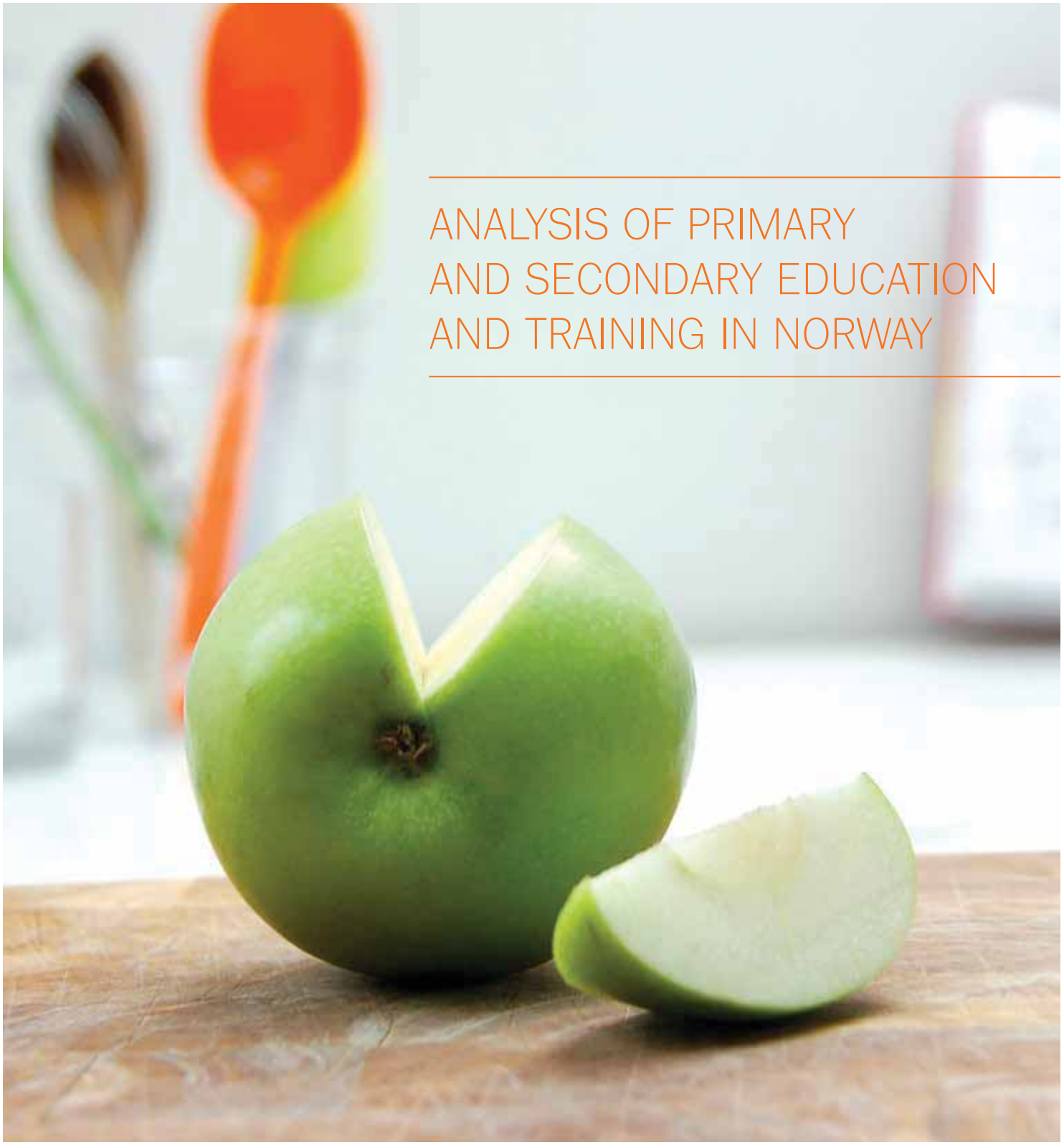
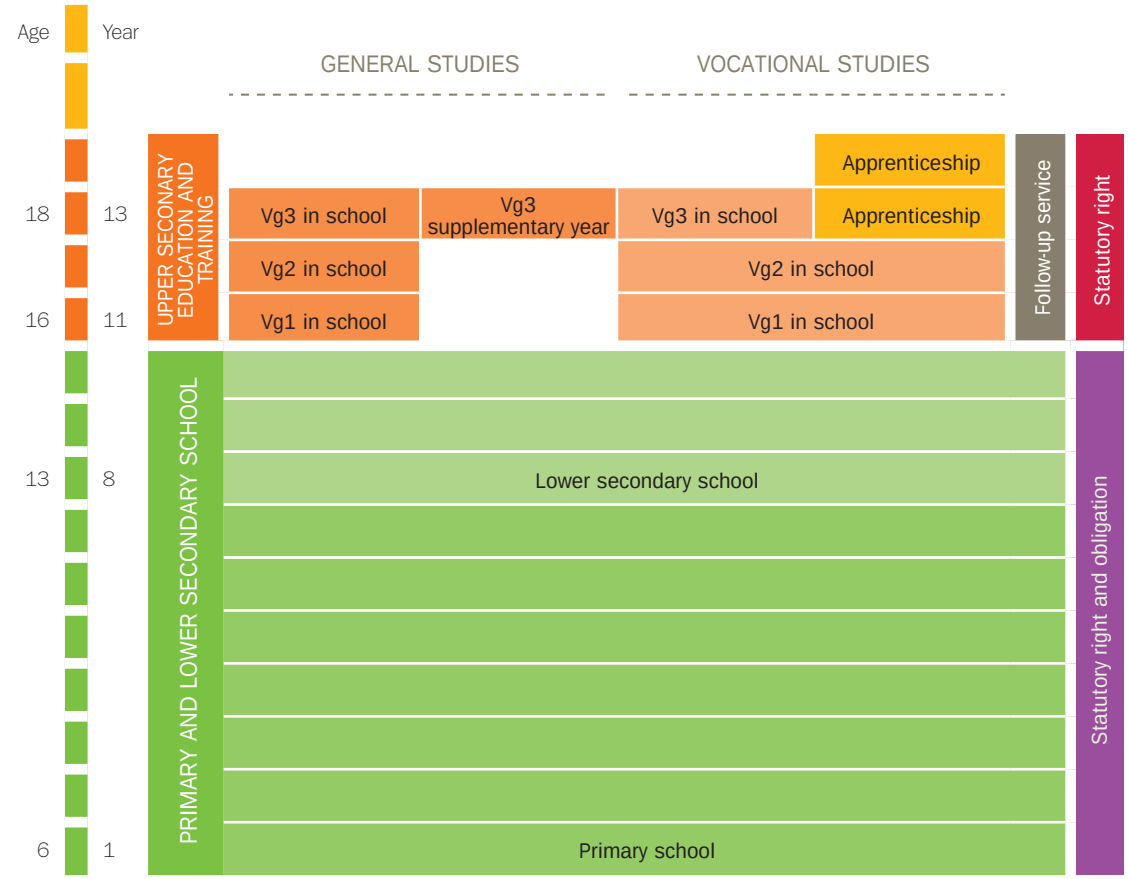
Norwegian Directorate
for Education and Training

The Education Mirror 2012



ANALYSIS OF PRIMARY AND SECONDARY EDUCATION AND TRAINING IN NORWAY

PRIMARY AND SECONDARY EDUCATION AND TRAINING IN NORWAY



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Foreword

The Norwegian Directorate for Education and Training has the task of giving political authorities, sectors and the general public good, up-to-date knowledge about the state of the Norwegian education system. In The Education Mirror 2012, we give you a bird's-eye view of what is happening from the time one-year-olds start going to a day-care centre until they make the important educational and career choices that determine what they are going to do later in life.

At the start of the new year, the Norwegian Directorate for Education and Training assumed responsibility for many important tasks in the day-care field. We are happy to already be able to present key information for quality assessment, documentation and analysis in this area in this edition of The Education Mirror.

The introductory chapters present quantitative facts about various aspects of primary and secondary education and training. Chapter 3 deals with learning outcomes. In Chapter 4, which deals with the learning environment, we take a closer look this year at the topic of class management. More and more educators regard good class management as an important key to success in the school system. This is also a key priority area in the follow-up of the Report to the Storting on lower secondary school.

Chapter 5 deals with completion of upper secondary education and training. This year, key figures are presented for the county follow-up service. This service works with young people who are entitled to education and training, but who are neither in education and training nor employed. One of the factors that helps determine whether we achieve the goals of seeing that more pupils shall be able to complete upper secondary education and training is whether the follow-up service succeeds in its work. For the first time in Chapter 5, we have also added a separate section about the situation in the labour market for newly trained skilled workers. In Chapter 6 about quality improvement in vocational education and training, we provide a glimpse of the efforts at developing a more systematic way of working on quality improvement in the vocational education programmes.

As mentioned, the final chapter deals with the day-care centres. It is an important milestone for the Directorate for Education and Training that we have already included a chapter about day-care centres in The Education Mirror this year. One of the challenges for the central government authorities in this sector is that our platform of knowledge is not good enough. Our aim is to develop a reference document for the state of the day-care centres like the one we have succeeded in creating for the schools.

The development of an even better education system in Norway can only occur if we have and make use of up-to-date information and knowledge. We hope and believe that The Education Mirror 2012 is an important contribution to so doing.

> OUR AIM IS TO DEVELOP A REFERENCE DOCUMENT FOR THE STATE OF THE DAY-CARE CENTRES LIKE THE ONE WE HAVE SUCCEEDED IN CREATING FOR THE SCHOOLS.

Happy reading!

Dag Thomas Gisholt
Director

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Read about the learning environment and class management at Biri Lower Secondary School.

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Read about Bjerkås Day-Care Centre and about how they work with the youngest children.

1

Facts about primary and secondary education and training

This chapter presents statistics that describe the facts about primary and secondary education and training in Norway. Here you will find an overview of school structure, number of pupils and the breakdown of pupils in various education programmes and subjects in upper secondary education and training. This chapter also presents data on apprentices and on adults in primary and secondary education and training as well as the development in the use of special needs education and Basic Norwegian for language minorities.

PRIMARY AND LOWER SECONDARY SCHOOL

Primary and lower secondary school is a 10-year education and is divided into primary school from Years 1 to 7 and lower secondary school from Years 8 to 10. Primary and lower secondary school are based on the principle of equal and adapted education and training for everyone. All children and young people shall share a common knowledge, culture and value base. Primary and lower secondary education and training is free and is mainly financed by the municipalities.

§ **2-1 OF THE EDUCATION ACT:**
Right and obligation to attend primary and lower secondary education

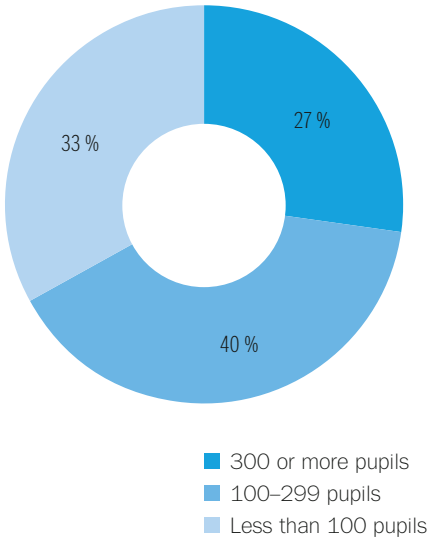
Children and young people are obliged to attend primary and lower secondary education and have the right to a public primary and lower secondary education in accordance with this Act and regulations pursuant to the Act. The obligation may be met by means of publicly maintained primary and lower secondary schools or by means of other equivalent education.

1.1 WHAT CHARACTERISES A TYPICAL NORWEGIAN PRIMARY AND LOWER SECONDARY SCHOOL?

In the autumn of 2011, there were 3,000 primary and lower secondary schools in Norway, This was 28 fewer schools than in the autumn of 2010. In 2001-2002, there were 344 more primary and lower secondary schools than there are at present. The main picture is that Norwegian schools are becoming fewer and larger.

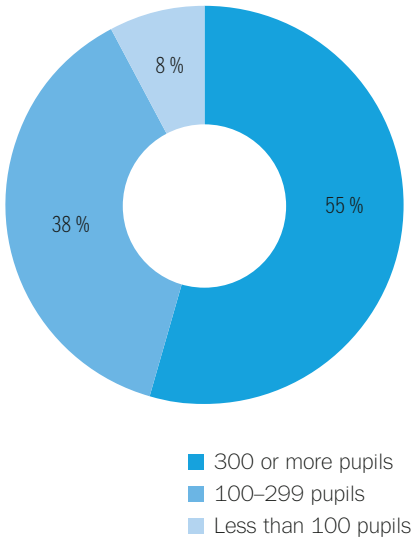
A Norwegian primary and lower secondary school had an average of about 200 pupils in the autumn of 2011. 27 per cent of the primary and lower secondary schools had over 300 pupils. The percentage of *pupils* who attend schools with 300 or more pupils has increased in the last decade. In the autumn of 2011, 55 per cent of the pupils attended schools with more than 300 pupils. By comparison, 49 per cent of the pupils attended schools of this size in 2001-2002. The increase in the number of schools with more than 300 pupils has levelled off in the past year. Nevertheless, there has been a substantial decline in the last decade in the number of schools with fewer than 100 pupils. This trend has also slacked off somewhat in the past year. 8 per cent of the pupils went to schools with less than 100 pupils in the 2011-2012 school year.

FIGURE 1.1 Breakdown of small, medium-sized and large primary and lower secondary schools. 2011-2012. Per cent.



Source: The Primary and Lower Secondary School Information System (GSI)/The Norwegian Directorate for Education and Training

FIGURE 1.2 Breakdown of pupils in small, medium-sized and large primary and lower secondary schools. 2011-2012. Per cent.



Source: The Primary and Lower Secondary School Information System (GSI)/The Norwegian Directorate for Education and Training

WE ABANDON THE CONCEPTS OF SPECIAL SCHOOLS AND MAINSTREAM PRIMARY AND LOWER SECONDARY SCHOOLS

In previous editions of The Education Mirror, the primary and lower secondary schools in Norway were divided into the categories of mainstream primary and lower secondary schools and special schools. Pupils at the special schools were only included in the data if this was specified. We have now abandoned this distinction and are using the concept "primary and lower secondary school" to include both schools that were previously referred to as mainstream primary and lower secondary schools and schools that were previously referred to as special schools.

Hereafter, data that is presented will include all pupils that are enrolled in Norwegian primary and lower secondary school, regardless of the type of school in which they are enrolled. In this year's edition, pupils enrolled in special schools are included in all of the data that is presented here, including data for previous years. The data from further back in time is therefore comparable. Thus, data from previous years that is presented here will depart from the previous editions of The Education Mirror and other publications.

There are many reasons why this change was carried out. The organisation of special needs education (SNE) into special schools is not mentioned in the Education Act. Special schools are not significantly distinguished from separate departments for special needs education at mainstream primary and lower secondary schools, and the extent to which the organisation is carried out in the one way or the other can vary among municipalities.

Source: The Norwegian Directorate for Education and Training

Schools are closed and the pupils are transferred to existing schools

From the 2010-2011 to the 2011-2012 school year, 54 primary and lower secondary schools were closed. 46 of these were municipal, 6 were private, 1 was county and 1 was a state school. At the same time, 26 new primary and lower secondary schools were opened. 8 of these were municipal, 13 were private, and 5 were county schools.

When primary and lower secondary schools are closed, it looks as if the most common pattern is that the pupils transfer to existing public schools rather than that new private schools are established. This was supported by a survey conducted in the spring of 2010, which showed that the most common reasons for school closings were a low number of pupils, a poor municipal economy and the desire to improve resource utilisation (Norwegian Directorate for Education and Training 2010a). We have based these figures on Statistics Norway's definition of a school. In order for a unit to count as a school in a year, there shall be at least one pupil at the school. This entails that units that provide instruction without any pupils having permanentaffiliation there, will not be regarded as a school in this context. For example, this may include hospital schools, etc.

The increase in the number of private primary and lower secondary schools has levelled off

In the 2011-2012 school year, 165 private primary and lower secondary schools were approved in accordance with the Private Education Act and were entitled to state funding. 5 more primary and lower secondary schools were approved in accordance with the Private Education Act than in the previous year. In addition, 7 private schools were approved without the right to government grants

THE PRIVATE EDUCATION ACT AND THE EDUCATION ACT

Private schools are approved pursuant to the Act relating to state grants to private schools offering primary and secondary education (the Private Education Act) or Sections 2-12 and 3-12 of the Act relating to primary and secondary education (the Education Act).

Schools approved pursuant to the Private Education Act shall conduct their activities on the following basis: religious, approved educational alternative, international, specially adapted upper secondary education and training in combination with top-level sports, Norwegian primary and secondary education and training abroad or specially adapted education and training for disabled persons. The requirement concerning a special basis do not apply to already approved schools that were in operation by year-end 2007 (Section 5-2 of the Private Education Act).

Private schools approved pursuant to the Private Education Act receive subsidies from the state amounting to 85 per cent of operating expenses in public schools (Section 6-1 of the Private Education Act). An approval as a private school pursuant to Sections 2-12 or 3-11 of the Education Act does not result in subsidies from the state.

(Section 2-12 of the Education Act). These include international and foreign schools in Norway.

The number of private primary and lower secondary schools increased rapidly from 2001-2002 (101 private primary and lower secondary schools) to 2005-2006 (155 private primary and lower secondary schools). Since 2005-2006, the increase in the number of private primary and lower secondary schools has levelled off. The increase in private primary and lower secondary schools from the 2001-2002 to the 2011-2012 school year was 70 per cent. In 2003, the Private Education Act was replaced by the Independent School Act. The Independent School Act did not require that the schools had to be operated on a specific basis. It was repealed in 2007 and replaced with a new Private Education Act, which reintroduced the requirement that the schools must be operated on a specific basis in order to be approved.

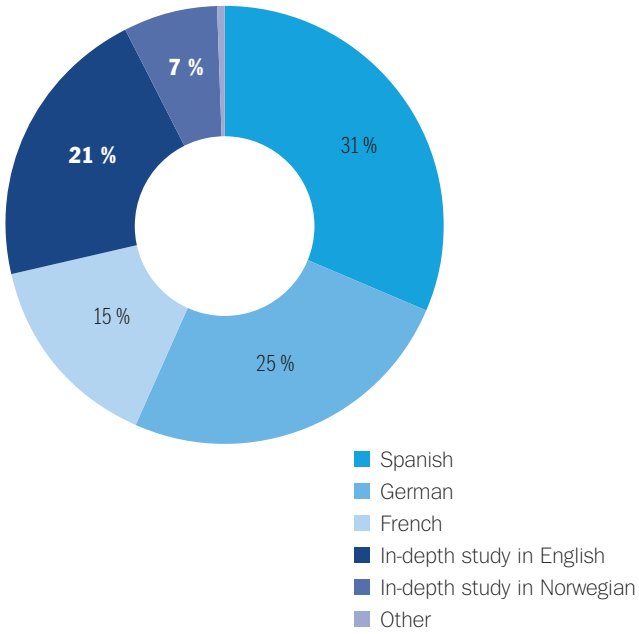
Nearly 3 per cent of the pupils in primary and lower secondary school attended a private primary and lower secondary school in the 2011-2012 school year. In the 2001-2002 school year, that percentage was a little less than 2 per cent. On the average, the private primary and lower secondary schools have fewer pupils than the public schools. 66 per cent of the private schools have less than 100 pupils, compared with 27 per cent of all of the primary and lower secondary schools in Norway.

