



Careers, Competences, and Values of European Higher Education Graduates in 2022

Executive Summary of the EUROGRADUATE 2022 Survey



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Executive Summary of the EUROGRADUATE 2022 Survey

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Introduction

The European Union needs skilled people to respond to new challenges and stay competitive. Therefore, in March 2025, the European Commission adopted the ‘Union of Skills’¹, a plan to improve high quality education, training, and lifelong learning for closing skills gaps and overcoming skills shortages. It aims to deliver higher levels of basic and advanced skills, provide opportunities for people to regularly update and learn new skills, facilitate skills mobility and recruitment by businesses across the EU as well as to attract, develop and retain top talent for Europe.

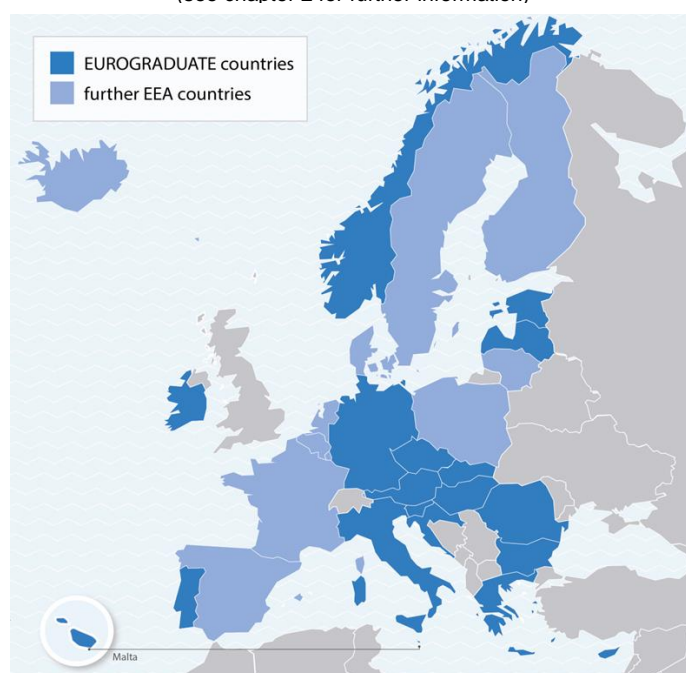
The EUROGRADUATE 2022 survey constitutes a significant contribution to the Union of Skills as well as the enhancement of the European Education Area. The survey demonstrates that progress is being made towards fostering a more skilled, and competitive workforce in Europe, which is of crucial importance for economic recovery and sustained growth. It provides information on mobility flows after graduation. Moreover, higher education contributes to preparing young adults to become active participants in their social and political environment, a key prerequisite for functioning and stable democracies. Thus, higher education plays a crucial role in providing the skills for Europe’s competitiveness and preparedness, for its economies and for democratic societies. At the same time, results show leeway for further improvement: Graduates feel that they do not sufficiently acquire skills which are relevant for leading teams. International student mobility has dropped substantially during the COVID-19 pandemic and full recovery cannot be taken for granted. Women still study ICT & Engineering to a much lesser extent than men which indicates unrealised potential.

Building on the first successful pilot survey (EUROGRADUATE 2018), the EUROGRADUATE 2022 survey has now taken the next step towards establishing a regular, comparative, and comprehensive data source for graduate tracking at the European level. The EUROGRADUATE 2026 survey, currently under preparation, will feed into the Skills Intelligence Observatory, planned under the Union of Skills initiative.

The second pilot phase of the European survey of higher education graduates provides comparable information on **18 countries**, more than double from the 8 countries in the 2018 pilot survey. The number of respondents has increased hugely from about 16,500 usable cases for EUROGRADUATE 2018 to more than 170,000 for EUROGRADUATE 2022. Two cohorts of graduates at Bachelor and Master level were interviewed: 2016/17 and 2020/21.

EUROGRADUATE 2022 covers a wide scope of topics, including **learning experiences** and **teaching methods** in higher education systems in Europe, the **socio-economic profile** of graduates, as well as **graduates’ satisfaction** and their **labour market outcomes**. Last but not least, international **learning and labour mobility** is covered, as well as **social outcomes**.

