

# How students use higher education



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# Summary

The purpose of this study is to obtain a clearer picture of the role of higher education in skills provision by analysing how students use higher education. While one thinks of the typical university student as a relatively young individual entering a study programme, graduating at the earliest opportunity and then entering the workforce, our study reveals that only around half of Swedish new entrants to higher education conform to the traditional image of the goal-oriented programme student. Indeed, the Swedish higher education system is flexible and can accommodate students with a wide range of study intentions. The ambition of the Swedish Higher Education Authority (UKÄ) is therefore to divide new entrants into distinct groups based on how they use higher education. To this end, we have identified six different student categories. These are:

- students who acquire a qualification by trial and error;
- goal-oriented programme students;
- give-it-a-try students and lifelong learners;
- long-term students who are yet to graduate;
- single-semester students; and
- incoming students.

The fact that students may have such diverse intentions leads to many interesting results when we study how students use higher education:

- Roughly four out of ten new entrants to higher education (incoming students included) graduate within the follow-up period, i.e., year of entry plus six years. When the follow-up period is extended, this increases to almost six out of ten.
- Over 40 per cent of domestic new entrants return to higher education after they have been awarded a qualification.
- Four of ten domestic new entrants take an extended break from their studies. Men are more likely to discontinue their studies than women.
- One third of those who do not complete their studies first time around return to higher education – and half of those who do return graduate.
- Eight per cent of new entrants to higher education have been awarded over 180 credits without graduating. Almost 40 per cent of them work in professions that demand specialist expertise from higher education.
- Sweden's flexible higher education system benefits the individual, who can adapt their studies to their own interests. Many students begin their studies with a freestanding course.

# Introduction

Compared to higher education in many other countries, the Swedish system is relatively flexible. Swedish higher education has long catered to not only young people fresh out of upper-secondary school but also to mature students with a wide range of motives for studying.

First- and second-cycle education consists of courses which can be studied separately or combined into a programme. Indeed, many students at Swedish higher education institutions (HEIs) take freestanding courses without any ambition to obtain a degree. It is also possible to combine freestanding courses to build one's own degree without following a programme offered by an HEI. Most HEIs offer distance learning courses and other distance education, some of which is entirely web-based. There are no tuition fees for Swedish students or students from the EU/EEA. This also applies to mature students and those returning for a second or third period of study, and all students are entitled to student finance so they can support themselves. All in all, this provides good conditions for lifelong learning.

This flexibility does, however, make it more difficult to describe and follow-up higher education. UKÄ regularly follows up the extent to which higher education contributes to skills provision, such as noncompletion and graduation rates and the total number of graduates from different first- and second-cycle programmes. However, the general emphasis on programme students ignores certain parts of the puzzle that are interesting from a skill-provision perspective. Some of the questions awaiting an answer include:

- How many graduates can one expect from a cohort of new entrants within a given number of years?
- To what extent do students fit the traditional image of relatively young people training for a future career?
- What other types of students do we find in our HEIs?

With this study, we hope to supplement the traditional image of how students use higher education, as perpetuated in our own follow-ups. The report is part of UKÄ's themed project on skills provision, the overarching purpose of which is to increase knowledge of the role of higher education institutions in providing the skills Sweden needs.

## The purpose of the report: Illuminate the role of higher education in skills provision

The overall purpose of this report is to obtain a clearer picture of the role of HEIs in skills provision by analysing how students use higher education. Based on our analysis, the ambition is to divide students into groups that broadly describe how they use higher education. Our main focus will be on answering the following general questions:

- What percentage of new entrants to higher education graduate?
- How common is it for students to return to higher education after the termination of a study period?
- What can we say about the students who take an extended break from their studies? To what extent do they return to higher education and how common is it for them to graduate after an interruption to their studies?
- Into what categories can we place the students at Swedish HEIs?

In addition to this introduction, the report consists of three empirical parts. The first part examines what percentage of new entrants to higher education are awarded a first- or second-cycle qualification. In the second part, we analyse noncompletion rates and the return to higher education, and look in more depth at how many credits new entrants earn. In the third and final part of the report, we analyse the categories of students we have identified at Swedish HEIs based on the results of parts one and two.

## Data and methodology

To answer our questions, we have used register data from Statistics Sweden. The register extracts cover all individuals registered at a Swedish HEI at anytime between spring semester 1995 and spring semester 2019. We have data on each student's course registrations and all credits and qualifications awarded during the period.

For each course, we have data on which HEI offered the course, if it was offered as part of a programme leading to a professional qualification, general qualification or qualification in the fine, applied and performing arts, or if it was a freestanding course.<sup>1</sup> We also know how many credits each course covered and whether it was held on campus or as a distance learning course.

We have added data on income (earnings and student finance) throughout the period for all individuals in the dataset, as well as background variables such as sex, age and whether they were an incoming student.

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<sup>1</sup> Courses offered as part of programmes leading to a general qualification or qualification in the fine, applied and performing arts are included in the statistics from autumn semester 2007, when the new Qualifications Framework entered into effect. While there have previously been local variants of programmes, these are not included in the register and students on such programmes have been coded as taking freestanding courses. Many of these local programmes may have been coded as one of the new forms of study.

Please note that the division into incoming and domestic students does not begin until 1996, meaning that in data for 1995 incoming students are included among domestic students.

## What percentage of new entrants to higher education graduate?

In order to study what percentage of new entrants to higher education graduate, we both follow their individual progress for six years after commencing their studies and the progress of each cohort (everyone entering higher education in a given calendar year) for as long as possible, which in this case is until spring semester 2019.

UKÄ regularly follows up graduation rates for students registered in study programmes. Graduation rate is calculated based on the percentage of new entrants to a programme who graduate within the nominal programme length plus three years.<sup>2</sup> We therefore know what percentage of new entrants to different programmes graduate within this period. However, there are also many students who take freestanding courses for a brief or extended period, some of whom have no intention of obtaining a degree. From the perspectives of skills provision and the volume and range of higher education, it is interesting to know what percentage of all those who begin higher education can be expected to be awarded a qualification. As no such data has previously been produced, this report fills a gap in knowledge.

As we are studying what percentage of all new entrants to higher education (including those taking a freestanding course) were awarded a qualification within a certain period, we cannot use the nominal programme length as a guide to how long the follow-up period should be.

To circumvent this problem, we have instead based our follow-up period on the length of programmes and the maximum length of time it is possible to finance full-time studies through the Swedish Board of Student Finance (CSN). The longest programmes offered at Swedish HEIs (study programmes in medicine, veterinary medicine and upper secondary education) cover 330 credits, or five and a half years of study. As a general rule, students can receive student finance from CSN for 240 weeks, which is equivalent to six years of full-time study.

This being the case, we have chosen six years from the date studies commenced as an appropriate follow-up period. As a result, certain programmes (such as medicine) will have a shorter follow-up period than in UKÄ's regular method for measuring graduation rate, while others (bachelor's programmes, for example) will have a longer follow-up period. We call this metric the *graduation ratio*.

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<sup>2</sup> See, for example: UF 20 SM 1903, *University och högskolor. Genomströmning på grundnivå och avancerad nivå till och med 2017/18*.

Nominal programme length: The System of Qualifications, Annex 2 to the Swedish Higher Education Ordinance (SFS 1993:100), states the exact number of credits required for the award of a first- or second-cycle qualification: 180 credits is equivalent to a nominal programme length of three years, i.e., 30 credits per semester.

As we also follow up all new entrants to higher education up to and including spring semester 2019, we are confident we can provide a relatively clear picture of the percentage who graduate.

### **Measurement problem: Form of study as new entrant and first qualification awarded**

There are two critical measurement points in this study: when the student enters higher education, and when they are awarded their first qualification. We have chosen to assign each individual the form of study (type of programme or freestanding course) they undertook as a new entrant to higher education for the entirety of their studies.

Reporting data on form of study as a new entrant and first qualification presents us with a number of problems, as it is possible for a student to be registered on multiple courses and to be awarded multiple qualifications simultaneously (in our case, during the same year), and because we have chosen to mainly follow individuals. There are a number of possible solutions to this problem and we have chosen to only permit a single value per individual and variable.

The variable *form of study as a new entrant to higher education* contains four categories: freestanding course; programme leading to a professional qualification; programme leading to a general qualification; and programme leading to a qualification in the fine, applied and performing arts. The student remains in the category they belonged to in their first semester as a new entrant throughout their studies. For example, a student whose first venture into higher education was a freestanding course will remain in that category throughout our study, even if he or she subsequently registered for a programme.

The variable *first qualification* contains three categories: general qualification; professional qualification; and qualification in the fine, applied and performing arts. Since each student can only be assigned one value per variable, we have applied an order of priority, see Table 1. For example, according to the order of priority, a student who on entering higher education is simultaneously registered in a programme leading to a professional qualification and on a freestanding course, will be classified as a new entrant to a programme leading to a professional qualification.



Table 1. Order of priority for the variables form of study and first qualification.

Ranking	Form of study as new entrant	First qualification
1.	Programme leading to a professional qualification	Professional qualification
2.	Programme leading to a qualification in the fine, applied and performing arts	Qualification in the fine, applied and performing arts
3.	Programme leading to a general qualification	Professional qualification
4.	Freestanding course	-

### Which students do and do not graduate?

We investigate whether a student's age or form of study on entering higher education affects the propensity to graduate.

We also study the extent to which students take advantage of the opportunity offered by Swedish HEIs to combine freestanding courses to create their own degree.

### How common is it for students to return to higher education after the termination of study period?

To answer this question, we need to define when a study period has been terminated. For the purposes of this study, we have chosen to define a terminated period of study as a break of at least two calendar years, or four semesters. We call this an *extended break*.

UKÄ's usual definition is three semesters without being registered on any course at an HEI. We have chosen a somewhat longer period, mainly so that we can utilise calendar year data in other registers. Another reason is that our follow-up period is the year the student enters higher education plus six years and not a given number of semesters. Nongraduates are thus considered to have taken an extended break if they do not register for a course for at least two calendar years during the follow-up period (year of entry + six years).

We will analyse how common it is for those who have and those who have not been awarded a qualification during the follow-up period respectively to return to higher education after taking an extended break of (at least) two calendar years.

### What can we say about the students who take an extended break from their studies?

We will also analyse how common it is to take an extended break from studies and how this changes over time, as well as how extended breaks affect students' credit production and the likelihood of graduating.

We are also interested in how many credits nongraduates accumulate. How common is it for students to have apparently abandoned their studies when only a few credits short of being awarded a qualification?

Here too we use the follow-up period year of entry plus six years.

## **Into what categories can we place the students at Swedish HEIs?**

In asking this final question, our intention is to combine data from the two previous studies into something like a synthesis.

In simple terms, one can say that there are two main categories of students at HEIs:

- Those who are awarded at least one qualification.
- Those who never graduate.

We can break these two groups down into subcategories. For example, graduates can be divided into:

- those awarded a qualification during the follow-up period (year of entry plus six years); and
- those who take a longer time to graduate, with or without an extended break from studies after the follow-up period.

There are of course other variables that we can use to categorise students, such as age, sex, form of study as new entrant, etc.

To answer the question, we will use data derived from answering the previous two questions.

# What percentage of new entrants to higher education graduate?

UKÄ regularly follows up the percentage of new entrants to a given programme who are awarded a qualification; our question here is, what is the total graduation ratio, i.e., the percentage of all new entrants who graduate within the follow-up period (year of entry plus six years)?

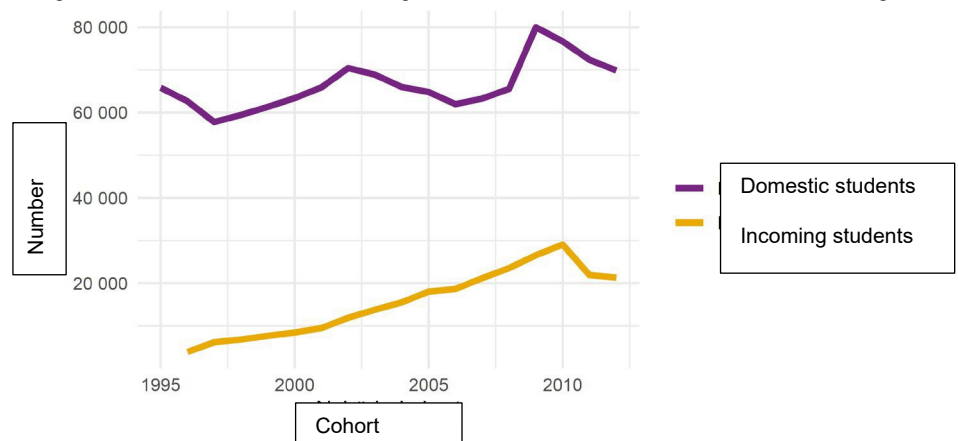
- What percentage of new entrants to higher education graduate within or after the follow-up period respectively?
- Can we explain why certain students graduate while others do not?
- How common is it for students to take advantage of the opportunity to combine freestanding courses to create their own degree?

