






Pathways to higher education for vocationally qualified students. The case of Norway

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ABSTRACT

This article investigates six pathways through which students possessing initial vocational qualifications can enter higher education in Norway. In Norway, vocational education and training (VET) tracks in upper secondary education are popular nationwide with the youth population, catering to almost half of every youth cohort. However, despite explicit goals to promote social mobility through education, there is evident reproduction of social inequalities in attraction to and completion of higher education programmes. This issue is of paramount importance for the welfare state context, given that students in VET tracks typically come from lower socioeconomic backgrounds compared to their peers in general education pathways. Therefore, prohibited permeability between VET and higher education undermines universal access to higher education. This study is designed in a threefold manner: First, the connection between VET and socioeconomic background is investigated, leading to the conclusion that underprivileged youth are overly represented in VET pathways. Secondly, we explore alternative routes to higher education available to vocationally qualified students in Norway; and thirdly, we present available data on to what extent these pathways facilitate access to higher education. We conclude that limited permeability is a social problem and discuss possible means to address the issue.

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Introduction

Norway's educational policies have a strong focus on equity, ensuring that education is accessible to all groups in society, which helps to promote social mobility (OECD, 2023). At the same time, access to higher education is formally restricted to those who have gained a higher education entrance certificate, hereafter HEEC (Norwegian Directorate for Higher Education and Skills, n.d.), normally achieved by completing an academic upper secondary education programme. However, there are also alternative pathways into higher education for students who initially chose vocational education and training (VET) in upper secondary education.

There have been notable efforts to widen accessibility to higher education in Norway, with the country showing significant progress compared to other Nordic states (Isopahkala-Bouret et al., 2018; Thomsen et al., 2017). The significance of higher education in Norway is reflected in the rising educational attainment levels across the population. Since 2020, over 50% of Norwegians at the age between 30 and 34 have held a higher educational qualification, and this share has risen from 45% in 2009 and around 33% in 2000

(Statistics Norway, table 09430). This increase highlights the commitment to educational advancement. Norway has one of the best-resourced higher education systems, with strengths including high expenditure per student and substantial financial support directly for students. This places Norway in the top quartile of OECD countries for educational investment (OECD, 2019). Believing in the substantial public benefits of higher education, the Norwegian government covers most higher education expenses, resulting in a relatively low direct financial burden on households. Education programmes at public higher education institutions are free of tuition fees, and students have access to loans and grants through the Norwegian State Educational Loan Fund (*Lånekassen*), ensuring that all eligible students can pursue higher education (OECD, 2019). This policy context underscores the necessity of accessible pathways from VET to higher education, ensuring that all students, regardless of their initial educational track, can benefit from the opportunities provided by higher education.

Despite almost universal enrolment in upper secondary education in Norway (Frøseth et al., 2008), a critical distinction remains: students who succeed in the academic track are automatically qualified for

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university admission, whereas those that qualify in a VET pathway have no direct access. The integration of VET into upper secondary education in Norway, following the reform of 1994, aimed to enhance social mobility by increasing enrolment and completion in VET programmes (Hiim, 2020; Smeplass & Schmees, 2023). Following the implementation of the reform, the number of students opting for VET has grown, and since then, nearly half of each youth cohort have chosen the VET track (Frøseth et al., 2008). While this reform succeeded in boosting initial enrolment in VET, it also exacerbated certain inequalities. Specifically, the reform did not significantly increase the likelihood of entering higher education (Bertrand et al., 2021).

This study is designed in a threefold manner: First, the connection between VET and socioeconomic background is investigated, leading to the conclusion that underprivileged youth are over-represented in VET pathways. Secondly, we explore alternative routes to higher education available for vocationally qualified students in Norway; and thirdly, we present available data on to what extent these pathways facilitate access to higher education. In summary, we present an assessment of permeability from VET to higher education in the Norwegian education system.

The paper begins by outlining the Norwegian higher education policy context regarding social mobility, followed by a theoretical discussion of accessibility as the foundation for permeability. It then outlines the methodology of the paper. We then illustrate that the VET pathway is taken by a comparatively underprivileged group, which increases the importance of subsequent permeability from an equity perspective. An analysis of the six specific pathways relevant for prospective students with initial VET qualifications is provided, supported by statistical evidence highlighting the current state of access and transition to higher education. The conclusion probes the contradiction of Norway's high levels of social reproduction amidst policies designed to mitigate them, questioning the efficacy of the existing framework.

Norwegian higher education and inequality

The Norwegian higher education system mainly consists mainly of public institutions. There are some private higher education institutions, but only about 16% of students attend these. Admission to higher education takes place via a common portal, where students rank up to 10 choices, choosing between 1,346 programmes at 27 universities and university colleges (NUCAS, 2024). In addition, there are higher vocational colleges for further education, constituting a post-secondary pathway that is not part of the higher education system (Høst & Michelsen, 2021), but nonetheless crucial for one pathway

towards higher education, as will be discussed in in this paper.

Higher education is governed by the Universities and University Colleges Act, which applies equally to public and private institutions (Ministry of Education and Research, 2024). The number of students in higher education reached almost 300,000 in 2019, increasing from 200,000 in the year 2000 (Nygård, 2022). While the most recent increase is considered a COVID-19 related trend, the steady increase over time is correlated with structural reforms to reduce the number of higher education institutions and providers (Hovdhaugen & Aamodt, 2022).