Figure 1: EUROGRADUATE 2022 participating countries
(see chapter 2 for further information)

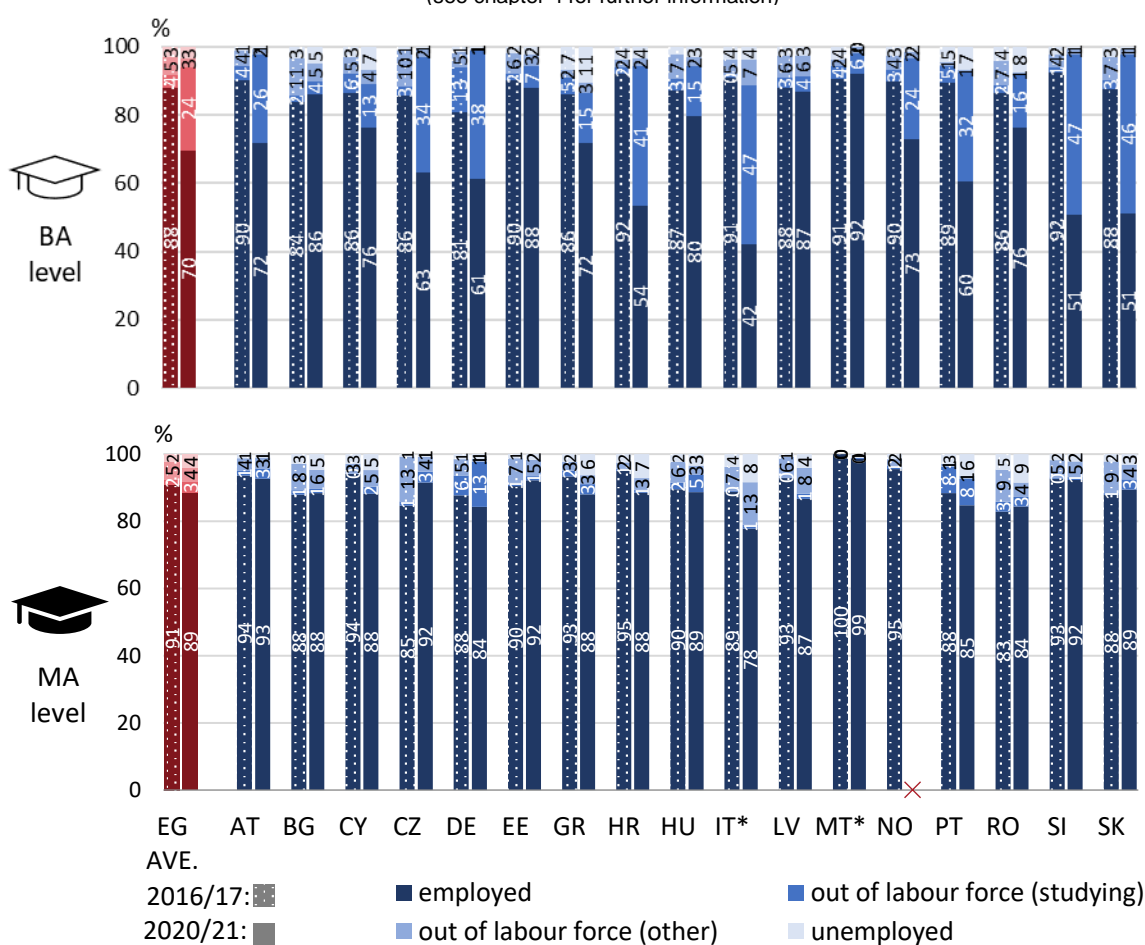


¹ COM(2025) 90 final, [The Union of Skills - European Commission](#), 5 March 2025.

I. Labour market participation

A key topic of EUROGRADUATE 2022 is the **connection between higher education and the labour market**. This connection is investigated in multiple ways, e.g. how type of institution, kind of degree, field of study, or learning activities are connected to labour market participation and labour market outcomes such as earnings and job satisfaction. Overall, these indicators provide **positive feedback on the value of a higher education degree**.

Figure 2: Employment status of graduates
(see chapter 4 for further information)



Eurograduate data show high demand for higher education graduates. **Around 90% of the graduates are employed 5 years after graduation.** Master level graduates are employed to a similar degree already 1 year after graduation in all Eurograduate countries. **Unemployment** is, in all survey countries, lower among higher education graduates than among the general population; in some countries, it is close to non-existent (e.g. in Austria, the Czech Republic, Germany, Estonia, or Slovenia). There is a strong decrease of unemployment in two of the countries where it was the highest in the 2018 survey: in Greece and Croatia, unemployment rates decreased to a similar level than in the other participating countries for both BA and MA graduates.

Participation of bachelor level graduates in the labour market also varies considerably between countries: while in Croatia, Italy, Slovakia and Slovenia more than 40% of the graduates are continuing education one year after graduation, only less than 10% are doing so in Bulgaria, Estonia, Latvia and Malta. This indicates that in some countries a bachelor's degree is regarded as a direct qualification for the labour market, whereas in other countries it is rather seen as the first step towards a master's degree for a large share of students.