The county with the highest percentage of pupils in private schools is Oslo with 5 per cent, followed by Vestfold, where 3.8 per cent of the pupils attended a private school. In Sogn og Fjordane County, only 0.3 per cent of the pupils attended a private school. The private schools are mainly concentrated around the largest cities. In Oslo, Bergen and Trondheim, the percentage of pupils attending private schools is about 5 per cent. In Vest-Agder County, however, the percentage is lower in Kristiansand than in the surrounding areas.

1.2 HOW IS THE NUMBER OF PUPILS CHANGING IN PRIMARY AND LOWER SECONDARY SCHOOL?

In October 2011, there were 614,413 pupils at public and private primary and lower secondary schools in Norway, 1,566 fewer than in 2010. At the national level, the number of pupils was quite stable during the last ten years, but there are large regional differences. The number of pupils has increased most in Oslo and Akershus County by 15 and 12 per cent respectively in the last ten years. The number of pupils has decreased by 10 per cent in both Finnmark and Nordland counties. Migration to centrally located areas is the main reason for the regional changes in the number of pupils (Statistics Norway, Population statistics).

FIGURE 1.3 Foreign languages and in-depth language studies in Years 8-10. 2011-2012. Per cent.



Source: The Primary and Lower Secondary School Information System (GSI)/The Norwegian Directorate for Education and Training

§ **SECTION 1-8 OF THE REGULATIONS ASSOCIATED WITH THE EDUCATION ACT:**
Education and training in foreign languages and in-depth language studies in primary and lower secondary school

In addition to education and training in English, the pupils in lower secondary school shall be given education and training in another foreign language or in-depth language studies in English, Norwegian or Sami. When a pupil has chosen either a foreign language or in-depth language studies, the pupil shall normally take the subject throughout all of lower secondary school. After education and training in a foreign language and in-depth language studies begin, the pupils may change to a different language during the first half year after consultation with the school. When special grounds so dictate, the school owner may approve such a change of language at a later point in time.

Marked increase in the number of primary and lower secondary school pupils up to 2020

The number of children of primary and lower secondary school age is expected to increase from 617,000 in the autumn of 2011 to 668,000 in 2020 (Statistics Norway 2011c). The number of pupils in primary and lower secondary school is expected to remain stable in the period from 2012 to 2014 and then to rise again up to 2020. The growth will mainly be in the primary schools, where the number of pupils will increase from 425,000 in the autumn of 2011 to about 473,000 in 2020. The number of pupils in the lower secondary schools will increase from 193,000 to about 195,000 in 2020.

In twelve of the counties, an increase is expected in the number of children of primary and lower secondary school age up to 2020. The largest increase will be in Oslo, Akershus, Rogaland and Hordaland counties. In Oslo, nearly 15,000 more pupils are expected in 2020 than in 2011.

1.3 WHAT SUBJECTS ARE THE PUPILS CHOOSING IN PRIMARY AND LOWER SECONDARY SCHOOL?

In lower secondary school, the pupils can choose from among various foreign languages or in-depth language studies in *Norwegian, English* or *Sami*. At some schools they may also choose *working life skills*.

Spanish is still the most popular 2nd foreign language

Most pupils in lower secondary school chose foreign languages in the autumn of 2011. The most popular 2nd foreign language is still *Spanish*. 31.4 per cent of the pupils who took a 2nd foreign language or in-depth language studies chose that language. In addition to the major languages that are indicated in Figure 1.3, a small number of pupils are also taking languages such as *Italian, Russian* and *Sami* in-depth. The breakdown of pupils taking the various languages has changed little in recent years.

Many are changing over from a second foreign language to in-depth language studies.

When a pupil has chosen either a foreign language or *in-depth study in Norwegian, English* or *Sami*, the pupil shall normally take the subject throughout all of lower secondary school. Under certain circumstances, the pupil may change his/her course at a later point in time. Almost 14 per cent of the pupils who took *Spanish* in Year 8 in 2009–2010 had chosen to stop taking this subject by the time they attended Year 10 in the 2011–2012 school year. Many pupils who chose *German* and *French* also changed subjects. About 13 and 11 per cent respectively of those who chose to take these languages in Year 8 did not take that subject in Year 10.

Pupils who stop taking a second foreign language usually change over to in-depth study in *English* or *Norwegian*. The percentage of pupils who choose in-depth language studies increases significantly from Year 8 to Year 10. Among pupils who began in Year 8 in the 2009–2010 school year, about 25 per cent chose in-depth study in *English* or *Norwegian* instead of a 2nd foreign language. When these pupils reached Year 10, i.e. in 2010-2011, the percentage with in-depth study in English or Norwegian had increased to 35 per cent. The largest number of changes in language subjects occurred between Years 8 and 9.

3,908 pupils were given an exemption from a 2nd foreign language in 2011–2012. Pupils may be given an exemption from a 2nd foreign language if they are given training in *Finnish* as a 2nd language or *Sami* as a 1st or 2nd language, or if they have an individual decision on special needs education (SNE).

Many boys choose working life skills

4,435 pupils in 139 schools chose *working life skills* in the 2011–2012 school year. Fully 67 per cent of the pupils were boys. The greatest number of pupils who have chosen *working life skills were in Year 9*. In the autumn of 2011,

WORKING LIFE SKILLS

Working life skills began as an experiment in the 2009-2010 school year. After the experiment has been evaluated and the findings summarised in 2013, it will be decided whether the subject shall become a permanent part of the curriculum. Working life skills shall be linked to vocational tasks from the nine vocational education programmes in upper secondary education and training, but adapted to the lower secondary level. At schools that have chosen to offer working life skills, the subject can be chosen as an alternative to a 2nd foreign language and in-depth study in Norwegian (for pupils with a different mother tongue) and English. The number of schools that offer the subject has been sharply increased since the programme commenced. Starting in the 2011-2012 school year, all primary and lower secondary schools that so desire can apply to begin offering this subject.

Source: The Norwegian Directorate for Education and Training

20 per cent of the pupils in Year 9 attended the relevant schools. By comparison, 18 per cent of the pupils in Year 8 and 4 per cent in Year 10 attended. The uneven distribution among the Years was due to the broadening of the experiment.

So far, the experiences show that pupils and teachers are very satisfied with the content and implementation of *working life skills*, but it is too early to conclude whether the subject has had the desired effect. Pupils who choose working life skills are mainly boys with somewhat lower than average marks and who want more practically oriented instruction in school (Bakken et al. 2012).

OPTIONAL SUBJECTS

Starting in the autumn of 2012, 8 new optional subjects will be offered in lower secondary school. They will gradually be introduced at the start of Year 8 in the autumn of 2012. Starting in 2014, optional subjects shall be introduced throughout the entire lower secondary school.

Source: The Norwegian Directorate for Education and Training

§ **SECTION 1-14 OF THE REGULATIONS ASSOCIATED WITH THE EDUCATION ACT:**
Offer of subjects from upper secondary education and training to pupils in lower secondary school

Pupils in primary and lower secondary school should follow the education and training in all subjects as specified in the curricula for the Knowledge Promotion Reform, cf. Section 1-1. However, this does not apply in full to the subjects of Mathematics, English, foreign languages, Science and Social Studies for pupils in lower secondary school who have sufficient competence to follow the education and training in one or more of these subjects at the upper secondary level in accordance with the curricula for the Knowledge Promotion Reform and who are given such education and training. These pupils should be assessed in the relevant subjects in accordance with both chapters 3 and 4 Pupils who follow education and training at the upper secondary level as specified in the second sentence, are allowed to have up to 60 % of the hours in the subject "Educational choices" reassigned to this education and training.

1.4 HOW IS THE EDUCATION AND TRAINING BEING ADAPTED TO THE PUPILS' ABILITIES AND QUALIFICATIONS?

All of the pupils in primary and lower secondary school are entitled to be given instruction that is adapted to their abilities and qualifications. The right to adapted education and training applies to both those who need extra support in order to achieve a satisfactory outcome from the regular education and training and those pupils who need extra challenges.

Few pupils in primary and lower secondary school take subjects at the upper secondary level

There are few formal schemes in primary and lower secondary school that are adapted to pupils who want extra challenges. The schemes that exist are used by very few pupils in a small number of schools.

In the 2011-2012 school year, there were 956 pupils in 131 primary and lower secondary schools who took subjects at the upper secondary level. In 2008-2009, there were 622 pupils who took advantage of this scheme. Over 90 per cent of the pupils who took subjects at the upper secondary level in 2011-2012 were in Year 10. The possibilities for adaptation for gifted pupils through this scheme appear to be underutilised at present.

Few pupils have had their number of lessons reassigned (the 25-per cent rule)

For some pupils, the school owner can reassign up to 25 per cent of the lessons stipulated in the individual subjects, when there is reason to believe that this can lead to a better overall achievement of goals in the subjects for the pupil. This reassignment must not result in the discarding of the competence goals in the curriculum for the subject.

In the 2011-2012 school year, 1,705 pupils had lessons reassigned that were stipulated in the individual subjects. 348 of them were in the Years 1 to 7, and 1,357 were in Years 8 to 10.

The relatively low use of this scheme may be because the formulation of the rule is unclear, because the use of the rule requires considerable organisation and resources, or because there is a lack of awareness of the rule (Rønning 2008).

The number of pupils who are given special needs education continues to increase

In the autumn of 2011, 52,972 pupils in primary and lower secondary schools received individual decisions on SNE.

§ SECTION 5-1 OF THE EDUCATION ACT:
The right to special education

Pupils who either do not or are unable to benefit satisfactorily from ordinary teaching have the right to special education.

§ SECTION 5-3 OF THE EDUCATION ACT:
Expert assessment

Before the municipality or the county authority takes a decision concerning special education pursuant to section 5-1, or a decision concerning special educational assistance pursuant to section 5-7, an expert assessment shall be made of the pupil's specific needs. This assessment shall determine whether the pupil needs special education and what kind of instruction should be provided.

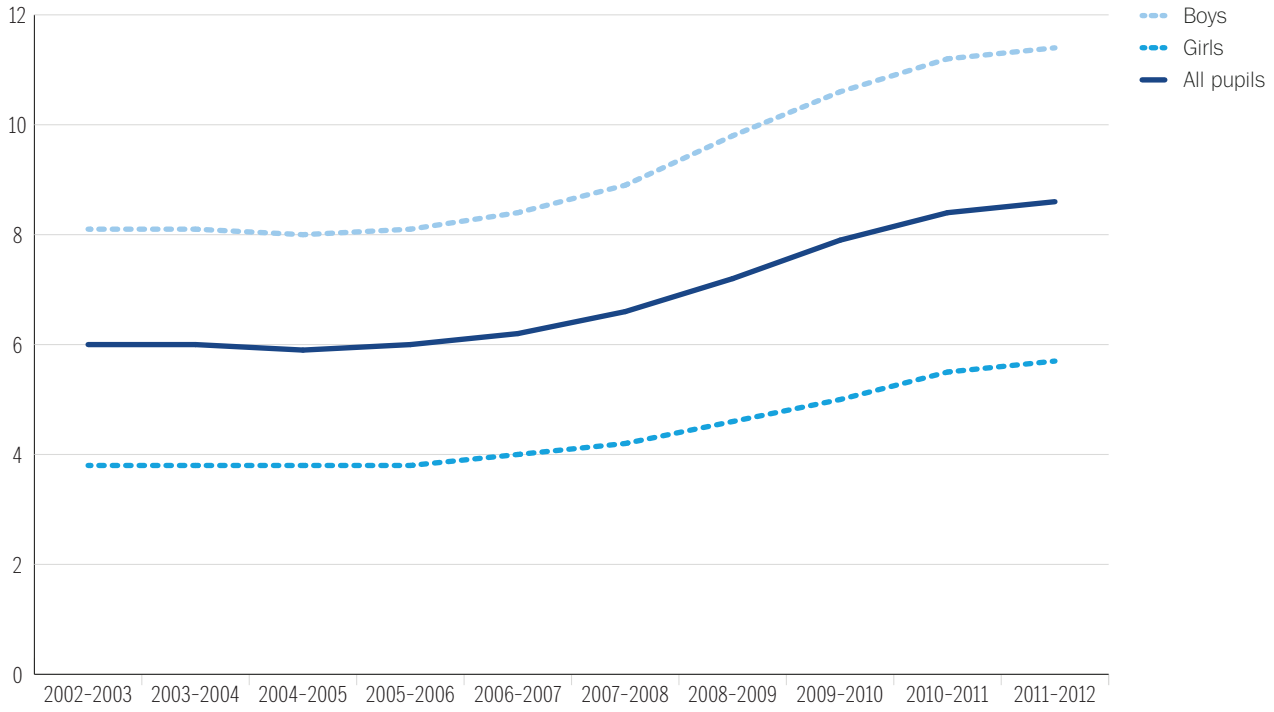
The expert assessment shall consider and determine the following:

- the pupil's learning outcome from the ordinary educational provisions
- learning difficulties the pupil has and other special conditions of importance to education
- realistic educational objectives for the pupil
- whether it is possible to provide help for the pupil's difficulties within the ordinary educational provisions
- what kind of instruction it is appropriate to provide.

As can be seen in Figure 1.4, there has been a substantial increase during the last five-six years in the percentage of pupils who are given SNE. For many years, the percentage was stable at about 6 per cent. Since 2006, there has been a steady increase in the percentage of pupils with SNE. In the autumn of 2011, 8.6 per cent of all of the pupils in primary and lower secondary schools received individual decisions on SNE.

In 2011-2012, Østfold and Akershus counties had the lowest percentage of pupils with individual decisions on SNE. A little over 7 per cent of the pupils in those counties were given SNE. The highest percentage of pupils with individual decisions on SNE was in Nordland and Aust-Agder

FIGURE 1.4 Pupils in primary and lower secondary school with individual decisions on special needs education 2002-2003 to 2011-2012. Per cent.



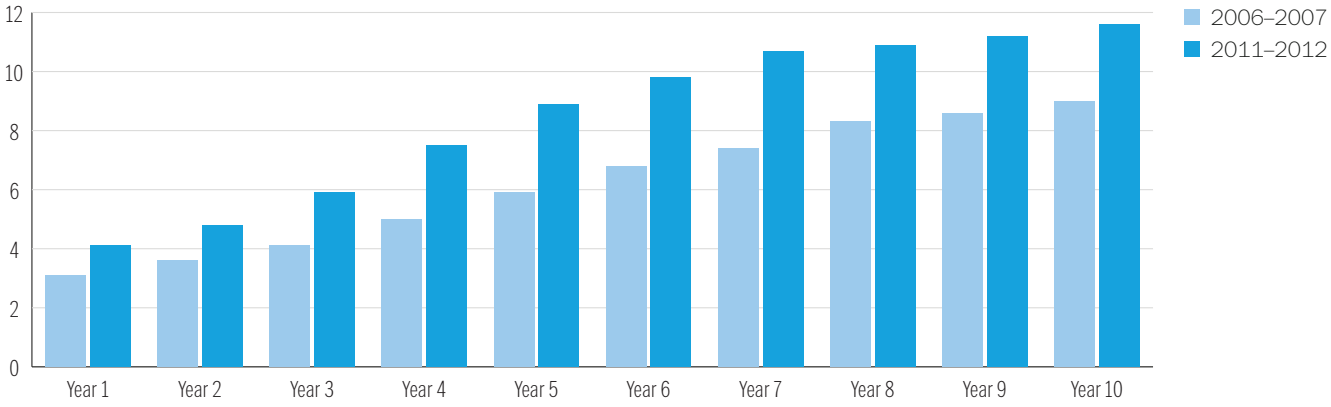
Source: The Primary and Lower Secondary School Information System (GSI)/The Norwegian Directorate for Education and Training

TABLE 1.1 Pupils in primary and lower secondary school with individual decisions on special needs education, broken down by gender. 2007-2008 to 2011-2012. Number and per cent.

	Special needs education			Pupils with SNE, by gender	
School year	All pupils	Pupils with SNE		Girls	Boys
	NUMBER	NUMBER	PER CENT	PER CENT	PER CENT
2011-2012	614,413	52,972	8.6	32.5	67.5
2010-2011	615,979	51,853	8.4	32.0	68.0
2009-2010	615,927	48,470	7.9	31.2	68.8
2008-2009	616,139	44,525	7.2	30.8	69.2
2007-2008	618,589	41,041	6.6	30.9	69.1

Source: The Primary and Lower Secondary School Information System (GSI)/The Norwegian Directorate for Education and Training

FIGURE 1.5 Pupils with individual decisions on special needs education, broken down by Year. 2006-2007 and 2011-2012. Per cent.



Source: The Primary and Lower Secondary School Information System (GSI)/The Norwegian Directorate for Education and Training

counties, where about 11 per cent of the pupils had individual decisions on SNE in 2011-2012.

14 per cent of the pupils with SNE were given it for the most part alone; 67 per cent were given it primarily in groups of 2 to 5 pupils; and 19 per cent were given SNE mainly in other ways, e.g. in groups of 6 or more or in the ordinary class.

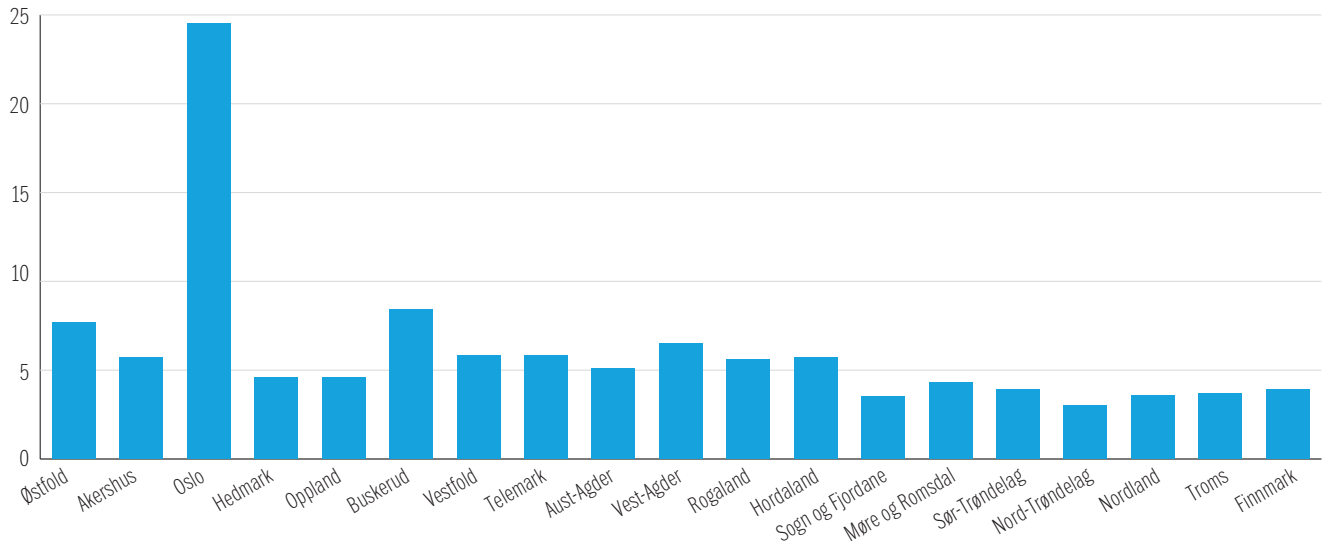
Almost seven out of ten pupils who were given SNE in 2011-2012 were boys. The gender gap related to who is given SNE was somewhat smaller inthe most recent school years.

The percentage of pupils with SNE increases during primary school and throughout lower secondary school. In the autumn of 2011, 4.4 per cent of the pupils in Year 1 had individual decisions on SNE, whereas in Year 10 the percentage was 11.6 per cent. The percentage of pupils with SNE increases with each Year, but the most marked increase is from Year 3 to Year 7.

