



More flexible Vocational and Professional Education With the Covid-19 and the Completion Reform as context

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Abstract

The purpose of this article is to discuss vocational training and education in the light of the Corona pandemic and the proposed completion reform. The Covid-19 pandemic has led to both unemployment and a shortage of labour, and apprentices are not allowed to complete their apprenticeships contract because companies closed down. Import infection is also a problem that is exacerbated by the fact that we have become dependent on labour immigration for basic necessary societal tasks. At the same time, in recent years there have been reports of large applications for vocational subjects. How is it related, and what is the problem?

In the school year 2020-21, there were 246,838 students, apprentices and apprentice candidates in upper secondary education. Of these, 45,300 were apprentices and apprentice candidates, which is 19.7%. The low proportion is not due to few applicants for vocational subjects, but few opportunities to complete their studies in the program they chose. The problem has been known for a long time and is due to a rigid link between training in school and compulsory vocational training in a company. It has never worked as intended when it was introduced. Many companies also lack good systems for training new employees based on their actual skills. Instead, companies choose to take shortcuts” and import labour.

The right to adapted education also does not work well for those who choose vocational subjects. Instead of being forced into a tight race, students should to a greater extent be able to choose subjects along the way, such as a predominance of practical subjects from the first school year. Such an arrangement is easier to achieve in school.

Furthermore, it is pointed out that higher education has become longer, more theoretical and less adapted to working life. The good experiences from the Y-road should be extended to more subjects, and higher vocational education should be available to everyone regardless of subject background.

The completion reform will contribute to more flexible vocational education and should be followed up with more vocational guidance also in higher education. The challenge will be to ensure relevant practice.

Keywords: vocational education, vocational competence, Covid-19, completion reform



1. Introduction

More knowledge out of the population's talent was the slogan for the Norwegian school reforms in the 1990s (NOU 1988: 28). Everyone was given a statutory right to three years of upper secondary education and reforms were implemented in higher education. Everyone had to complete, either with a trade certificate or study qualifications (Act, 1998). For the latter group, the goal is far from being achieved. But for those who choose vocational subjects, a problem over a hundred years old remains unresolved: too few apprenticeships and few other opportunities to complete a vocational education as the purpose of the vocational school once was (Lov, 1940; Aakre, 2019). The Covid-19 pandemic has exacerbated the problem by discontinuing apprenticeships when companies close. It provides a good opportunity to reflect on vocational education in Norway. How can the Completion Reform now contribute to more vocational competence out of young people's talent (KD, 2021)?

Since 1994 vocational education in Norway has been based on a dual system for the most part: Two years of theoretical and practical training in schools, followed by two years of apprentice training in a company (Lov, 1998, Chapter 3 and Chapter 4). In the two years of training in a company, the apprenticeship receives a regulated and one year is counted as regular work practice. The intention with the scheme was good. However, the scheme has also been discussed and criticized. Research and several studies have pointed to few available apprenticeships, a low completion rate and a large drop-out rate (Markussen, 2019; Aakre, 2019; Hernes 2010). Furthermore, in recent years there has been an increasing focus on higher vocational education and more relevant practice in higher education (NOU 2014:14; Government.no, 2018, p. 61).

2. Method

This is a qualitative study based on structured searches and analysis of relevant research literature and written after the school reforms of the 1990s (Bryman, 2012 and Charmaz, 2014, p.45).



Analysis of research literature gives us the opportunity to identify previous research and the findings it has made within a field. By comparing and comparing research with different perspectives, one can develop suitable topics and relevant categories for one's own research. It stimulates to raise new questions that one can pursue to gain a deeper understanding of a phenomenon. Based on such analyzes, one can also formulate syntheses and new theories (Strauss & Corbin, 1990, p. 50).