Self-employment is most common among Arts & Humanities graduates, of whom between 23% (bachelor level) and 29% (master level) are either mainly or exclusively self-employed. Male graduates and older age groups engage more in self-employment as well. **Entrepreneurship**, referring to self-employment within a self-founded business, is more likely among the same groups too. Project- and problem-based learning and exposure to entrepreneurial activities in one's study programme are positively associated with founding one's own business.

II. Finding a matching job

An important indicator for checking if educational degrees are in line with labour market requirements is the so-called vertical match, i.e. whether the job of the graduate is adequate for the level of the degree.

Most graduates feel they have a job in line with their level of education: this applies to 2/3 of the bachelor level graduates and 52-57% of master level graduates who have a matching job. Similarly, about **two thirds of the graduates have a job in line with their chosen study field** (horizontal match). While the vertical matching is somewhat better for the older cohort, indicating progress over time, **there is a considerable proportion who feel overqualified** for the job they are doing – especially at master level. As much as 40% of master level graduates feel that their job could have been done with a bachelor's degree, indicating **notable reserve of unused skills by employers**. At this backdrop it is a relevant finding that **internships, self-study, and international experience** during studying seem to contribute to a **better match of job and degree level**.

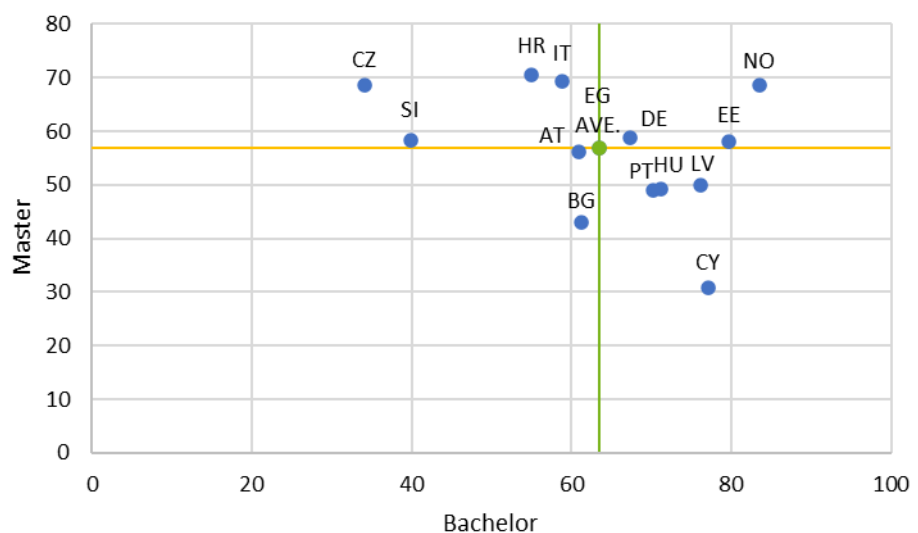
Figure 3 shows how **European labour markets differ in the job-education match for bachelor level and for master level graduates**.

Compared to the average across the EUROGRADUATE countries, we can broadly distinguish 4 groups of countries. The countries above the orange line offer relatively good chances to attain a matching job for master level graduates.

The countries right to the green line offer relatively good chances to attain a matching job for bachelor level graduates.

There are countries where master level graduates have a very good chance for a matching job but apparently adequate job opportunities for bachelor level graduates are scarce. This group of countries is represented by the Czech Republic. In contrast, there are labour markets offering a high number of adequate job opportunities for bachelor level graduates but very few adequate opportunities for master level graduates. Cyprus is the country representing this group. There are countries with a high number of adequate positions for graduates with both kinds of degrees

Figure 3: Share of graduates with a vertical match between job and degree level – master level and bachelor level graduates compared
(see chapter 5 for further information)



as exemplified by Norway. Finally, there are as well countries with relatively low chances for adequate positions for graduates with both kinds of degrees as shown by Bulgaria.

A finding that is reflected in several indicators are the **highly positive prospects for graduates of ICT & Engineering** (even compared to graduates of Math & Sciences, the other sub-field of STEM studies). Graduates of these fields have a lower risk for unemployment, a high chance for an unlimited employment contract, a lower risk for overqualification, the highest salaries, and the highest share of graduates satisfied with their job. Still, much less women than men are choosing ICT & Engineering programmes and are benefitting from these positive outcomes. This is particularly worrisome, as, according to the recent Draghi report on “The Future of European Competitiveness”², current and future skills gaps in Europe are most pronounced in ICT and STEM in general. Correspondingly, for the ‘Union of Skills’ the European Commission proposes strategic targets on increased enrolment in STEM fields and reducing the gender-enrolment-gap.

