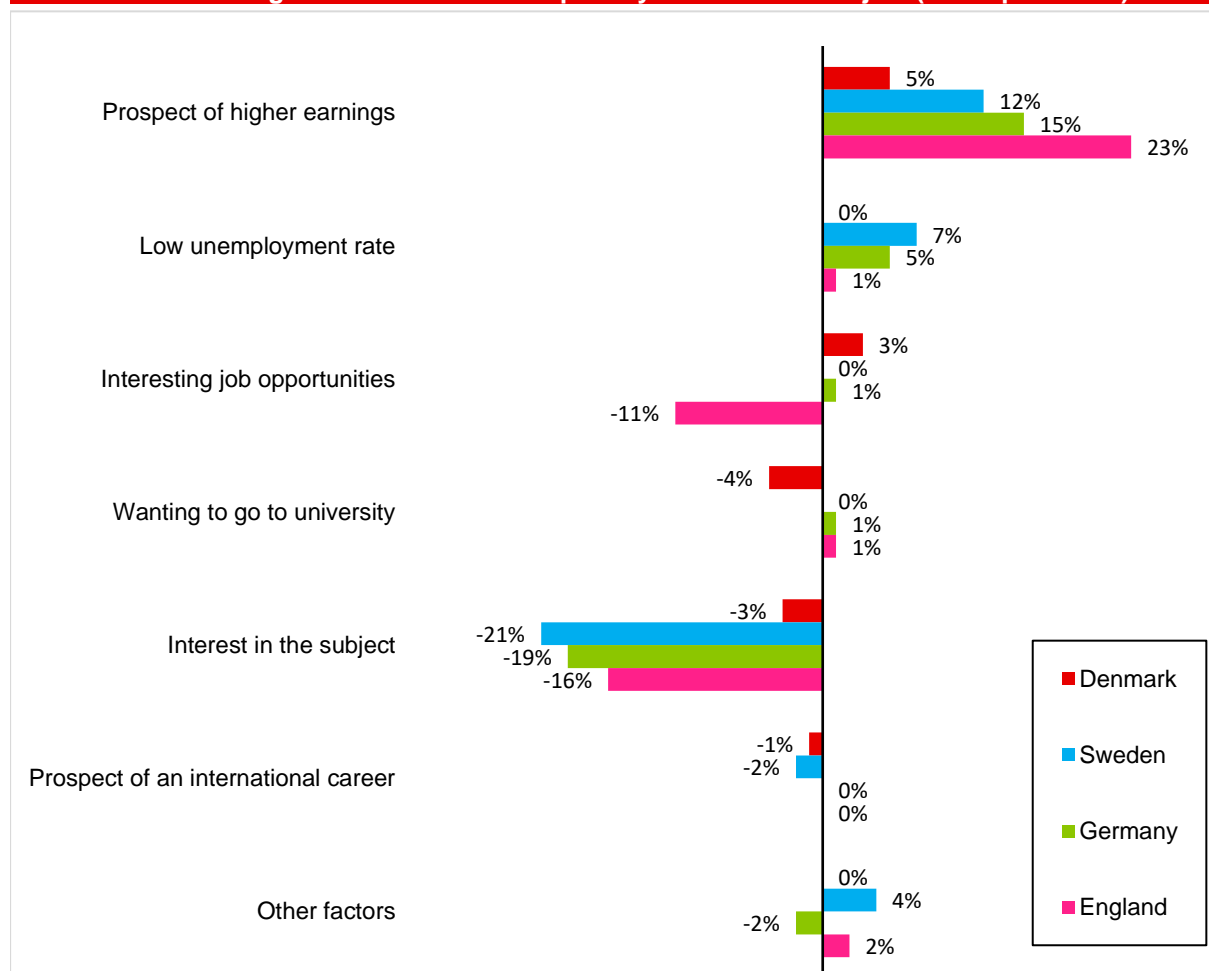
¹ We also considered the overall distribution of first, second and third priorities. The results are the same as when we use first priorities alone.

The countries differ most when it comes to the relative importance assigned to future income. Just 2% of Danish students rank income as their main priority for choice of subject; in Britain, it was one in three. By contrast, British students are less focused on interesting job opportunities than respondents in the other countries, whilst simply “wanting to go to university” mattered greatly to Danes’ choices.