These are the questions we will answer in this chapter. Let us begin with a brief introduction.

## Brief background on new entrants

If we are to allow new entrants a reasonable period of time to graduate, we need to go back in time and follow the progress of new entrants during the period 1995–2012. The number of new entrants increased for much of this period, especially incoming students, even if there was a decline towards the end of the period (see Figure 1).

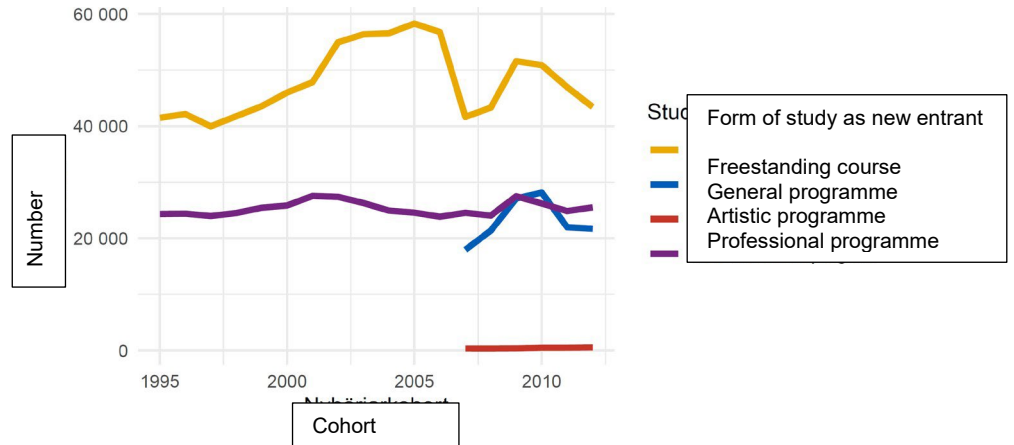
Figure 1. Number of new entrants to higher education, 1995–2012, domestic and incoming students.



The number of new entrants by form of study has however shifted somewhat during the period. This is particularly obvious when we look at freestanding courses, something largely attributable to the

introduction of the new Qualifications framework that entered into effect on 1 July 2007. While Swedish HEIs did offer programmes leading to the award of a Degree of Bachelor or Degree of Master before this, these were designed locally rather than in accordance with national regulations. Students on these programmes are not categorised as programme students but as students on freestanding courses in the Register of Higher Education, meaning that the number of new entrants on freestanding courses (in the current meaning) is overestimated before autumn semester 2007.

Figure 2. Number of new entrants to higher education by form of study, 1995–2012.



## Graduation ratio and graduation after the follow-up period

We calculate the graduation ratio for the different groups of new entrants and study the change in the percentage of graduates when the follow-up period is extended.

### Results

- The graduation ratio for all new entrants is 40 per cent. Roughly four out of ten new entrants to higher education graduate within the follow-up period (year of entry plus six years). When the follow-up period is extended, this increases to almost six out of ten.
- The overall graduation ratio is dragged down by incoming students, who have a low graduation ratio.
- The graduation ratio for domestic new entrants to higher education is 45 per cent. When the follow-up period is extended, the percentage of domestic new entrants who graduate rises to just over 60 per cent.
- New entrants to programmes leading to a professional qualification or qualification in the fine, applied and performing arts have the highest graduation ratio and new entrants to

freestanding courses the lowest.

- The graduation ratio for new entrants to programmes leading to a general qualification is significantly lower for domestic students than it is for incoming students.
- Women have a higher graduation ratio than men irrespective of their form of study as new entrants.
- The gender gap is wide among new entrants to programme leading to a professional qualification, with a graduation ratio of 75 per cent for women and 50 per cent for men.

Our analysis demonstrates that less than half of all new entrants to higher education were awarded a qualification within the follow-up period (year of entry plus six years). Figure 3 shows that the percentages remain relatively stable over time and that the overall graduation ratio for all new entrants, including incoming students, has remained at around 40 per cent throughout the period 1995–2012. Of those entering higher education in 2012, 41 per cent were awarded a qualification within the follow-up period.

If one extends the follow-up period to spring semester 2019, the graduation ratio for the earliest cohort rises by almost 20 per cent, to just under 60 per cent (see Figure 3b). Among the earliest cohorts in the study (1995–2001), hence those with most time to graduate, between 57 and 58 per cent had been awarded a qualification by spring semester 2019. So, we can see that it is common for new entrants to take their time to graduate.

The overall graduation ratio is dragged down by incoming students, who have a low graduation ratio. Many incoming students are exchange students who only study briefly at a Swedish HEI as part of a programme at a university in their homeland, with no intention of being awarded a qualification in Sweden. As incoming students account for a significant percentage of new entrants, this has a considerable impact on the overall graduation rate.

Figure 3a. Graduation ratio (i.e., percentage graduating within the follow-up period) for all new entrants to higher education 1995–2012. Statistics divided into domestic and incoming students from 1996 onwards.

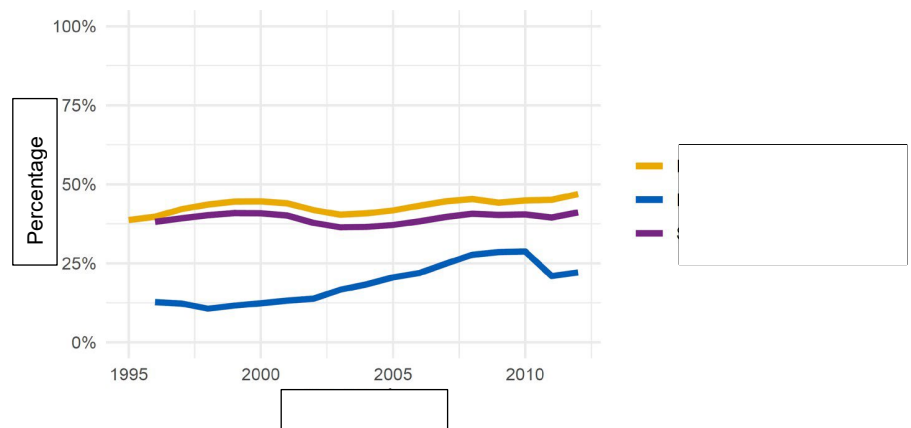
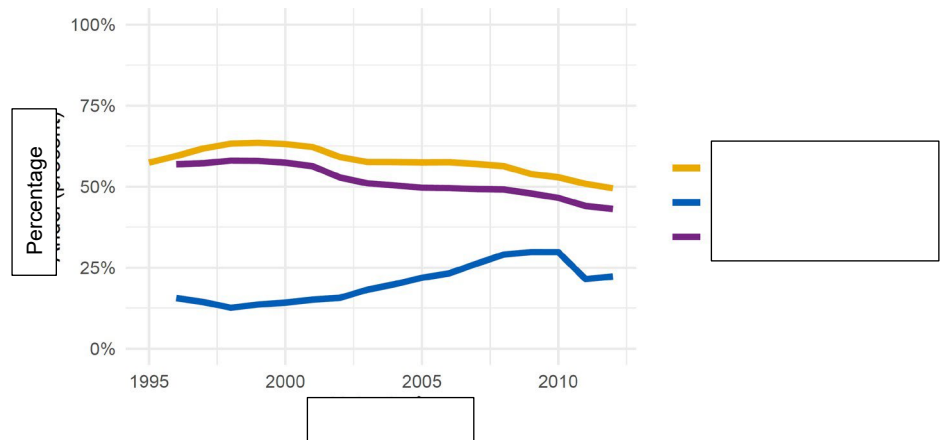


Figure 3b. Percentage of all new entrants to higher education 1995–2012 awarded a qualification up to and including spring semester 2019.



The graduation ratio for domestic new entrants rises modestly and is admittedly higher than the overall ratio, but still does not reach 50 per cent (figure 3 a). Of those entering higher education in 2012, 47 per cent were awarded a qualification within the follow-up period. If the follow-up period is extended, the percentage of graduates rises significantly and is highest for new entrant cohorts between 1998 and 2000, 63 per cent of whom had been awarded a qualification by spring semester 2019.

The graduation ratio for domestic students is particularly interesting from a skills provision perspective. The main focus of this study will therefore be on domestic students. However, in the interests of obtaining a complete picture, let us begin by including incoming students in our analysis.

### Women have a higher graduation ratio than men – irrespective of form of study

As shown in Figure 4, if we follow up all new entrants to higher education (domestic and incoming), the graduation ratio is highest for new entrants to programmes leading to a professional qualification or qualification in the fine, applied and performing arts and lowest for new entrants to freestanding courses. We can also see that women have a higher graduation ratio than men irrespective of their form of study.

The gender gap is widest between female and male new entrants to programmes leading to a professional qualification, where women’s graduation ratios are 20 to 25 per cent higher than men’s. The graduation ratio for women entering a programme leading to a professional qualification has remained at roughly 75 per cent throughout the follow-up period, compared to around 50 per cent for men. In the 2012 cohort, 73 per cent of women and 51 per cent of men were awarded a qualification within the follow-up period, a gender gap of 22 percentage points. Another discrepancy between the sexes is that the graduation ratio for new entrants to programmes leading to a general qualification is rising slightly for women but not for men.

We also note that the percentage of new entrants to freestanding courses who graduate is considerably lower than the percentage of new entrants to programmes.

The pattern is the same for domestic new entrants and new entrants as a whole. Even if we look solely at incoming students, the pattern is similar, although the variations between cohorts are slightly greater. Another difference is that the percentage of incoming students who graduate within the follow-up period is higher for programmes leading to a general or fine, applied and performing arts qualification than programmes leading to a professional qualification. It should however be noted that relatively few incoming students register for a programme leading to a professional qualification. Most incoming freemover students register for a programme leading to a general qualification, while exchange students tend to take freestanding courses<sup>3</sup>.

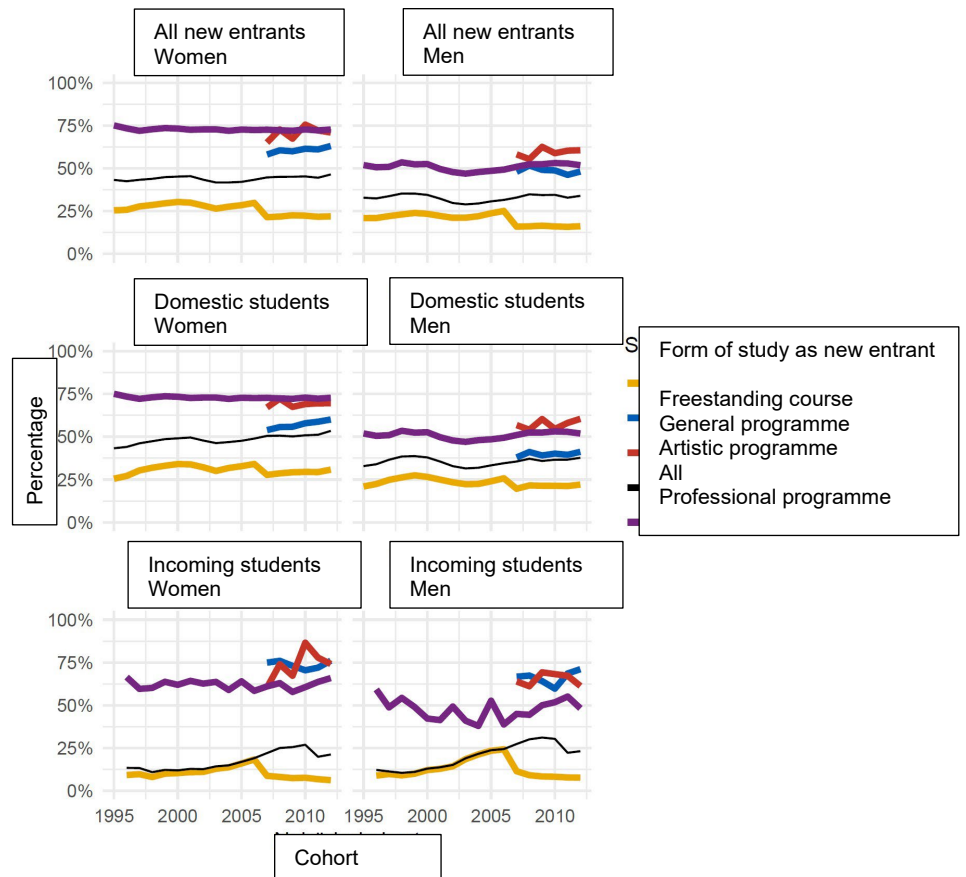
It is also worth noting that the graduation ratio for domestic new entrants to programmes leading to a general qualification is significantly lower than for incoming students. The graduation ratio for domestic new entrants to programmes leading to a general qualification is between 55 and 60 per cent for women and 40 per cent for men. The corresponding figures for incoming new entrants are 70 to 75 per cent for women and 60 to 70 percent for men.