While no other field promises such positive outcomes throughout, graduates of other fields have good prospects as well and probably in some aspects even better ones. For example, graduates from **Health and Education-oriented fields** have a very low risk of becoming unemployed and a very high chance to attain a job well matched with their education choices. This shows a close link between such programmes and specific jobs and as well the high demand for graduates in these fields. The European Commission’s communication on the ‘Union of Skills’ aims at tackling the shortage of teachers, not least with a view towards teachers in STEM subjects, and hints to projected shortages for health occupations. As opposed to ICT & Engineering, men are strongly underrepresented in Health and Teacher Training.

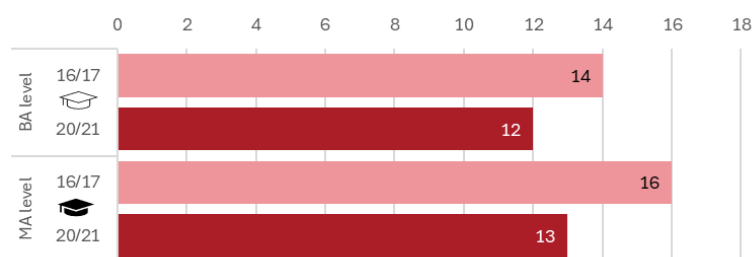
Increasing awareness of the positive labour market outlooks for graduates of STEM fields, Health, or Teacher Training could help in attracting more students for these fields.

III. Satisfaction with employment and earnings

An overwhelming majority, **70%** of higher graduates **are (very) satisfied** with their jobs in general. A similar share is satisfied with many aspects of their jobs, **mostly so for the content** of their jobs. Satisfaction **drops to around 50% for career opportunities and salaries**. **Master level graduates earn a higher salary, and they are more or equally satisfied** with their jobs than bachelor level graduates. **Overqualified graduates**, i.e. in a job below their qualification level, **are less satisfied**, however even among this group the vast majority feels (very) satisfied with their job.

Gross hourly earnings of graduates differ across the EUROGRADUATE 2022 countries, with graduates of the cohort 2016/17 from Austria, Germany and Norway earning the most per hour (ranging from €21 to €25 five years after graduation) and recent graduates from Bulgaria, Cyprus, Portugal or Slovakia earning the least (€9 to €10). In the younger cohort, one year after graduation, master level

Figure 5: Gross hourly earnings by degree level
(see chapter 5 for further information)

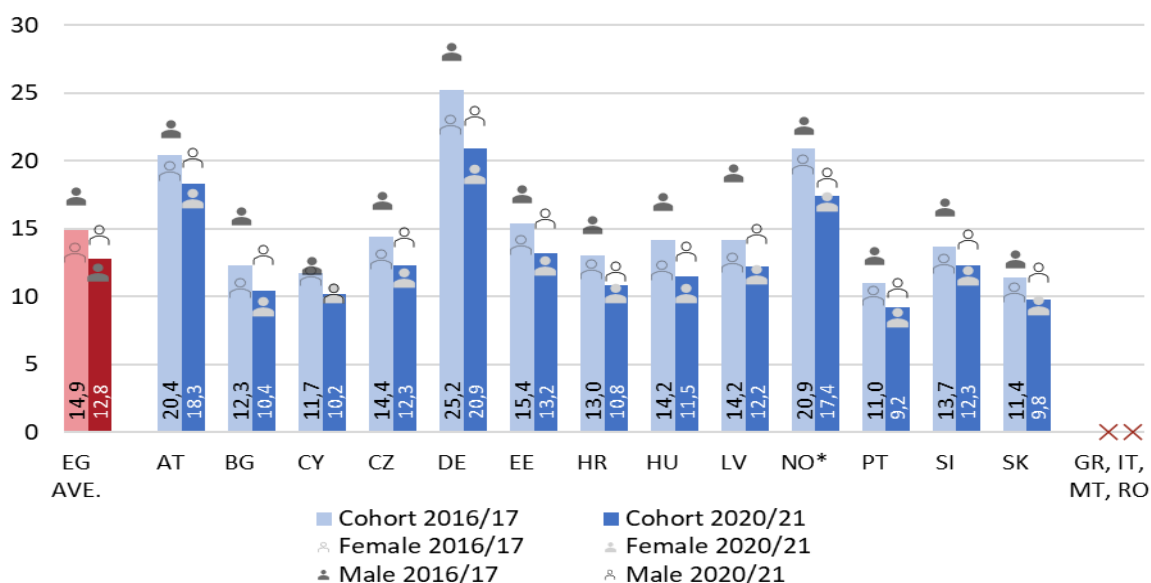


² Draghi Mario (European Commission, 2024). The Future of European Competitiveness — A Competitiveness Strategy for Europe. https://commission.europa.eu/document/97e481fd-2dc3-412d-be4c-f152a8232961_en.

graduates earn €1,70 more per hour on average. Five years after graduation, this difference is still modest but has increased to €2,60.