The biggest increase in the percentage of pupils who are given SNE during the last five years has been in Years 5 to 7. In these Years, the percentage of pupils with SNE has increased by 3 percentage points or more since 2006-2007. By comparison, the percentage in Years 1 and 2 has only increased by one percentage point in the same time interval.

Thus, the percentage of pupils with SNE is low in the earliest Years and relatively high in the last Years of primary and lower secondary school. This may also indicate that when pupils have first received a decision on SNE, they tend to continue with SNE throughout the rest of primary and lower secondary school. At the same time, many pupils take a long time before they are first given SNE. The Report to the Storting on early intervention for lifelong learning (The Ministry of Education and Research 2006b), emphasises the importance of initiating measures for the pupil at an early point in time and as soon as challenges arise or are detected.

FIGURE 1.6 Pupils with Basic Norwegian for language minorities, by county. 2011-2012. Primary and lower secondary school. Per cent.



Source: The Primary and Lower Secondary School Information System (GSI)/The Norwegian Directorate for Education and Training

§ **SECTIONS 2-8 AND 3-12 OF THE EDUCATION ACT:**
Basic Norwegian for language minorities for pupils from language minorities

Pupils attending the primary and lower secondary school who have a mother tongue other than Norwegian or Sami have the right to Basic Norwegian for language minorities until they are sufficiently proficient in Norwegian to follow the normal instruction of the school. If necessary, such pupils are also entitled to Mother tongue education, Bilingual technical training, or both.

When Mother tongue education and Bilingual technical training cannot be provided by suitable teaching staff, the municipality shall as far as possible provide for other instruction adapted to the pupils' abilities.

The municipality shall survey the pupils' proficiency in Norwegian before any decisions are made about Basic Norwegian for language minorities. This survey shall also be conducted during the instruction for pupils who are given Basic Norwegian for language minorities in accordance with the regulations as a basis for assessing whether the pupils have sufficient proficiency in Norwegian to follow the normal instruction in the school.

No increase last year in the number of pupils with Basic Norwegian for language minorities

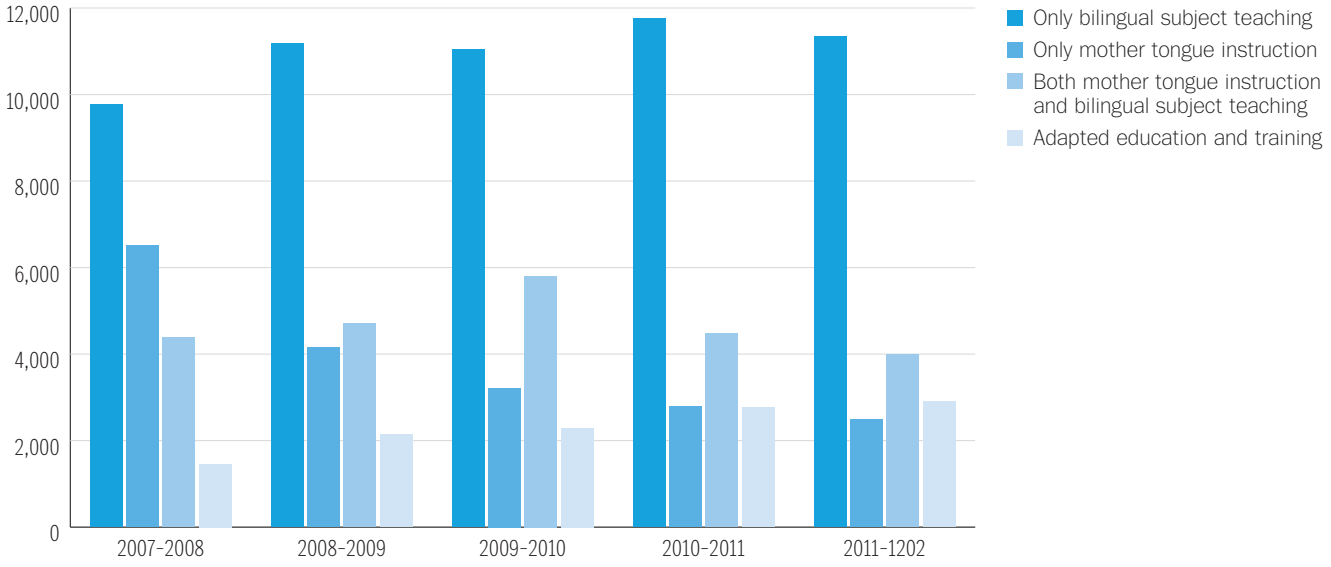
In the autumn of 2011, there were 43,991 pupils with Basic Norwegian for language minorities. This amounted to 7 per cent of the pupils. There has been a slight increase in recent years and no change from the previous school year. The percentage of pupils with Basic Norwegian for language minorities was highest in Oslo with nearly 25 per cent.

Mother tongue education is given to pupils with a mother tongue other than Norwegian and Sami in addition to the number of regular teaching hours. Bilingual technical training is the teaching that takes place within the regular teaching hours, where the pupil's mother tongue is used in the education and training (for example, "Mathematics in Urdu"), either alone or together with instruction in Norwegian.

In the autumn of 2011, 3,987 pupils were given both Mother tongue education and Bilingual technical training. 11,346 pupils were given only Bilingual technical training, and 2,484 pupils were given only Mother tongue education. Pupils who are given Mother tongue education and Bilingual technical training, are given this in addition to Basic Norwegian for language minorities. The number of pupils who are only given Mother tongue education has been declining since 2007-2008.

When Mother tongue education and Bilingual technical training cannot be given by suitable teaching staff, the

FIGURE 1.7 Pupils who are given Mother tongue education and/or Bilingual technical training. 2007–2008 to 2011–2012. Number.



Source: The Primary and Lower Secondary School Information System (GSI)/The Norwegian Directorate for Education and Training

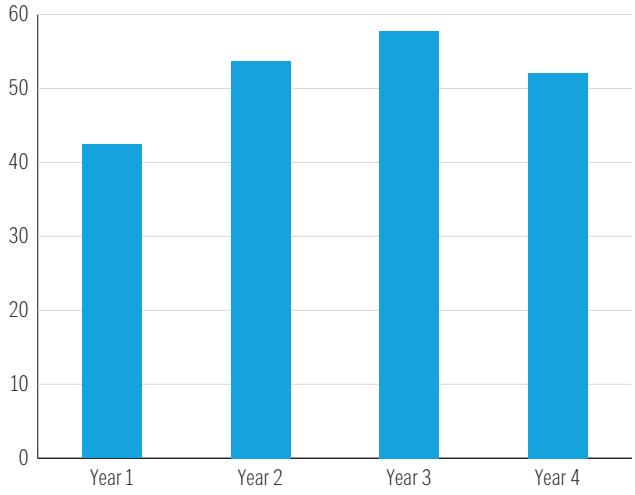
municipality shall arrange for other education and training that is adapted to the pupils' qualifications insofar as it this is possible. 2,904 pupils were given adapted education and training instead of Mother tongue education and Bilingual technical training. The number of pupils who were given this kind of education and training has increased somewhat in the last five years.

In the autumn of 2010, Mother tongue education and/or Bilingual technical training or adapted education and training were given in more than 125 different languages. The dominant languages among pupils who were given Mother tongue education and/or Bilingual technical training and training were Somali, Arabic and Polish.

1.5 HOW EXTENSIVE IS THE PROGRAMME FOR PHYSICAL ACTIVITY?

The schools are required to give the pupils a total of 76 hours of physical activity during Years 5, 6 and 7. These hours come in addition to Physical Education. Most of the schools give more than the required 76 hours, and the average is 104 hours divided among Years 5-7. The rules concerning individual assessment and the rules concerning requirements for educational qualifications for the teaching staff that are specified in the Education Act do not apply to physical activity. In the autumn of 2011, 47 per cent of the staff that provided physical activity were qualified teachers.

FIGURE 1.8 Pupils who took part in the scheme to provide homework assistanceas per 1 October 2011 Years 1-4. Per cent.



Source: The Primary and Lower Secondary School Information System (GSI)/The Norwegian Directorate for Education and Training

§ **SECTION 13-7A OF THE EDUCATION ACT:**
Requirement for the municipality to provide homework assistance

The municipality shall provide homework assistance to pupils in Years 1 to 4. This assistance shall be free of charge for the pupils. The pupils shall be entitled to participate in the homework assistance programme, but their participation shall be voluntary.

The total scope of the homework assistance in Years 1-4 shall be a total of at least 8 hours each week. Each Year shall have at least one hour of homework assistance per week (Section 1A-1 of the Regulations associated with the Education Act).

§ **SECTION 13-7 OF THE EDUCATION ACT:**
Day-care facilities for school children

The municipality shall provide day-care facilities for school children both before and after school hours for grades 1-4 and for children with special needs attending grades 1-7.

Day-care facilities for school children shall be designed for play as well as cultural and leisure activities appropriate to the age, functional level and interests of the children.

1.6 HOW MANY PUPILS TAKE ADVANTAGE OF THE HOMEWORK ASSISTANCE PROGRAMME AND THE EXTRA-CURRICULAR ACTIVITIES PROGRAMME (SFO)?

The figure shows that over half of the pupils in Years 1 to 4 took part in homework assistance as per 1 October. Among the schools that offer homework assistance, the average amount offered is 8.2 hours per week, divided among Years 1 to 4. The average number of hours of homework assistance that is given by the staff is 8.4 hours a week. In 59 per cent of the homework assistance schemes, the school offers the homework assistance. SFO accounts for 17 per cent of these schemes. In 23 per cent of the schemes, both the school and SFO offer homework assistance.

33 schools with pupils in Years 1-4 have stated that they do not have any homework assistance programme. The most common reasons are that the school does not give homework or that the school has incorporated homework assistance into the instruction, e.g. by offering some extra hours of instruction, or that the school in consultation with the parents has agreed that homework assistance shall not be provided. Among the schools that do not provide homework assistance, over half are special schools for SNE or treatment institutions.

More children in the extracurricular activities programme

63 per cent of the pupils in Years 1-4 took part in SFO in the 2011-2012 school year. In 2002-2003, the percentage was 55 per cent. The percentage of children who are in SFO has steadily risen during the last decade.

36 per cent of the staff in SFO have an approved teacher or pre-school teacher education or a trade certificate in child care and youth work. There has been a slight increase in the staff with a trade certificate in child care and youth work.

The parents pay an average of NOK 2,000 for a full-time place in SFO.

UPPER SECONDARY EDUCATION AND TRAINING

Upper secondary education and training is voluntary. All young people who have completed primary and lower secondary school are nevertheless entitled to three years of upper secondary education and training that shall lead to qualification for higher education or vocational qualifications. Preliminary figures from KOSTRA (Municipality-State-Reporting 2011d) show that 91.5 per cent of all 16-18-year-olds were enrolled in upper secondary education and training in the autumn of 2011.

1.7 HOW IS THE SCHOOL STRUCTURE CHANGING IN UPPER SECONDARY EDUCATION AND TRAINING?

Continued decline in the number of upper secondary schools in Norway

In the autumn of 2011, there were 430 upper secondary schools in Norway, 347 of which were county-administered, 81 private and two state-administered (Statistics Norway, preliminary figures for 2011). That is 8 schools less than in the 2010-2011 school year.

Since 2001, the number of upper secondary schools in Norway has decreased by 67. From the 2010-2011 to the 2011-2012 school year, 13 upper secondary schools were closed, 10 of these were municipal and 3 were private. In the same period, 5 county-administered upper secondary schools were established. The number of pupils per school has increased. In 2002, there were an average of 347 pupils per upper secondary school, whereas in 2011 there were 454 pupils.

§ SECTION 3-1 OF THE EDUCATION ACT:
Right to upper secondary education and training for young people

Young people who have completed primary and lower secondary education or the equivalent have, on application, the right to three years' full-time upper secondary education and training. In subjects where the curriculum requires a period of instruction that is longer than three years, such young people have the right to education in accordance with the period of instruction determined in the subject curriculum.

This right must normally be fully claimed during a continuous period of five years, or six years when the training is wholly or partly provided at a training establishment, and before the end of the year in which the person concerned reaches the age of 24.

1.8 HOW IS THE NUMBER OF PUPILS CHANGING IN UPPER SECONDARY EDUCATION AND TRAINING?

Slight increase in the number of pupils in upper secondary school

In the autumn of 2011, there were 195,364 pupils in upper secondary education and training according to preliminary figures from Statistics Norway. This is an increase of 2,481 pupils compared with the final figures from the previous year.

There were 76,659 pupils in Vg1, 66,231 pupils in Vg2 and 52,474 pupils in Vg3. Almost 58 per cent of the pupils took general studies, and a little over 42 per cent took vocational studies. This breakdown has been stable for the last four years. There were 33,814 apprentices and 1,356 trainees in addition to the pupils in upper secondary education and training in the 2011-2012 school year.

7 per cent of the pupils in upper secondary education and training were enrolled in private schools in the autumn of 2011. The percentage was highest among pupils in general studies education programmes, where 9 per cent were enrolled in private schools, compared with 5 per cent of the pupils in vocational education programmes. In 2006-2007, the percentage of pupils in private upper secondary schools was 6 per cent. The percentage has been stable at about 7 per cent since the 2007-2008 school year.

Pupils who were separated out in the category of alternative education and training in 2009-2010 and earlier years are now included under the other education programmes. These pupils are now characterised as pupils with a decision on education and training that leads to basic competence, which is competence at a lower level than full vocational qualifications and qualification for higher education. Here we do not present figures for the percentage of pupils with qualifications at a lower level because the quality of this data is not good enough. A review of the figures shows that the data that has been entered so far is too incomplete and the variation in the registration among county authorities is too great.

1.9 WHICH EDUCATION PROGRAMMES ARE MOST POPULAR AMONG THE APPLICANTS?

Over half of the applicants to Vg1 and Vg2 want to be enrolled in one of the nine vocational education programmes. In Vg3, however, this has changed, and only 35 per cent apply for vocational education programmes. Among other things, this is attributed to the fact that an extremely large number of pupils want to take a supplementary year qualifying for higher education after completion of vocational Vg2.

Many applicants to media and communication

Specialisation in General Studies is by far the most applied-for education programme in Vg1 with over 28,000 applicants, or 37 per cent of the applicants. After that comes *Health and Social Care* and *Technical and Industrial Production* with 8,300 and 7,300 appli-

EDUCATION PROGRAMME, PROGRAMME AREA, COMMON CORE SUBJECTS AND PROGRAMME SUBJECTS

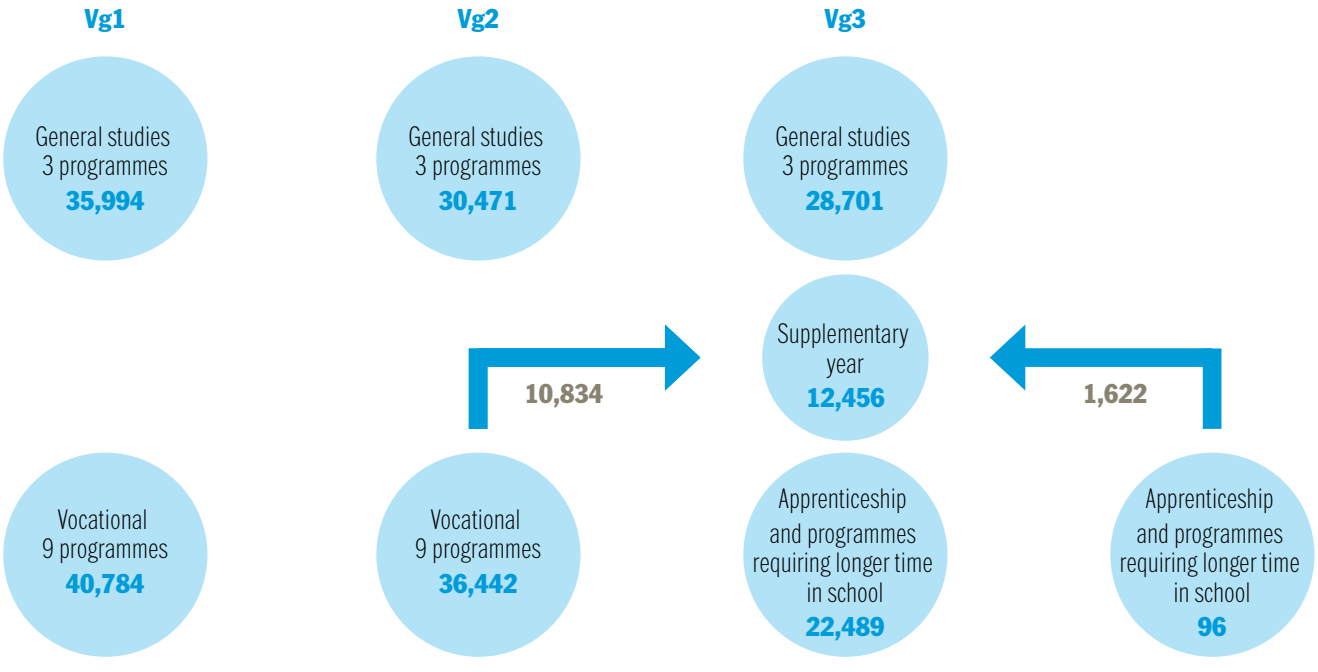
Upper secondary education and training consists of 12 different education programmes, 3 in general studies and 9 vocational, e.g. *Specialisation in General Studies* or *Building and Construction*.

In Vg2, the pupils choose the programme area that they will take in the education programme, e.g. *Natural Science and Mathematics* in *Specialisation in General Studies* or *Construction* in *Building and Construction*.

Common core subjects are compulsory subjects that are taught at each Year of education and training in school, e.g. *Norwegian*, *English*, *Mathematics* and *Natural Sciences*. Programme subjects can be common core subjects so that pupils in a programme area must take that subject, or they can be optional subjects. *Sociology and Social Anthropology* is one of the programme subjects that the pupils can choose in the programme area *Language, Social Studies and Economics Studies*. In vocational education programmes, the programme subjects are common for all pupils in the same programme area. In the education programmes for *Sports and Physical Education, Music, Dance and Drama* and *Specialisation in General Studies with Arts, Crafts and Design Studies*, certain programme subjects are common to all pupils in Vg1, Vg2 and Vg3.

Source: The Norwegian Directorate for Education and Training 2011h

FIGURE 1.9 Applicants for upper secondary education and training as per 1 March 2012, by Year and pathway. Number.



cants respectively. *Agriculture, Fishing and Forestry* and *Restaurant and Food Processing* are the smallest education programmes in Vg1.

By comparing the number of applicants in the 2012-2013 school year with the number of pupils for the 2011-2012 school year, we can get a picture of the over- and undersubscription to the various education programmes. Being oversubscribed means that there are more applicants to the education programme than the number of places being offered to pupils for the 2011-2012 school year. This will usually be reflected in tougher admission requirements for those programmes.

The highest oversubscribing is in *Media and Communication*, where there are 1,295 more applicants than places in the current school year. This corresponds to 1.34 applicants per place. There is also considerable oversubscription in *Electricity and Electronics* and *Music, Dance and Drama* with 1.25 and 1.23 applicants per place respectively.

The undersubscription is greatest in *Specialisation in General Studies* with 1,236 fewer applicants than the number of places. However, it is *Restaurant and Food Processing* and *Design, Arts and Crafts* that have the fewest applicants per place with 0.86 and 0.84 applicants per place, respectively.

Gendered pattern of applications

There is a majority of girls who apply for general studies, whereas it is mostly boys who apply for vocational studies. The differences become extra clear when we look at the individual education programmes. For *Health and Social Care* and *Design, Arts and Crafts* there are all in all 86 and 90 per cent girls who apply, whereas the percentage of girls is 3 and 5 respectively for *Building and Construction* and *Electricity and Electronics*.