Another interesting observation is a dramatic change after 2007 in the percentage of those who entered higher education via freestanding courses subsequently awarded a qualification. This coincides with the introduction of programmes leading to a general qualification and qualification in the fine, applied and performing arts when the new Qualifications framework entered into effect. So, to a certain extent, this change may be explained by the fact that students previously classified as new entrants to freestanding courses were classified as new entrants to these programmes.

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<sup>3</sup> *Higher education: International mobility in higher education from a Swedish perspective 2018/19*. UF 20 SM 1903, UKÄ and Statistics Sweden 2019.

Figure 4. Graduation ratio during the follow-up period by cohort, sex and study form as a new entrant.



If we extend the follow-up period to spring semester 2019, the percentage awarded at least one qualification increases in every cohort. This is only natural, given that students in each cohort then have longer to graduate. The increase is especially striking among new entrants to freestanding courses. Among new entrants between 1995 and 2000 – i.e., those who had longest to graduate – the percentage awarded a qualification almost doubles when the follow-up period is extended. We will return to this later (see Table 2). Among incoming students, however, there is no significant change in the graduation ratio when the follow-up period is extended.

## Possible explanations for differences in graduation ratio

Based on our data, we will now attempt to explain why certain domestic new entrants go on to graduate while others do not.

### Results

- Age on entering higher education for the first time does not appear to have a significant impact on the likelihood of a student graduating, with the exception of new entrants to



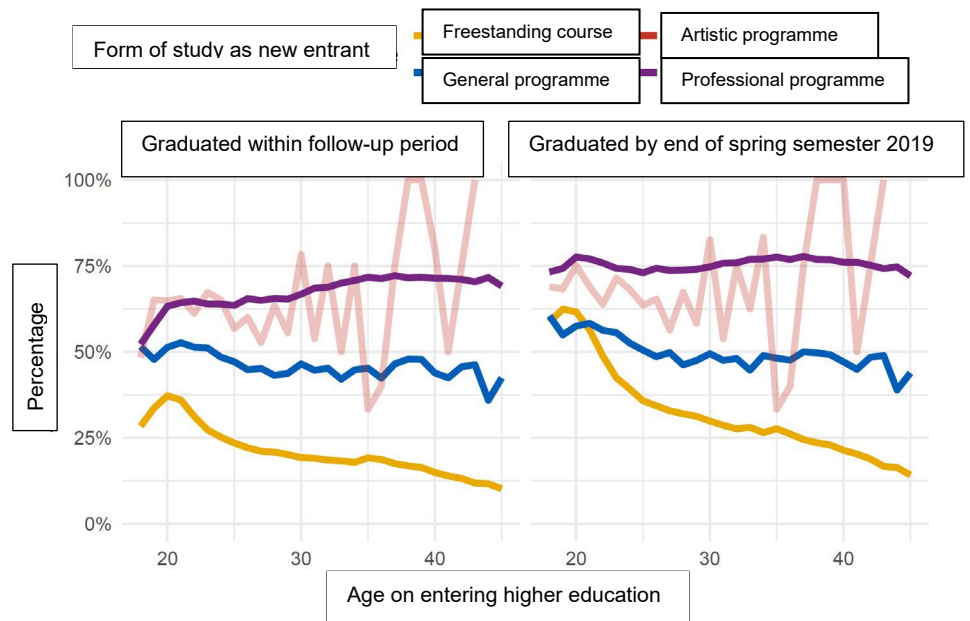
freestanding courses, who are less likely to graduate the older they are on entering higher education.

- When it comes to the percentage of new entrants to programmes who are awarded a qualification, age is less of a factor.
- Form of study is a more significant factor: those who enter higher education via a programme are significantly more likely to graduate than those who start with a freestanding course.
- Most new entrants to freestanding courses who do eventually graduate do so after registering for a programme.
- As new entrants to freestanding courses take their time to graduate, the percentage awarded a qualification increases sharply if we extend the follow-up period.

### Minor deviations between age groups

So, does age on entering higher education affect the likelihood of graduating? In Figure 5, we compare domestic new entrants in all cohorts aged between 18 and 45 years on entering higher education.

Figure 5. Graduation ratio during the follow-up period by cohort, sex and study form as a new entrant, within each follow-up period.



The left-hand panel shows the percentage of new entrants awarded at least one qualification during the follow-up period (i.e., the graduation ratio). Among new entrants to a programme leading to a professional qualification, the graduation ratio increases with age, while the opposite is true of new entrants to programmes leading to a general qualification or freestanding courses. We can also see that those who started a programme leading to a professional qualification at 35–40 years of age were more likely to graduate within the follow-up period than those in their early 20s. One hypothesis that may explain why the graduation

ratio for new entrants to a programme leading to a professional qualification increases slightly with age on entering higher education is that older students are more certain of exactly which job they wish to train for than their younger counterparts.

The major variation among new entrants to programmes leading to a qualification in the fine, applied and performing arts is explained by the fact that the number of new entrants in each age group is relatively small. Among new entrants to freestanding courses, the graduation ratio declines significantly with age on entering higher education. This may be because those who enter higher education via a freestanding course at a young age are more likely to go on to register for a programme than their older counterparts.

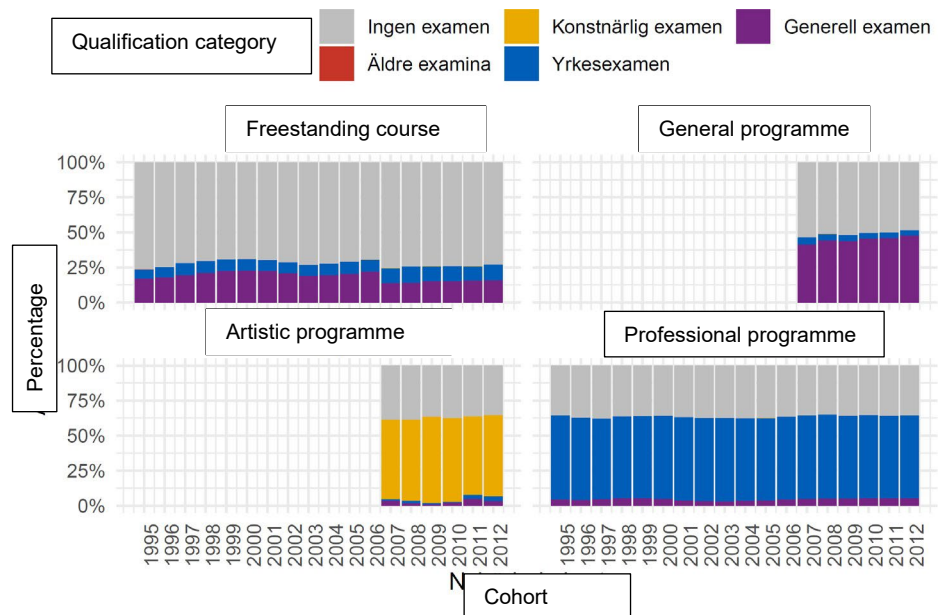
If we extend the follow-up period to the end of spring semester 2019, the pattern remains the same for new entrants to freestanding courses and programmes leading to a general qualification, i.e., the graduation ratio decreases with age on entering higher education. When it comes to new entrants to programme leading to a professional qualification, we are unable to detect any obvious correlation with age; the graduation ratio remains relatively even regardless of age on entering higher education. This suggests that younger new entrants to programmes leading to a professional qualification take longer to graduate, which may in part be due to the fact that older new entrants are less likely to study long programmes.

So, age on entering higher education for the first time does not appear to have a significant impact on the likelihood of a student graduating, With the exception of new entrants to freestanding courses, who are less likely to graduate the older they are on entering higher education. The same pattern is discernible when the follow-up period is extended.

### **Form of study has a significant impact on when the first qualification is awarded**

Here, we look at the mobility between forms of study of the domestic new entrants who graduate. In Figure 6, we look at the correlation between a student's form of study on entering higher education and the first qualification the student is awarded. Calculations are limited to the follow-up period of year of entry plus six years. We can see that roughly 65 per cent of all new entrants to a programme leading to a professional qualification graduated within the follow-up period, the vast majority with a professional qualification, although some were awarded a general qualification. For example, 59 per cent of new entrants to a programme leading to a professional qualification in 2012 were subsequently awarded a professional qualification within the follow-up period and 6 per cent a general qualification.

Figure 6. The most common categories of qualification by cohort and form of study as a new entrant, domestic new entrants 1995–2012.



Explanation to Figure 6:

Grey = No qualification Red = Old qualification Yellow = Artistic qualification Blue= Professional qualification Purple = General qualification

The form of study a student chooses on entering higher education is clearly significant to which qualification they are subsequently awarded (here, the first qualification awarded within the follow-up period): those who entered higher education through an artistic programme were more likely to be awarded a qualification in the fine, applied and performing arts; those who entered through a general programme were more likely to be awarded a general qualification; and those who entered through a professional programme were more likely to be awarded a professional qualification. A relatively low percentage of students who entered higher education via a freestanding course graduated during the follow-up period and, throughout the period, those that did were most likely to be awarded a general qualification. For example, 27 per cent of new entrants to a freestanding course in 2012 were awarded a qualification within the follow-up period, 16 per cent a general qualification and 11 per cent a professional qualification. This low graduation ratio may to some extent be due to the fact that the award of a qualification was never the purpose of study.

It is reasonable to assume that entering higher education via a freestanding course is often a gateway for students intending to go on to study a programme leading to a professional qualification, or indeed a programme leading to the award of a general qualification. After all, it is common for those who start a programme to have previous experience of higher education.

**The percentage of new entrants to freestanding courses awarded a qualification increases significantly if the follow-up period is extended**

The percentage of new entrants to freestanding courses who were

awarded a qualification during the follow-up period remained relatively low in all cohorts, varying between approximately 25 and 30 per cent. The later cohorts followed up in our study (2007–2012) have a graduation ratio of around 26 per cent. However, if we extend the follow-up period, the percentage awarded a qualification increases significantly – to around 50 per cent for the earliest cohorts. The graduation ratio within the follow-up period is higher for women than men, a trend that continues if the follow-up period is extended.

Table 2. Graduation ratios for domestic new entrants to freestanding courses.

Cohort	Graduation ratio during the follow up period			Graduated up to and including spring semester 2019		
	All	Men	Women	All	Men	Women
1995	24%	21%	26%	45%	40%	48%
1996	25%	22%	27%	48%	42%	52%
1997	28%	25%	30%	51%	45%	55%
1998	30%	26%	32%	52%	46%	56%
1999	31%	27%	33%	53%	47%	56%
2000	31%	27%	34%	53%	46%	57%
2001	30%	25%	34%	51%	43%	56%
2002	29%	23%	32%	48%	41%	52%
2003	27%	22%	30%	46%	40%	50%
2004	28%	22%	32%	47%	40%	51%
2005	29%	24%	33%	47%	40%	51%
2006	31%	26%	34%	47%	40%	51%
2007	25%	20%	28%	40%	34%	44%
2008	26%	22%	29%	40%	34%	43%
2009	26%	21%	29%	38%	32%	42%
2010	26%	21%	29%	36%	30%	41%
2011	26%	21%	29%	33%	28%	37%
2012	27%	22%	31%	30%	25%	34%

One of the most striking results of the descriptive statistics presented above is the much greater extent to which those who enter higher education via a programme graduate compared to those who start with a freestanding course.

There are of course many different reasons why someone might choose to take a freestanding course. Some new entrants take a few courses after which they discontinue their studies and never return to higher education. For others, freestanding courses are a gateway to other studies. They may take one or more courses of interest while they decide which programme they wish to pursue, or while they are waiting to be admitted to a specific programme. There are both pros and cons to this. While the student gains more knowledge, it also delays their entry into the labour market.