The **gender pay gap** is **particularly pronounced for the highly skilled workforce** and women on average earn clearly less than men. An important reason for this is that women are less likely to study fields returning specifically high salaries, such as ICT & Engineering. The gender pay gap is at about €3 per hour in the younger cohort and at about €4 per hour in the older cohort (i.e. it increases in the life course after family formation).

Figure 4: Gender pay gap - median gross hourly earnings in € (PPP) by gender
(see chapter 5 for further information)



Concerning postgraduate or labour mobility, it is noted that master level graduates are more likely to move abroad, while bachelor level graduates are more likely to move within the country. At the same time, master level graduates are also more inclined to relocate. These decisions are mostly **driven by labour market considerations and (lack of) job opportunities**. It is quite noteworthy that **job satisfaction is mostly negatively affected** by leaving the country of graduation, while **life satisfaction is significantly higher** for those who live abroad.

IV. Skills relevance for the labour market

On the whole, graduates assess their **own skills level high for most kinds of skills**, and they see their skills level matching with the job requirements or even above them. This is true for applied ICT skills where most graduates are confident of their high level; on the contrary, advanced ICT skills are assessed as only moderate on average.

When graduates were asked how they assess their skills level compared to the requirements in their job, the majority perceives a match of the level or even a surplus in all skills considered, including for ICT skills. At the same time, relatively high shares of graduates (30% and more) perceive a **skills deficit** for mastering their **own discipline**, for **making their meaning clear** to others, and for **coordinating activities** of others. These communication skills are especially relevant for management positions. As such positions are usually occupied by higher education graduates, it seems worth considering how such skills could be strengthened in and through higher education.

Figure 6: Current own level of skills
(mean values (1 – very low, ..., 7 – very high); see chapter 6 for further information)