Selection of sources was set up in three steps: preparation, implementation and summary of findings in the form of relevant research (Pullin and Stuart, 2006). In addition to research literature, statistics, public documents from school reforms, curricula and debate posts on the topic were used. In step 1, the problem was formulated and criteria for source search were developed based on relevant themes and key concepts. In Step 2, delimited searches were performed using logical functions. From this source material, sources were selected and data extracted for further analysis. In step 3, a quality assessment of the source material was made before it was used as a basis for writing a text.

3. Status of facts

In the public debate on vocational training and vocational education in Norway, we encounter different and sometimes conflicting narratives. Furthermore, terms such as vocational subjects, vocational training and vocational education are often used in ways that can be misunderstood. In recent years, for example, there have been reports of great progress for vocational subjects in upper secondary education, that more apprenticeships are being created and that higher vocational education is now to be given priority. This is preferably done in advance of applying for education every year, or in connection with elections since education is an important political issue (NTB, 2020). But it is unclear what the various actors consider to be vocational subjects. At one point, they refer to vocational education in general terms and then talk about vocational training and trade certificates as if it were the same thing. But it will be wrong.

The Education Act operates with three competences concepts: study competence, vocational competence or basic competence (Lov, 1998, § 3-3). Study competence is obtained after



completing and approving a study preparation program. The concept of professional competence is somewhat more vague. In most cases, it is a combination of passing vocational training in school and passing vocational training in a company with a vocational or journeyman's certificate as a certificate of competence. However, it may also have passed some vocational subject in school, but without a certificate, and possibly acquired study competence through an extension year or equivalent. In addition, we have the category of basic competence which is at a lower level than vocational or study competence. In the latter category, the candidates receive a certificate of competence that documents which parts of the training have been completed. In Norway, the number is relatively high compared with many other countries (Aakre, 2019, p. 68).

Vocational education is used for higher vocational education that is at the level above upper secondary education, for example vocational education (Act, 2018, §4). It can also be about other higher education, for example the Y-road for candidates with a trade certificate (Aakre and Hagen, 2011). However, this scheme has to a small extent been further developed to include subjects other than engineering education. The term can also be used for more vocational education at a higher level, but we have few of these in Norway compared with many other countries.

Statistics Norway states that a total of 246,838 pupils, apprentices and apprenticeship candidates attended upper secondary education in the 1920-21 school year (SSB, 2021). Of these, 48,502 were apprentices and apprentices. If we use it as a starting point, there is only 19.7% in vocational training with a trade certificate or equivalent. This is in contrast to recent years' stories of how successful vocational training has now become.

If we use the degree of implementation, another and often discussed problem arises. Now almost 90% of the students from pre-study programs complete, but still only about 60% of the students from the vocational programs. In recent years, the degree of completion of vocational subjects has risen somewhat, but if we see the number of approved trade certificates in relation to the entire cohort of students, almost 25% have been approved after 5 years. The main reason is that many are guided into vocational programs without a guarantee of an apprenticeship and the opportunity to complete the education they started on.

Looking at the last twenty years as a whole, there is only a modest progress to be traced for vocational training. The largest growth has been in health and upbringing subjects, which in



the beginning were not apprenticeships. Even with an increase in the public sector, one is far from meeting the need in this area as well. This in itself suggests that it is time to discuss vocational training and vocational training on other premises than what has been the tone of the review since the last major reform in 1994.

A positive feature, however, is that a few more subjects can now be completed in school. But these candidates face resistance in working life (ElogIT, 2018). This applies, among other things, to the vocational acquisition scheme for those who want to transfer to vocational subjects from study preparation subjects. Similar reactions have come to the Red Party's proposal for a reverse vocational subject. It is also reported that the companies will not employ candidates with training in school. On the contrary: In many countries, all vocational training takes place in school, or in combination with placement, without it being claimed that it is worse. There are in fact examples of more than 90% moving to jobs where they receive the necessary specialization. In this way, they gain early professional experience rather than going as "unskilled" until well into adulthood (Aakre, 2017).