Some of those who enter higher education via a freestanding course progress relatively quickly to a programme. (It should however be

noted that pre-2007 many new entrants to freestanding courses may well have been registered in a local study programme.) But there are also many students who take advantage of the opportunity to combine freestanding courses in a way that they together meet the requirements of a general qualification.

## How many students create their own degree?

The Swedish HE system have offered the opportunity to combine freestanding courses to create a degree for many years now, an opportunity that remains even after the current Qualifications framework introduced national requirements for the award of qualifications. As long as the combined courses meet the requirements of the qualification laid down in the Higher Education Ordinance, including the completion of an independent project (degree project), it is possible to combine the credits for freestanding courses for the award of a general qualification. But how common is it for students take advantage of this opportunity? This is what we will find out now.

### Results

- Approximately 1,000 members of each cohort create their own degree mainly from freestanding courses.
- This is equivalent to 1.4 per cent of domestic new entrants in 2012.

To answer our question, we have analysed credit production by domestic new entrants to freestanding courses who have been awarded at least one qualification during the follow-up period. We limited our analysis to those students who entered higher education after the current System of Qualifications entered into effect, i.e., new entrants to freestanding courses during the period 2007–2012. This is because, prior to 2007, new entrants to local programmes are categorised as students on freestanding courses in the register.

Figure 7. Credit production by domestic new entrants to freestanding courses 2007–2012 with a qualification,

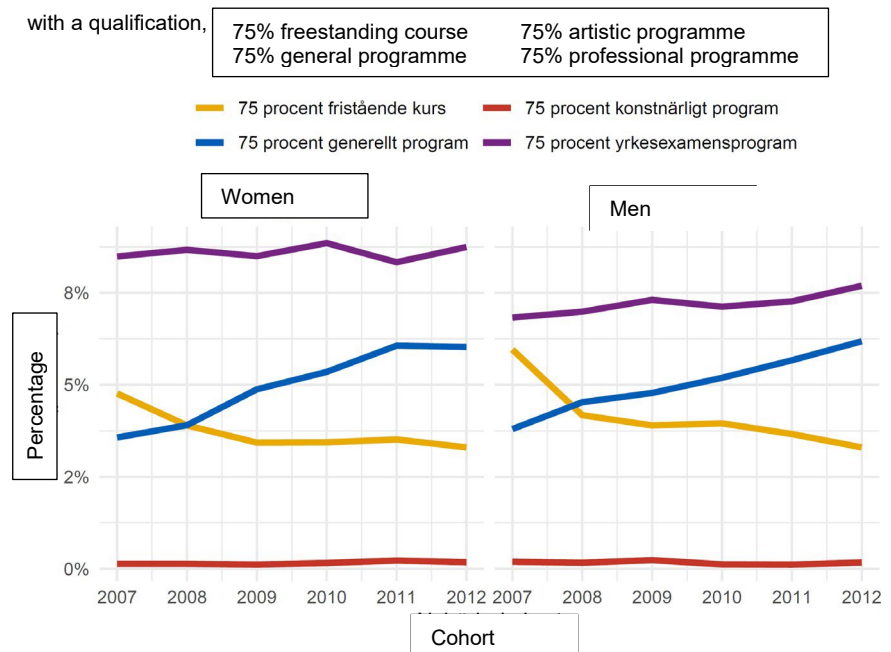


Figure 7 shows the percentages of new entrants to freestanding courses who were awarded a qualification during the follow-up period and who were awarded a qualification during the follow-up period and who were awarded a qualification during the follow-up period.

obtained at least 75 per cent of their credits from either freestanding courses, a programme leading to a general qualification, a programme leading to a qualification in the fine, applied and performing arts or a programme leading to a professional qualification.

The analysis reveals that between 3 and 5 per cent of graduates in the 2007–2012 cohorts who entered higher education via a freestanding course obtained at least 75 per cent of their credits from freestanding courses. That is to say, they did not register for a programme but combined freestanding courses to create their own degree. Numerically, in most cohorts this amounts to over 1,000 new entrants who have taken advantage of this opportunity since the current System of Qualifications was introduced in 2007 (see Table 3). The cohort with the highest number of students creating their own degree was 2007, with 1,300 individuals. The number gradually declined in later cohorts, to 970 individuals in 2012. In all cohorts, significantly more women than men took the opportunity. In the 2012 cohort, 640 women and 330 men combined freestanding courses to create their own degree.

Table 3. The number and percentage of new entrants to freestanding courses with a qualification who obtained at least 75 per cent of their credits during the follow-up period from freestanding courses.

Cohort	All	%	Women	%	Men	%
2007	1,300	5%	840	5%	470	6%
2008	1,120	4%	740	4%	380	4%
2009	1,280	4%	800	3%	480	4%
2010	1,230	4%	780	3%	450	4%
2011	1,110	4%	730	4%	380	4%
2012	970	3%	640	4%	330	3%

We can now supplement the earlier data in Table 2. Of those who entered higher education via a freestanding course in 2012, 27 per cent were awarded a qualification within the follow-up period, 3 per cent of whom created their own degree by combining freestanding courses.

In total, between 1 and 2 per cent of all domestic new entrants during the period 2007–2012 created their own degree. In 2012, this equated to 1.4 per cent of 69,900 domestic new entrants.

# Returning students and extended breaks

We have established that less than half of domestic new entrants to higher education were awarded a qualification within the follow-up period (year of entry plus six years). This begs a number of questions:

- To what extent do students return to higher education after the follow-up period?
- How common is it for students to take an extended break from studies? Who are the students who choose to discontinue their studies and to what extent do they return to higher education?
- How common is it for students who do return to higher education to graduate?
- And how well have they performed during the follow-up period?

## Returning students

Let us begin by investigating how common it is for new entrants to be registered at a Swedish HEI after the follow-up period (year of entry plus six years). In this analysis, our main focus is on those awarded a qualification during the follow-up period.

### Results

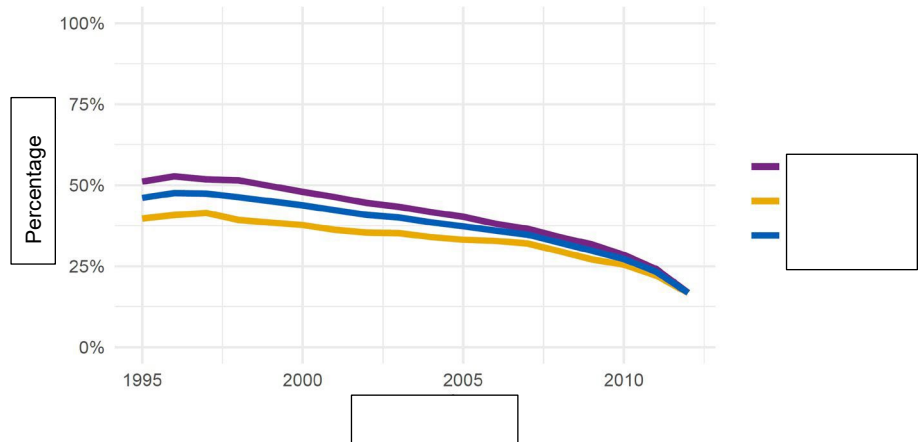
- Of those awarded a professional qualification, between 45 and 50 per cent of the most recent cohorts have returned to higher education.
- The corresponding figure for those awarded a general qualification is around 40 per cent.
- Those awarded a qualification in the fine, applied and performing arts are most likely to return to higher education after graduating.
- One third of those who discontinue their studies without graduating later return to higher education.

As a metric for returning to higher education, in Figures 8 and 9 we follow up the percentage of domestic new entrants registered at a Swedish HEI at some point after the follow-up period (year of entry plus six years). This includes both those who graduated during the follow-up period and those who did not.



The highest percentages are found among the earliest cohorts and declines with each subsequent cohort, which is hardly surprising as the follow-up period is so long. According to this metric, women are more likely to return than men. Among the 1995–2000 cohorts, approximately 45 per cent were registered a Swedish HEI after the follow-up period, around 50 per cent of women and 40 per cent of men. The gender gap narrows over time. By the 2010 cohort, which had less time to return, the percentage of returnees had declined to 27 per cent and there was no significant difference between the sexes.

Figure 8. The percentage of domestic new entrants registered at a Swedish HEI at some point after the follow-up period and by the end of spring semester 2019, by sex and cohort.



Students appear to take advantage of the opportunity to drop in and out of higher education, see Figure 9. The group of new entrants most likely to be registered at an HEI after the follow-up period is nongraduates who neither graduated nor took an extended break from studies during the follow-up period. These students are probably in long programmes and many will have graduated after the follow-up period.

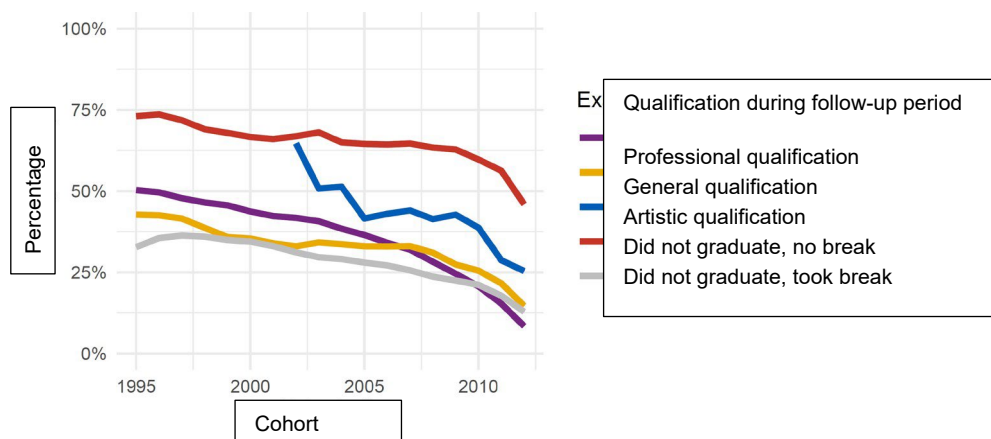
### **Almost half of those awarded a professional qualification return to higher education later**

It is also common for those who graduated during the follow-up period to return to continue their studies. We naturally find the highest percentages among the earliest cohorts, as they have had more time to return (the follow-up extends to spring semester 2019).

Almost half of the first cohort of new entrants who were awarded a professional qualification during the follow-up period were subsequently registered at a Swedish HEI. The corresponding figure for those awarded a general qualification was just over 40 per cent. While they are relatively few in number, those awarded a qualification in the fine, applied and performing arts are most likely to return to higher education after the follow-up period. Figure 9 also reveals that the percentage declines in all groups in later cohorts, which is only natural given that they have had less time to return.

Approximately one third of those in the earliest cohorts who were not awarded a qualification and took an extended break from their studies during the follow-up period, subsequently returned to higher education. We will look at this group a little more closely in the next section.

Figure 9. The percentage of domestic new entrants registered at a Swedish HEI at some point after the follow-up period, by cohort and first qualification awarded during the follow-up period.



## Students who take extended breaks

Let us move on to study the group of domestic students that have taken extended breaks (at least two years without being registered at a Swedish HEI) during the follow-up period. How common is it for students to take an extended break from studies? Who are these students? And how common is it for them to return to higher education to continue their studies?

### Results

- Four of ten domestic new entrants took an extended break from their studies during the follow-up period (year of entry plus six years).
- One third of those who took an extended break from their studies return to higher education and almost half of those who do return graduate.
- Students returning to higher education after an extended break equate to 15 per cent of all domestic new entrants.
- Men are more likely to take a break from their studies than women, and women are more likely to return to higher education and graduate after taking a break.
- New entrants to freestanding courses are most likely to take an extended break and new entrants to a programme leading to a professional qualification least likely.
- Older new entrants are more likely to take an extended

break, especially when they enter higher education via a freestanding course, and less likely to return to graduate.

- Ten per cent of domestic new entrants are single-semester students who do not return to higher education, mainly mature students taking freestanding courses.

#### Four of ten domestic new entrants take a break from their studies

Approximately 40 per cent of all domestic new entrants to higher education in the cohorts studied here have taken an extended break during the follow-up period (see Figure 10). For our purposes, an extended break from studies may be taken with the intention of returning to higher education at a later date, or the individual in question may have no plans to do so.

With the exception of a period in the late 1990s, when extended breaks were less common, the percentage has remained relatively stable at around 40 per cent.

Men have been more likely to take an extended break from their studies than women throughout the period studied. In the 2012 cohort, 45 per cent of men and 36 per cent of women took an extended break from studies.