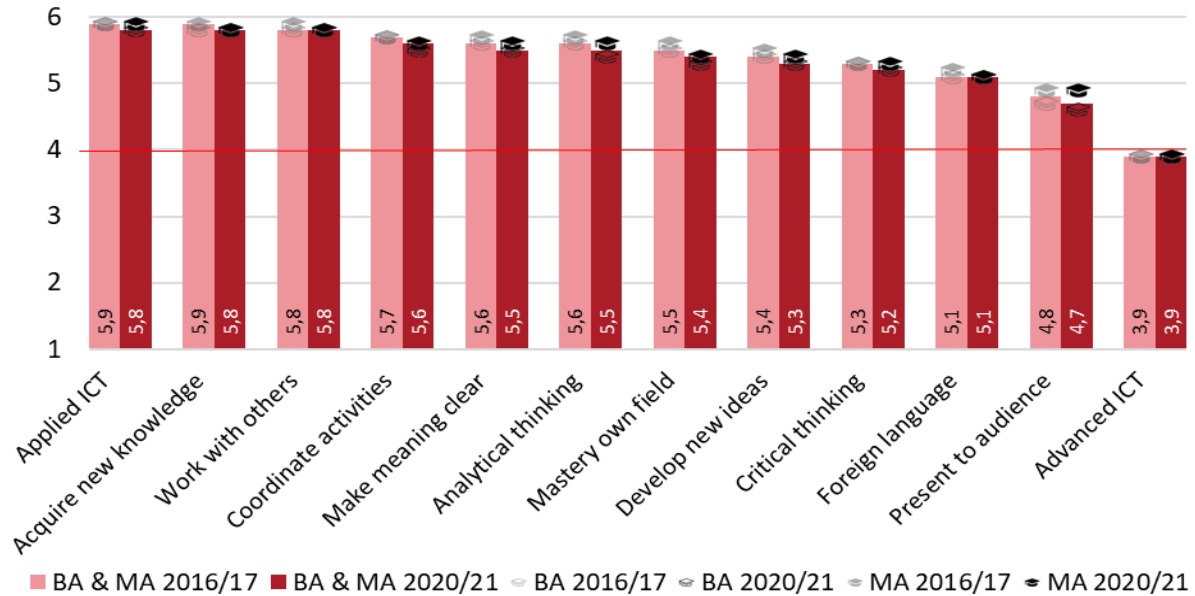
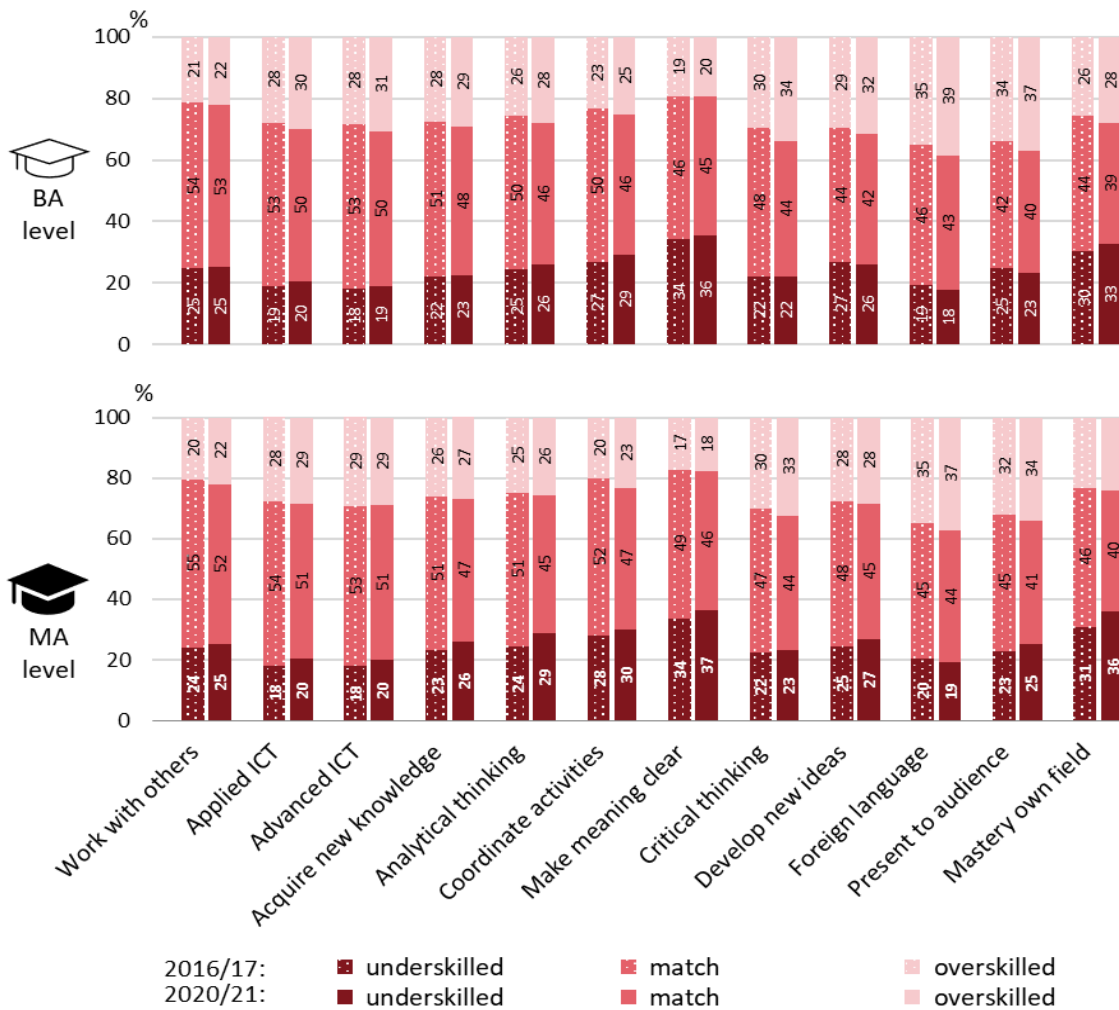


Figure 7: Share of graduates with skills match, underskilled, and overskilled
(see chapter 6 for further information)