The worst cases are those who are left out of both education and work for a long time. Many of them went awry with choosing a vocational subject without getting an apprenticeship, or other opportunity to continue a practical and vocational education. Some people also need adapted training, which can be difficult to achieve outside of school. They have few rights and no strong organizations behind them and end up in the category of «social dumping».

4. New ways to vocational education

Vocational training with apprenticeships in companies has its qualities that must be retained. But the Norwegian model where young people at the age of fifteen have to choose a career is too rigid. It is characterized by a technical and rational way of thinking far from young people's world of life. When many do not get an apprenticeship or other good alternatives, it becomes even more difficult. Furthermore: Norwegian companies seems lack good tradition of training outside the apprenticeship system as we find in some other countries (Streitlien and Aakre, 2019).



Vocational training in schools and vocational training with apprenticeships in companies both have their strengths and weaknesses. They should be able to complement each other.

Vocational training in schools is easier to organize and the right to adapted training is easier to fulfill with teachers who have an education for it. On the other hand, it is difficult to recreate authentic work situations in school, and access to modern aids and equipment is often a problem. But a lot can be done in the form of relevant practice along the way and training in the companies after finishing school.

For those who are sure of their career choice at the end of upper secondary school, a vocational program in school with subsequent apprenticeships is a good arrangement. But the scheme is also sensitive to economic conditions and other events. During the pandemic, it also turned out that many apprentices were not allowed to complete because the company had to close or go bankrupt (WorldSkills, 2020). One possible solution is to coordinate admissions to vocational programs with apprenticeships, possibly with apprenticeships in school, as there are proposals for KD (2021). But in some professional circles there is great resistance to the latter.

The weaknesses are also expressed in the form of differences with regard to gender, geography and social background. In the Oslo area, where construction is large, only 20% choose vocational subjects, while in Finnmark, where construction is small, 70% choose vocational subjects. This means that within the construction industry on a national basis there is both a shortage of labor and unemployment within the same industry. At the same time, there is a report of a shortage of both teachers and nurses in areas of the country where few take higher education. This suggests that one should be careful about guiding young people into certain occupations where the need can vary greatly over a few years. The main principle should be to help young people make good choices based on their own interests. Fluctuations in working life should rather be compensated with good training programs in companies.

Other challenges are differences in gender, subject, geography and social background. In the vocational subjects, the gender differences are still large and the distribution in different subjects has been fairly stable over a long period of time. Among girls, 80 per cent complete upper secondary education within 5 years, while the proportion among boys is 68 per cent. The gender differences are significant and in the girls' favor both in vocational subjects and in study-preparatory education programs.



In health and upbringing subjects, there is still a large predominance of girls. In 2017, only 29% of students from health and upbringing subjects had obtained a certificate after five years. A significant reason is the lack of apprenticeships. On the other hand, as many as 38% of the students in this group obtained study qualifications. Formally, they are then not qualified for a position as an auxiliary nurse or child and youth worker.

On the other hand, there is a positive effect of this that many of these students choose a vocational path to higher education where they become nurses or kindergarten teachers, which is also much needed. Then it is a bigger problem that as many as 33% did not achieve full competence after five years and that 9% of these were still in training.

In comparison, construction is still a male-dominated profession, although somewhat more girls have applied for these subjects in recent years. Construction is perhaps also the subject that has profiled itself most in the media in recent years due to strong growth in the industry and demand for skilled labor. It is also an industry characterized by hired labor and a number of suspected unscrupulous actors linked to social dumping. The latter probably has a negative effect on the application for the subject. In addition, one must take into account that it is an industry where the unemployed or employees on leave are also reported from time to time, which complicates the picture.