The factors that motivate choice of subject differ between men and women. The chart below shows the difference between male and female respondents in absolute terms. As it shows, men and women’s choices especially differ when it comes to the relative importance assigned to earnings versus personal interest. Compared to men, women tend to be less motivated by higher earnings and more so by personal interest in the subject.

The chart also demonstrates the limited difference in priorities between men and women in Denmark compared to other countries.

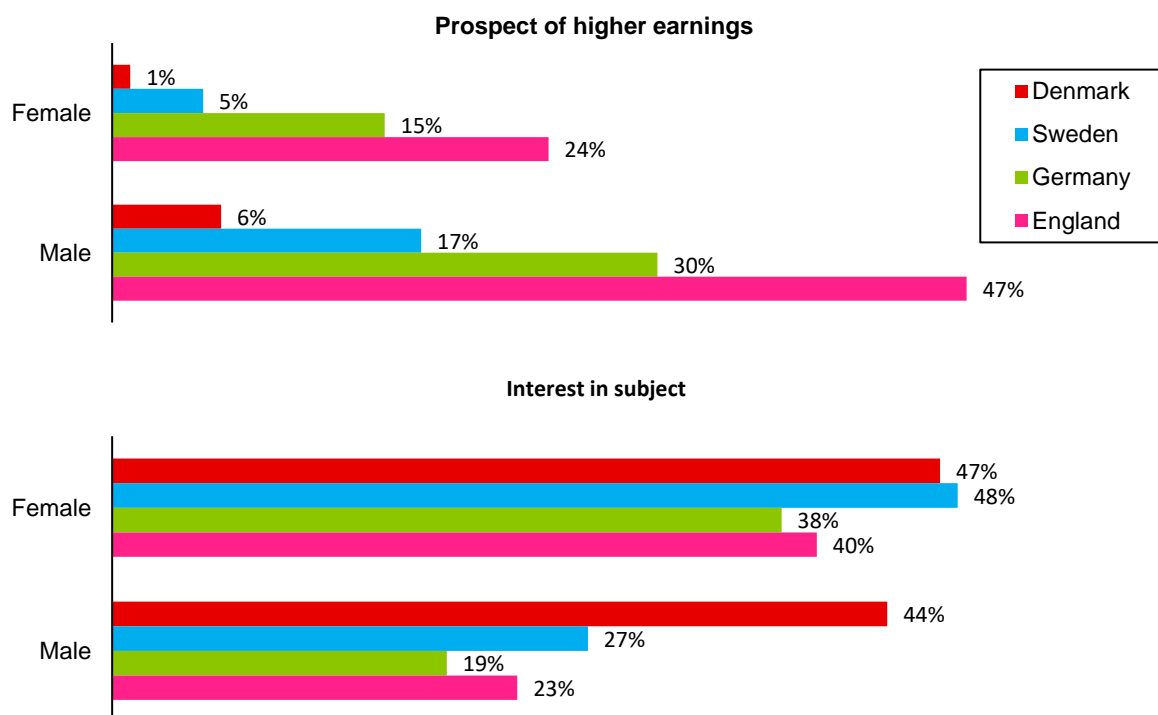
Chart 2: Absolute difference in percentage points between the share of men and women who ranked the following factors as their main priority in choice of subject (all respondents)



Note: A positive value indicates that men are more motivated by this factor than women (e.g. the prospect of higher earnings). Note that there were only 80 to 100 male respondents in the Swedish, German and British surveys. There were approximately 160 responses from male students in Denmark. Hence, the associated margin of error is relatively high. Absolute response figures are listed in [Table 5](#).

Chart 3 details the two factors where we observed the largest divergence between male and female students' priorities. As the chart shows, Danish men and women are more alike in their priorities than their fellow students abroad. Compared to male students in Sweden and Germany, the Danish men are much more likely to be motivated by personal interest. In fact, the male Danish students' responses were largely in line with those of female students. Male students in Denmark are much less motivated by future earnings than students in Sweden, Germany and Britain, whether male or female (albeit to a lesser extent.)