In particular, the Structural Reform (*Strukturreformen*) changed the dynamics of higher education by merging universities with colleges and university colleges (Ministry of Education and Research, 2015), encompassing larger geographical areas and incorporating multiple research and teaching cultures (Frølich, 2021). At the same time, an amendment to the Education Act (*Opplæringsloven*) ensured that anyone with a VET certificate from 2014 and onwards was entitled to receive free schooling to obtain the HEEC (Ministry of Education and Research, 2014). The purpose of the amendment was to provide a legal right to additional education for the vocationally qualified, stimulating pathways to higher education and improving their career prospects. As from 2024, another significant initiative, the Completion Reform (*Fullføringsreformen*), aims to increase completion rates in upper secondary education by offering tailored guidance, greater flexibility and enhanced support to ensure that more students achieve formalized competences (Ministry of Education and Research, 2021a; Norwegian Directorate for Education and Training, 2024).

Norwegian welfare-state policies are governed by universalistic ideals, where access to education and related social services are, in principle, available to all residents (Reisel et al., 2019). Therefore, there are few elite institutions in Norwegian higher education and access is based on general egalitarian ideas (Ahola et al., 2014). The loan and grant scheme provided by the Norwegian State Educational Loan Fund guarantees that students can live independently while studying, without the need for parental support (Levy, 2004). But even if the fund has made higher education possible for all, there is still persistent inequality linked to parents' educational level, and students from highly educated families are more likely to participate, particularly within some fields of study (H. Helland & Strømme, 2024). Despite high ambitions for educational equity, a contradiction is evident, as there continues to be strong evidence of reproduction of social inequality in education (Iversen, 2014; Smeplass et al., 2023).

Accessibility as a foundation for permeability

Despite the expansion of higher education across the European Higher Education Area, participation remains insufficiently inclusive (Orr & Hovdhaugen, 2014; Vabø & Hovdhaugen, 2014). Structures and supportive measures that respond to the diverse needs of the increasing number of vocationally qualified students in higher education can facilitate their study success and thereby promote permeability between VET and higher education (Bernhard, 2018, 2019; Smeplass, 2023a, 2023b).

In Denmark, for example, issues of apprenticeship not leading to higher education qualifications have been problematized, since this inhibits social mobility (Jørgensen, 2017). Transition programmes were therefore implemented to make VET more attractive to young people who had the ambition of attaining a university degree (Aarkrog, 2020). In response to the lack of permeability in the Nordics, several hybrid programmes that combine apprenticeships with preparation for higher education have been introduced, to counteract dead-end effects whereby VET students become less likely to attend higher education (Jørgensen, 2017). While scholars have focused on permeability as a key concept in connections between VET and higher education and the social inequalities produced by education systems, research in the Norwegian context is significantly less extensive. In fact, only a few empirical studies have been conducted since the millennium (e.g. Helland & Støren, 2011; Orr & Hovdhaugen, 2014; Vabø & Hovdhaugen, 2014).

Permeability can be conceptualized in terms of access to educational sectors and organizations, recognition and validation of learning from previous educational sectors, connections in terms of organizational linkage between educational sectors (e.g. integrated curriculum, double qualification) and support structures which meet the diverse needs of learners (cf. Bernhard, 2017, Chapter 2). As Bernhard argues, all four dimensions are relevant for pursuing permeability in an education system. However, these four dimensions can also be imagined as a pyramid, where one follows the other: if there is no formal access, the last three dimensions have no function (cf. Figure 1). We therefore argue that access is the most important dimension to start with. For this reason, we restrict ourselves to analysing access from VET to higher education in Norway. The 'access' criterion is used to analyse the formal barriers

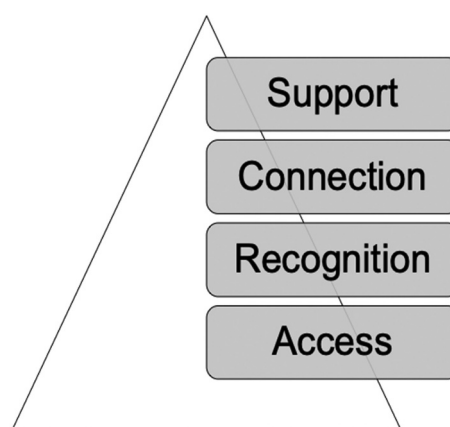


Figure 1. Criteria for permeability.

to entering a programme. Here, we can further distinguish how open the admission process is, in the sense that more people can apply without any required preconditions. Secondly, we can distinguish how selective admission is, i.e. the likelihood of being admitted to a programme (cf. Table 1). A similar distinction was used by Haj et al. (2018) in their categorization of different dimensions of admissions systems in Europe, based on a project for the European Commission. In the following, the four possibilities as a result by crossing openness and selectivity are presented.

(1) First, we can distinguish between extreme forms of openness, such as those practised by open universities around the world. Here, no formal requirements have to be met to gain admission. Instead of predicting the probability of success for a given student on the basis of their prior qualifications (*ex ante*), this model determines the readiness of a given student by their actual performance during their actual studies (*ex post*). If students succeed in their studies, they are allowed to continue; and if they fail, they drop out. Critics of this model are concerned about the higher costs of this system, as well as the 'wasted' time of unsuccessful students. But so far, there is no reliable calculation of how much a university would save by streamlining the admissions process. Moreover, hiring more academic staff to serve students is more in the nature of a university than large administrative units to process admission. In addition, the loss of competences, skills and career opportunities could be cited as an effect of the barriers for the vocationally qualified. Furthermore, the 'higher costs' are assumed rather than calculated. (2) Secondly, there are admission systems based on

Table 1. Dimensions of the 'access' criterion.