Figure 10. Percentage of domestic new entrants taking an extended break during the follow-up period, by cohort and sex.

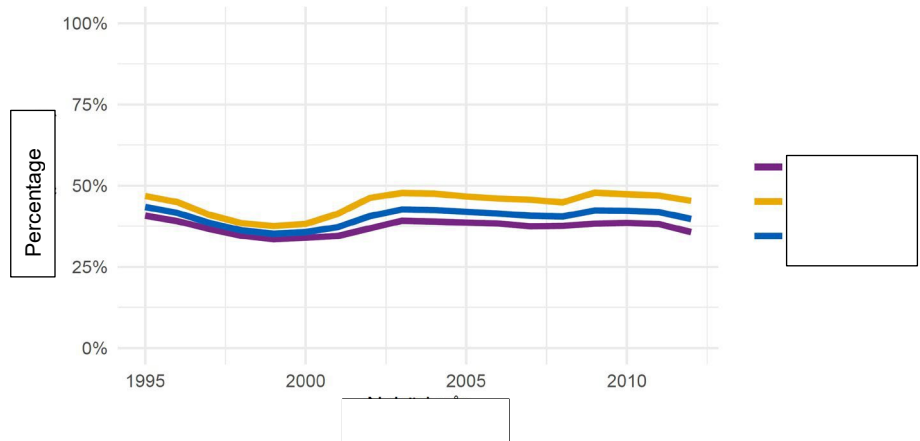
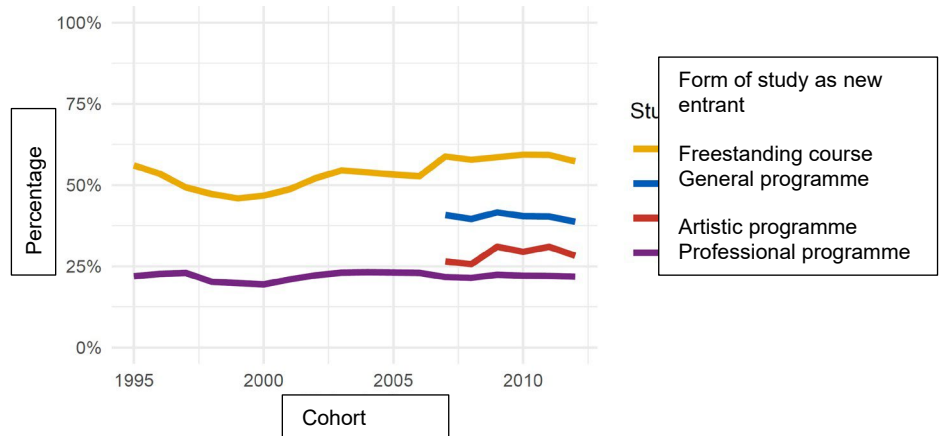


Figure 11 shows that, throughout the study period, the percentage of all new entrants taking an extended break during the follow-up period was highest among new entrants to freestanding courses, reaching over 50 per cent in most cohorts. The corresponding figure for new entrants to programmes leading to a professional qualification was 40 per cent. At just under 25 per cent, new entrants to a programme leading to a professional qualification were least likely to take an extended break from their studies.

Figure 11. Percentage of domestic new entrants taking an extended break during the follow-up period, by cohort and form of study on entering higher education.



### Fifteen per cent of new entrants take a break from their studies and return to higher education later

Figure 12 (left-hand panel) shows that 15 per cent of the earliest cohorts took an extended break from their studies before returning to higher education, and that a slightly higher percentage of women than men did so. From the 2002 cohort onwards, there is no gender gap in the percentage of new entrants taking an extended break before returning to higher education. Just over 7 per cent of new entrants take an extended break from studies before returning to graduate.

This implies that almost half of students who take an extended break from their studies will eventually graduate. Figure 13 shows that the percentage of women that return to graduate is higher than men in all cohorts. In the 1995–2005 cohorts, just over 50 per cent of women who interrupted their studies returned later to graduate. The corresponding figure for men is just over 40 per cent.

Figure 12. Percentage of domestic new entrants 1995–2012 returning to higher education after an extended break during the follow-up period and graduating up to the end of spring semester 2019, by sex.

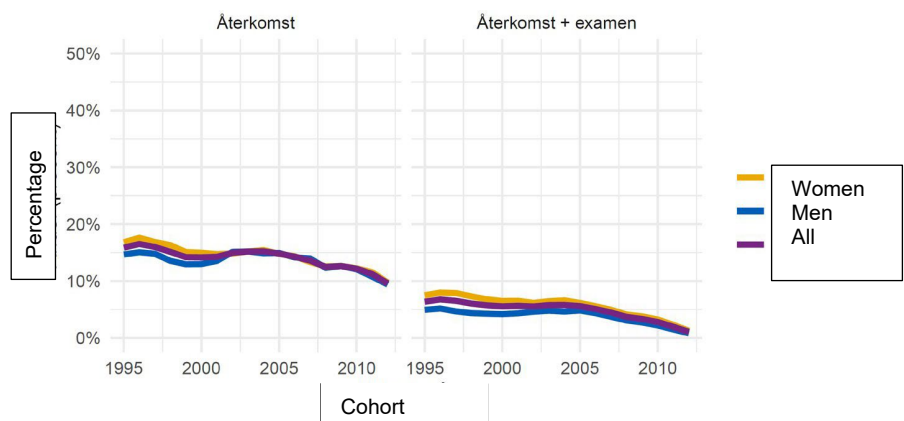
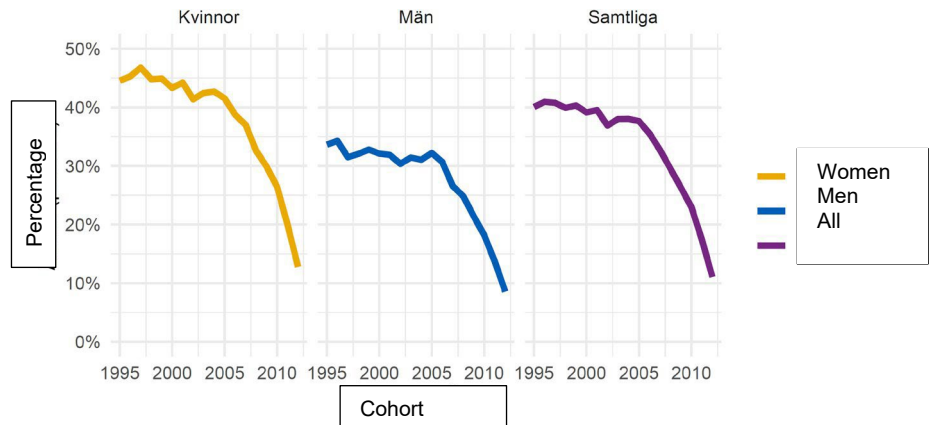


Figure 13. Percentage of domestic new entrants 1995–2012 graduating (up to the end of spring semester 2019) after returning from an extended break during the follow-up period, by sex.



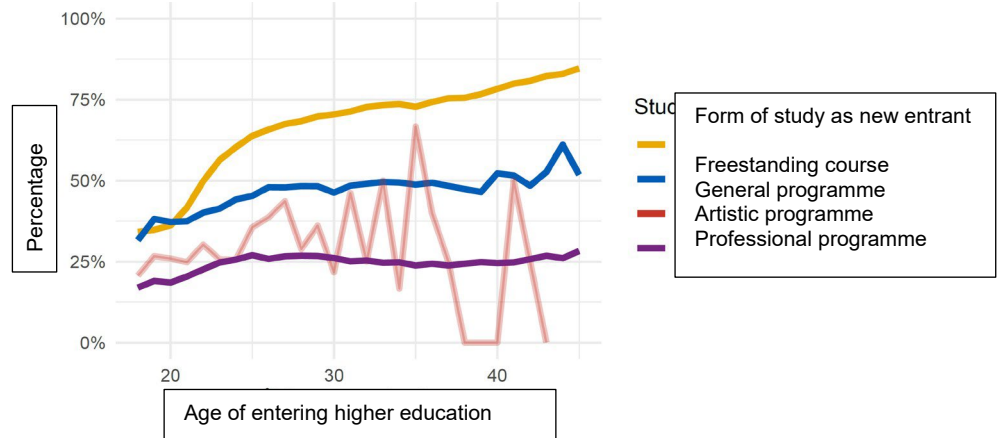
### Mature students taking freestanding courses more likely to take an extended break

We have confirmed that roughly 40 per cent of new entrants take an extended break from their studies during the follow-up period. While some of them abandon their studies completely, a relatively large percentage return to higher education.

If we examine how extended breaks from studies vary with age on entering higher education, we can see that mature new entrants in general are more likely to take a break than their younger counterparts (see Figure 14). This is particularly obvious when we look at new entrants to freestanding courses, whose number includes single-semester students (as described below). This suggests that these students use higher education specifically to take a few courses, but not with the intention of being awarded a qualification.

Breaks in studies are less common among younger new entrants to freestanding courses than among those who are 25 years of age or older. However, regardless of the age on entering higher education, extended breaks are more common among new entrants to freestanding courses and programmes leading to a general qualification than new entrants to programmes leading to a professional qualification.

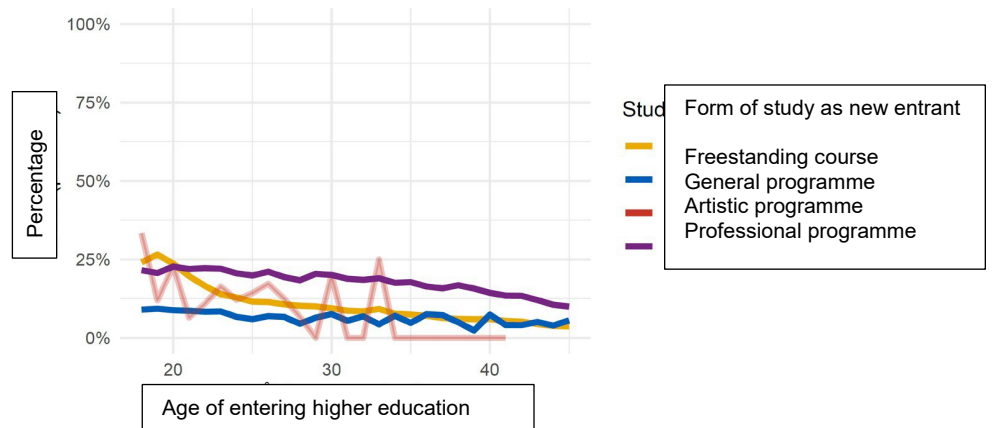
Figure 14. Percentage of domestic new entrants 1995–2012 taking an extended break during the follow-up period, by age and form of study on entering higher education.



In Figure 15, we investigate the percentage of all domestic new entrants to higher education during the period 1995–2012 between the ages 18 and 45 who have taken an extended break from studies during the follow-up period, and who later returned to graduate, during or after the follow-up period.

The group most likely to graduate after taking a break from studies (aside from younger new entrants to programmes leading to a qualification in the fine, applied and performing arts) is those who enter higher education via a freestanding course before turning 20. As we have seen previously, age on entering higher education via a freestanding course has a significant impact on pattern of study, and this result too suggests that new entrants to freestanding courses are a highly heterogeneous group. Even among new entrants to a programme leading to a professional qualification it is relatively common to return to higher education and to graduate after an extended break from studies. However, the percentage does decline slightly with age on entering higher education. New entrants to programmes leading to a general qualification are least likely to return to graduate after an extended break.

Figure 15. Percentage of domestic new entrants returning to graduate (up to the end of spring semester 2019) after taking an extended break from studies, by age and form of study on entering higher education.



## Ten per cent of new entrants are single-semester students

There are also students who only attend HEIs for a brief period with no apparent intention of returning to continue their studies. An earlier study of students' study patterns found that a stable percentage (approximately 10%) of every cohort of new entrants over a 20-year period from 1978/79–1997/98 had been registered for no more than one semester and had not returned to higher education<sup>4</sup>. We can now state that this has not changed; the pattern is largely the same in later cohorts.

Table 4. Percentage domestic new entrants who are single-semester students, by cohort and sex.