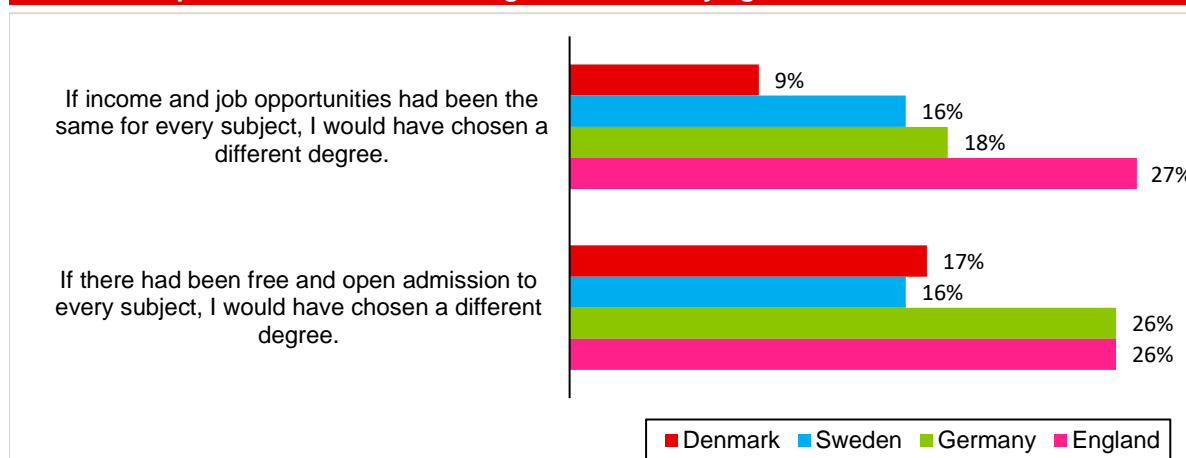
Chart 3: Percentage of men and women who listed the following factors as their main priority in choice of subject (all respondents).



The difference in consideration given to future earnings re-appears when students are asked whether they would have chosen the same degree programs if income and career prospects had been the same across all the different subjects. British students were particularly likely to say that they would have chosen a different subject in that case.

Especially for UK and German students, tuition fees and admissions criteria are additional factors to consider. If there had been no tuition fees and open access to every program, one in four British and German students would have chosen differently. Nevertheless, the difference between countries in the propensity of students to choose their subject according to future income remains even after controlling for these factors (cf. section on regressions).

Chart 4: Proportion of students who agree or definitely agree with the statement



Statistical analysis

We applied a regression analysis to determine which criteria differentiated respondents who had been motivated by the prospect of higher earnings and interest in the subject, respectively, while controlling for possible confounding background variables.

Our analysis supports the conclusions already presented in the charts above: Students from outside Denmark are more motivated by their income prospects than are Danish students. This finding holds up even after differences between fields of study, gender, etc., are factored in. Our findings also support the conclusion that men’s choice of subject is more likely to motivated by income prospects. The results have also shown that students of the fine arts and humanities are less motivated by future earnings than students in other fields, such as the social sciences, even when controlling for a number of background variables including gender, age, and country.

We have also found that students from Germany and England are less motivated by their personal interest in the subject than Danes, while the difference between Danish and Swedish students is not significant after differences in field of study and background variables are controlled for. Finally, students in the humanities, fine arts, natural science, and health sciences tend to be more motivated by interest in the subject than students in technical subjects or the social sciences.

To determine whether the differing importance of income prospects to students from the different countries was a result of differences in national educational systems, we also controlled for whether students would have chosen differently if there had been free and open access to every program. We found that there was a significant, positive correlation between agreeing with this statement and having chosen one’s subject primarily with future earnings in mind. In other words, we found a correlation between being motivated by higher future income and having chosen one’s subject based on admissions criteria and fees. However, including the situation where a student would have chosen a different subject if there had been free and open access as a variable has next to no impact on the other correlations. The results of the analysis are detailed in full in the appendices in the Danish language version of this report.

Commitment

The section presents our main findings regarding students' level of commitment.

Academic commitment – hours spent

Chart 5 shows the average number of hours spent attending classes, studying, and working. Danish students spend more time doing paid work that is related to their field than students from other countries. German students spend the most time in class.