		Openness	
		Open	Closed
Selectivity	Non-selective Selective	Extreme forms of openness (1) University entrance tests (3)	HEEC with formal division between VET and general education (2) HEEC and university entrance test (4)

previous schooling or other qualifications (Becker & Hecken, 2009). In most systems, there are clear boundaries between initial VET qualifications and general upper secondary qualifications. Although both are placed at the same qualification level – usually level 4 in the European Qualifications Framework, EQF – the VET qualification does not grant direct access to most higher education systems. This difference still represents a formal division between VET and general education. (3) Thirdly, there are admission systems based on entrance tests. The most famous of these is the higher education system in the United States of America (for a description and discussion, cf. Zwick, 2019). Here, everyone is free to take a test to gain admission to university. (4) Fourthly, there are also combined admission systems. Admission to the Chinese higher education system, for example, is based on an examination (高考, gāokǎo) and the successful completion of upper secondary education (cf. Wang, 2010). Finland has a similar system, by requiring students who seek access to universities to compete on the basis of the matriculation exam, rather than their upper secondary education grades (Hovdhaugen et al., 2022).

While in Norway, university entrance with a higher school leaving certificate from upper secondary school can be placed in group 2, the access for people with an initial VET qualification is complex. While the VET qualification in itself is, in most cases, not sufficient, several qualification pathways are open to be subsequently pursued as will be outlined.

Methodological approaches

This study primarily uses a descriptive approach and secondary data analysis (Smith, 2008) to explore the pathways from VET to higher education in Norway. By synthesizing data from various sources, the study aims to present a comprehensive overview of the existing pathways and their implications for social mobility and educational equity (Watkins, 2022). The primary data sources for this study include the Norwegian Database for Statistics on Higher Education (DBH), reports edited by Statistics Norway and various policy documents from the Ministry of Education and Research. These sources were chosen for their comprehensiveness and relevance to the research topic. Data was obtained through systematic searches and retrievals from DBH (2023, 2024) and Statistics Norway's online repositories. Policy documents were accessed directly from the official websites of the Ministry of Education and Research and other relevant governmental bodies.

The data collected from these sources was used to illustrate and support the pathways identified in the study. Descriptive statistics from DBH and Statistics Norway provided insights into the number of students using each pathway, completion rates and demographic information. Policy documents offered contexts and detailed descriptions of the pathways and their intended outcomes. To ensure the validity and reliability of the study, data was cross-referenced across multiple sources, to verify their accuracy and consistency (Golafshani, 2003). While there is generally limited published research on the specific pathways from VET to higher education in Norway, the sources utilized in this study are considered reliable and of high quality. This includes government databases and official reports, which are recognized for their accuracy and comprehensiveness. The study adheres to ethical guidelines for the use of public data. All data utilized is publicly available and has been used in accordance with its respective terms of use.

In addition to this, we used administrative data made accessible by Statistics Norway to (1) document the prevalence of alternative ways of entering higher education for students with a background in VET and (2) investigate differences in socioeconomic status between higher education students originating in the academic track and the VET track, respectively. In particular, we used the Norwegian education database, short NUDB (Vangen, 2007). This register includes all educational activity and results at all levels of the Norwegian educational system, linked with background variables such as parents' educational level when students are aged 16, immigration background and home municipality. This information is used in the analysis, where we compare the social origin of students who completed upper secondary education in a VET programme, an academic programme or through the supplementary programme available to students who switch from the VET to the academic track in order to gain HEEC. For these analyses, we measure educational activity three years after starting upper secondary education and employ data for the 2014 to 2016 cohorts measured in 2016 to 2019.

In order to categorize different pathways to access higher education, we used administrative data from the Common Student System (*Felles studentsystem*,¹ FS). The formal admission qualification of the admitted student can be found in this data. The qualification is set by administrative staff, and includes information on, for example, whether the student was admitted on the basis of a higher vocational college degree. These analyses focus on students attending a higher education institution in the autumn of 2022. The formal definition and coding of different entrance qualifications is available on request.

Vocational upper secondary education as a pathway for underprivileged youth

VET in Norway tends to attract underrepresented groups, including students from lower socioeconomic backgrounds and ethnic minorities (Halvorsrud, 2017). Several studies have shown that the choice of track in upper secondary education is very strongly linked to socioeconomic background and ethnicity (Støren & Helland, 2009; Strømme, 2020). Figure 2 below illustrates the difference between students choosing different pathways in upper secondary education. Students following the academic track are more likely to come from families with higher educational qualifications, while VET students are more likely to have parents with lower levels of education, VET or solely compulsory education. Students who have started in VET but changed their course of study to the academic track by taking the supplementary programme (explained in subsection 6.1), lie in between. This is also evident when considering the average grades from lower secondary education for these three groups. Students in academic programmes have the highest average, at 4.54 (on a scale from 1 to 6, where 6 is highest); and VET students have the lowest average, 3.61; with students in the supplementary programme lying in between, with 3.85 as the average grade for their group.