More pupils want to get an apprenticeship in *Health and Social Care*

Table 1.3 shows that there was a total of 17,692 applicants for apprenticeships. This is a slight increase relative to last year. Those who arrange for apprenticeship contracts on their own without applying are not included in these statistics.

There are most applicants for apprenticeships in *Technical and Industrial Production*, followed by *Health and Social Care*, *Electricity and Electronics* and *Building and Construction*.

We can also see from the table that less than half of those who are enrolled in Vg1 apply for an apprenticeship two years later. There are substantial variations here among the education programmes. In *Media and Communication*, which has a separate education pathway that results in qualification for higher education, only three per cent of the pupils in Vg1 apply for apprenticeship. The highest percentage of applicants relative to pupils is in *Electricity and Electronics*, where the number of applicants for apprenticeship amounts to 62 per cent of the number of pupils in Vg1.

TABLE 1.2 Over and undersubscription in Vg1 broken down by education programme. Number.

Education programme		Applicants per 1 March 2012	Places offered per 1 October 2011	Difference between applicants and places offered	Applicants per place
MK	Media and Communication	5,111	3,816	1,295	1.34
EL	Electricity and Electronics	6,081	4,865	1,216	1.25
MD	Music, Dance and Drama	2,963	2,414	549	1.23
ID	Sports and Physical Education	4,649	3,961	688	1.17
TP	Technical and Industrial Production	7,329	6,938	391	1.06
ST	Specialisation in General Studies	28,382	29,618	-1,236	0.96
HS	Health and Social Care	8,325	8,893	-568	0.94
SS	Service and Transport	3,345	3,587	-242	0.93
NA	Agriculture, Fishing and Forestry	1,633	1,861	-228	0.88
BA	Building and Construction	4,223	4,900	-677	0.86
RM	Restaurant and Food Processing	2,141	2,498	-357	0.86
DH	Design, Arts and Crafts	2,596	3,095	-499	0.84
	Total	**76,778**	**76,541**	**237**	**1.00**

Source: The Norwegian Directorate for Education and Training

TABLE 1.3 Applicants for apprenticeships as per 1 March 2012 and registered pupils in Vg1 as per 1 October 2010, broken down by education programme. Number and per cent.

Education programme	Number of applicants	Pupils as per 1 October 2010	Percentage of applicants for apprenticeships out of the number of pupils in Vg1
Technical and Industrial Production	4,132	7,037	58.7
Health and Social Care	3,202	8,786	36.4
Electricity and Electronics	2,992	4,844	61.8
Building and Construction	2,849	4,991	57.1
Service and Transport	2,024	3,386	59.8
Restaurant and Food Processing	1,188	2,538	46.8
Design, Arts and Crafts	805	3,313	24.3
Agriculture, Fishing and Forestry	383	1,877	20.4
Media and Communication	117	3,813	3.1
Total	**17,692**	**40,585**	**43.6**

Source: The Norwegian Directorate for Education and Training

1.10 WHICH PROGRAMME AREAS AND PROGRAMME SUBJECTS ARE THE PUPILS CHOOSING IN THE GENERAL STUDIES EDUCATION PROGRAMMES?

About 47 per cent of the pupils who began Vg1 in the autumn of 2011 started in a general studies education programme in the 2011-2012 school year. Specialisation in General Studies is the largest of all the programmes of study.

The number of pupils in general studies is highest in Vg3. One reason for this is that many pupils who begin in vocational education programmes choose to take a supplementary year qualifying for higher education after Vg2. Therefore, there has been a considerably higher percentage of graduates with qualification for higher education than with vocational qualifications, even though most pupils chose vocational education programmes in Vg1. The fact that the number of drop-outs from upper secondary school is higher in the vocational than in the general studies education programmes is another reason why the percentage with vocational qualifications is relatively low compared with the percentage with qualification for higher education. Table 1.4 shows the breakdown among the various education programmes that qualify for higher education.

The number of pupils in general studies education programmes has undergone a slight increase in recent years.

The most pupils in the programme area for language, social studies and economics studies in Vg2

In the Norwegian Directorate for Education and Training's analyses of the choice of subjects of the pupils in upper secondary education and training (The Norwegian Directorate for Education and Training 2012c), we see that with education programmes for *Specialisation in General Studies* in Vg2, the most pupils were in the programme area for *Language, Social Studies and Economics Studies*. A little over 13,000 pupils, or 54 per cent of the pupils in *Specialisation in General Studies*, had chosen this programme area.

The percentage of pupils in the programme area *Natural Science and Mathematics* in Vg2 *Specialisation in General Studies* was 42 per cent in the 2011–2012 school year.

TABLE 1.4 Pupils in the general studies education programmes as per 1 October 2011 by education programme. Preliminary figures. Number.

	Vg1	Vg2	Vg3
Specialisation in General Studies	29,618	24,968	25,956
Vg3 supplementary year qualifying for higher education			13,742
Sports and Physical Education	3,961	3,654	3,800
Music, Dance and Drama	2,414	2,025	2,033

Source: The Norwegian Directorate for Education and Training

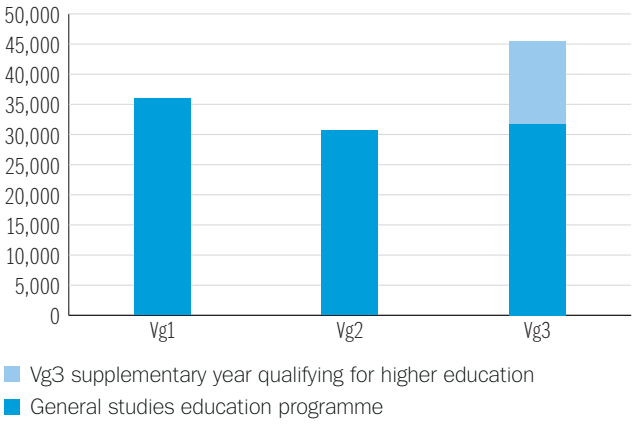
In addition, it is possible to choose a pathway within the vocational education programmes Media and Communication and Agriculture, Fishing and Forestry, which lead to qualification for higher education. They are not includedin this table.

In the programme area *Language, Social Studies and Economics Studies, Sociology and Social Anthropology were* the most popular programme subjects. 11,240 pupils chose this subject.

The largest of the programme subject in Natural Science and Mathematics was *Mathematics* with a total of almost 27,000 pupils in the five different mathematics programme subjects.

As in primary and lower secondary school, the most popular second foreign language was *Spanish*. 44 per cent of the pupils who took a second foreign language chose Spanish. Also at the upper secondary level, there has been a decrease in the number of pupils who choose *French*.

FIGURE 1.10 Pupils in general studies education programmes, broken down by Year. 2011-2012. Preliminary figures. Number.



Source: The Norwegian Directorate for Education and Training

1.11 HOW MANY PUPILS ARE ENROLLED IN VOCATIONAL EDUCATION PROGRAMMES?

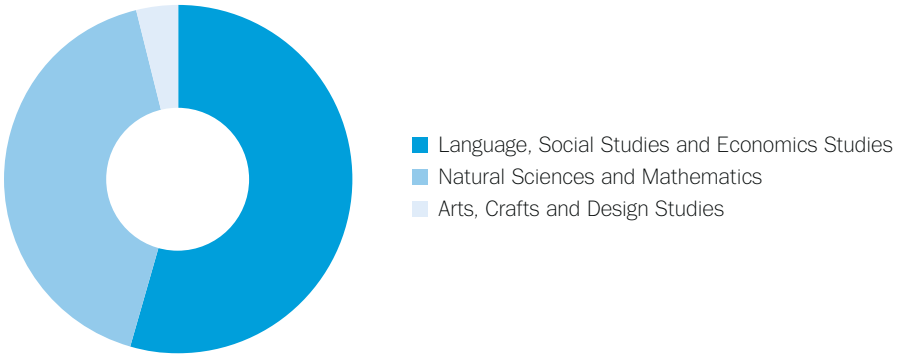
Health and Social Care is the vocational education programme with the most pupils

About 53 per cent of the pupils who began in Vg1 in the autumn of 2011, started in a vocational education programme. There has been a marginal increase in the number of pupils in the vocational education programme from 2010 to 2011.

Among the vocational education programmes, the most pupils were enrolled in *Health and Social Care* and *Technical and Industrial Production* in both Vg1 and Vg2. In 2011-2012, the lowest numbers of pupils in Vg1 and Vg2 were in *Agriculture, Fishing and Forestry* and *Restaurant and Food Processing*.

After Vg2, the number of pupils who are given education and training in school and the number who are given education and training in training establishments varies with the education programme In subjects such as *Building and Construction* and *Technical and Industrial Production,* most of the pupils are given education and training in training establishments. In *Health and Social Care,* a little over two-thirds of the pupils are given education and training in training establishments and the rest in school. In *Media and Communication,* almost all of the pupils are given education and training in school. The pupils in *Media and Communication* and *Agriculture, Fishing and Forestry* can also choose an education pathway that results in qualification for higher education instead of vocational qualifications.

FIGURE 1.11 Programme areas in Vg2 Specialisation in General Studies, 2011-2012. Per cent.



Source: The Norwegian Directorate for Education and Training 2012c

TABLE 1.5 Pupils in vocational education programmes and new apprentices as per 1 October 2011, by education programme. Preliminary figures. Number.

	Vg1	Vg2	Vg3	
			IN SCHOOL	FIRST-YEAR APPRENTICES IN A TRAINING ESTABLISHMENT
Health and Social Care	8,893	8,806	1,101	2,657
Technical and Industrial Production	6,938	5,696	231	3,768
Building and Construction	4,900	3,856	89	3,283
Electricity and Electronics	4,865	4,134	976	2,610
Media and Communication	3,816	3,375	2,371	100
Service and Transport	3,587	3,896	116	1,673
Design, Arts and Crafts	3,095	2,051	323	1,132
Restaurant and Food Processing	2,498	1,834	45	1,182
Agriculture, Fishing and Forestry	1,861	1,590	906	406

Source: The Norwegian Directorate for Education and Training

§ **SECTION 4-1 OF THE EDUCATION ACT:**
DEFINITION OF THE TERMS APPRENTICE AND TRAINING CANDIDATE

For the purposes of this Act, an apprentice is defined as a person who has entered into an apprenticeship contract with a view to taking a trade or journeyman's examination in a trade that requires an apprenticeship in accordance with regulations issued pursuant to section 3-4. Pursuant to this Act, a training candidate is defined as a person who has entered into a training contract with a view to taking a less extensive examination than a trade or journeyman's examination.

TABLE 1.6 Passed trade and journeyman's examinations by area of study and/or education programme. Taken during the 2010-2011 school year. Preliminary figures. Number.

	Passed trade examinations
Health and Social Care	3,723
Technical and Industrial Production	3,535
Building and Construction	3,339
Electricity and Electronics	2,162
Service and Transport	1,947
Restaurant and Food Processing	1,015
Design, Arts and Crafts	756
Agriculture, Fishing and Forestry	313
Media and Communication	73
Reform 94 (previous programme)	3,529
Total	**20,392**

Source: Statistics Norway Education Statistics

1.12 HOW MANY APPRENTICES ARE THERE IN UPPER SECONDARY EDUCATION AND TRAINING, AND HOW MANY END UP WITH VOCATIONAL QUALIFICATIONS?

As per October 2011, 33,814 apprentices and 1,356 trainees were registered in upper secondary education and training in preliminary figures from Statistics Norway. The number of apprentices has decreased by about one per cent relative to the 2010-2011 school year, while the number of trainees has increased by about three per cent.

Over two thirds of the apprentices are men. The number of apprentices decreases the most in the recognised trades *Building and Construction*, and it increases the most in the subjects *Technical and Industrial Production* and *Health and Social Care*.

Decline in the number of passed trade and journeyman's examinations

20,392 passed trade and journeyman's examinations were registered in the 2010-2011 school year. That is a decline of 3 per cent from the 2009-2010 school year. Of those who took a journeyman's examination, about 10 per cent did not pass. Most of the graduate apprentices were in *Health and Social Care*, *Technical and Industrial Production* and *Building and Construction*. The fewest graduate apprentices were in *Media and Communication*.

EDUCATION AND TRAINING FOR ADULTS

1.13 HOW MANY ADULTS ARE GIVEN PRIMARY AND LOWER SECONDARY EDUCATION AND UPPER SECONDARY EDUCATION AND TRAINING?

In 2011-2012, 10,325 adult participants were given primary and lower secondary education, a decline of 178 relative to the previous school year.

The number of adult participants who were only given mainstream primary and lower secondary education was 5,648, an increase of 176 relative to the previous school year. Oslo had the most participants in mainstream primary and lower secondary education with 1,475 participants.

Many adults from language minorities are given primary and lower secondary education and training for adults

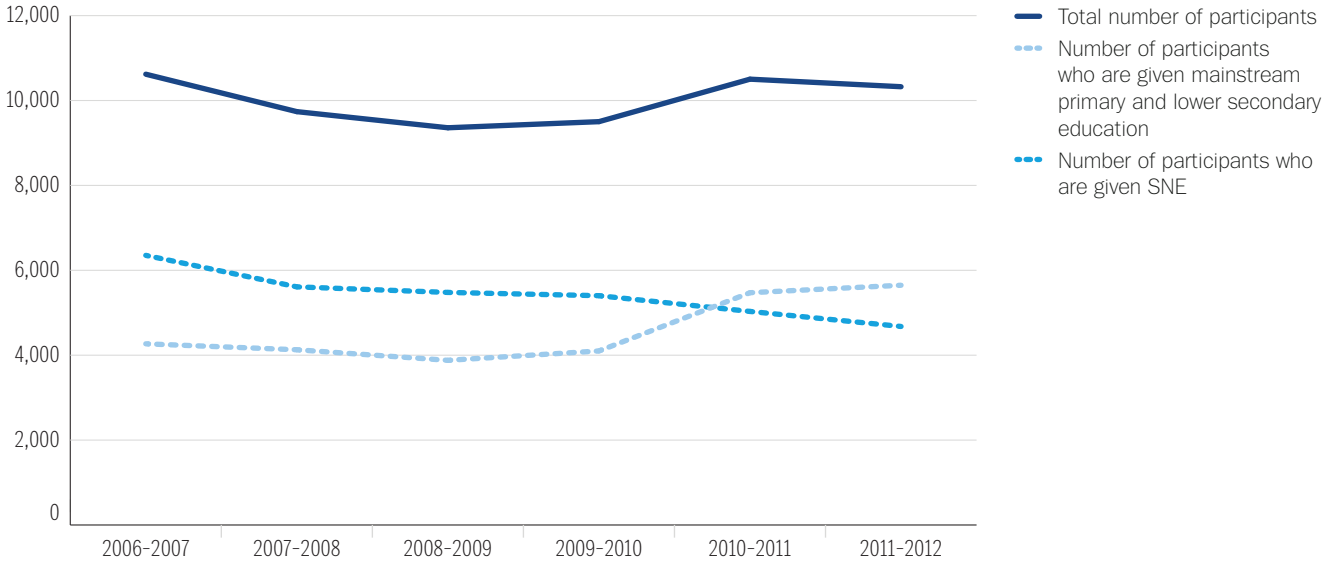
55 per cent of the participants who are given primary and lower secondary education for adults belong to language minorities. The percentage of adults who are given primary and lower secondary education in this group has increased markedly in recent years. In 2006-2007, 33 per cent were from a language minority. In the past year, that percentage increased by 4 percentage points. It is especially the percentage of men with a minority background that has increased. There are now about equally many men as women in primary and lower secondary education for adults.

The percentage from a language minority in mainstream primary and lower secondary education increased by 2.7 percentage points to 90.2 per cent in the past year. The percentage from a language minority among the participants who are given SNE has increased by a little over 1 percentage point to 11.3 per cent.

46 per cent of the participants in mainstream primary and lower secondary education are under the age of 25. This applies especially to men, where fully 63 per cent of the male participants in mainstream primary and lower secondary education are under the age of 25, whereas only 30 per cent of the women are under the age of 25. For the participants who are given SNE, only 12 per cent are under the age of 25. In this group, there are a larger number of older participants, and 31 per cent are age 50 or older. There is a small gender gap in the age distribution for participants who are given SNE.

NOVA (Norwegian Social Research) is conducting a research project on commission from the Norwegian Directorate for Education and Training concerning adults in primary and lower secondary school. The results of this study will be published in 2012.

FIGURE 1.12 Adults who are given education and training in the area of primary and lower secondary education. 2006-2007 to 2011-2012. Number.



Source: The Norwegian Directorate for Education and Training

TABLE 1.7 Participants who are age 25 or older in upper secondary education and training. 2007-2008 to 2010-2011. Preliminary figures 2010-2011. Number.

	2007-2008	2008-2009	2009-2010	2010-2011
Apprentices and trainees	4,766	4,864	4,610	4,251
Candidates for experience-based trade certification	5,865	6,456	6,649	6,520
Participants in school	14,717	12,943	9,446	8,838
Total	**25,348**	**24,263**	**20,705**	**19,609**

Source: The Norwegian Directorate for Education and Training/Statistics Norway

A majority of the municipalities offer primary and lower secondary education and training for adults

In the 2011-2012 school year, there were 307 municipalities with participants in primary and lower secondary education and training for adults, an increase of 6 municipalities over the previous year. 268 municipalities had participants in primary and lower secondary education and training for adults in their own municipality, which was 6 municipalities fewer than the previous year. 108 municipalities had inhabitants who participated in primary and lower secondary education and training in another municipality, and this amounted to an increase from 101 municipalities in the previous year. Not all municipalities have inhabitants who are receiving primary and lower secondary education and training for adults. These are primarily municipalities with fewer than 10,000 inhabitants. The reason why not all municipalities have inhabitants who are given primary and lower secondary education and training for adults may be that they do not have inhabitants who have a need for this kind of education and training or that they have a need but are not well enough aware of their rights or not aware of the programme being offered.

Fewer adult participants in upper secondary education and training

Pursuant to Section 4A-3 of the Education Act, adults who have completed primary and lower secondary school, but not upper secondary education and training or the equivalent, are entitled after submitting an application to free upper secondary education and training. Up to 1 August 2008, this right applied to adults born before 1978, but starting in the autumn of 2008 this was changed to apply to adults starting in the year when they turn 25.

The education and training shall be adapted to the needs and life situation of each individual. The programme of education for adults can be condensed, and as a result of an assessment of prior learning, the education and training may also be more abbreviated.

The number of adults in upper secondary education and training has decreased since 2007-2008. This decrease has primarily taken place among adult participants in school. The number of apprentices and trainees has also decreased, while the number of candidates for experience-based trade certification appears to have stabilised at about 6,500.

54 per cent of the adult participants in upper secondary education and training in the 2010-2011 school year were women. The average age of the participants was 36. About half of the participants were under age 35. The candidates for experience-based trade certification were the oldest group with an average age of 40.

§ **SECTION 3-5 OF THE EDUCATION ACT:**
Trade and journeyman's examinations without apprenticeship or schooling

It is possible to sit a trade or journeyman's examination on the basis of sufficiently broad working experience of a trade of a duration that is 25 per cent longer than the stipulated apprenticeship period. The county authority decides whether the working experience indicated by the applicant can be approved and may in special cases approve shorter periods of experience (candidates for experience-based trade certification).

TABLE 1.8 The 10 most popular education programmes for adults in upper secondary education and training. 2010-2011. Preliminary figures. Number.