Cohort	All	%	Women	%	Men	%
1995	8,490	13%	4,700	13%	3,790	13%
1996	6,990	11%	3,940	11%	3,050	11%
1997	5,010	9%	2,910	9%	2,110	9%
1998	4,990	8%	2,830	8%	2,160	8%
1999	4,770	8%	2,780	8%	2,000	8%
2000	4,860	8%	2,820	7%	2,040	8%
2001	5,330	8%	3,160	8%	2,180	8%
2002	6,710	10%	3,860	9%	2,850	10%
2003	7,470	11%	4,490	11%	2,980	11%
2004	7,120	11%	4,070	10%	3,040	11%
2005	7,190	11%	4,100	11%	3,090	11%
2006	6,750	11%	3,900	10%	2,850	11%
2007	6,770	11%	3,980	10%	2,790	11%
2008	6,810	10%	4,090	10%	2,720	10%
2009	9,050	11%	4,820	10%	4,230	12%
2010	9,210	12%	4,930	11%	4,290	13%
2011	8,700	12%	4,580	11%	4,120	14%
2012	7,510	11%	4,010	10%	3,500	12%

For our purposes, a *single-semester student* is defined as a domestic new entrant to higher education who is only registered for one semester during the follow-up period (year of entry plus six years).

Approximately 10 per cent of new entrants in the period 1995–2012 studied at an HEI for a single semester and did not register again during the follow-up period.

Over the course of the period, with the exception of 1995 when incoming students are included in the population, the percentage varied between 8 and 12 per cent. Among men, the percentage increased somewhat after the new System of Qualifications was introduced in 2007. In the 2012 cohort, men were more likely (12%) to be single-semester students than women (10%). Prior to this, there was no difference between the sexes.

<sup>4</sup> Swedish National Agency for Higher Education: *Students' study patterns and total lengths of study*, Report 2012:6 R.

### Mature new entrants to freestanding courses more likely to be single-semester students

The vast majority of single-semester students study freestanding courses. In later cohorts in our study, around 20 per cent of women and 25 per cent of men are single-semester students (see Figure 16). We can also see that few of the youngest new entrants leave higher education after a single semester. As Figure 17 illustrates, the percentage of single-semester students rises significantly with age on entering higher education.

New entrants to programmes also account for a small percentage of single-semester students, presumably because they have dropped out for whatever reason. Men are more likely to drop out than women.

Figure 16. Percentage of domestic single-semester students, by cohort, sex and form of study on entering higher education.

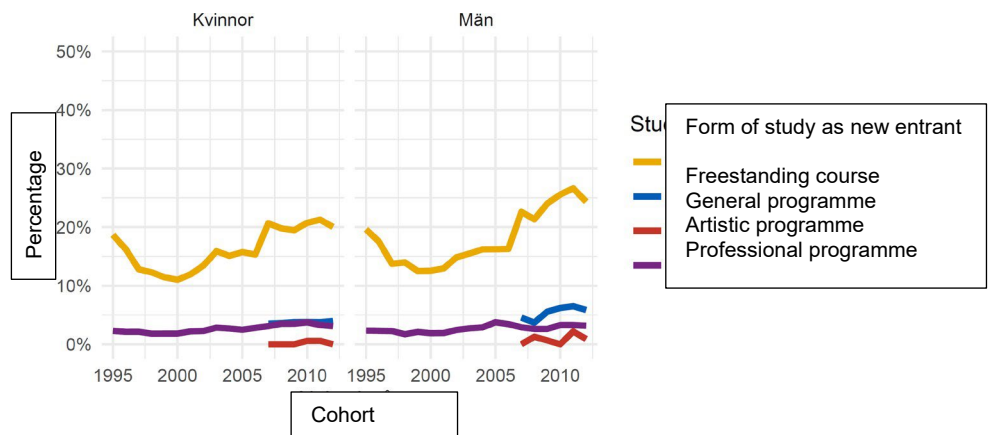
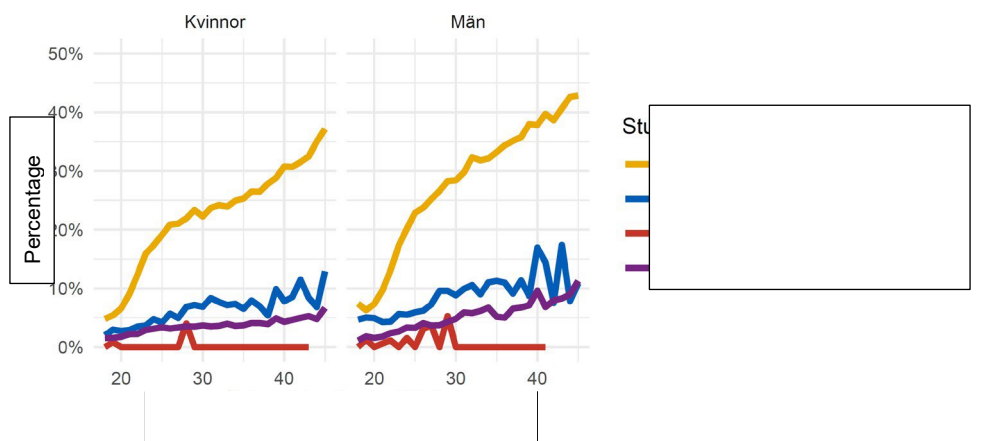


Figure 17. The percentage of domestic single-semester students (1995–2012), by sex and age and form of study on entering higher education.



In summary, we can state that as a group, single-semester students mainly consist of mature new entrants to freestanding courses, probably studying out of general interest in learning or to advance themselves in a given field.



### Some single-semester students return to higher education after a long absence

Our definition of single-semester students and other students who discontinue their studies is based on a follow-up period of year of entry plus six years. A delimited follow-up period allows us to make comparisons over time. As with other students, we have continued to monitor the activity of single-semester students after the end of the follow-up period. This has revealed that some single-semester students have returned to higher education at a later date, particularly those from earlier cohorts who have had more time to do so (see Table 4b).

When we extend the follow-up period, the percentage of single-semester students in our earliest cohorts declines by up to two percentage points, reducing the average to 9 per cent.

Table 4b. Percentage of domestic single-semester students up to the end of spring semester 2019, by cohort and sex.

Cohort	All	%	Women	%	Men	%
1995	7,220	11%	3,870	11%	3,350	11%
1996	5,840	9%	3,140	9%	2,700	10%
1997	4,110	7%	2,300	7%	1,820	7%
1998	4,070	7%	2,200	6%	1,870	7%
1999	3,940	6%	2,210	6%	1,730	7%
2000	4,020	6%	2,260	6%	1,770	7%
2001	4,500	7%	2,580	7%	1,920	7%
2002	5,620	8%	3,160	7%	2,470	9%
2003	6,460	9%	3,820	9%	2,640	10%
2004	6,200	9%	3,470	9%	2,730	10%
2005	6,310	10%	3,570	9%	2,750	10%
2006	6,050	10%	3,450	9%	2,590	10%
2007	6,070	10%	3,540	9%	2,530	10%
2008	6,160	9%	3,630	9%	2,530	10%
2009	8,310	10%	4,340	9%	3,970	12%
2010	8,630	11%	4,540	10%	4,090	13%
2011	8,310	11%	4,330	10%	3,980	13%
2012	7,390	11%	3,930	10%	3,460	12%

Our analysis shows that 12 per cent of those we defined as single-semester students (14,500 individuals) returned to higher education at some point after the follow-up period and before the end of spring semester 2019. A significant number of them (3,900 individuals) were awarded a qualification. So, these individuals had been registered at a Swedish HEI for one semester, left higher education for at least six years and then returned to graduate. This is another example of how students make use of the flexibility afforded by the Swedish higher education system.

## How well have students who took an extended break performed during the follow-up period?

Our analysis clearly demonstrates that students who take an extended break from studies are less likely to graduate than those who do not. That said, the award of a qualification is only one metric for performance in higher education and there are many reasons why students may choose not to graduate. As a supplement to the graduation metric, we have compared the credit production of students who take an extended break from studies with other new entrants to higher education.

### Results:

- 86 per cent of domestic new entrants belong to one of two main groups: students who graduate without taking an extended break from studies; and students who take an extended break from studies and do not graduate.
- Over 40 per cent of students who took an extended break have been awarded less than 30 credits during the follow-up period, and 17 per cent no credits whatsoever. This equates to 7 per cent of new entrants.
- 8 per cent of new entrants to higher education were awarded over 180 credits during the follow-up period but as of the end of spring semester 2019 had not graduated.
- Almost 60 per cent of them now work in professions that demand expertise from higher education.

In this section, we have divided all domestic new entrants (1,196,100 individuals) during the period 1995–2012 into four groups based on whether or not they have taken an extended break from studies and whether or not they had been awarded a qualification by the end of spring semester 2019:

1. Group 1: New entrants who have taken an extended break from studies during the follow-up period and returned to graduate (**71,200** individuals).
2. Group 2: New entrants who have not taken an extended break from studies during the follow-up period and have graduated (**617,200** individuals).
3. Group 3: New entrants who have taken an extended break from studies during the follow-up period and as of the end of spring semester 2019 had not graduated (**411,300** individuals, some of whom may eventually end up in Group 1).

4. Group 4: New entrants who have not taken an extended break from studies during the follow-up period and as of the end of spring semester 2019 had not graduated (**96,300** individuals, some of whom may eventually end up in Group 2).

These rough divisions alone crystallise two major student groups within higher education: new entrants who have graduated without taking an extended break from studies during the follow-up period (Group 2), and new entrants who took an extended break from studies during the follow-up period and have not yet graduated (Group 3). Between them, these two groups account for 86 per cent of new entrants during the period 1995–2012.

Table 5 shows how new entrants in each group performed during the follow-up period (year of entry plus six years). The data in Table 5 can also be used to answer the question of how common it is for students to discontinue their studies without graduating despite having been awarded a large number of credits.

Table 5. Credits awarded during the follow-up period to the four groups of new entrants described in the bullet list above (domestic new entrants 1995–2012).

Credits awarded during the follow up period	Group 1 Graduated after a break		Group 2 Graduated without a break		Group 3 Break, not yet graduated		Group 4 No break, not yet graduated	
	Number	%	Number	%	Number	%	Number	%
0 credits	2,500	3	4,100	1	79,300	19	500	1
1–29 credits	5,000	7	1,600	0	119,700	29	1,900	2
30–89 credits	11,300	16	7,900	1	104,700	25	9,300	10
90–179 credits	20,800	29	38,300	6	70,500	17	28,200	29
180–299 credits	31,000	44	425,800	69	36,800	9	48,600	50
300 credits	600	1	139,100	23	300	0	7,700	8
<b>Total</b>	<b>71,200</b>	<b>100</b>	<b>617,200</b>	<b>100</b>	<b>411,300</b>	<b>100</b>	<b>96,300</b>	<b>100</b>

Group 1, one of the smaller groups, contains new entrants who have taken an extended break during the follow-up period then returned to graduate. Less than half (45%) were awarded at least 180 credits during the follow-up period. It is interesting to note that 10 per cent were awarded less than 30 credits during the follow-up period (year of entry plus six years) but later returned to graduate.

Group 2 contains most individuals, all of whom graduated without taking an extended break from their studies. The vast majority (82%) of students in this group were awarded at least 180 credits during the follow-up period and many of them over 300 credits.

Group 3 is the second largest and is relatively heterogeneous. It contains those who took an extended break from studies during the follow-up

period and as of the end of spring semester 2019 had not graduated. Almost 20 per cent of students in Group 3 had no credits whatsoever at the end of the follow-up period and just under 30 per cent had been awarded between 1 and 29 credits. It seems likely that these students can be subdivided into two types: those who quickly realise that higher education is not for them, and those who for whatever reason choose to study only one or more freestanding courses. The same division can probably be applied to the 25 per cent of students in Group 3 with between 30 and 89 credits. Less than 10 per cent of individuals in group 3 were awarded 180 credits or more during the follow-up period.

The other small group, Group 4, contains new entrants who did not take an extended break from studies during the follow-up period and as of the end of spring semester 2019 had not graduated. In this group, 58 per cent of new entrants were awarded over 180 credits during the follow-up period.

Over 40 per cent of students who took an extended break (Group 1 and Group 3) were awarded less than 30 credits during the follow-up period, and 17 per cent no credits whatsoever. This equates to 7 per cent of all domestic new entrants.

### **Many new entrants to Master of Science in Engineering programmes do not graduate despite high credit production**

Table 5 revealed that 93,500 members of the studied cohorts, or 8 per cent of all domestic new entrants, were awarded over 180 credits during the follow-up period without graduating. These individuals are found in Groups 3 and 4. Approximately 56,000 of them did not take an extended break from studies during the follow-up period (Group 4). In Table 6, we list the most common programmes (or forms of study) containing over 1,000 of these new entrants.