Chart 5: Average hours spent across average week (all respondents)

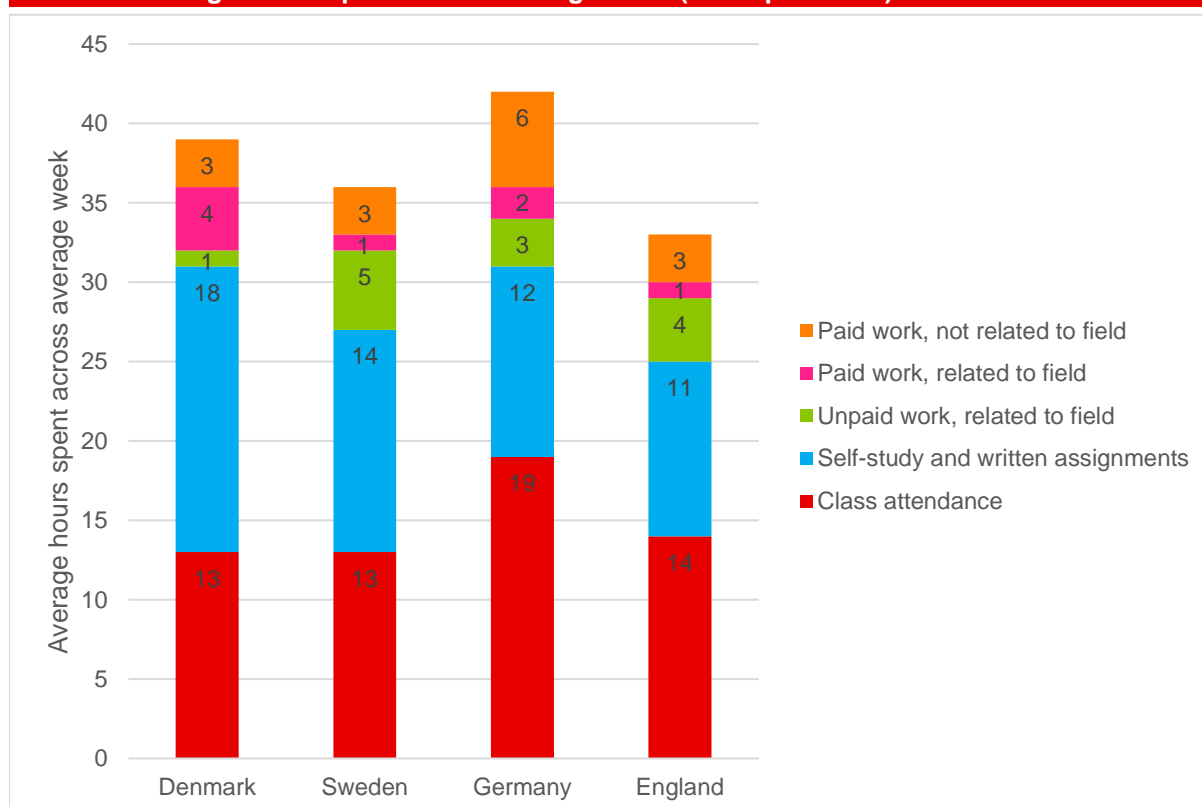


Table 2 shows data from the Eurostudent survey. Compared to the findings from Eurostudent, the Swedish and German respondents in our survey (Chart 5) indicated spending less time on average than their Danish peers. The total number of hours spent doing paid work was roughly the same in the two surveys (though the numbers for Sweden were a bit lower in our survey). The average number of hours spent attending classes was a bit higher for Danish students in our survey, while Swedes and Germans reported comparable figures in both.

Statistical analysis

We conducted a regression analysis of the time spent preparing for classes and doing written assignments using different background variables and other relevant explanatory variables. We have included the number of hours spent in class as a control to ensure that our findings were not affected by differences between countries and fields with regard to time spent in classes versus time spent studying.

Our results confirm an overall significant positive correlation between time spent preparing for classes and interest-based subject choice. Conversely, we found a negative correlation between having income as one's top priority and time spent preparing for classes. However, this finding was only borderline significant ($p=0.0581$). This indicates that choice of subject based on personal interest is also associated with greater motivation to devote time to studying.