Education programme	Participants in school	Apprentices and trainees	Candidates for experience-based trade certification	Total
Health and Social Care	3,258	991	1,738	**5,987**
Supplementary year qualifying for higher education	2,621	0	0	**2,621**
Building and Construction	270	507	1,110	**1,887**
Service and Transport	350	242	878	**1,470**
Technical and Industrial Production	199	454	657	**1,310**
Specialisation in General Studies	1,259	0	0	**1,259**
Electricity and Electronics	240	527	146	**913**
Restaurant and Food Processing	143	152	229	**524**
Design, Arts and Crafts	162	307	44	**513**
Agriculture, Fishing and Forestry	268	76	66	**410**

Source: The Norwegian Directorate for Education and Training/Statistics Norway

Many adults in Health and Social Care education and training and in Electricity and Electronics

Health and Social Care is the education programme with the most adult participants. This applies to participants in school, apprentices and candidates for experience-based trade certification. Many of the adult participants in *Health and Social Care* have completed upper secondary education and training previously, and 63 per cent have vocational experience from the nursing and care sector *(Autumn 2010)*. Among the participants in school, there are also many who take a supplementary year qualifying for higher education and Specialisation in General Studies. After *Health and Social Care,* it is *Electricity and Electronics* that has the most adult apprentices. Among the candidates for experience-based trade certification, there are also many who take the examination for experience-based trade certification in *Service and Transport* and *Technical and Industrial Production.*

§ **SECTION 4A–3 OF THE EDUCATION ACT:**
The right to upper secondary education and training for adults

Adults who have the right to upper secondary education and training have the right to an assessment of their formal, informal and non-formal competence and to a certificate of competence (assessment of prior learning).

Fewer adults in upper secondary education and training have their prior learning assessed

Of the 19,609 adult participants in upper secondary education and training in 2010-2011, 2,457 participants had their prior learning assessed. This amounts to 12.5 per cent and is a decline from 2009-2010, when 14 per cent of the participants had their prior learning assessed. Only a few of the apprentices and candidates for experience-based trade certification have had their prior learning assessed. Of the participants in school, 38 per cent of the participants in vocational education programmes have had their prior learning assessed, and this is a decline from 40 per cent in 2009-2010. 12 per cent of the participants in general studies education programmes had their prior learning assessed, and this is an increase of one percentage point over 2009-2010.

2 Resources

Norway spends considerable resources on its schools relative to many countries. This chapter provides insight into what those resources are spent on and how and why the resources that are spent vary among municipalities and counties.

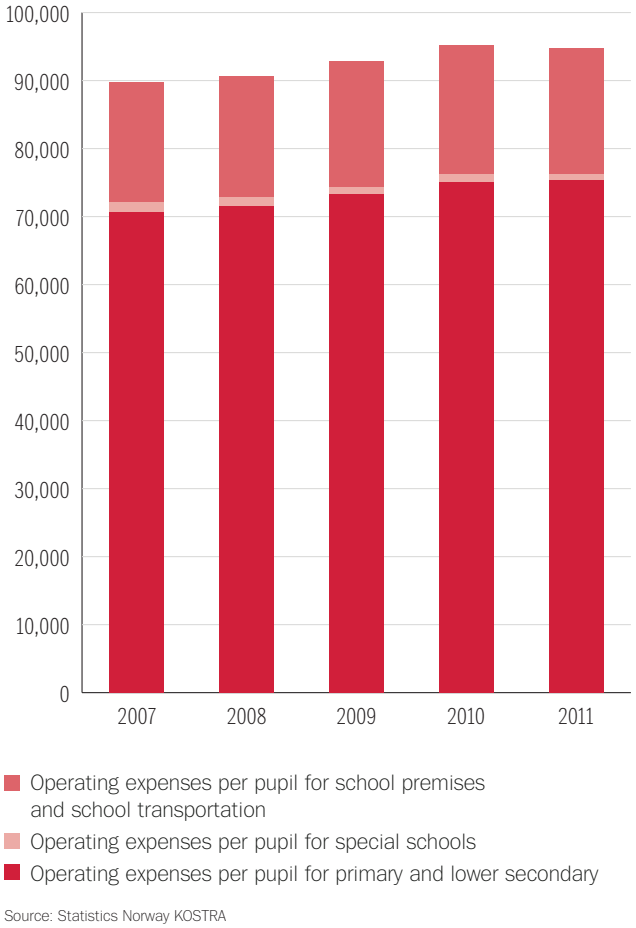
The varied spending of resources is related to differences in geography and demographic structure. This gives rise to substantial differences in the spending of resources among different municipalities and county authorities.

2.1 HOW MUCH DOES PRIMARY AND LOWER SECONDARY EDUCATION COST?

Preliminary figures from Statistics Norway's Municipality-State-Reporting (SSB KOSTRA) show that the municipalities spent NOK 57 billion in 2011 on public primary and lower secondary education. Adjusted for wage and price increases, this is a decline of 0.6 per cent relative to the previous year. The expenses consist of operating expenses for mainstream schools, special schools, school premises and school transportation.

In Statistics Norway's KOSTRA reporting, a distinction is made between special schools and mainstream primary and lower secondary schools. That means that certain economic data for special schools and mainstream primary and lower secondary schools are presented separately in this chapter as opposed to Chapter 1, where special schools and mainstream primary and lower secondary schools are presented as one unit.

FIGURE 2.1 Operating expenses per pupil broken down by expenses for primary and lower secondary schools, special schools, and school premises and school transportation. Adjusted for wage and price increases. 2007-2011. Preliminary figures 2011. NOK.



Source: Statistics Norway KOSTRA

The biggest cost is pay to employees

The expenses for mainstream primary and lower secondary schools and special schools constitute about 80 per cent of the expenses to the primary and lower secondary school sector. The biggest individual item in the primary and lower secondary school sector is payroll costs, which constitute 78 per cent of the expenses. The municipalities also have responsibility for the extracurricular activities programme (SFO). In 2011, the operating expenses for SFO amounted to about NOK 3.6 billion. In addition, the municipalities invested over NOK 9.5 billion in school buildings, SFO and school transportation in 2011. Adjusted for wage and price increases, this is a decline of just under NOK 1.2 billion relative to 2010.

In 2011, the operating expenses for primary and lower secondary schools came to a little over 24 per cent of the expenses in the municipalities. This was a decline of a little over 4 percentage points relative to 2010. For the most part, this was attributed to the fact that starting in 2011 the day-care centres were block financed and that the municipalities have thereby received a larger total budget.

A pupil in primary and lower secondary school costs an average of NOK 94,755 per year

Preliminary figures from Statistics Norway KOSTRA show that the municipalities spent an average of NOK 94,755 per pupil in the primary and lower secondary school sector in 2011. The operating expenses for primary and lower secondary schools and the special schools amounted to an average of NOK 76,318 per pupil, whereas the municipalities spent an average of NOK 18,437 per pupil on school premises and school transportation.

Figure 2.1 shows that from 2010 to 2011 there was a reduction in the resources spent per pupil. Adjusted for wage and price increases, the operating expenses per pupil in the primary and lower secondary school sector fell by NOK 400 or 0.4 per cent from 2010 to 2011. This reduction is attributed to a decline in operating expenses for school premises and school transportation, which have decreased by almost 3 per cent. The operating expenses for primary and lower secondary schools and special schools increased throughout the whole period. From 2007 to 2011, these expenses increased by NOK 4,200 per pupil adjusted for wage and price increases.

2.2 WHY IS THERE SUCH GREAT VARIATION IN THE RESOURCES SPENT PER PUPIL?

Figure 2.2 shows that there are considerable variations in operating expenses per pupil. The municipality with the lowest expenses per pupil spends in excess of NOK 65,200 per pupil, whereas the municipality with the highest expenses spends over NOK 200,000 per pupil. 71 per cent of the municipalities spend between NOK 80,000 and 120,000 per pupil, and fully 88 per cent of the pupils attend school in these municipalities.

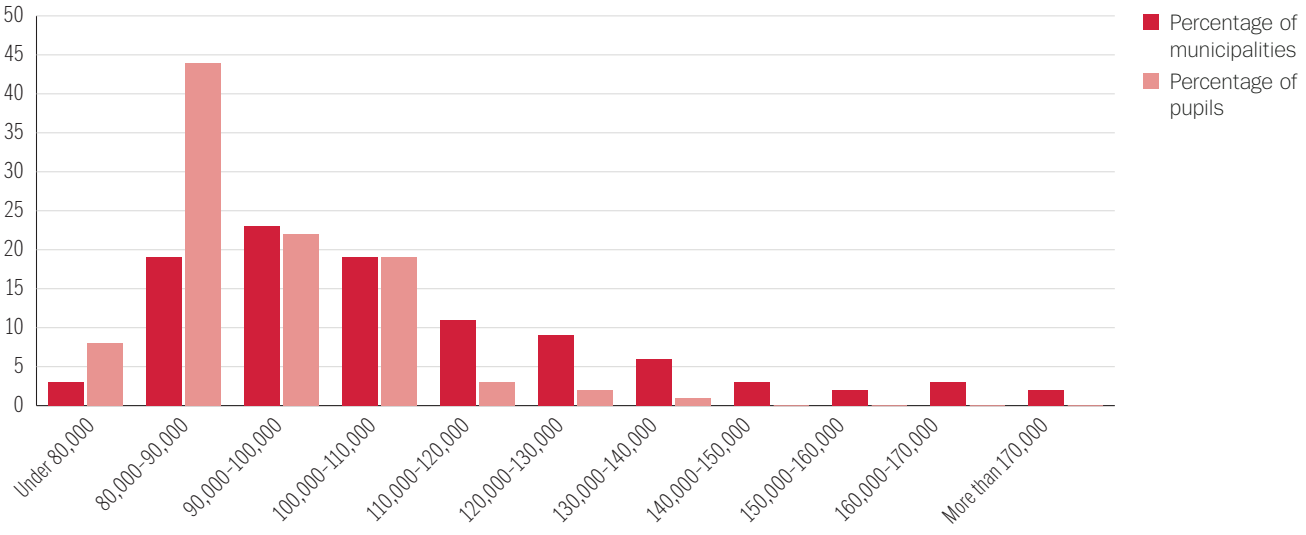
Municipalities that spend more than NOK 110,000 per pupil are municipalities with a low number of pupils. 36 per cent of the municipalities have operating expenses per pupil of more than NOK 110,000, but only 7 per cent of the pupils attend school in these municipalities.

The reasons why the expenses vary considerably among the municipalities are many and complex. The variation may be partly attributed to different priorities in the municipalities, but also to conditions that the individual municipality cannot easily influence, e.g. the settlement pattern, the size of the municipality, the number of pupils in the municipality and the percentage of inhabitants with an immigrant background of primary and lower secondary school age (Ministry of Local Government and Regional Development 2010).

Small municipalities with sparse settlement have higher expenses

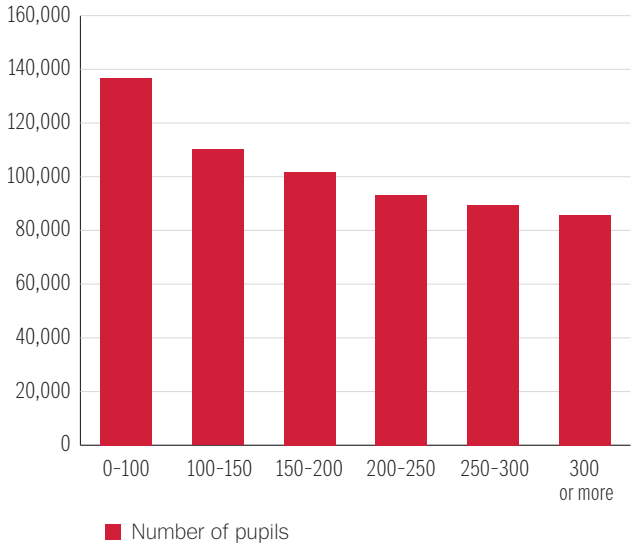
Municipalities with a sparse settlement pattern often have smaller schools than other similar municipalities, among other things in order to limit the distance that the pupils have to travel. As a general rule, the resources spent per pupil decrease as the number of pupils in the schools increases. Among other things, this is because the schools have a number of fixed expenses for administration and operation, and when these expenses are divided among a lower number of pupils, it gives higher expenses per pupil. In addition, small schools often have a low number of pupils per Year, which results in higher expenses for teacher salaries per pupil (NOU 2005: 18). Even though the settlement pattern largely determines how large the schools can be, this is also partly a political decision. That is also indicated by the fact that there is a positive correlation between the municipality's economic manoeuvring room and sparse school structure (Falch et al. 2005).

FIGURE 2.2 Municipalities and pupils broken down by operating expenses per pupil in primary and lower secondary school. Municipal primary and lower secondary schools. Preliminary figures 2011. Per cent.



Source: Statistics Norway KOSTRA and the Primary and Lower Secondary School Information System (GSI)

FIGURE 2.3 Expenses per pupil broken down according to number of pupils per school. Adjusted for wage and price increases. Municipal primary and lower secondary schools. Preliminary figures 2011. NOK.



Source: Statistics Norway KOSTRA and the Primary and Lower Secondary School Information System (GSI)

As mentioned above, large schools have lower expenses per pupil than small schools. Figure 2.3 shows a pattern between school size and expenses. Municipalities with small schools spend far more per pupil than municipalities with large schools. Municipalities that have an average school size of more than 300 pupils spend an average of NOK 51,100 less per pupil than municipalities that have an average school size of less than 100 pupils.

Small municipalities with few pupils do not have enough pupils to be able to take advantage of economies of scale (Falch et al. 2005). This means that municipalities with a low number of pupils also have disadvantages due to small-scale operations that are independent of the settlement pattern. Surveys indicate that the expenses for primary and lower secondary education and training are less sensitive to changes in the number of pupils after the introduction of the Knowledge Promotion Reform. This may indicate that the municipalities have become more flexible in handling changes in the number of pupils (Bonesrønning et al. 2010).

Many pupils from a language minority result in increased expenses

Pursuant to Section 2.8 of the Education Act, pupils with a mother tongue other than Norwegian or Sami are entitled to Basic Norwegian for language minorities until they have sufficient proficiency to follow the normal education and training. This Basic Norwegian for language minorities can be both Bilingual technical training and Mother tongue education, and it contributes to higher school expenses. Analyses show that it is especially the number of pupils born outside of Norway who contribute to increased expenses, whereas pupils born in Norway with two foreign-born parents affect the expenses in the municipalities to a much lesser extent (Borge et al. 2008). Later in this chapter, the scope and variation of the resources spent on Basic Norwegian for language minorities will be described.

The municipalities' financial situation explains little of the differences in expenses per pupil

Estimates show that 70-75 per cent of the variations in municipal expenses were attributed to differences in settlement pattern, size of the municipality and percentage of foreign-born pupils. This is relatively stable with time. That means that scarcely one fourth of the differences among the municipalities can be explained by other factors, such as economics and different priorities in the municipalities. (Hægeland et al. 2009a).

Because of the differing demographic structure, geography and size of the municipalities, it costs some municipalities more than others to give their inhabitants roughly the same range of services. Even after we have corrected for these differences in expenditure needs, there is still a substantial variation in the municipalities' unrestricted revenue. This is enhanced if we include income from electrical power licences and property tax. In 2010, 91 municipalities had unrestricted revenue corrected for expenses that was 5 per cent or more below the national average, whereas 63 municipalities were 30 per cent or more above the national average (Ministry of Local Government and Regional Development 2011). The variation in economic freedom of action seems to affect the resources that are spent per pupil. Municipalities with high unrestricted revenue spend more on primary

and lower secondary school than municipalities with low unrestricted revenue. Nevertheless, the income gaps among the municipalities are so small that differences in unrestricted revenue only appear to be able to explain1-3 per cent of the variation among municipalities in expenses per pupil. It is especially revenue from electrical power and revenue from property tax that appear to affect the differences in the funds that the municipalities spend per pupil (Hægeland et al. (2009a).

The percentages of day-care-aged children and the elderly affect the resources spent in primary and lower secondary school

Within given constraints and regulatory requirements, the municipalities can prioritise the ways in which they shall allocate their resources among various service areas. In that way, the primary and lower secondary school sector may find itself competing with other municipal sectors, e.g. day-care centres and care of the elderly. These differences in prioritisation may be attributed to different political preferences, but can also be explained by varying demand for different municipal services in different municipalities. Studies show that demand for other municipal services has an effect on the resources spent on primary and lower secondary school. An increase in the percentage of children of day-care age and the percentage of elderly seems to have a negative effect on the primary and lower secondary school's percentage of the municipal budgets (Pettersen et al. 2012 and Bonesrønning et al. 2010).

2.3 HOW MUCH DOES UPPER SECONDARY EDUCATION AND TRAINING COST?

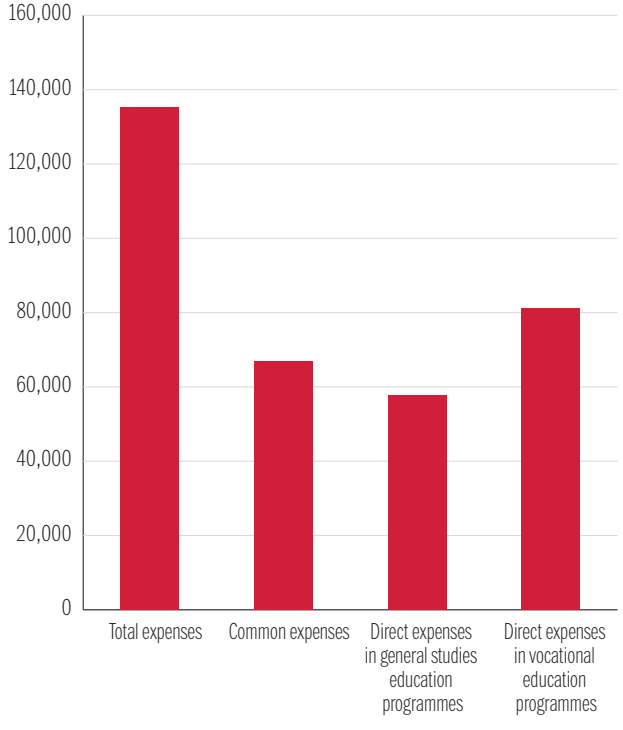
Preliminary figures from Statistics Norway KOSTRA show that in 2011, the county authorities spent NOK 23.7 billion on upper secondary education and training. Adjusted for wage and price increases, this is a decline of 0.4 per cent from 2010, whereas the equivalent decline for primary and lower secondary school was 0.6 per cent. This means that upper secondary education and training constituted an average of 34.3 per cent of the operating expenses in the county administrations, a decrease of 3.4 percentage points from 2010. In addition to the expenses mentioned above, the county authorities spent NOK 2.2 billion on vocational education and training in working life skills. Adjusted for wage and price increases, this is more or less unchanged from the previous year.

A pupil in upper secondary education and training costs an average of NOK 135,215 per year

Figure 2.4 shows expenses per pupil in upper secondary education and training. The total operating expenses per pupil came to NOK 135,215 per pupil in 2011. Adjusted for wage and price increases, this is a decline of just over 1 per cent or NOK 1,440 relative to 2010. The expenses in upper secondary education and training can be divided into common expenses, which consist of expenses for school premises, school administration, educational administration, special needs education and specially adapted education on the one hand and direct expenses for general studies education programmes and vocational education programmes respectively on the other. Operating expenses per pupil that are not allocated have decreased by 0.6 percentage points, while direct expenses for general studies education programmes and vocational programmes have decreased by 2 and 3 per cent respectively adjusted for wage and price increases.

The high direct costs for vocational education programmes are probably based on smaller basic groups in the instruction in vocational education programmes than in the general studies programmes.

FIGURE 2.4 Expenses per pupil in upper secondary education and training. Preliminary figures 2011. NOK.