Background influences the choice of higher education (Hansen, 2005; H. Helland, 2006) and departure from commenced programmes (Hovdhaugen, 2009), as completion of upper secondary school is also strongly connected to social background (Statistics Norway, 2024a). In Norway, students' grade point average (GPA) in lower secondary school is a significant predictor of dropout rates in upper secondary education, highlighting the interplay between academic performance and social inequality. Research

indicates that GPA not only reflects individual academic achievement, but is also influenced by students' social background, contributing to educational disparities (Markussen et al., 2008, 2011).

While one in four students who started VET achieve HEEC within five years of starting upper secondary education, the success rate in their study programmes differ from those who initially chose the general track. Students from the academic track have a success rate of 70% within five years of their studies, while students from the supplementary programme have a significantly lower achievement rate (61%). This difference highlights how disparities in foundational education can propagate to higher education, affecting not just access, but also completion rates across different educational pathways (Statistics Norway, 2020).

The data presented in Figure 3 highlights the relationship between parental education levels and the higher education participation rates of their children over time. Figure 3 shows the share of Norwegian residents aged 19 to 24 who attend higher education, broken down by parents' level of education from 1992 to 2021. The data reveals a consistent trend whereby students whose parents have higher levels of education are more likely to attend higher education themselves. Specifically, participation rates are highest among those whose parents have a long-cycle higher educational degree (e.g. medicine, law, master's degree), followed by those with parents who have a short-cycle higher educational degree (bachelor's), and significantly lower among those whose parents have only upper secondary or compulsory educational qualifications. This trend has persisted over the years, illustrating the enduring impact of socioeconomic background on educational attainment. But as Caspersen and Hovdhaugen (2014)

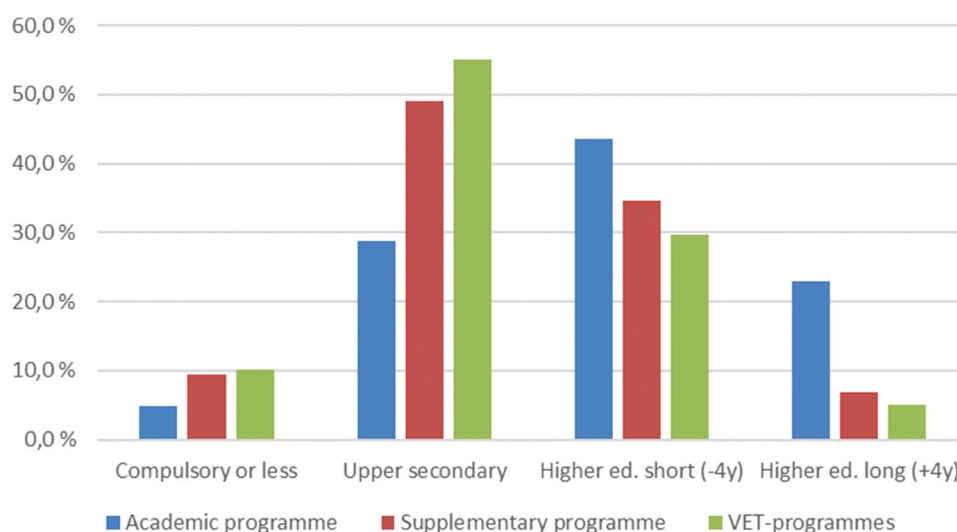


Figure 2. Educational level of parents of students taking the academic track, the supplementary programme or the VET track. Source: Statistics Norway, analysed by the authors

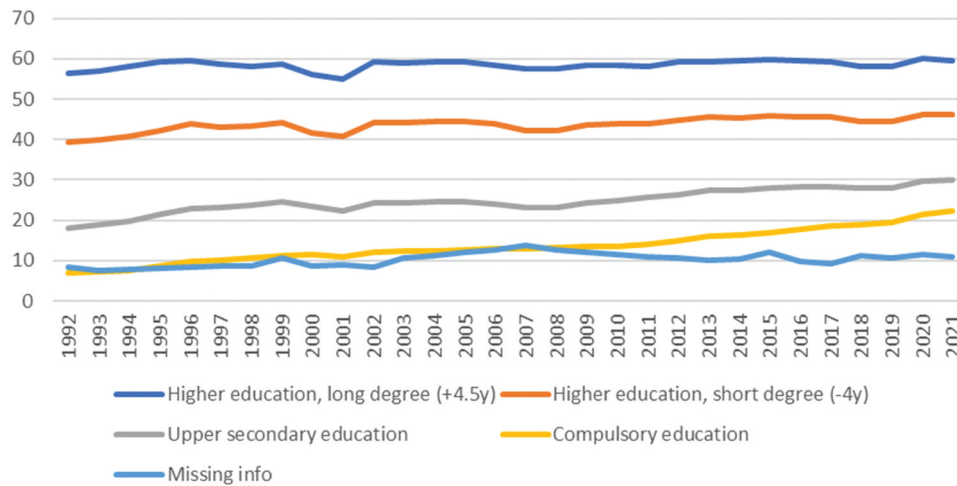


Figure 3. Share of residents in Norway aged 19–24 who attend higher education, by parents' level of education from 1992–2021. Source: Statistics Norway, 2022

argue, the disparities between students coming from families with and without higher educational qualifications are smaller in 2021 than they were in 1992, as students from non-educated families are more likely to continue to higher education today, and the share of students from families with higher education who attend higher education has been stable over time. However, there is still quite a large disparity, as students from families with long-cycle higher education are five times more likely to study than students from families with only compulsory education.