Table 1: Overview of average weekly time allocation among students in the Eurostudent survey. Figures weighted to reflect level of education in DEA's survey

	DK	SE	GE	UK
Class attendance - Hours per week	16	13	20	n.a.
Self-study and written assignments - Hours per week	18	20	17	n.a.
Paid work - Hours per week	7	7	8	n.a.

Source: Eurostudent (<http://www.eurostudent.eu>).

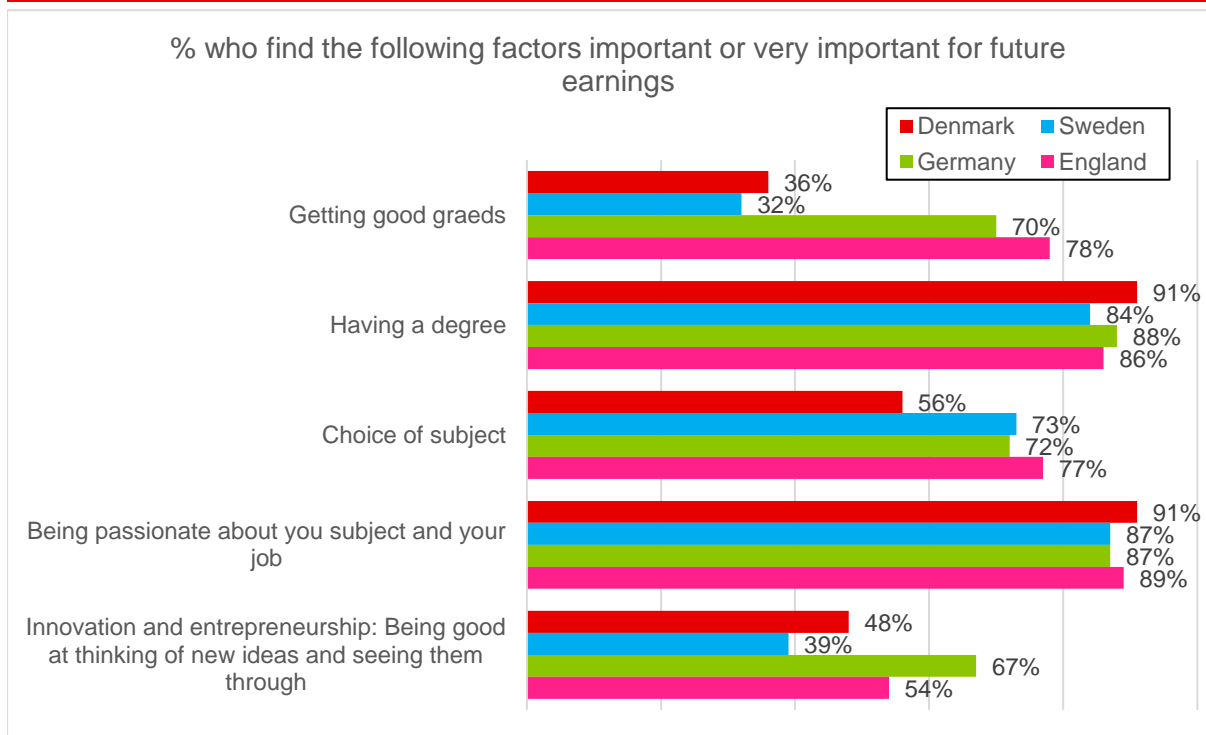
Note: The weighted weekly averages have been rounded to the closest whole hour

Our regression analysis also found that men generally spend less time preparing for classes than women, and that master-level students generally spend more time preparing than undergraduates. The findings are detailed in full in the appendices in the Danish language version of this report.

What do the students think matters to future earnings?

Chart 6 illustrates the factors that students consider to be important determinants of future earnings. Many of the factors – such as “having a degree” and “being passionate about your subject and your job” – show similar response rates across the different countries, though British and German students are more inclined to believe that grades are important for future earnings than their Danish and Swedish peers.

Chart 6: Perceived importance of factors for future earnings



Gap years

Danish students take more time off before commencing their studies than do students from the other countries. On average, they will have had a two-year gap between secondary school and university². Consequently, Danish undergraduates tend to be older than undergraduates in Sweden, Germany and Britain.