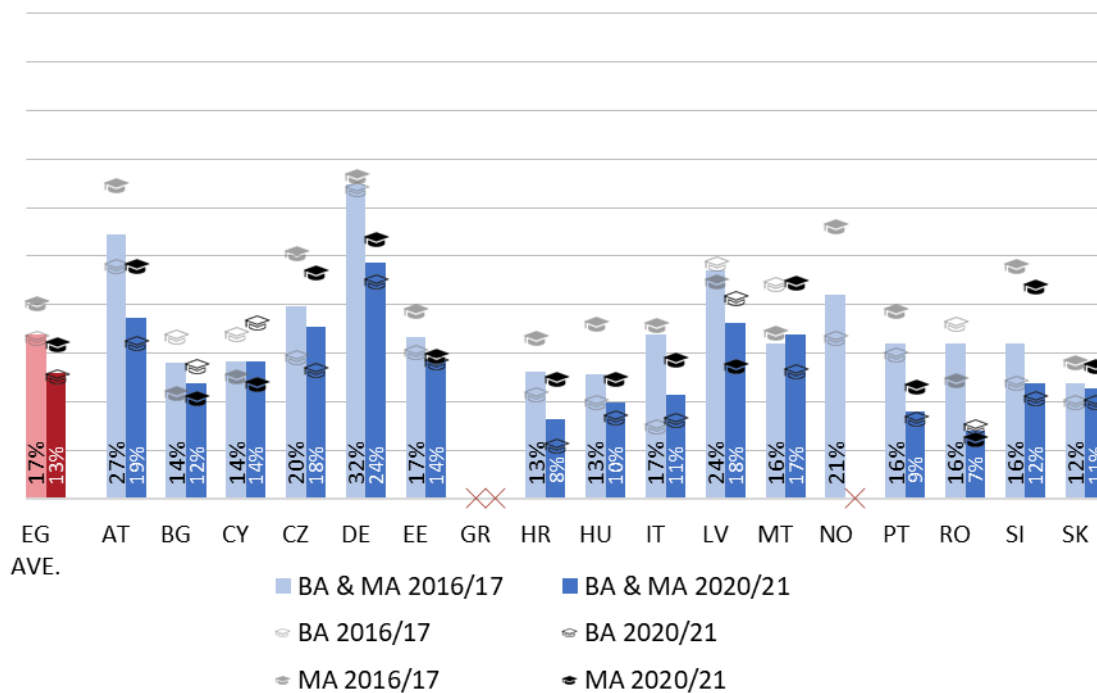


EUROGRADUATE provides the perspective of graduates on skills. In this respect, it does not observe a major gap regarding ICT skills among higher education graduates currently in employment. While this is somewhat reassuring, it cannot be concluded that there is sufficient supply of ICT skills in European labour markets. In contrast, ICT is among the sectors with the most distinct shortage of available employees and the highest share of job vacancies, as shown by the recent Draghi report on “The Future of European Competitiveness”.

V. Learning experience and skills development

Teaching and learning modes are contributing to skills development to differing extents and they are also connected to learning outcomes, labour market outcomes, and social outcomes. Lecture-based teaching is still the predominant method in the EUROGRADUATE 2022 countries. Comparing the learning experience of the cohort 2020/21 with the cohort 2016/17, more **activating learning modes are gaining ground, but progress is modest**.

Figure 8: Graduates with (any) experience abroad during reference programme
(see chapter 3 for further information)

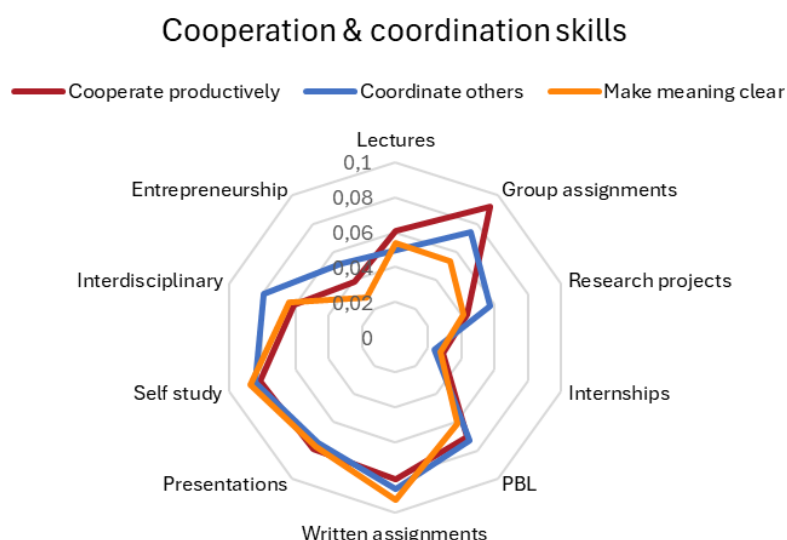
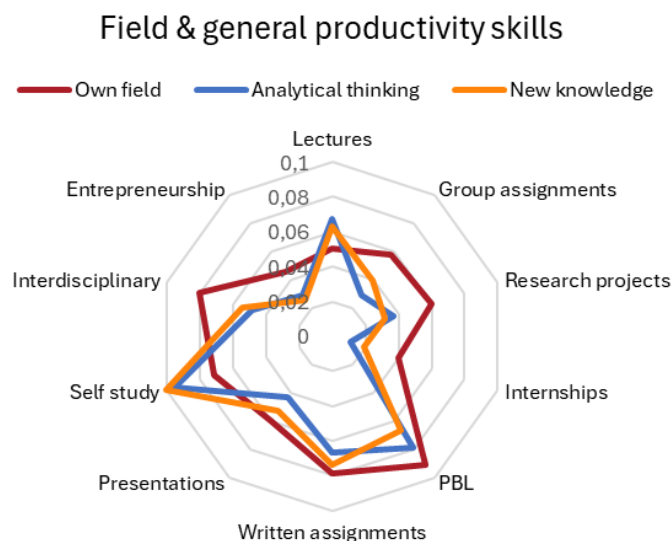