In recent years, the construction industry has implemented several measures to recruit better, including through schemes in secondary schools and promises of more apprenticeships. But the increase in the number of apprenticeships is not as high as companies are trying to convey to the public as their statistics are not based on actual needs, nor the number of students who have entered Vg1. Instead, they report an increase in the number of applicants for apprenticeships. It has increased from 66% to 71%, while the real need for apprenticeships is significantly higher. In reality, this means that only about 60% have actually received an apprenticeship contract.

Statistics from Statistics Norway show that 50% of the students in building and construction obtained a trade certificate after five years in 2017, and that as many as 41% had not achieved full competence in the subject. Of these, 11% were still in training. Of the students in building and construction, 9% had obtained study qualifications after five years.



Electrical engineering, which is called electrical and computer technology after 2020, is the subject area with the most stable application, the most apprenticeships and a high degree of completion. This is because they have a long and strong tradition of training, both through the apprenticeship scheme and in the form of continuing education under the auspices of the industry.

Among the new programs that seem to be growing well are Sales, Service and Tourism. A new structure has also been changed after the professional renewal in 2020.

High occupational participation is necessary to maintain and finance welfare schemes in Norway. In other words, this is about sustainable development. For the individual, work is important for being financially independent, for personal development and as a social arena. There is broad political agreement on the goal of high employment.

Surveys indicate that a workforce with only primary school or study preparation from upper secondary school has the most difficulty in finding a job. Adults without completed primary school or upper secondary education are particularly vulnerable in the labor market. Lack of basic skills can be a problem both in terms of getting a job or qualifying for a job. Based on the PISA survey, it is assumed that 15–20 per cent of 15-year-olds have not acquired sufficient basic skills. But one should be careful not to place too much emphasis on such assumptions.

5. Higher vocational education and "the master decease"?

Short and more practically oriented studies in higher education have been lost and replaced by 3-year bachelor's degrees. This is due to the fact that Norway has come the furthest in implementing the Bologna Process, which was initiated in 1999. The aim has been to coordinate and develop joint measures and policies for higher education in Europe (EHEA, 2021).

As a replacement for the short and more practical courses of half a year and a half in the former colleges, we should get higher vocational education with a more practical structure that is accessible to everyone, regardless of subject background. A strengthening of the



vocational schools is positive, but the target group is primarily candidates with a trade certificate or with long practice. With study preparation subjects, it should also be possible to choose a polytechnic rather than a more theoretical bachelor's degree. The education should be adapted to a degree system that easily makes it possible to study further for those who want it.

In some countries, including Japan, they have long had an "associate degree" for equivalent education of one to two years. But it is easier there since vocational subjects at the upper secondary level have a larger element of common subjects at the level of general study competence in Norway. This makes transitions to higher education easier (Aakre 2019).

Another alternative is the Y-road, which has proven to be a good scheme. But the potential has not been further developed to include more subject areas (Aakre, 2011). An extension of the scheme would contribute to a more vocational education in universities and colleges.

"Master's disease" is another phenomenon that has emerged in the wake of the Bologna process when the somewhat longer majors were replaced by shorter master's degrees. But presenting it as a problem is a derailment. Surveys clearly show that most people get a job and are often preferred instead of others with a lower degree. To the extent that it is a problem, one should rather prevent wrong choices and ensure good recruitment to occupations that are needed (Waalder, 2018). For example, there are more unskilled teachers in schools than in any other profession (SSB, 2021-b). The need for nurses is also greater than what it is trained for.

One should also facilitate better internship schemes for those who want to go out to work rather than study further. But here one encounters a problem that many companies lack a good tradition of training. New employees are expected to go straight into the work tasks that are available.

Furthermore, some educations have been expanded with a master's degree in order to improve quality, for example teacher education. But practice was not a priority. A 5-year model with integrated education was chosen without the possibility of a year or two in practice before the actual master's thesis. A dichotomy would give the education a better foundation in practice and give the candidates experience that they could bring with them into practice-oriented research in the master's thesis. In short: another example of how vocational guidance and anchoring in practice often have to give way to more theory.