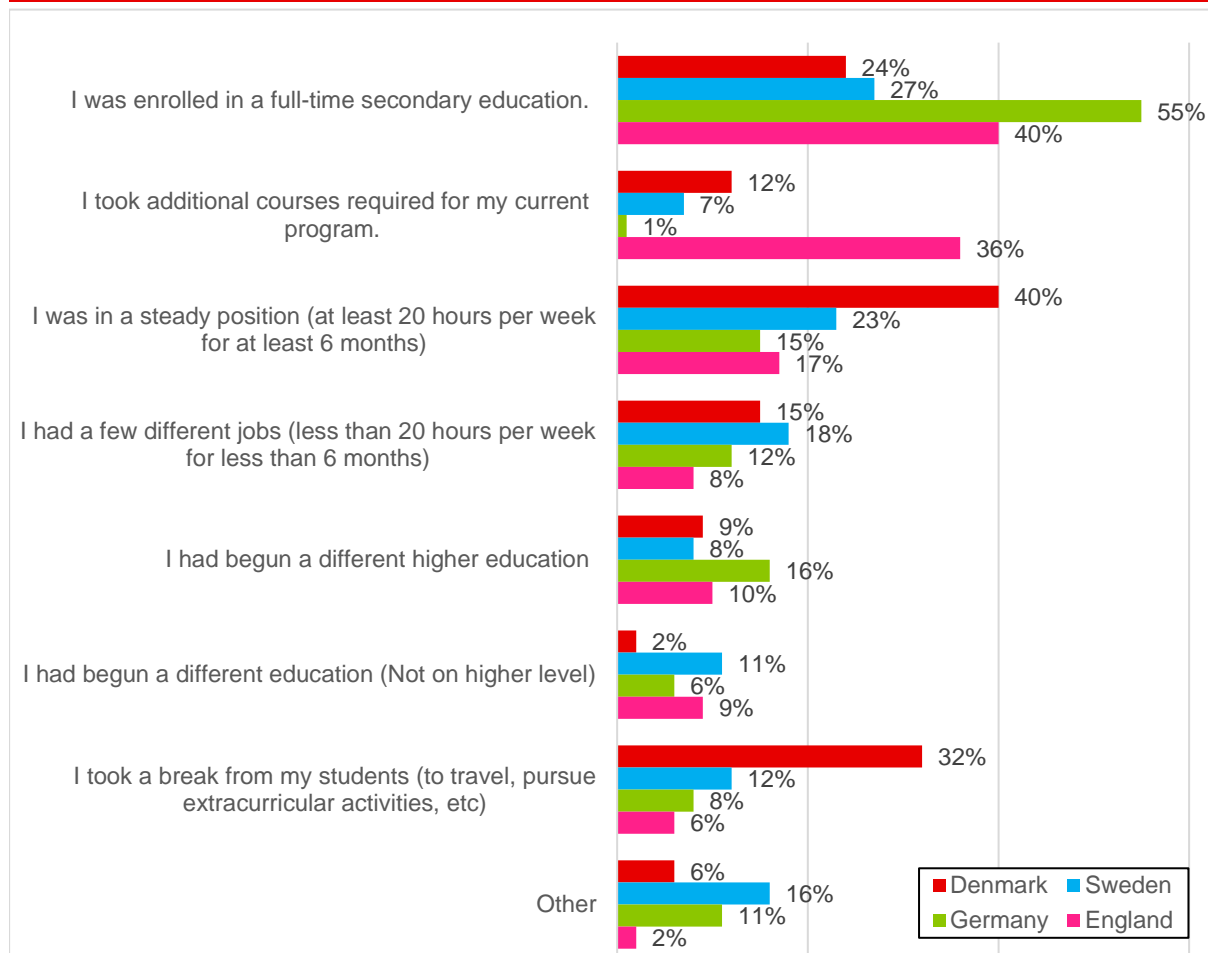
Table 2: Average age of undergraduate students

Country	Age
DK	25.9
SE	25.0
GE	23.2
UK	24.0

Chart 7 shows how students spent the year before starting university. Denmark has the highest proportion of students who interrupted their education to travel, attend extracurricular courses and or pursue other outside activities. A substantial proportion also spent time working in full-time, paid positions. German and British students are the most likely to have transferred directly from full-time secondary school to university.