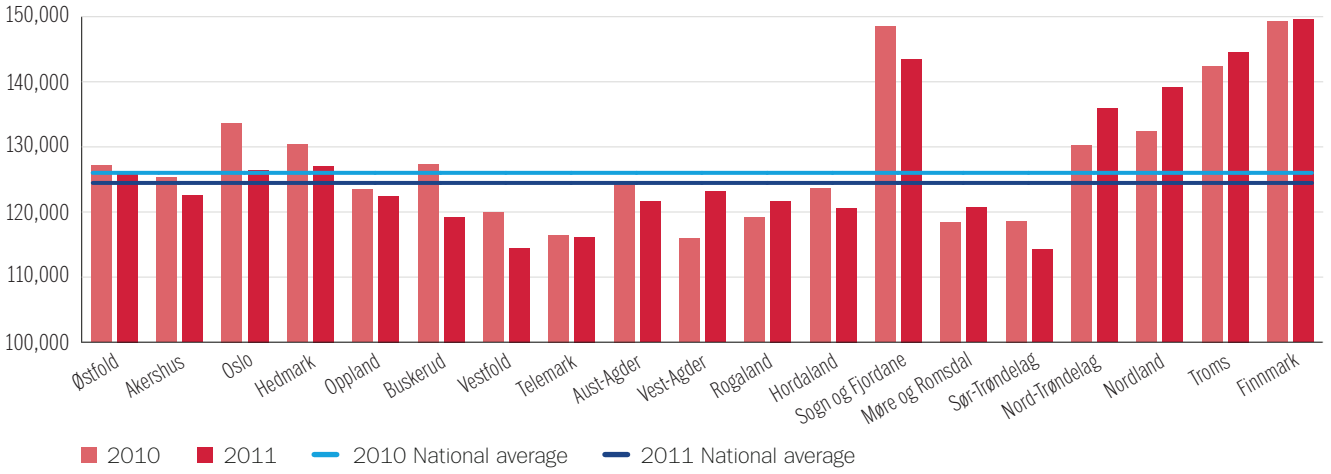
Source: Statistics Norway KOSTRA

2.4 WHY DO THE COSTS OF UPPER SECONDARY EDUCATION AND TRAINING VARY AMONG THE COUNTIES?

From figure 2.5, it can be seen that in 2011 Finnmark, Troms and Sogn og Fjordane counties had the highest expenses per pupil in the general studies education programmes. The common expenses discussed above are divided equally here between vocational and general studies education programmes. The differences among the counties are relatively large. Finnmark, which spends the most, spends 31 per cent more per pupil than Sør-Trøndelag county, which spends the least. Seven of the counties have had an increase in the expenses per pupil in the general studies education programmes, while 12 of the counties have had a decrease. The decrease has been greatest in Oslo and Buskerud counties.

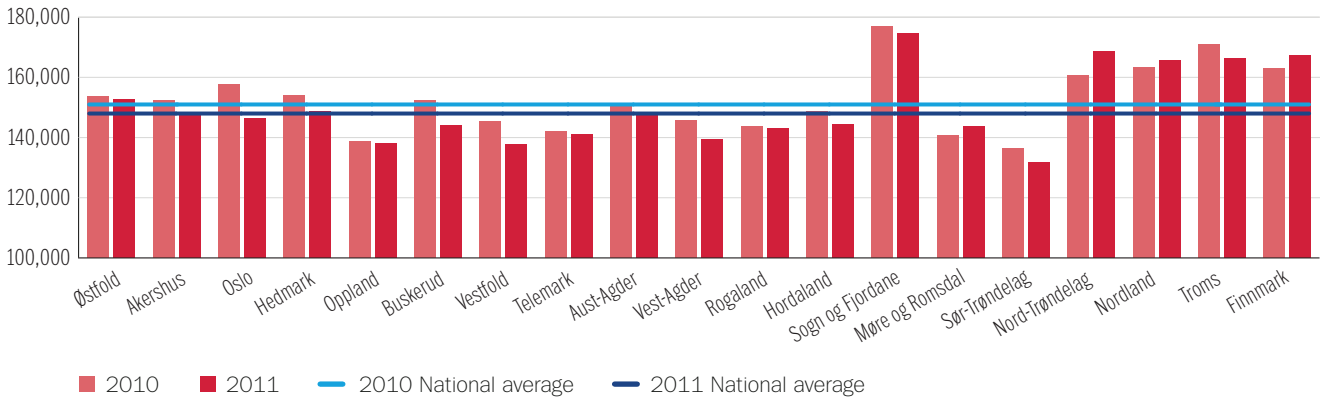
Figure 2.6 shows that Sogn og Fjordane, Nord-Trøndelag and Finnmark counties have the highest expenses per pupil in the vocational education programmes. Fifteen counties have had a decrease in operating expenses per pupil. The difference between the county that spends the most and the one that spends the least is about the same for the vocational education programmes as for the general studies education programmes and amounted to 32 per cent in 2011.

FIGURE 2.5 Expenses per pupil in general studies education programmes, adjusted for wage and price increases. 2010 and 2011. Preliminary figures 2011. NOK.



Source: Statistics Norway KOSTRA

FIGURE 2.6 Expenses per pupil in vocational education programmes, adjusted for wage and price increases. 2010 and 2011. Preliminary figures 2011. NOK.



Source: Statistics Norway KOSTRA

Pupils' choice of education programme gives lower expenses

The expenses per pupil have decreased slightly for both general studies and vocational education programmes. This decrease applies for most of the county administrations so that the decrease in the total operating expenses per pupil can probably not be explained by the fact that the composition of pupils among county administrations with high and low operating expenses has changed. The operating expenses per pupil have decreased in several education programmes, e.g. in the major education programmes Specialisation in General Studies and Health and Social Care. At the same time, there have been relatively more pupils in Specialisation in General Studies, which has the lowest expenses per pupil of the general studies education programmes. There have also been relatively more pupils in vocational education programmes with low expenses per pupil, e.g. Health and Social Care and Service and Transport. These two changes can probably explain much of the reduction in the expenses per pupil.

The county authority's financial situation affects the expenses per pupil

Figures 2.5 and 2.6 above show that the expenses vary for different county administrations, but not as much as for different municipalities. Pupils in upper secondary school can travel further than the pupils in primary and lower secondary school. Nevertheless, the situation is such that the disadvantages due to small-scale operations that we find in municipalities with a low number of pupils and sparsely settled population also apply to some extent to upper secondary education and training although to a lesser extent than for the municipalities. The percentage of pupils with a minority background does not appear to have any significant effect on the operating expenses per pupil (Hægeland et al. 2009a).

The financial situation in the county administrations appears to play a greater role than it does in the municipalities, and that may explain more of the variation in operating expenses per pupil in upper secondary education and training among the county administrations than among the municipalities. In particular, it appears that the unrestricted revenue affects the variation in expenses that cannot be directly divided between vocational or general studies educationprogrammes. This applies, for example, to school premises, transportation and educational administration (Hægeland et al. 2009a).

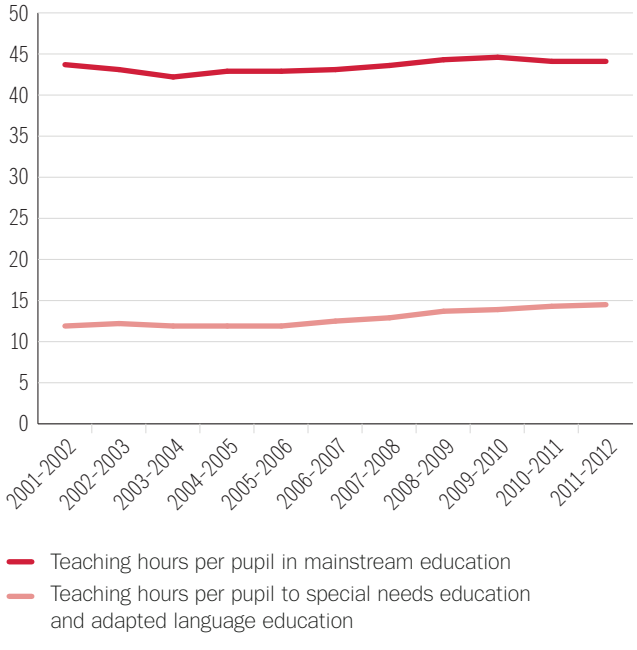
2.5 WHAT ARE THE RESOURCES SPENT ON?

The percentage of resources that go to individual adaptation increases

As shown above, payroll expenses are the biggest expense item in primary and lower secondary school. In 2011-2012, 57,446 full-time equivalents (FTEs) were performed by teachers in primary and lower secondary school. This figure includes both teachers with and without an approved degree. There is a slight reduction here relative to the previous year. If we look at the trend in the number of FTEs over a ten-year period, there has been an increase of 10 per cent. The teaching hours can go to both mainstream instruction and to various forms of individual adaptation. They can be related to special needs education, language education for language minorities pursuant to Section 2.8 of the Education Act and other types of language education in Sami, Finnish and sign language or education in the second choice form of Norwegian when this entails an extradivision of the class.

Figure 2.7 shows the distribution of the teaching hours for instruction for these various tasks adjusted for the number of pupils. The total number of teaching hours

FIGURE 2.7 Teaching hours per pupil for mainstream education, special needs education and Basic Norwegian for language minorities 2001-2002 to 2011-2012. Number.



Source: The Primary and Lower Secondary School Information System (GSI)

for instruction per pupil has increased slightly from 2010-2011 to 2011-2012. Almost the entire growth has occurred in teaching hours for special needs education and Basic Norwegian for language minorities. Over a ten-year period after 2001-2002, teaching hours per pupil have increased by 3.1 hours per pupil or 6 per cent. 84 per cent of this growth has come in teaching hours for special needs education and Basic Norwegian for language minorities, which has increased from 11.9 teaching hours per pupil in 2001-2002 to 14.5 teaching hours per pupil in 2011-2012. This means that most of the increase in teaching hours for instruction has gone to individual adaptation so that the percentage of teaching hours for mainstream instruction has decreased from 79 per cent in 2001-2002 to 75 per cent in 2011-2012.

The group size is roughly unchanged

Another much used measure of the resources spent per pupil is the teacher density per pupil, which measures how many teaching resources are spent on a pupil on the average.

The interest in teacher density derives from an expected correlation between the time the teacher devotes to each individual pupil and the pupils' learning outcomes. It is also argued that high teacher density can improve the job situation for the teachers and make it easier to arrange matters for continuous further and continuing education without it being too detrimental to the education and training of the pupils.

There is great interest in the correlation between teacher density and the pupil's learning outcomes. Neither national nor international studies show unambiguous results. Some researchers find no direct correlation (Bonesrønning et al. 2009 and Leuven et al. 2008). On the other hand, Hægeland et al. (2009b), for example, have found that higher expenses per pupil give somewhat better marks on examinations in Year 10.

Many of the surveys emphasise that for certain groups, e.g. pupils who have parents with a low level of education and pupils in the earliest Years of schooling, increased teacher density can have a positive effect on learning outcomes(Wiborg et al. 2011 and Bonesrønning 2009). It may be problematic detecting a correlation of this sort because there is often too little variation in teacher density among schools that it is natural to compare for this to have any significant impact on pupils' learning outcomes. In addition, there may be underlying-factors that mask the effect of increased teacher density. For example, it may be the case that extra teaching resources are devoted to classes or schools facing especially big challenges.

The average number of pupils per teacher in an average teaching situation is 13.4 when all of the hours of instruction are counted (group size 1), and 16.9 when hours for Basic Norwegian for language minorities and special needs education are excluded (group size 2). The two measurements of group size are almost unchanged from 2010-2011 to 2011-2012. There is a levelling off of the trend of slightly decreasing group sizes since 2005-2006. There are relatively small differences in the trend among the various Years, but the biggest changes from last year are in group size 2, which has decreased slightly in Years 5-7 and increased somewhat in Years 8-10. In 2009, a statutory requirement was introduced (Section 1-3 of the Education Act) concerning an especially high teacher density in Years 1-4 in Norwegian and Mathematics. The group size for Years 1-4 were roughly unchanged from 2008-2009 to 2011-2012 so that the effect of this amendment is not very traceable at the national level.

25 per cent of the current pupils attend schools where group size 2 exceeds 20 pupils per teacher. This is a slight decrease relative to last year.

Figure 2.8 shows that there is a strong correlation between school size and resources spent, measured by group size 2. This is one of the underlying causal explanations for the disparities in operating expenses between municipalities with small and large schools that were discussed ear-

GROUP SIZE 1

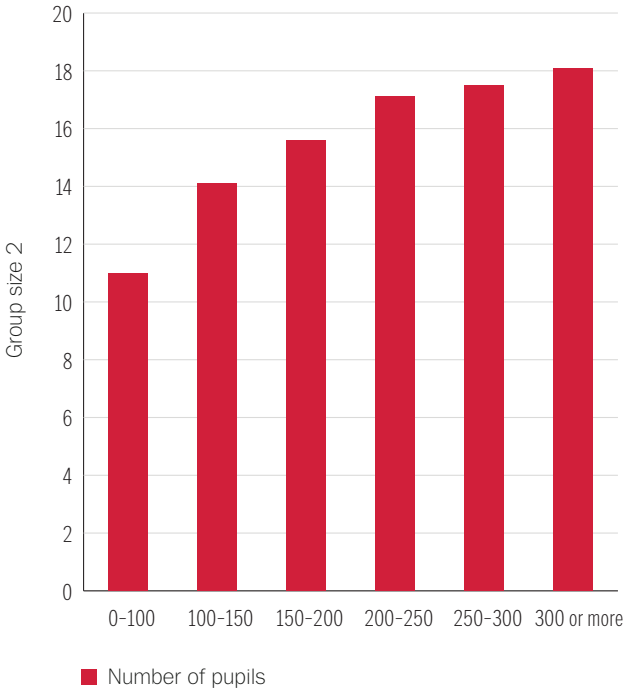
Group size 1 is defined as *the ratio of the total number of pupil hours to the total number of teaching hours.* This quantity includes all pupil hours and all teaching hours.

This definition gives a picture of the total at a school or in a municipality. In order to assess the ratio of pupils to teachers in a mainstream teaching hour, group size 2 is a better indicator.

GROUP SIZE 2

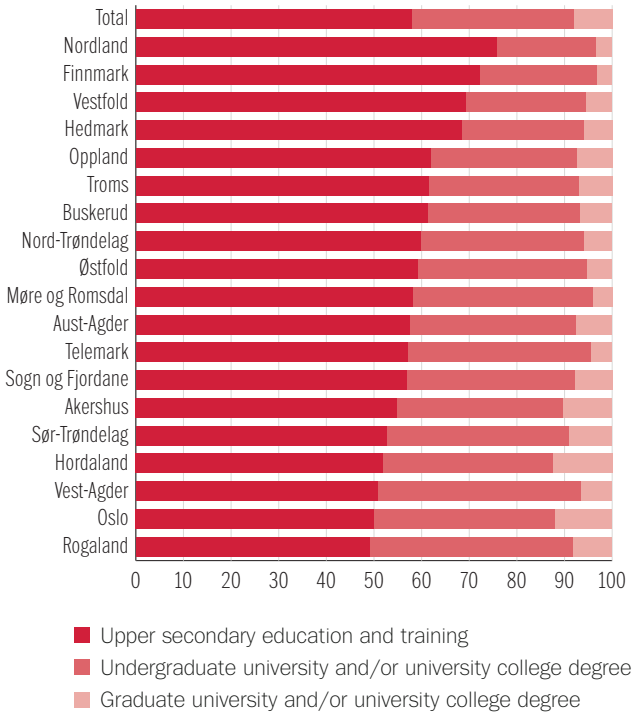
Group size 2 is defined as *the ratio of pupil hours minus hours for special needs education and Basic Norwegian for language minorities to mainstream teaching hours plus a division for Sami language alternatives.* This is an indication of pupils per teacher in mainstream education, and resources for special needs education and Basic Norwegian for language minorities are not included.

FIGURE 2.8 Group size 2 broken down by average school size in the municipality. Municipal primary and lower secondary schools. 2011-2012. Number.



Source: The Primary and Lower Secondary School Information System (GSI)

FIGURE 2.9 Level of education for staff in primary and lower secondary school who do not have teacher training, broken down by county. 4th quarter 2010. Per cent.



Source: Statistics Norway

lier in this chapter. Municipalities with small schools have considerably fewer pupils per teacher than municipalities with large schools. Relative to 2010-2011, there are only small changes in group size 2 regardless of the average school size in the municipality.

Fewer teachers who do not have approved qualifications

In the last ten years, the percentage of the total number of teacher FTEs that have been performed by teachers with approved qualifications has remained stable above 94 per cent. From 2005–2006 to 2009–2010, the percentage of FTEs performed by teachers with approved qualifications decreased somewhat, but has risen slightly from 2009–2010 to 2011–2012 so that the percentage of FTEs performed by teachers with approved qualifications in 2011–2012 was 96.4 per cent. In 2011-2012, there were 1,800 FTEs that were performed by teachers who do not have approved qualifications. The percentage of FTEs performed by teachers who do not have approved qualifications varies somewhat among the municipalities. In 58 municipalities, less than 90 per cent of the FTEs in municipal primary and lower secondary schools were performed by teachers with approved qualifications, whereas in 55 municipalities all of the FTEs in municipal primary and lower secondary schools were performed by teachers with approved qualifications. Municipalities in Finnmark, Oslo and Akershus counties had the highest percentage of FTEs that were performed by staff who did not have approved qualifications.

Figure 2.9 shows that at the national level, 58 per cent of the teachers who do not have teacher training only had education and training from upper secondary school, whereas 8 per cent had a graduate university or university college degree. It is the counties with a university that have the highest percentage of teachers who do not have teacher training, but who have a graduate university or university college degree. This is the case, for example, in Oslo, Akershus and Rogaland counties. Nordland, Finnmark and Vestfold counties had the highestpercentage of teachers without teacher training who only had upper secondary education and training.

The percentage of teaching hours for special needs education continues to increase

In 2011-2012, 18.3 per cent of the teachers' hours of instruction per year went to special needs education. This amounts to approximately 9,200 FTEs and is an increase of 0.4 percentage points from 2010-2011. This increase is also an extension of a trend that has been under way for several years. Since 2002-2003, the percentage of teachers' hours per year that go to special needs education increased by 19 per cent.

Figure 2.10 shows that more and more municipalities have increasing expenses for special needs education. The number of municipalities that use more than 25 per cent of their teaching hours on SNE has increased from 9 to 36 municipalities from 2005–2006 to 2011–2012. It appears that the increase in the number of municipalities that use more than 25 per cent of their teaching hours on SNE has levelled off from 2010-2011 to 2011-2012. In 2005-2006, 54 per cent of the pupils attended school in municipalities that used 10-15 per cent of their teaching hours on SNE. In 2011-2012, this percentage decreased to 19 per cent. In 2011-2012, 26 per cent of the pupils attended school in municipalities that used 20 per cent or more of their teaching hours on SNE, an increase of 22 percentage points since 2005-2006.