Studying pathways to higher education for vocationally qualified students in Norway therefore sheds light on the welfare state's efforts and challenges in promoting social inclusion through education. Despite Norway's strong policy framework aimed at equity, significant barriers remain for the vocationally qualified, and analysing these pathways reveals how policy measures align with ideals of social mobility and educational access, providing crucial insights for improving future strategies to reduce educational disparities

Pathways from vocational to higher education

HEEC is the general basis for admission to higher education in Norway (Norwegian Directorate for Higher Education and Skills, n.d.). The Universities and University Colleges Act in Norway stipulates that the requirement for general study competence is 'completed and passed secondary education with the requirements for subject composition and time distribution set by the ministry' (Ministry of Education and Research, 2022). Accordingly, HEEC is the most common way into higher education and requires documented completion of general upper secondary education that includes six subjects, namely

Norwegian, English, Social Science, History, Mathematics and Natural Science (Moafi & Sundberg, 2021; NUCAS, 2024). Competition for admission is based on grades from upper secondary education, and students apply through a common system. The regulations governing the current definition of what constitutes HEEC were established by the Ministry of Education and Research in 1995, and the subject requirements have, with minor changes, been the same since then (Ministry of Education and Research, 2022). Before 1995, universities and specialized universities could set their admission rules themselves, while the Ministry of Education and Research set the rules for the college sector (Ministry of Education and Research, 2019).

As shown in Figure 4, the Norwegian education system also offers possibilities for students who initially chose the VET pathway in upper secondary education. In total, six pathways to gain admission to higher education are currently offered (discussed in the following subsection 5.1 to subsection 5.6): (1) Students who have completed two years of VET in upper secondary education can opt for the supplementary programme in school instead of proceeding to a two-year apprenticeship scheme, giving them HEEC. (2) The Y pathway (*Y-veien*), where Y stands for *yrkesfag*, the Norwegian term for 'vocational subject', is specially designed for students with a trade certificate in engineering disciplines in order for them to study without a loss of time. (3) Some specific study programmes have designed one-year courses that prepare and qualify students with initial VET qualifications for entering higher education, mainly within the technical field. (4) Holders of a trade certificate can also directly enter a higher vocational college. From there, general study competence can be gained upon successful completion of a two-year programme leading to level 5 EQF. (5)

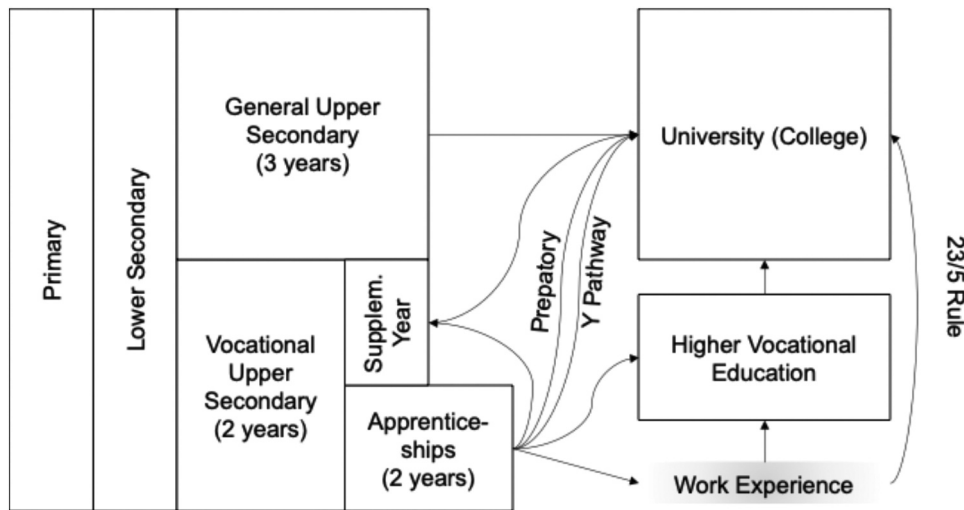


Figure 4. Overview of the pathways in the Norwegian education system.

Table 2. Share of students who have gained admission through various alternative routes, compared to the ordinary route for admission, in autumn 2022.

	Count	Percentage
Ordinary admission	196,805	78.3
Supplementary programme	38,725	15.4
23/5 rule	8,942	3.6
Higher vocational college	1,592	0.6
Y pathway*	1,174	0.5
Preparatory courses for technical fields	312	0.1
Recognition of prior learning	3,655	1.5
Total	251,205	100.0

*Admission to engineering for trade certificate holders in technical fields. Source: Based on registration of qualifications in the Common Student System (*Felles studentsystem*, FS).

Through the 23/5 rule – meaning that the students are aged over 23 and have at least five years’ relevant work experience – admission to higher education is also possible, as long as they have completed the subjects required for HEEC. (6) Lastly, recognition of documented prior work and/or learning

experience is possible, in order to gain admission to higher education. Table 2 displays how common these routes are, compared to ordinary admission (after completion of an academic track programme). Table 3 provides an overview of the assessment of the different pathways.