6. Competence in a changing labor market

The labor market is changing and when many of those who are now in education have finished, there will be both new professions and new work tasks. In special circumstances such as a pandemic or similar crisis, the changes may be larger and more unpredictable. Under such conditions, we must also learn to develop and use the manpower available and the skills people have rather than importing labor. All education must therefore be aimed at improving young people on tasks we do not know and not just tasks that are known in advance. Young people should also be prepared to create jobs themselves and not specialize too much in established subjects. This suggests that parts of the education should be more general, revolve around solving new problems and to a lesser extent specialize in known tasks. This can happen because those who do not get an apprenticeship get a greater element of entrepreneurship in their training, especially at Vg3.

Population talent must be assumed to be more or less equal advantage. There should therefore be no reason why Norway has a completion rate of 70%, and for some vocational subjects even lower, while other countries have an implementation rate of 95% and higher. The added value is what we manage to provide through the distribution of knowledge and work. We know, for example, that immigrants with a good education have to wait longer to get a job. Some go so far as to change their name to avoid being disqualified in the application process.

The combination of unemployment and labor shortages that we experienced with the corona pandemic has many causes. This is partly due to the fact that Norway is part of a common labor market through the EEA agreement. But that is not the whole explanation since we also get workers from distant countries such as Vietnam and Thailand. The problem is that we do not utilize the expertise we have in Norway by, among other things, making it easier for seasonal work and work in industries with low earnings.

Health and social services and education are the occupational areas where the demand for skilled workers is greatest and where the most unskilled workers are employed, about 10% in 2018. The problem is largest in the northern part of the country and in areas outside the big cities. As a result, we have had a new debate about differences between the city center and the periphery. The trend is confirmed by the fact that there are few unemployed in these



occupations. Projections of the need also indicate that the problem will persist for years to come.

The construction industry has had problems finding enough skilled labor in recent years. But the picture is somewhat more nuanced because an industry has also reported many unemployed in parts of the country. This may be related to geographical differences in recruitment to the profession. A lot of construction activity takes place in or around the big cities where the proportion of students in vocational subjects is low.

Some similar applies to agriculture, forestry and fishing. Food, including the fishing industry, is an industry in this group with a lot of seasonal work and hired labor. The combination of low wage levels and seasonal work is a problem for which one must find one's own solutions. First, one must do something about the wage level. If the other gets it, one must find schemes that make it possible to combine seasonal work with other work. In Norway, we have a cost level that means that one must have a stable income throughout the year.

Hotels and tourism struggled to recruit qualified workers, but the corona pandemic has turned the situation in this industry upside down. We can hope that the trend can reverse when the pandemic is over.

Finally, it may be relevant to ask which qualifications the companies demand and which competencies will be important in the future? We have both Norwegian and foreign surveys to rely on. Norwegian companies state that they emphasize experience / competence, personal qualities, commitment, relevant education, references, and social qualities. These are so-called "traits" that originate from psychological tests, but which are less suitable for describing actual competence for specific tasks.

In 2018, the OECD made some recommendations to Norway about which expertise is important. They focus more on skills and not qualities, and include, among other things, analytical thinking, collaboration, adaptability, subject-specific skills, entrepreneurship skills, problem solving and initiative. In their survey, they distinguish between recommendations from educational institutions and representatives of working life. The differences in opinion are small, but the representatives of working life place somewhat greater emphasis on analytical thinking, collaboration skills and subject-specific skills. Educational institutions, for their part, are clearly more concerned with critical thinking.



Which educations are best to provide such competence? Here it is the combination of competencies that decides. A plumber or electrician must be able to do the job and carry out the work professionally and in accordance with regulations. Critical thinking will not be able to compensate for lack of skills. On the other hand, one can say that the order of the factor is indifferent: it should be possible to acquire technical skills after a more general and theoretical education, preferably through adapted practice along the way. It is also seen that some vocational educations face competition from labor with higher education. Hotels, tourism and service is one example, which is related to requirements for competence in language and cultural understanding. The problem is therefore not as simple as recruiting more students to vocational subjects. A better⁴ alternative is to think in terms of lifelong learning (LLL) where a combination of vocational education and higher education becomes more common in a lifelong perspective.