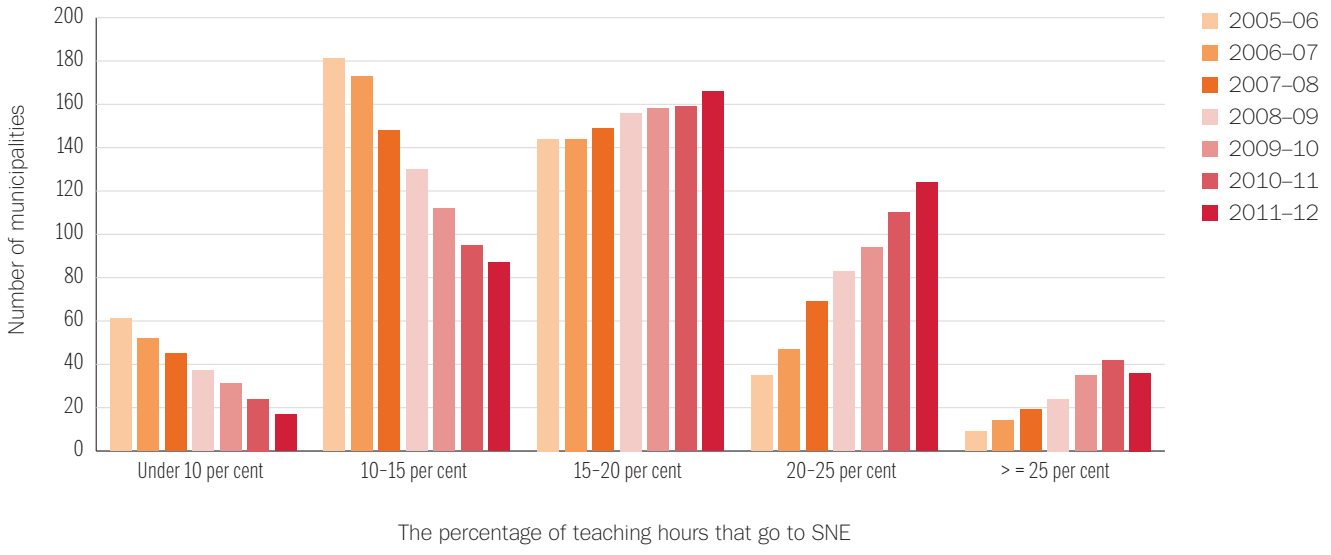
The increase has taken place independently of municipal size, but there has been a tendency for the increase in the percentage of teaching hours that go to SNE to be smaller the larger the municipalities. The percentage of teaching hours that go to SNE is lowest in the big municipalities with more than 50,000 inhabitants. They use an average of 17.4 per cent of their teachers' hours of instruction per year on SNE. This is 1.4 percentage points lower than municipalities with fewer than 5,000 inhabitants.

Big variations in resources that are spent on each pupil

At the same time that the resources used for SNE are increasing, the number of teaching hours per pupil is decreasing. In 2002-2003, there was an average of 153 hours per year per pupil, whereas in 2011-2012 that had dropped to 129 hours per year per pupil who was given SNE. This may be because SNE is being given to larger groups or because the number of hours devoted to each individual pupil has decreased.

Figure 2.11 shows that half of the pupils who are given SNE, are allotted between 2 and 5 hours a week with a teacher. In addition, about one-fourth are allotted more than 7 hours a week. Only a small percentage are allotted less than two hours a week. The extent of the allotment of hours varies somewhat among the municipalities. 72 municipalities allotted more than 7 hours of SNE a week to more than 40 per cent of the pupils who were allotted hours with a teacher, whereas in 125 municipalities less

FIGURE 2.10 Municipalities' use of teaching hours for special needs education. Municipal primary and lower secondary schools. 2005-2006 to 2011-2012. Number. Per cent.

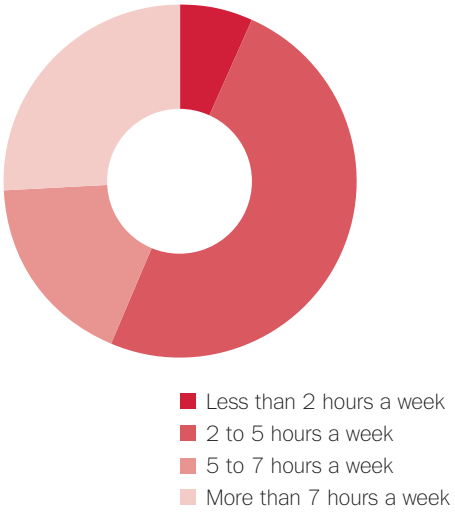


Source: The Primary and Lower Secondary School Information System (GSI)

than 15 per cent were allotted this number of hours.

From 2008-2009 to 2010-2011, the percentage of pupils who were allotted more than 7 hours per week with a teacher decreased from 28.3 to 25.4 per cent, but from 2010-2011 to 2011-2012 it has increased slightly to 25.6 per cent. The percentage of pupils who were allotted 5-7 hours a week with a teacher has also decreased since 2008-2009.

FIGURE 2.11 Distribution of individual decisions on special needs education with a teacher. Number of hours 2011-2012. Per cent.



Source: The Primary and Lower Secondary School Information System (GSI)

This indicates that in each case part of the reduction in the teachers' hours per year per pupil for SNE can be explained by the fact that the pupils are allotted a lower number of hours with a teacher.

Many reasons for growth in the use of resources on SNE

There are many different explanations for the rapid increase in SNE and the large gender gap in the allotment of individual decisions, which was discussed in Chapter 1. It is pointed out that the individual school now has a greater possibility of managing its use of resources at the same time that more attention has been focused on the pupils' learning outcomes. Increased monitoring of outcomes could lead to greater awareness of pupils who need adaptation. At the same time, an increased focus on outcomes helps facilitate the implementation of measures aimed at pupils with challenges in order to shield the learning situation for the rest of the group of pupils.

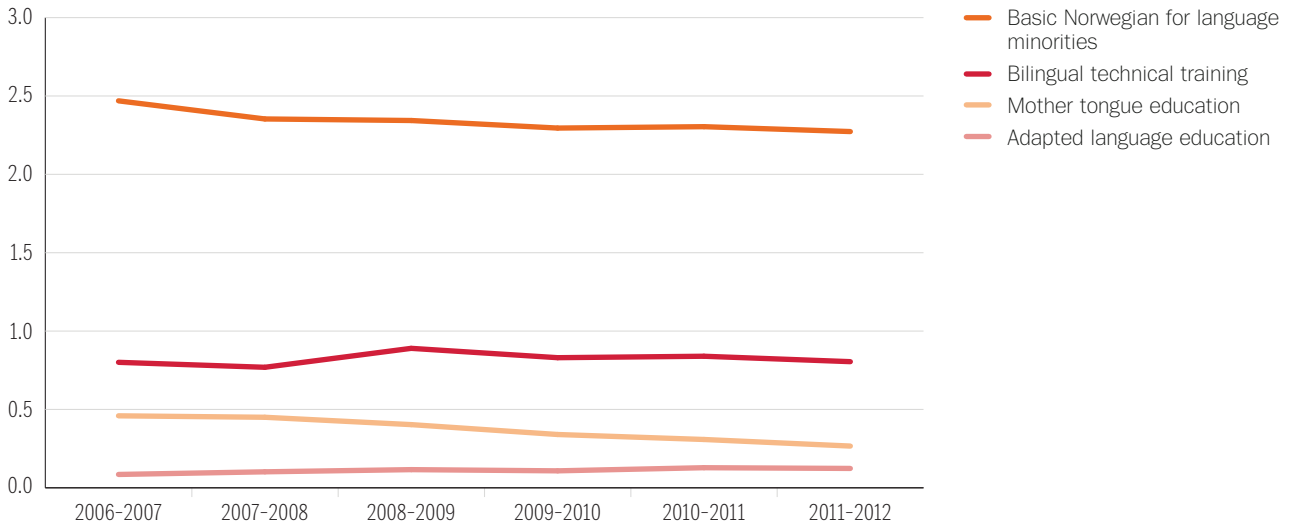
Bonesrønning et al. (2010) call attention to the correlation between the high percentage of boys and the rapid increase in ADHD diagnoses. Nordahl and Hausstätter (2009) find in their study that test results and clearly established medical diagnoses seem to be the most important reasons for enrolment in the Educational and Psychological Counselling Service (PPT). Their studies also show that 1 out of 6 pupils with undiagnosed behaviour disorders (assessed by their form teacher) are given SNE, whereas 7 out of 10 with an ADHD diagnosis are given this kind of instruction.

2.6 WHAT AMOUNT OF RESOURCES ARE USED ON BASIC NORWEGIAN FOR LANGUAGE MINORITIES?

In 2011-2012, teaching hours in Basic Norwegian for language minorities, Bilingual technical training, Mother tongue education and adapted education and training when the municipality is unable to offer Mother tongue education or Bilingual technical training amounted to 5.9 per cent of the teaching hours in instruction. This is a decrease from 6.8 per cent in 2006-2007.

There is considerable variation among the municipalities in the use of resources for language education for language minorities. 24 municipalities did not devote any teaching hours at all to this task in 2011-2012, while 33 municipalities used more than 8 per cent of their teaching hours on language education for language minorities. 27 per cent of the pupils attend school in one of these municipalities.

FIGURE 2.12 Teaching hours per pupil for Basic Norwegian for language minorities, Bilingual technical training, Mother tongue education and Adapted language education. 2006-2007 to 2011-2012. Number.



Source: The Primary and Lower Secondary School Information System (GSI)

The use of resources for Mother tongue education is decreasing

The percentage of pupils with decisions on Basic Norwegian for language minorities has increased in recent years. As indicated in figure 2.12, this is not reflected in the trend in teaching hours per pupil for various forms of language education for language minorities.

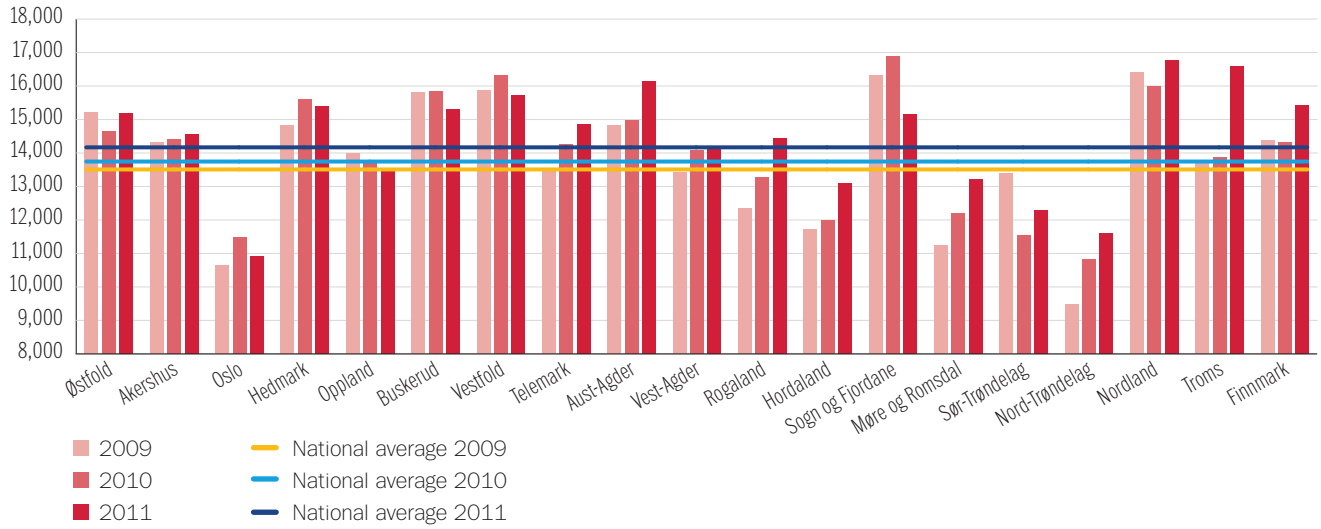
Figure 2.12 shows that since 2006-2007, the number of teaching hours per pupil for Basic Norwegian for language minorities and Mother tongue education has decreased. The number of teaching hours per pupil for Bilingual technical training is more or less unchanged. The decline in the number of teaching hours has been sharpest in Basic Norwegian for language minorities and Mother tongue education. This can be attributed to the fact that the instruction takes place in relatively large groups and to a reduction in the number of hours for the pupils. There has been an increase of over 40 per cent in teaching hours for adapted education and training when the municipality is unable to offer Mother tongue education or Bilingual technical training. This increase may be attributed to problems with recruiting staff with the right qualifications. Adapted education and training when the municipality is unable to offer Mother tongue education or Bilingual technical training is only used to a very slight extent by municipalities with a substantial number of pupils with Basic Norwegian for language minorities pursuant to Section 2.8 of the Education Act.

Surveys from the Norwegian Institute for Studies in Research and Higher Education (NIFU) (Vibe 2011) show that 72 per cent of the primary and lower secondary schools have pupils who are entitled to bilingual education and training, but only 39 per cent of the schools have teachers with the relevant formal competence. 28 per cent of the schools have teachers with formal competence in second-language didactics, 20 per cent of the schools have teachers with formal competence in multicultural education and 9 per cent of the schools have teachers with other relevant qualifications. One third of the municipalities state in the same survey that they take the initiative to provide relevant continuing and further education in multi-cultural education or second-language didactics. Larger municipalities take the initiative to do so to a greater extent than small municipalities.

More time for other tasks beside instruction

The teacher's FTEs (registered in the Primary and Lower Secondary School Information System [GSI]) include instruction and preliminary and supplementary work in connection with the instruction. The time that a teacher spends teaching can be reduced if the teacher has other demanding tasks, such as the form teacher function or the social and career counsellor function. For teachers employed by the municipality, senior measures also give a reduced teaching load starting in the year when the

FIGURE 2.13 Expenses per pupil for special needs education and special adaptation in upper secondary education and training. Adjusted for wage and price increases. 2009-2011. Preliminary figures 2011. NOK.



Source: Statistics Norway KOSTRA

teacher turns 55. This entails that the teacher does not spend all of the time specified as the annual number of teaching hours for the purpose of teaching. In 2011-2012, this type of task comprised 6,850 FTEs or 12 per cent of the FTEs of the teachers. From the 2004-2005 school year up to 2009-2010, this percentage increased from 9.5 to 12.5 per cent. After 2009-2010, this percentage has decreased somewhat again.

2.7 WHAT AMOUNT OF RESOURCES GO TO SPECIAL NEEDS EDUCATION AND SPECIAL ADAPTATION IN UPPER SECONDARY EDUCATION AND TRAINING?

The expenses for SNE and special adaptation in upper secondary education and training are reported somewhat differently from the expenses in primary and lower secondary education and training, so they are not directly comparable. For instance, the expenses in upper secondary education and training include expenses for the Educational and Psychological Counselling Service and the Follow-up service.

In 2011, the county authorities spent about NOK 2.5 billion on SNE and special adaptation. Adjusted for wage and price increases, these expenses increased by about 13 per cent from 2008 to 2011. This means that expenses for SNE and special adaptation constitute scarcely 10 per cent of the county authorities' expenses for upper secondary education and training.

In 2011, this amounted to an expense of NOK 14,169 per pupil in upper secondary education and training. Adjusted for wage and price increases, this amounts to an increase of 12 per cent relative to 2008. Since 2008, all of the counties have had growth in their expenses per pupil for special adaptation and SNE.

Figure 2.13 shows that there are relatively large variations in the expenses the county authorities incur for SNE and special adaptation. Nordland County, which spent the most, spent almost 18 per cent above the average, whereas Oslo, which spent the least, spent 23 per cent below the average. There is no direct correlation between the counties' total expenses per pupil and the expenses per pupil for SNE and special adaptation.

2.8 WHAT AMOUNT OF RESOURCES ARE SPENT ON ASSISTANTS IN THE SCHOOL SYSTEM?

Assistants are staff without formal teacher competence who are employed, among other things, to help the teacher with the instruction. The use of occupational groups without teacher competence is not discussed in the Education Act

or its associated regulations. In the *Guide to the Education Act concerning special educational assistance and special needs education,* it is assumed that assistants are not going to lead the instruction, have responsibility for SNE or replace the teacher.

The expenses for the assistants have increased considerably

In 2011-2012, there were 8,515 assistant FTEs in primary and lower secondary school. This is an increase of 33 per cent since 2006-2007. In the same period, the teacher FTEs increased by 6 per cent. In 2011-2012, the FTEs of assistants constituted almost 13 per cent of the total FTEs for teachers and assistants. This is an increase of 2.4 percentage points from 2006-2007, and it is the continuation of a trend that also existed prior to 2006-2007.

The municipalities themselves state that the most important reasons for hiring assistants are the desire for closer follow-up of individual pupils and more pupils with decisions on special needs education. Challenges in recruiting teaching staff also play an important role in small municipalities. The municipalities respond that economic reasons are not the most important reason for hiring assistants. (Rambøll Management 2010)

Many pupils have special needs education with an assistant

In 2011-2012, 25,330 pupils, i.e. 4.1 per cent of the pupils, had an individual decision on special needs education that included hours with an assistant. This is an increase of 4 per cent relative to 2009-2010. That means that scarcely half of the pupils with an individual decision on special needs education were also allotted hours with an assistant.

Figure 2.14 shows that 59 per cent of the pupils who are given SNE with an assistant are allotted more than 7 hours a week. In addition, about 24 per cent are given 2 to 5 hours a week. Only a small percentage are given less than two hours a week. Compared with the number of hours that are allotted for SNE with a teacher, the pupils who are allotted hours with an assistant are allotted a greater number of hours.

About 70 per cent of the assistant FTEs are used in connection with SNE, and that comes to about 6,000 FTEs. There is a certain amount of uncertainty in connection with the reported figures with regard to the use of assistants in connection with SNE, but the figures indicate that in the past year there has been a relatively rapid growth in the number of assistant FTEs that are used on tasks related to SNE.

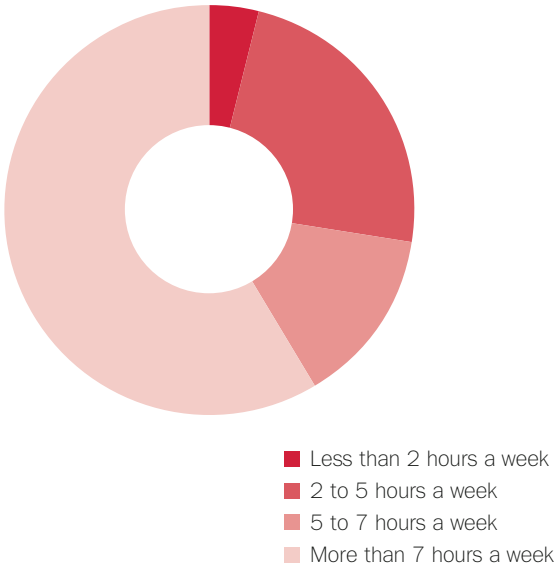
As a part of the evaluation of SNE in primary and lower secondary school after the introduction of the Knowledge Promotion Reform, Nordahl and Hausstätter (2009) have asked a number of questions to school administrators about their use of assistants. 70 per cent of the school administrators report that assistants often or occasionally are given responsibility for the practical execution of the instruction focused on academic goals in SNE. In the same survey, 70 per cent of the school administrators state that the assistants always or often are given instruction by the teachers in the tasks they are given to execute.

A survey from Rambøll (2010), however, shows a disparity between school administrators and assistants in their views on the amount of instruction. School administrators think that assistants are given more instruction than the assistants state that they actually get.

In the same survey, over 40 per cent of the assistants respond that they need more instruction and competence in order to perform their tasks in a good way.

The assistants usually have upper secondary education and training as their highest completed education, and many of them have a background in Health and Social Care. Data from Statistics Norway shows that scarcely 19 per cent of the assistants have a trade certificate in child care and youth work.

FIGURE 2.14 Breakdown of individual decisions on special needs education with assistants. Number of hours 2011-2012. Per cent.



Source: The Primary and Lower Secondary School Information System (GSI)

2.9 WHAT AMOUNT OF RESOURCES ARE SPENT ON ADULTS IN PRIMARY AND SECONDARY EDUCATION AND TRAINING?

Through the Competence Reform, adults were given the right to primary and secondary education and training (NOU 1997: 25). The requirement for a diploma is final assessment in the subjects Norwegian, English and Mathematics and in two of the following subjects: Mathematics oral, Natural Sciences, Social Studies, or Christianity with Comparative Religion and Ethics (RLE).