Supplementary programme

The supplementary programme is an increasingly attractive option for students who want to combine a VET track programme with getting admission to higher education by gaining the HEEC (Skålholt & Hovdhaugen, 2023). Internationally, these set-ups are usually subsumed under hybrid qualifications (Deißinger et al., 2013). The supplementary programme consists of all the subjects that VET students have not already taken to fulfil the requirements for HEEC. This is the most significant pathway for VET students, as one in four VET

Table 3. Comparison of the six types of higher education permeability options in terms of their contributions to social mobility.

	Target group	Extra study time	Assessment
Supplementary programme as third year	Academically strong students who opted for VET at first.	No extra time.	Significant, but without a completed VET qualification.
Post-apprenticeship supplementary programme	Academically strong students who completed their VET qualification.	Two years longer compared to the academic route.	Limited, as the apprenticeship qualification is not recognised.
Y pathway	Students with initial VET qualifications in selected professions.	Usually, no extra time is needed as the required courses can be taken during studies.	Limited, as the pathway is designed for specific (often technical) professions.
Preparatory courses	Students with initial VET qualifications in selected professions.	Usually, one year of extra full-time study is needed after the initial VET qualification.	Limited, as the pathway is designed for specific (often technical) professions.
Higher vocational colleges	Individuals who want to further enhance their careers.	Usually, two extra years (full-time) for a higher VET qualification is required.	Limited, as the pathway recognises VET, but requires an additional two years of full-time study.
23/5 rule	Individuals who want to continue their studies without general study competence.	Must be aged above 23, and have 5 years of practice.	Medium, as students have to wait until they are 23, but no extra study time is required.
RPL	Students who have not completed an upper secondary programme for any reason.	Must be aged above 25 and have obtained experience from documented practice	Medium, as it is decided case-by-case, but no extra study time is required, and VET qualifications can be recognised.

students achieve HEEC through this way (Bratholmen, 2019). There are two options for which the supplementary programme can be instrumental. It can be pursued after the initial first two years in VET (1), or after obtaining the trade certificate (2). However, pursuing the first pathway means that no VET qualification (trade certificate) will be gained.

(1) *Supplementary programme as third year*: As shown in Figure 5, the supplementary programme was increasingly popular from its implementation in 1994 until around 2008, since when the proportion taking this route has been stable at around 20% of a cohort of VET students. Of the students who start this pathway, a study found that only 6.2% of these candidates actually wanted to take an apprenticeship, but could not get it. Hence, the great majority of students taking the supplementary programme were planning to do this, as 84% explained that they wanted to enter into higher education (Markussen & Gloppen, 2012). (2) *Post-apprenticeship supplementary programme*: After the supplementary programme was introduced, students who had completed a trade certificate were able to take this programme in order to gain admission to higher education. From 2014 onwards this was made part of the statutory right to upper secondary education (Ministry of Education and Research, 2014), and as visible in Figure 5, this made this opportunity to gain HEEC slightly more popular.

In summary, the supplementary programme is a significant pathway whereby VET students can achieve general study competence. This route, pursued after the initial two years of VET or after receiving the trade certificate, is increasingly popular, and

accounts for around 20% of students admitted to higher education programmes every year.

Y pathway

The Y pathway is designed for VET students in technical fields, such as electrical engineering as well as building and construction, to be able to pursue their studies at a higher education institution. It was established to increase recruitment to engineering studies while facilitating the transition from VET to higher education without acquiring a general study programme. It started as a pilot scheme between 2002 and 2007. The political rationale was the need for engineers in the Norwegian economy. Also, there was available capacity at several colleges. However, the Y pathway is only available for those who have completed the two-year apprenticeship scheme and have therefore received a trade certificate (Utdanning, 2024b). At its core, the Y pathway provides courses that are parallel to the higher education studies. This is why the Y pathway allows for completion of the bachelor's degree in three years – without any additional time loss. It is important to note that the Y pathway does not provide general study competence, but is limited to the subject area of the trade certificate.

Statistics Norway (2021) reports that in higher education, only 1% of incoming students enter higher education through the Y pathway. The Y pathway is thus effective for specific trades, but does not generalize across disciplines, offering limited broader social mobility.

In summary, the Y pathway, tailored for engineering disciplines, allows those who have completed the VET