7. Discussion and conclusion

The Corona pandemic has given a new dimension to the exchange of words about vocational training and vocational education in Norway. It has led to both unemployment and a shortage of labor, and apprentices are not able to complete their apprenticeship training because their company close due to lockdown. Import infection is also a problem that is exacerbated by the fact that we have become dependent on labor immigration for basic need like food production, transportation etc. At the same time, in recent years there have been reports of many applicants for vocational programs, but few available apprentice contracts. What challenges do this present?

Inaccurate use of terms and statistics is one of the reasons one. The authorities would like to promote vocational subjects on the basis that there is a shortage of skilled labor in some industries. They have also implemented various measures and with their rhetoric will bring out possible results of these measures. A few years ago, there was a clear distinction between training that leads to study competence and a trade certificate, respectively.

In recent years, the story has been about distinguishing between a purely study-preparatory program and all other training as a vocational subject. The category vocational subjects then includes both sports subjects and all other practical and aesthetic subjects, and all those who



have completed a vocational subject program, but without completing the education. None of these have taken a trade certificate. Then the calculation becomes completely different with only modest progress for vocational subjects. In the school year 2020-21, for example, there were 246,838 students, apprentices and apprentices in upper secondary education. Of these, 45,300 were apprentices and apprentice candidates, which is only 19.7%. This is in contrast to the reports that there are now more applicants for vocational subjects than for study preparation subjects.

On the other hand, it is positive that general vocational competence from school education is valued in the public discourse. The vocational subject that has had the greatest progress is health and upbringing subjects. It was basically not an apprenticeship. It was carried out in its entirety in school in combination with placement and follow-up from the school. That scheme should return to all subjects as an alternative to vocational training in working life. Only then will everyone have the opportunity to complete education in the subject they have chosen. Furthermore, working life must adapt to those who take training in school and provide the specialization that is typical of the individual company.

Furthermore, this survey confirmed that very many do not complete upper secondary education in the subject they are starting in. They change subjects along the way, or do not get an apprenticeship. Many do not complete the training at all. This is largely due to a link between school education and vocational training in working life that does not work as intended when it was introduced in 1994.

The right to adapted education also does not work well for those who choose vocational subjects. Instead of being forced into a tight race, students should to a greater extent be able to choose subjects along the way, such as a predominance of practical subjects from the first school year. Such an arrangement is easier to achieve in school.

Reverse vocational education is also an idea that has been launched. This may involve a transition from study preparation subjects to vocational subjects, but can also be thought of as simpler transitions between subjects and programs, as indicated in the section above.

Furthermore, it is pointed out that higher education has also become longer, more theoretical and less adapted to working life.

As a replacement for the short and more practical courses of half a year and a half in the former colleges, we should get higher vocational education with a more practical structure and which is available to everyone regardless of their subject background. A strengthening of



the vocational schools is positive, but the target group is primarily candidates with a trade certificate or long practice. With study preparation subjects, it should also be possible to choose a polytechnic rather than a more theoretical bachelor's degree, and the education should be adapted to a degree system that is simple and makes it possible to study further for those who wish to do so.

The Y-road, which has proven to be a successful scheme, should also be further developed and adapted to more subject areas than engineering subjects. It would contribute to a more vocational education in universities and colleges.

All in all, this suggests that we need a more flexible and sustainable vocational education at several levels in Norwegian society. The completion reform will contribute to more flexible vocational education and should be followed up with more vocational guidance also in higher education. The challenge will be to ensure authentic and relevant practice. Those who do not get an apprenticeship should get a greater element of entrepreneurship in their training, especially at Vg3.

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