Table 6. The most common programme in which domestic new entrants in the period 1995–2012 were awarded over 180 credits during the follow-up period but had not graduated by the end of spring semester 2019, i.e., individuals in Groups 3 and 4.

Form of study/programme on entering higher education	Number	Percentage av total (%)
Freestanding course	53,100	57%
Degree of Master of Science in Engineering	11,000	12%
Programme leading to a general qualification	8,100	9%
Degree of Bachelor of Science in Engineering	7,600	8%
Degree of Bachelor of Arts in Education	4,400	5%
Degree of Bachelor of Science in Social Work	1,000	1%
Total	93,500	100%

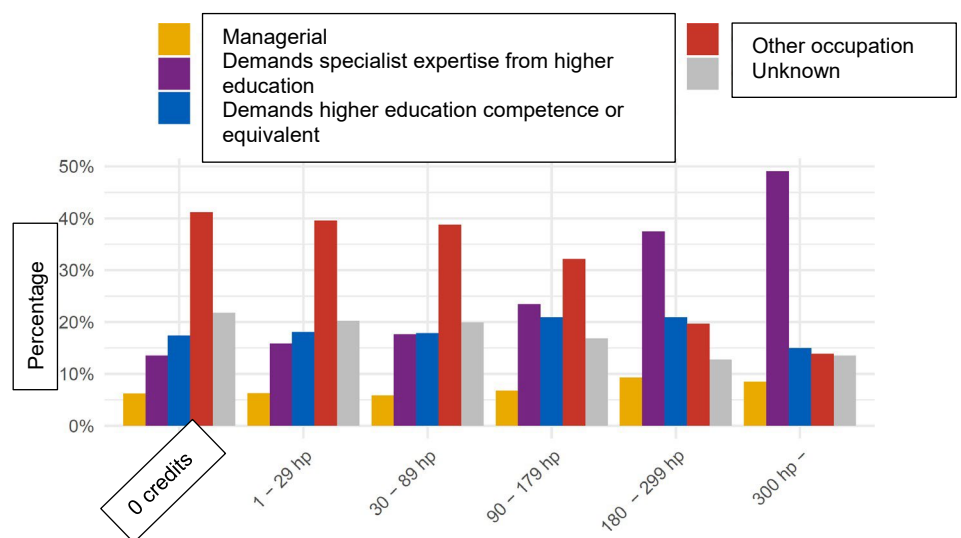
The majority of those awarded over 180 credits without graduating are new entrants to freestanding courses. It is difficult to draw any conclusions about these students, many of whom may well have gone on to register in a study programme. Master of Science in Engineering programmes are the single most common point of entry for this group. In total, just under 11,000 domestic new entrants to Master of Science in Engineering programmes during the period 1995–2012 were awarded over 180 credits without graduating. To put this in perspective, of the approximately 1.2 million individuals included in this study, 81,000 entered higher education via a Master of Science in Engineering programme, 66,000 of whom had been awarded a Degree of Master of Science in Engineering by the end of spring semester 2019.

At a generous estimate, this suggests that the number of individuals with the requisite competence to work in engineering professions may be 10–15 per cent higher than the number of qualifications awarded among the cohorts. Furthermore, just over 7,600 new entrants to Bachelor of Science in Engineering programmes were awarded over 180 credits during the follow-up period without graduating.

In fact, according to the Swedish Standard Classification of Occupations 2012 (SSYK 2012), professions that demand specialist expertise from higher education are by far the most common occupations of new entrants with over 180 credits who have not been awarded a qualification by a Swedish HEI (see Figure 18).

New entrants with less than 180 credits are significantly more likely to have occupations that do not require competence from higher education. So, higher education clearly also contributes to skills provision through those who have acquired relevant expertise at an HEI but were never awarded a qualification.

Figure 18. Occupational categories 2017 (among those not registered with an HEI) of nongraduate new entrants 1995–2012, by number of credits awarded during the follow-up period.



# What does the analysis tell us about how students use higher education?

## Results

- Almost 60 per cent of domestic new entrants to higher education during the period 1995–2012 had been awarded a qualification by the end of spring semester 2019, while 8 per cent had been awarded at least 180 credits without graduating.
- This means that roughly two thirds of new entrants had either graduated or been awarded 180 credits.
- The remaining third may well have had other reasons to study, they may have quickly realised that higher education was not for them, or perhaps they will return to their studies at a later date.

The results reveal that the percentage of students taking an extended break from studies has remained relatively stable over time, with the exception of cohorts entering higher education during the late 1990s. In all cohorts, men have been more likely to discontinue their studies than women.

We can also confirm that older new entrants were more likely to discontinue their studies than their younger counterparts, especially those entering via freestanding courses. Older new entrants who took an extended break from studies were also less likely to return to higher education to graduate. This is true irrespective of the form of study on entering higher education.

In combination with other results, our analysis of new entrants' credit production indicates that there may be many different reasons for discontinuing one's studies. For example, a relatively large percentage (7%) of all new entrants are never awarded any credits and have no apparent plans to return to higher education in the short or medium term. A large group of new entrants drop out after receiving a handful of credits and the majority of them have yet to return to higher education to graduate. It seems likely that this group contains both those who take a few courses out of a general interest in learning or for continuing professional development, as well as those who quickly realise that higher education is not for them.

Just over 70 per cent of students awarded over 180 credits without graduating entered higher education via freestanding courses. Otherwise, new entrants to programmes leading to a professional qualification with strong links to the labour market but not in a regulated profession are somewhat overrepresented in this group (just over 20 per cent were new entrants to a programme leading to a Degree of Master in Engineering or Degree of Bachelor in Engineering).

Of the 1.2 million domestic new entrants we studied, just over 615,000 graduated without taking an extended break from their studies. A small percentage (71,000 individuals) returned to higher education to graduate after an extended break. As of the end of spring semester 2019, approximately 500,000 new entrants in our cohorts had yet to be awarded a qualification, 80,000 of whom had not been awarded a single credit and 93,500 had been awarded at least 180 credits during the follow-up period.

So, in total only 688,000 individuals – or less than 60 per cent of new entrants – had graduated by the end of spring semester 2019. However, we consider it likely that a large percentage of those awarded at least 180 credits are on the labour market in occupations that demand expertise from higher education, thus contributing knowledge acquired at Swedish HEIs to Sweden's skills provision. Were we to also include the 93,500 individuals awarded 180 credits or more during the follow-up period, then higher education's contribution to the labour market is two thirds of all new entrants – or 781,900 individuals – who either graduated or were awarded at least 180 credits during the follow-up period.

The remaining third mainly appear to have had other reasons to study, or they quickly realised that higher education was not for them. Some of them can also be expected to return to higher education later.

# Into what categories can we place the students at Swedish HEIs?

We have established that students at Swedish HEIs can be roughly divided into two main categories: those who graduate without taking an extended break from their studies, and those who take an extended break and do not graduate. There are however considerable variations and similarities between students in both groups. In this section, we will analyse similarities and differences between the different groups.

While our point of departure is the four groups described in the bullet list on page 34, we have separated single-semester students and will deal with them as a group of their own. The groups are described in Table 7 below.

Table 7. Description of Groups 1–5.

		Number	Men	Women
Group 1	Graduated after a break	70,900	35%	65%
Group 2	Graduated without a break	616,800	36%	64%
Group 3	Break, not yet graduated	302,700	49%	51%
Group 4	No break, not yet graduated	96,300	55%	45%
Group 5	Single-semester students	109,200	45%	55%

## Freestanding courses are the most common form of study for four of five groups

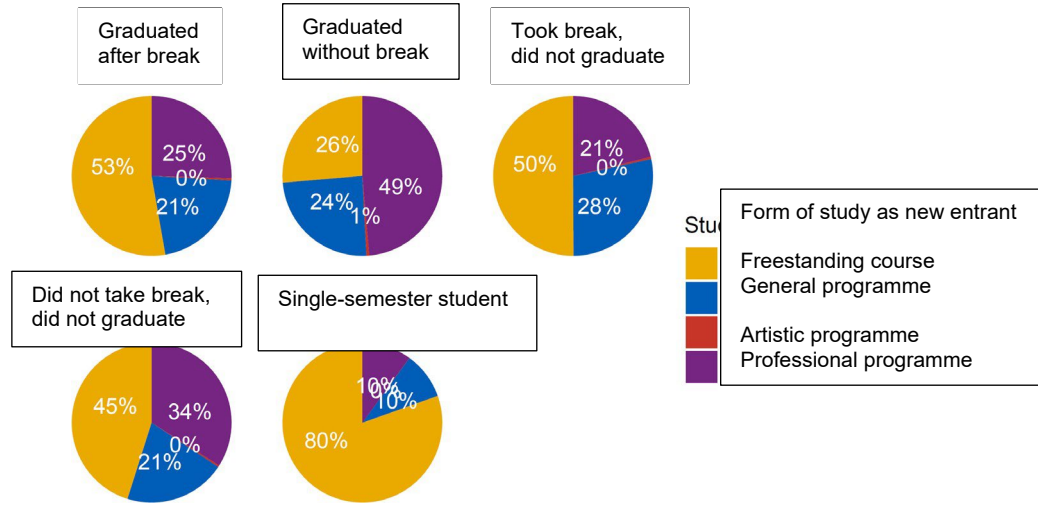
Figure 19 shows the form of study on entering higher education for the five groups. Half of the students in Group 2 (graduated without a break) entered higher education via a programme leading to a professional qualification. This is the only group in which this is the most common form of study for new entrants. In Group 4 (no break, not yet graduated), freestanding courses are the most common form of study, although a relatively large percentage (34%) entered higher education via a programme leading to a professional qualification.

In the other groups, freestanding courses were clearly the most common form of study for new entrants. This is especially true of Group 5 (single-semester students), in which four out of five were new entrants to freestanding courses.

In Group 1 (graduated after a break), 25 per cent entered higher education via a programme leading to a professional qualification. The corresponding figure for Group 3 (break, not yet graduated) was 21 per cent. Group 3 was also the group with the highest percentage (28%) entering via a programme leading to a general qualification.



Figure 19. Form of study for new entrants 2007–2012 in Groups 1–5.

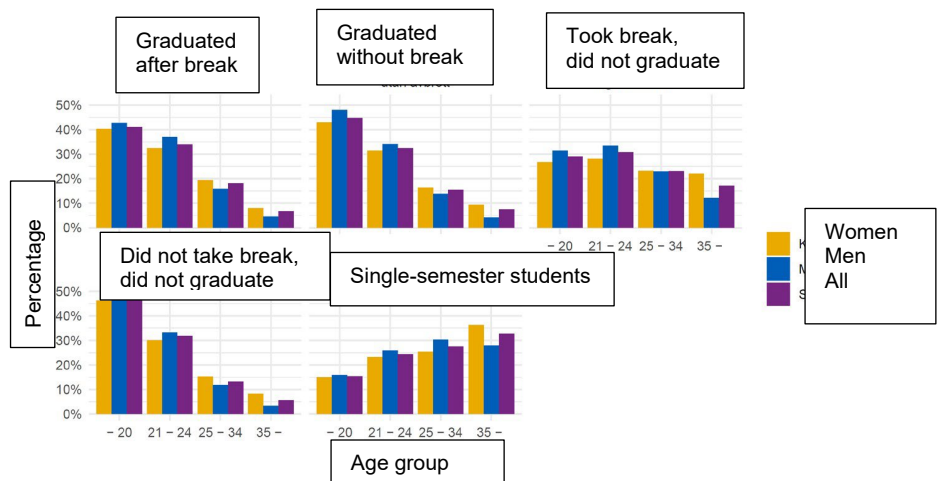


**Group 4 (no break, not yet graduated) has the youngest new entrants**

An examination of the age distribution in our groups reveals that students under 25 years of age dominate in Groups 1, 2 and 4. These groups contain all graduates whether or not they took an extended break from their studies, as well as those who neither took a break nor graduated. The youngest average age is in Group 4 (no break, not yet graduated), where 49 per cent were 20 or younger on entering higher education.

The age distribution in Group 3 (break, not yet graduated) is more even, while the over 25s dominate in Group 5 (single-semester students). This is largely accounted for by the fact that a large percentage of students in Groups 3 and 5 are mature students with no intention of graduating. In all groups, a higher percentage of women than men are in the oldest age group (see Figure 20).

Figure 20. Domestic new entrants 1995–2012 in Groups 1–5, by age group and sex.