Graduates of the more recent cohort have gained considerably less experience abroad during studying. Most likely this is connected to the COVID-19 pandemic: a high share of graduates report that the pandemic has affected their mobility plans during studying. It is unclear, if student mobility will fully recover from this setback. Generally, mobility levels in southern and eastern European countries are lower. **Some of the less affluent countries were particularly hit by the drop in student mobility**, e.g. Portugal, Romania, or Croatia, increasing inequality across countries even further.

At the individual level, there is a persisting pattern that **students from non-academic background engage less in student mobility**. As student mobility has the potential to reduce inequalities in labour market outcomes between graduates from academic and non-academic background, it could be considered to reach out to the latter specifically by mobility programmes.

More in-depth analyses shed some light on how strongly the various teaching learning modes are related to each respective skill. There are some learning forms which seem to be generally advantageous, e.g. self-study, written assignments, and especially problem-based learning (PBL) have a potential to foster a large bandwidth of skills. Thus, our results suggest that students should be offered a variety of teaching and learning forms, to foster a diverse set of skills including mastery of one's own field, productivity, ability to work in or lead teams, or innovation capacities.

Figure 9: Connection of teaching & learning modes with own skills level
(see chapters 3 & 6 for further information)



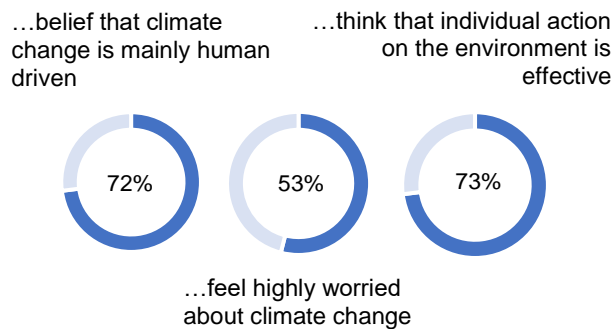
VI. Social outcomes

The EUROGRADUATE 2022 survey provides evidence on the social outcomes of higher education, as it **contributes to democratic values and environmental awareness**.

There is very high support for democracy among higher education graduates (>90%), yet their confidence to participate in politics is very low (only around 10%), showing the need for civic education. Looking at **political participation** across different study fields, graduates from the fields **Arts & Humanities**, as well as **Social Sciences & Journalism**, show the highest levels of political activity. With regards to the survey country, it can be observed that the support for democracy is very high in all countries, but it is higher in Austria and Germany compared to the other countries. The support for democracy is around one full scale point lower among Bulgarian graduates compared to Austrian ones. Graduates in Portugal and the Czech Republic also show slightly less support for democracy than in Austria, but the difference is noticeably smaller.

Topics related to **environmental sustainability** are **increasingly integrated in the curricula** across all study programmes, most prominently in the field of Natural Sciences & Mathematics. The proportions of graduates who reported a (very) high extent of topics on environmental sustainability as part of their curriculum are higher in the cohort 2020/21. Thus, environmental sustainability appears to be increasingly integrated in study programmes across all countries. Still, we see the highest shares of graduates who reported a high or very high extent of environmental sustainability as a topic during their study programme in Austria (from 19% in 2016/17 to 29% in 2020/21), Bulgaria (from 23% to 31%), Cyprus (from 33% to 37%), Croatia (from 18% to 28%) and Slovakia (from 27% to 31%). With 14% in 2016/17 and 19% in 2020/21, the proportion of those who engaged with environmental sustainability through their curriculum is lowest in the Czech Republic.

Figure 10: Climate attitudes
(see chapter 8 for further information)



Worryingly, only a little more than 70% of graduates believe that climate change is mainly or entirely human driven; the effectiveness of individual action is also questioned by more than a quarter of graduates.

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