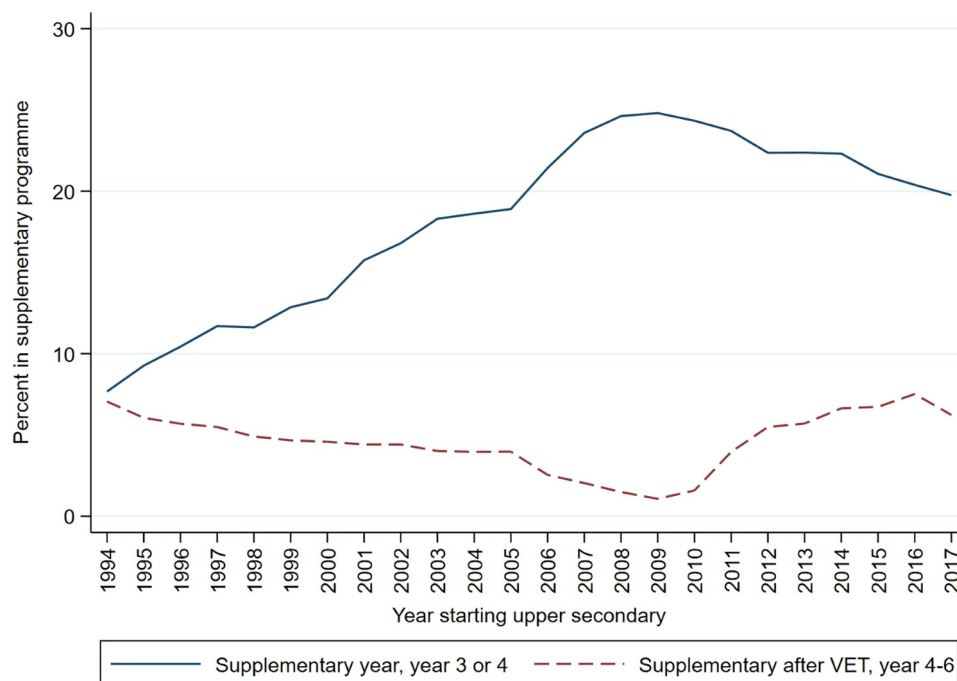


Figure 5. Share of VET students taking the supplementary program.

Source: Statistics Norway, analysed by the authors

route to pursue higher education without additional time loss. Established to meet the demand for engineers.

Preparatory courses

The difference between preparatory courses and the Y pathway is that preparatory courses require an extra year before entering engineering studies. Those who complete a preparatory course can apply for the education programme they have prepared for; there is sometimes a quota for this group of students. Students in this pathway qualify for student loans during their studies and are registered students at a higher education institution. However, they are not guaranteed a place on the course they prepare for and must compete with other students on the basis of their grades and other additional accomplishments. A trade certificate gives the applicant a slight benefit. The curriculum for a preparatory course is determined by the Norwegian Association of Higher Education Institutions (UHR). Currently, seven higher education providers (both universities and university colleges) provide these courses in engineering, marine engineering and nautical engineering, while one college has a special pathway in service management and marketing (Utdanning, 2024b; 2024a).

In 2021, there were 653 registered students on preparatory courses (Ministry of Education and Research, 2022), while our data indicates that in the autumn after, in 2022, only 312 students were taking preparatory courses. Hence, generally very few students took the opportunity to access higher education through preparatory courses. These courses provide tailored academic preparation, but have a narrow scope, limiting their broader impact.

In summary, preparatory courses offer another route to those with a trade certificate, requiring an extra year of study before entering higher education. Although valuable for specific fields, their low enrolment numbers highlight a limited broader impact.

Higher vocational colleges

It is also possible to enter universities and university colleges as well as specialized universities, through higher vocational colleges. More specifically, it is possible for those who have completed vocational college education with a scope of 120 ECTS credits (equivalent to two years of study) at level 5 EQF to enter higher education (NUCAS, 2024).

The proportion of students in higher vocational education has doubled in the last couple of years, but from an initially low number from 15,000 to 30,000 (Norwegian Government 2023a). Nationally, there are 60 vocational colleges (DBH, 2024), run by a mix of public and private providers under national

supervision (NOKUT, 2024). Higher vocational colleges provide training programmes lasting six months to two years, and have a variety of entrance requirements, often a VET certificate or equivalent. However, it is only the longer, two-year programmes that qualify for admission to higher education.

Table 2 indicates that using higher vocational college to access higher education is rather uncommon, and only 1,592 of admitted students used this pathway. It is, for instance, a challenge that education at level 4 and level 5 EQF are formally assessed equally for admission to higher education, and that more complicated assessments of real competence are needed to differentiate between various competences. Higher vocational colleges are valuable stepping stones, but require additional time and investment.

In summary, higher vocational colleges provide an entry point to higher education through additional vocational training. These programmes, regulated by national standards, require substantial investment and time, and their effectiveness in promoting social mobility into higher education requires further research, due to a lack of comprehensive data.

23/5 rule

The 23/5 rule is designed to give students who have not completed academic upper secondary education an opportunity to gain the HEEC required for admission to higher education. This rule was introduced in the first joint regulation on HEEC, effective from the admission of 1996/1997. The regulation was based on St.meld. (White Paper) no. 33 (1991–92), which stated that adults should still be able to achieve HEEC based on other means than completed secondary education (Ministry of Education and Research, 2022). Previously, colleges had a similar rule, while universities operated with a system of individual assessment. Hence, if a person has completed the required number of hours in the six subjects included in HEEC, in addition to having five years of practice, they can apply on the basis of this rule. Persons who reach the age of 23 or are older during the admission year achieve general study competence if they can document that they have passed the six subjects required for study competence (NUCAS, 2024). In addition to education and work experience, the five-year practice requirement can also be met through documented reduced work capacity, care of children or adults, completed military or civil service, volunteer work and participation in the introduction programme for newly arrived immigrants. Education includes subjects passed in secondary education, education from folk high schools and higher education courses passed (Ministry of Education and Research, 2022).

In 2021, around 5,500 applicants with general study competence were registered based on the 23/5 rule, accounting for 3.9% of the qualified applicants (Ministry for Education and Research, 2022). Our data in Table 2 shows that among registered students, 3.6% had gained admission this way. The 23/5 rule enhances higher education access for mature students, contributing positively to social mobility, particularly for those who have gained substantial work experience.

In summary, the 23/5 rule enhances access for mature students, allowing those with sufficient work experience and partial upper secondary education to apply for higher education, given that they have completed the six required subjects to gain HEEC. This pathway contributes positively to social mobility, and is a route commonly used by those who did not finish upper secondary education when they were younger (19 to 20 years old).