### Those who graduate without taking a break have the highest earnings

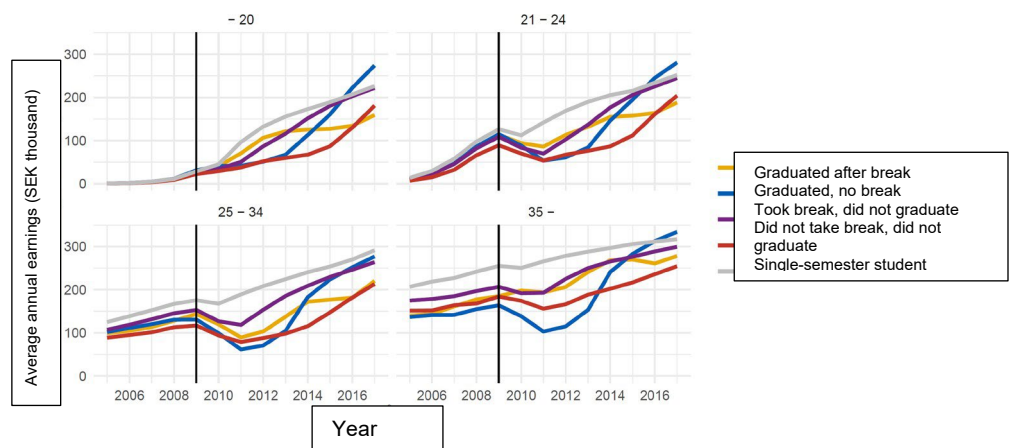
We have also studied the average earnings of domestic new entrants during autumn semester 2009. Data on income has been collected for these new entrants each year during the period 2005–2017.<sup>5</sup> Figure 21 shows average earnings for new entrants in Groups 1–5 in the age groups shown in Figure 20 above.

One striking finding is that, with the exception of Group 5 (single-semester students), the development of earnings is similar within the groups. At the end of the period, Group 2 (graduated without a break) had the highest average income within all age groups. However, until a sufficient percentage of new entrants had graduated, Group 1 (graduated after a break) and Group 3 (break, not yet graduated) had higher average incomes. The exception is new entrants over 35 in Group 4 (no break, not yet graduated). The likely explanation for this is that a large percentage of these students left higher education to take paid work.

Otherwise, earnings development for new entrants in Group 4 is reminiscent of that in Group 2, although slowing down towards the end of the period. In Group 5 (single-semester students), there is a significant difference in earnings development between age groups, with the youngest new entrants enjoying rapid income development immediately after discontinuing their studies.

Another interesting finding is that average earnings in Group 5 (single-semester students) for those entering higher education at 35 years of age or over was significantly higher than average earnings for other new entrants in the same age group. This shows that a large percentage of mature new entrants in Group 5 were well-established on the labour market when they entered higher education.

Figure 21. Average earnings 2005–2017 for domestic new entrants autumn semester 2009 in Groups 1–5, by age group.



<sup>5</sup> 2017 is the last year for which we have data.

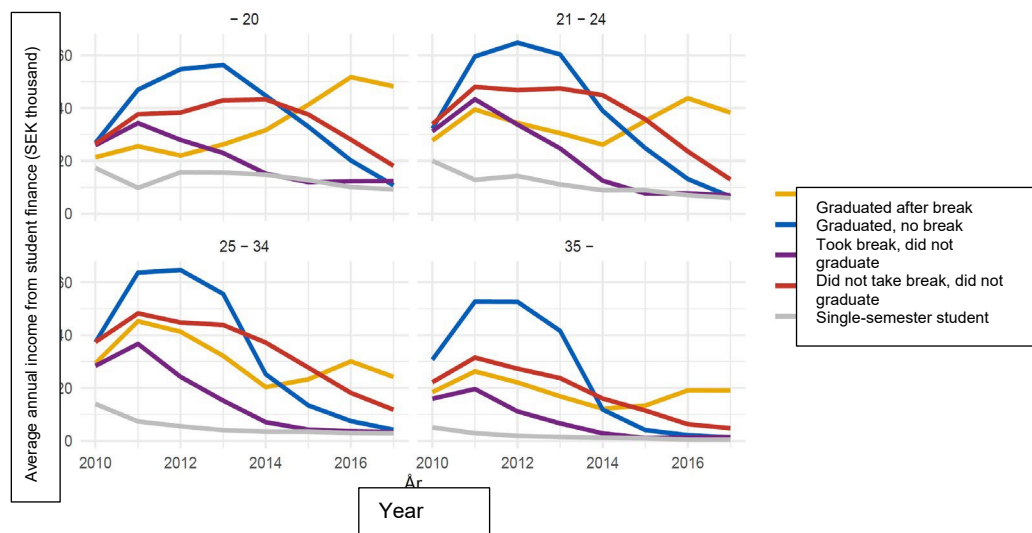
While average earnings of new entrants in Group 2 (graduated without a break) in the age group 35 years of age or over declined markedly after entering higher education, they remained significantly higher than for new entrants in the younger age groups. However, the downward curve demonstrates that these individuals cut back on gainful employment in order to study.

### Those who graduate without taking a break take out the most student finance

This is made even clearer when we analyse the average income from student finance at the same points of intersection in Figure 22. We have prepared data on average income from student finance at the same points of intersection as in Figure 21 and this clearly demonstrates that Group 2 has the highest average student finance in all age groups.

The amount of student finance taken out by younger new entrants in Group 1 (graduated after a break) increases towards the end of the period. The increase is especially apparent in the youngest age group ( $\leq 20$  years of age). It is also clear that they take a break relatively early and then return to their studies. In the age groups 21–24 and 25–34 in Group 1, the break appears to come later. Single-semester students receiving student finance for several years is explained by the fact that individuals in this group may have subsequently gone on to another form of study, such as a higher vocational education programme.

Figure 22. Average income from student finance 2009–2017 for domestic new entrants autumn semester 2009 in Groups 1–5, by age group.



## Six distinct student groups

The Swedish higher education system is remarkably flexible and can accommodate students with a wide range of study intentions. It is therefore difficult to describe students at an overall level. One of the purposes of this study is therefore to describe different categories of students in general terms based on how they use higher education. Based on the data reported earlier in the report, we have been able to distinguish five such categories. Incoming students

constitute a sixth category. Table 8 illustrates what this categorisation might look like in light of the findings in earlier sections of the report.

Table 8. General categories of students based on their use of higher education.

Group	Objective of study	Need for a qualification	Type of course/programme	Break YES/NO cause Reason for returning	Age, percentage women	Form of study as new entrant	
<b>Group 1 Graduated after a break</b>	Qualification	Relatively high	Relatively short course/programme	YES: Give it a try/start work	Need for qualification	Relatively young, 65% women	53% freestanding course
<b>Group 2 Graduated without a break</b>	A qualification that leads to a specific occupation	High	Programme leading to a professional qualification, often longer	NO	--	Young, 64% women	49% programme leading to a professional qualification
<b>Group 3 Break, not yet qualification</b>	Give higher education a try/certain courses	Varies	Half programme, half freestanding course	YES: drop out/no intention of graduating	Try again/Wants to take more courses	Mixed ages, 51% women	51% freestanding course
<b>Group 4 No break, not yet qualification</b>	A qualification that leads to a specific occupation	Varies	Programme leading to a professional qualification, often longer	NO	--	Youngest group, 45% women	45% freestanding course, 34% programme leading to a professional qualification
<b>Group 5 Single-semester students</b>	Give higher education a try/certain courses	Low	Freestanding course, low percentage on programme	YES: Only interested in taking certain courses/drops out of programme	Does not return	Mature, 55% women	81% freestanding course
<b>Group 6 Incoming Students</b>	Exchange studies/ study abroad	Vary	Freestanding courses/ Second-cycle programme	YES: Return to homeland/NO (freemover)	--	See SM	See SM

## Students who acquire a qualification by trial and error

Group 1 consists of new entrants with a relatively high need for a qualification. Programmes are relatively short and new entrants are fairly young. A high percentage of women often begin their studies with freestanding courses. Student finance is relatively low. The very youngest members of Group 1 tend to discontinue their studies early; they have tried higher education and now want to do something else. Older members of the group tend to discontinue their studies later. If they return to higher education, it is probably because they need a qualification.

## Goal-oriented programme students

Group 2 is the only group in which a programme leading to a professional qualification is the most common form of study for new entrants. New entrants tend to be younger and the percentage of women higher, and the purpose of study is the award of a specific qualification. Many of these students take out student finance and they can expect a high income when they graduate.

## **Give-it-a-try students and lifelong learners**

Age distribution among new entrants in Group 3 is even. The group includes students taking freestanding courses during one or more periods, as well as young programme students giving higher education a try, many of whom quickly realise it is not for them. Gender balance is even.

If students in this group return to higher education later and then graduate, they will move to Group 1.

## **Long-term students without qualification**

The average age of new entrants in Group 4 is low; almost half are 20 years of age or younger. Men are in the majority. These students have not taken an extended break from studies during the follow-up period and as of the end of spring semester 2019 had not graduated. Those who do eventually graduate will move to Group 1. The most common form of study for new entrants is a freestanding course, although programmes leading to a professional qualification are also fairly common.

This group contains a relatively large percentage of students who probably interrupted their studies because they were offered work in an occupation that demands (specialised) expertise from higher education. Over half of the members of this group have been awarded over 180 credits during the follow-up period.

## **Single-semester students**

Group 5 consists of students who were registered at an HEI for no more than a single term and had not returned to higher education as of the end of spring semester 2019. If they do eventually return, they will move into Group 3 and then Group 1 if they graduate. New entrants in this group tend to be older than those in the other groups and just over half are women. As with lifelong learners, this group encompasses both those taking only freestanding courses and new entrants to a programme who quickly drop out. Some will move on to some other form of study.

## **Incoming students**

As our report is primarily interested in Swedish skills provision, our focus has been on domestic students. At the start of the study period, the number of incoming students among new entrants was relatively low; however, their numbers grew rapidly and by 2012 they constituted 23 per cent of new entrants to higher education. This trend has continued and by the academic year 2018/19, incoming students accounted for 27 per cent of all new entrants.

The majority of incoming students are exchange students who only study briefly at a Swedish HEI as part of a programme at a university in their homeland. Another type of incoming student is freemovers, students who arrange their own studies, usually in second-cycle

programmes. For further information on incoming students, please refer to *Higher education: International mobility in higher education from a Swedish perspective 2018/19*, UF 20 SM 2003, UKÄ and Statistics Sweden 2019.

## Higher education's contribution to skills provision

Based on the findings in this report, it is clear that Swedish higher education encompasses many different types of students who study for a variety of reasons. It is also apparent that higher education can contribute to skills provision in many different ways.

During the period we have studied, the majority of domestic students have graduated without taking an extended break from their studies. We have also identified a group that is awarded a relatively high number of credits without graduating. These individuals, together with those in Group 1 (students who graduate after taking an extended break from studies) constituted approximately 65 per cent of all domestic new entrants during the period studied. This is important to bear in mind when discussing the importance of higher education to skills provision and, by extension, Sweden's long-term competitiveness as a leading industrial and research nation.

Our analysis shows that, in certain occupations and especially engineering and technology, a degree is not the be-all and end-all when it comes to obtaining qualified employment. It is of course positive that, after several years of study, students can enter the workforce in a professional capacity that demands expertise from higher education without obtaining a formal qualification.

That said, these students miss out on developing the research competence that is often introduced when undertaking a degree project, such as academic writing, in-depth subject knowledge and research methodology. Another potential drawback is that their opportunities for international mobility may be diminished.

Another finding of our study is that it is common for those who have been awarded a qualification to return to higher education to continue their professional development. This is another contribution that higher education makes to skills provision<sup>6</sup>.

Opportunities to try higher education and relatively quickly confirm whether or not one is suited to it can also be considered positive in many regards, both for the individual and society. There are however many people who, for example, study for a qualification that will enable them to practice a regulated profession, but who fail to graduate. Many of the challenges that society is facing in terms of skills provision relate to regulated professions. If we can encourage students who have dropped out of programmes that lead to an occupation with a skills shortage to return to resume their studies, and to graduate, this would be a major improvement to skills provision.

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<sup>6</sup> Higher education institutions also offer various forms of contract education, see UKÄ's report 2020:10 *Kartläggning av lärosätenas uppdragsutbildningar*.

The Swedish Higher Education Authority (UKÄ) is tasked with strengthening higher education in Sweden and assuring Sweden's status as a knowledge society. We review the quality of higher education, analyse and follow up developments in the higher education sector and monitor legal certainty for students.

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