² Source: Eurostudent (<http://www.eurostudent.eu/>). Data on gap years was only available for Denmark and Germany. German students take an average one-year and two-month break between secondary school and university.

Chart 7: How did you spend the year before you started the first year of your current education?



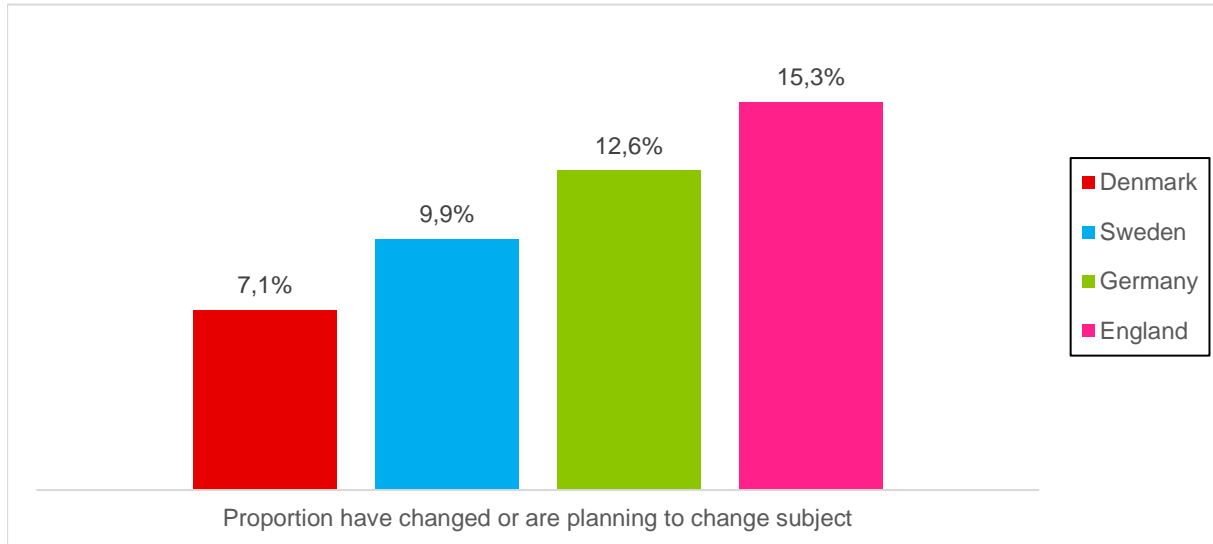
Changing field of study

The total number of respondents who had changed or were planning to change their subject between the undergraduate and graduate level was just 120 – too small a sample to split by field and country. However, if we consider country and field together as a whole, we do find that some trends begin to appear.

The charts below show the proportions of current and aspiring graduate students who changed their subject between the undergraduate and graduate level or are planning to do so (e.g. transferring from a fine arts and humanities degree to a technical field).

The survey showed that changing subject was more common in other countries – especially Britain – than in Denmark. This finding was further supported by the results of the regression analysis, which controlled for a number of background variables including gender, age, and field of study. The results show a significantly larger likelihood of students changing their field of study in Britain and Germany compared to Denmark (cf. appendices in the Danish language version of this report).

Chart 8: Proportion of students who have changed or are planning to change subjects between the undergraduate and graduate level, by country



Note: The chart shows the proportion of students who have changed or are planning to change subjects between the undergraduate and graduate level among current and coming graduate students (n=13,21). Students were asked about their current field of study (social sciences, humanities and fine arts, life sciences, natural sciences or technical fields (e.g. engineering), and their former (graduate students) or expected field of study (for undergraduates planning to continue their studies).

As Chart 9 shows, we may observe that humanities and natural science students from all countries tend to be more likely to either have changed their field of study or to be planning to do so. The regression analysis, which controlled for country, among other variables, showed a difference from undergraduates that was significant at the 10% level ($p=0.052$ for humanities students and $p=0.093$ for the natural sciences) (cf. appendices in the Danish language version of this report).

Chart 9: Proportion of students who have or are planning to change their field between the undergraduate and graduate levels - by undergraduate field