Recognition of prior learning

Assessment and RPL is a pathway for students above the age of 25 that enables students to apply based on their documented experience (Norwegian Directorate for Higher Education and Skills, 2024). The pathway is designed to enable recognition of the competences that adults have acquired in arenas other than through upper secondary education (Norwegian Directorate for Education and Training, 2023). Recognition of prior learning involves assessing how other experience can compensate for the lack of formal training. This scheme is important at several levels of the education system because it allows people from other countries, or those who have not completed Norwegian education for various reasons, to have opportunities to study or to gain recognition of other relevant competences. It also ensures that candidates who have become qualified to study through other forms of knowledge and competence acquisition can apply for higher education programmes (Smeplass, 2024). This practice has great relevance for VET, as a large proportion of those seeking RPL have a background in VET. The basis for this pathway is reinforced by the Bologna process and by the European Union's emphasis on real competences as equivalent to education (European Commission, 2021). In these cases, educational institutions can grant dispensation from the general study competence requirement. This provision was incorporated into the admissions regulation in 2003. It is not a general dispensation, but an exemption that applies to admission to a specific study programme, which entails that the higher education institutions must in each case assess the documented competences of the applicant. The institution must make a specific assessment of whether the student is

qualified for the specific study programme they are applying for, and the applicant must document that they have the necessary academic qualifications for completing the study programme. Hence, this pathway can only give a student admission to the specific programme they apply for.

In 2021, there were 3,001 applicants wishing to be considered for RPL. This represents 1.9% of the total number of applicants that year. Of these, under half were found to be qualified, and 620 RPL applicants enrolled in a study programme in autumn 2021. The difference can be explained by many not reaching the ranking threshold, while not all who received offers attended the start of studies. Table 2 shows that 1.5% of admitted students entered using RPL. An NIFU report from 2018 shows that in relation to the total number of applicants for higher education, applicants through the recognition of prior learning represent a very limited group; and this applies to both the centralized and the local admissions processes. In the centralized admissions process, the proportion of applicants through the recognition of prior learning has decreased from nearly 4% to around 2.5%, and in the local admissions process, from 2.5% to just over 1% (Olsen et al., 2018). When assessed based on these requirements, 80% of these students are found to be qualified through the national system, while 70% are found to be qualified when they apply locally. However, the pathway is governed locally and limited to specific education programmes, meaning that the assessment cannot provide access to other study programmes. Actually, only 44% respectively 60% are offered a place to study. This track is important for VET teacher training programmes, for example, where more than half of the applicants are assessed under this rule; and moreover, more than 80% are considered to be qualified and are offered a study place (Olsen et al., 2018).

In summary, RPL is crucially important for non-traditional students, enabling them to apply based on their documented experience. This pathway is significant for VET students, but is limited by local governance and specific programme applicability.

Conclusion and outlook

In this paper, we have analysed pathways from VET to higher education, as VET in Norwegian upper secondary education can be seen as a pathway for the underprivileged. Our aim was to map possible pathways and to assess their reach and effectiveness in facilitating the transition from VET to higher education.

Our theoretical framework emphasizes the concept of permeability, which is crucial for understanding the links between VET and higher education. Permeability encompasses four dimensions (Bernhard, 2017), of which we selected

‘access’ as the other dimensions cannot function effectively without this criterion being in place. Therefore, focusing on improving access to higher education is the most important, although not sufficient, step.

Norway offers several pathways for VET students to transition to higher education: the supplementary programme in the third year and after completing the apprenticeship, the Y pathway, preparatory courses, higher vocational colleges, the 23/5 rule and RPL. We show that these pathways vary in their reach and effectiveness. While one in five students entering higher education does so through the supplementary programme, several of the other pathways (Y pathway, preparatory courses and higher vocational colleges) serve only a small number of vocationally qualified applicants. Only the 23/5 rule and RPL can be considered as having a somewhat wider reach and therefore impact on students with initial VET qualifications. Taken together, this highlights the challenges of achieving significant permeability and social mobility for those with vocational qualifications. In addition, it is difficult to obtain data on the different access routes to higher education for students with a VET background, as neither data nor statistics are readily available. This, combined with the fact that some of the pathways are not widely used, makes it difficult to monitor permeability in Norway.

This leads us to conclude that although there are opportunities for the vocationally qualified to enter higher education, Norway still has a long way to go in terms of supporting further education after initial VET. In our view, Norway has not invested enough in higher VET and few programmes build on VET in a satisfactory way. A politically initiated strategy aimed at professionalizing upper secondary vocational education and providing higher VET with standardized governance and quality assurance requirements is expected to result in a white paper in 2025 (Ministry of Education and Research, 2021b; Norwegian Government, 2023b). It is still unclear whether the expansion of upper secondary vocational education will lead to these programmes being classified as higher education. If not, these pathways may only be a limited complement to the VET system and may not support permeability into higher education for groups of students who are already underrepresented.

The Norwegian case shows that despite the intention to promote inclusion in higher education through permeability, a variety of factors still seem to prevent students with a VET background from using higher education as an opportunity for further learning. We project that these pathways will become even more important in the future, as trends show an increasing interest in higher education in general.

Note

1. <https://sikt.no/tjenester/felles-studentsystem>

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