Increase in the resources spent in primary and lower secondary education and training for adults

There has been a relatively large increase in the number of adults who were given mainstream primary and lower secondary education and training in recent years, while there has been a decline in the number of adults who were given SNE (cf. Chapter 1).

The number of FTEs of teachers and staff with administrative and educational administrative tasks increased by 17 FTEs to 1,260 FTEs from 2010-2011 to 2011-2012. This comes after a relatively rapid increase of 196 FTEs from the previous school year. The number of hours per year per participant who is given mainstream primary and lower secondary education and training decreased somewhat from 2010-2011 to the following school year. In 2010-2011, there were 57.7 hours per year per participant, but this decreased to 56.7 hours per year in 2011-2012. The number of hours per year per participant in SNE has decreased by 3 hours per year per participant to barely 69 hours per year per participant in 2011-2012.

Almost 97 per cent of the FTEs that went to instruction are performed by staff with an approved degree. The percentage of FTEs that went to instruction performed by staff with an approved degree has increased since 2009-2010 when 94.4 per cent of the FTEs that went to instruction were performed by staff with an approved degree,

Data from Statistics Norway show that about 85 per cent of the staff at the adult education institutions (not including administrators) have a university or university college degree with teacher training, whereas 8 per cent have a university or university college degree, but do not have teacher training.

Adults in upper secondary education and training

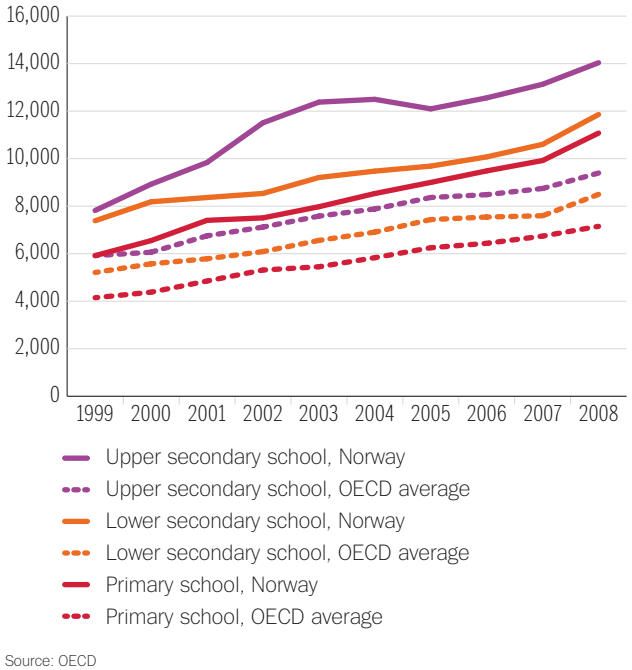
Preliminary KOSTRA figures show that in 2011 the county authorities spent about NOK 342 million on upper secondary education and training that was specially adapted to adults. Adjusted for wage and price increases, this amounts to an increase of 0.3 per cent. These expenses only include expenses for programmes that are specially adapted to adults. That means that expenses for adults who take part in ordinary classes are not included in these expenses. 11 counties have had an increase in these expenses relative to 2010 after adjusting for wage and price increases.

2.10 WHAT AMOUNT OF RESOURCES DOES NORWAY SPEND ON EDUCATION COMPARED WITH OTHER COUNTRIES?

Norway spends 4-5 percentage points more of its GDPper inhabitant than the OECD average

Measured relative to the country's economic capacity (gross domestic product per inhabitant) Norway spends more resources than the average in the OECD. In Norway, the expenses per pupil measured relative to GDP per inhabitant in 2008 came to 25 per cent in Years 1-7, and this is 4 percentage points more than the OECD average. The difference is greatest for upper secondary education and training, where Norway spends 32 per cent of its GDP per inhabitant, which is 5 percentage points higher than the OECD average.

FIGURE 2.15 Expenses per pupil broken down by main school level. Norway and OECD average. 1999-2008. Figures adjusted for purchasing power and presented in USD.



Source: OECD

When we look at the total resources spent on primary and secondary education and training relative to total GDP, Norway also spends more than the OECD average. In 2008, Norway spent 5 per cent of its GDP on primary and secondary education and training as a whole, whereas the OECD countries spent only 3.8 per cent on average.

Norway spends considerable resources on primary and secondary education and training, measured in expenses per pupil. For all of the Years of primary and secondary education and training, Norway has spent considerably more than the OECD average throughout the whole period from 1999 to 2008. For primary (Years 1-7) and upper secondary education and training, the differences between Norway and the OECD average have increased. In 1999, Norway spent 43 per cent more than the OECD average in Years 1-7 and in 2008 this had increased to 55 per cent. In upper secondary school, the difference increased from 32 per cent to 49 per cent. In Years 8 to 10, the difference was reduced from 42 per cent to 40 per cent from 1999 to 2008.

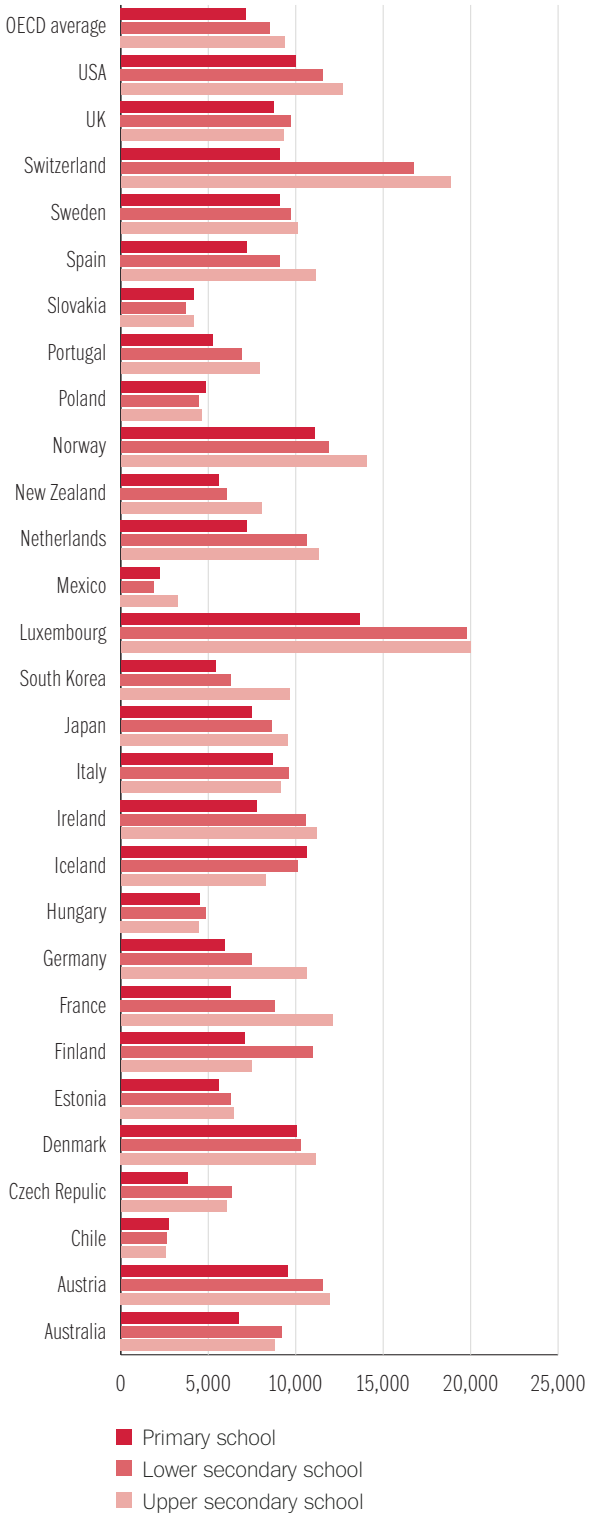
From figure 2.16, we see that, with the exception of Switzerland and Luxembourg, Norway had higher expenses in all of the main levels of schooling in 2008 than countries with which it is natural to compare ourselves. Compared with the other Nordic countries, Norway also spent considerably more. The differences are especially great for upper secondary education and training, where Norway spends 39 per cent more than Sweden, for example.

As previously mentioned in this chapter, payroll expenses are the largest expense item in primary and secondary education and training. The payroll expenditures per pupil are governed by the teacher's salary level, number of teaching hours, number of pupils per teacher and the number of hours of instruction for the pupils. In 2008, Norway had higher payroll expenditures per pupil than the OECD average in both primary and lower secondary school and in upper secondary education and training.

High teacher density contributes to higher expenses in Norway

It is especially the high teacher density that contributes to the high expenses per pupil in Norway. We have a higher teacher density than the OECD at all three school levels. In Norway, there are 10.7 pupils per teacher FTE in Years 1.7, compared with 16.0 on the average in the OECD countries. In Years 8-10 and in upper secondary education and training, the difference is somewhat less. In Norway, there is an average of almost 10 pupils per teacher FTE in Years 8-10, which is 3.6 fewer pupils than the OECD average,

FIGURE 2.16 Expenses per pupil in the OECD countries for 2008. Figures adjusted for purchasing power and presented in USD.



Source: OECD

whereas at the upper secondary level there are 9.4 pupils per teacher FTE, which is 4.1 fewer pupils per teacher FTE than the OECD average. Norway also has a high teacher density compared with the other Nordic countries. With the exception of Iceland, which has a somewhat higher teacher density than Norway at the lower secondary level, Norway has a higher teacher density at all of the main levels of schooling than the other Nordic countries.

Sparse settlement and many schools are costly

The pattern of settlement in Norway is sparser than in most OECD countries. As we have shown previously in this chapter, this affects the teacher density. Estimates of the effects of the pattern of settlement show that if the number of schools is halved and the average school size increases to 400 pupils, real resources spent will be reduced by about 6 per cent (Bonesrønning et al 2008). Real resources are the product of the teacher density and the teachers' teaching hours, and they are calculated to be about 20 per cent above the OECD average. In other words, only a little over one third of the difference can be attributed to the pattern of settlement in Norway.

Few teaching hours per teacher draw up the expenses in Norway

Fewer teaching hours among the teachers also tend to drive payroll expenditures per pupil up relative to the OECD average, but to much lesser extent than the high teacher density. Teachers in Norway instruct less than the OECD average in both primary and lower secondary school and upper secondary education and training. In Years 1-7, the teachers had 5 per cent fewer teaching hours than the OECD average in 2009, whereas the number of teaching hours was 20 per cent lower at the upper secondary level.

Teachers with high seniority draw the payroll expenditures somewhat down in Norway

The teachers' salary level mainly tends to draw down payroll expenditures per pupil. As a general rule, Norwegian teachers with low seniority earn somewhat more than the average in the OECD, whereas teachers with high seniority tend to earn less. This is mainly attributed to the fact that the payroll structure for Norwegian teachers is relatively compressed so that there is little difference between the top and bottom of the payroll scale. The top salary in 2009 was 19-23 per cent higher than the starting pay, whereas the average difference in the OECD is 64 per cent.

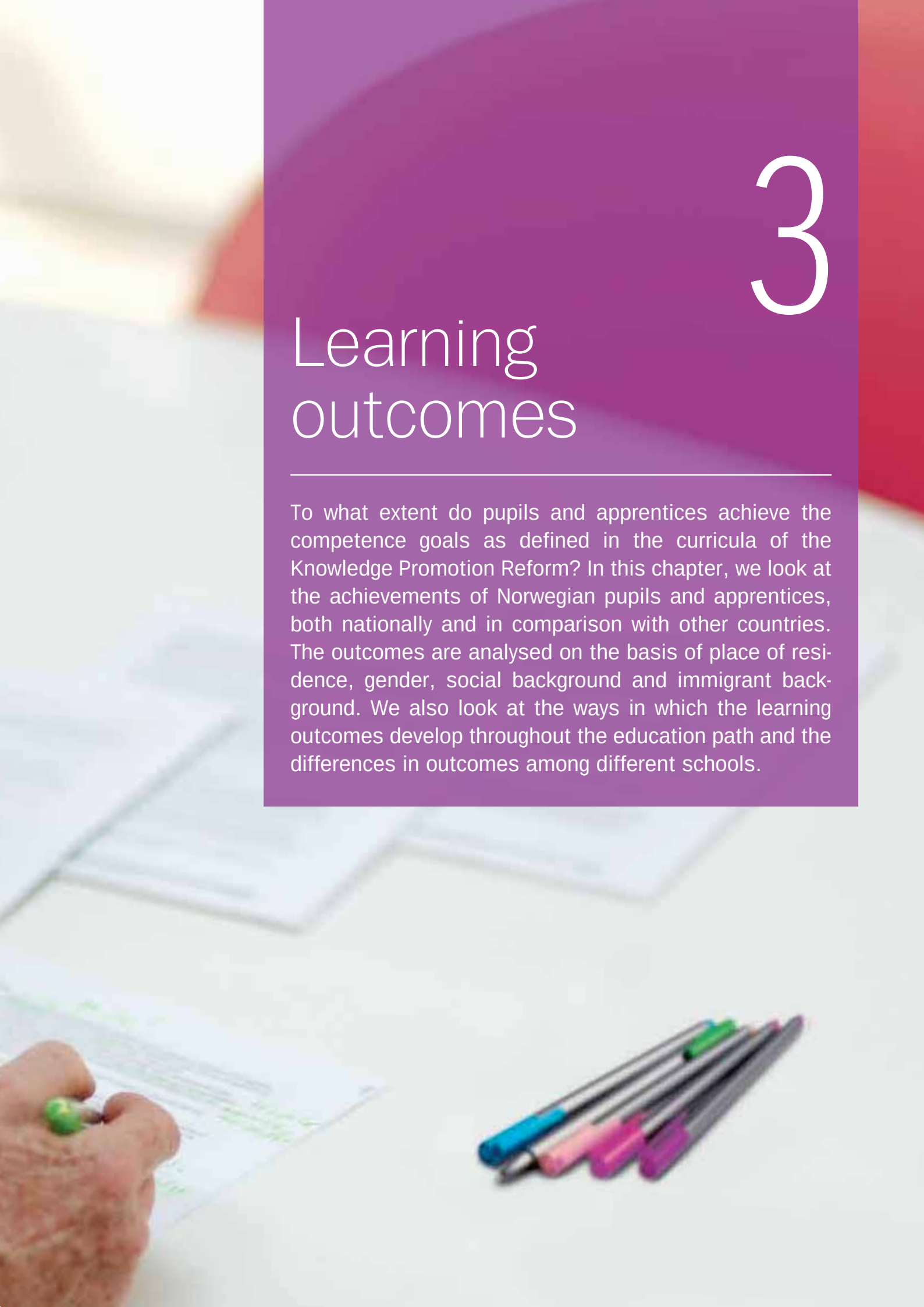
Low number of teaching hours for the pupils draws down the expenses in Norway

As a general rule, Norwegian pupils get fewer teaching hours than the OECD average. This tends to draw payroll expenditures per pupil down relative to the OECD average. Norwegian 7-14-year-old pupils in primary and lower secondary school were given 9 per cent fewer teaching hours than the OECD average in 2009. This is somewhat fewer hours than the number in Denmark, but more hours than the number in Sweden.

3

Learning outcomes

To what extent do pupils and apprentices achieve the competence goals as defined in the curricula of the Knowledge Promotion Reform? In this chapter, we look at the achievements of Norwegian pupils and apprentices, both nationally and in comparison with other countries. The outcomes are analysed on the basis of place of residence, gender, social background and immigrant background. We also look at the ways in which the learning outcomes develop throughout the education path and the differences in outcomes among different schools.



3.1 WHAT DO WE KNOW ABOUT LEARNING OUTCOMES IN NORWEGIAN PRIMARY AND SECONDARY EDUCATION AND TRAINING?

We now have much more information about the state of Norwegian schools than we had at the beginning of the 2000s. Since 2004, Norway has made efforts to implement and further develop a national quality-assessment system (NKVS). The key elements in NKVS are national tests, international studies, user surveys, inspections and *Skoleporten* (the School Portal). In addition now, a system shall be developed that is more specifically focused on vocational education and training in upper secondary school and in training establishments (read more about this in chapter 6). In addition, we acquire knowledge about learning outcomes in primary and secondary education and training through statistics for overall achievement and examination marks and trade and journeyman's examinations and through research and evaluation. What do we know about learning outcomes in Norwegian primary and secondary education and training now, based on these sources?

We know that girls consistently have better outcomes than boys in most subjects. Pupils who have parents with a higher level of education achieve better than pupils who have parents with a lower level of education, and pupils who do not come from an immigrant background achieve better on the average than pupils who come from an immigrant background. Analyses have shown that gender and family background, measured, for example by immigrant background and parents' level of education, income, marital status, etc. can explain almost one third of the differences in marks among pupils (Hægeland et al. 2005). Thus, most of the variation in marks is attributed to factors we have so far not been able to measure in a good way, e.g. unobserved family characteristics, motivation and the effort of the pupil, the teacher's ability to communicate, etc.

We also know that there are usually only small variations in learning outcomes from year to year at the national level, both in the outcomes in themselves and when we consider differences in gender, immigration background or level of education of the parents. National tests, overall achievement and examination marks and trade and journeyman's examinations were not devised to measure the trend in the pupils' competence and skills over a period of time. So far it is only the international studies that can measure these trends. Therefore, when we consider the improvement in achievement for pupils from Years 5 to 8 and Year 10 later in this chapter, we do so by considering how the pupils are ranked in the distribution of achievement compared with other pupils, not by looking at the trend in the competence of the pupils over a period of time.

NATIONAL TESTS

National tests in *Reading*, *Mathematics* and *English* are carried out in Years 5 and 8. Pupils in Year 9 take the same tests in *Reading* and *Mathematics* as pupils in Year 8. The tests shall be used to assess the extent to which the school has managed to develop the skills of the pupils in *Reading* and *Mathematics*, and in parts of the subject, *English*. The tests shall be used by schools, school owners and national authorities as a basis for quality improvement in the education and training. The outcomes from the national tests are divided into three mastering levels in Year 5 and five mastering levels in Years 8 and 9.

Signs of improvement for Norway in international studies

The most important international trend studies that Norway takes part in are TIMSS (*Trends in International Mathematics and Science Study*), PIRLS (*Progress in International Reading Literacy Study*) and PISA (*Programme for International Student Assessment*). Together they examine the competence and skills in *Mathematics*, *Natural Sciences* and *Reading* of the pupils in Years 4, 5 and 8 and of 15-year-olds.

The results from the first PISA study, in 2000, showed that Norwegian pupils performed at about the average level for the OECD countries. Then they suffered a decline both in PISA 2003 and PISA 2006. After that, the trend reversed. In 2009, Norway was back at the 2000 level and was one of the nine best OECD countries in *Reading*. TIMSS also shows a positive trend for the Norwegian pupils from 2003 to 2007 (Grønmo and Onstad 2009). The next results from TIMSS AND PIRLS will come in 2012, whereas new results from PISA will come in 2013.

Still differences among the counties

As a rule, it is the same counties each year that distinguish themselves with the best outcomes on national tests. Figure 3.1 illustrates this for national tests in *Mathematics* in Year 5. Oslo and Akershus County usually have the highest average mastering level, the largest percentage of pupils at the highest mastering levels and the smallest percentage of pupils at the lowest mastering levels (The

Norwegian Directorate for Education and Training 2011 a, b and c). Sogn og Fjordane County is usually not far behind, but has a slightly higher variation in the outcomes from different years, tests and Years.

It is the same counties that distinguish themselves in Year 10 as in the national tests. As a rule, Sogn og Fjordane has the highest lower secondary school points, followed by Akershus and Oslo. In all instances, the differences among counties are not great (The Norwegian Directorate for Education and Training 2011d).

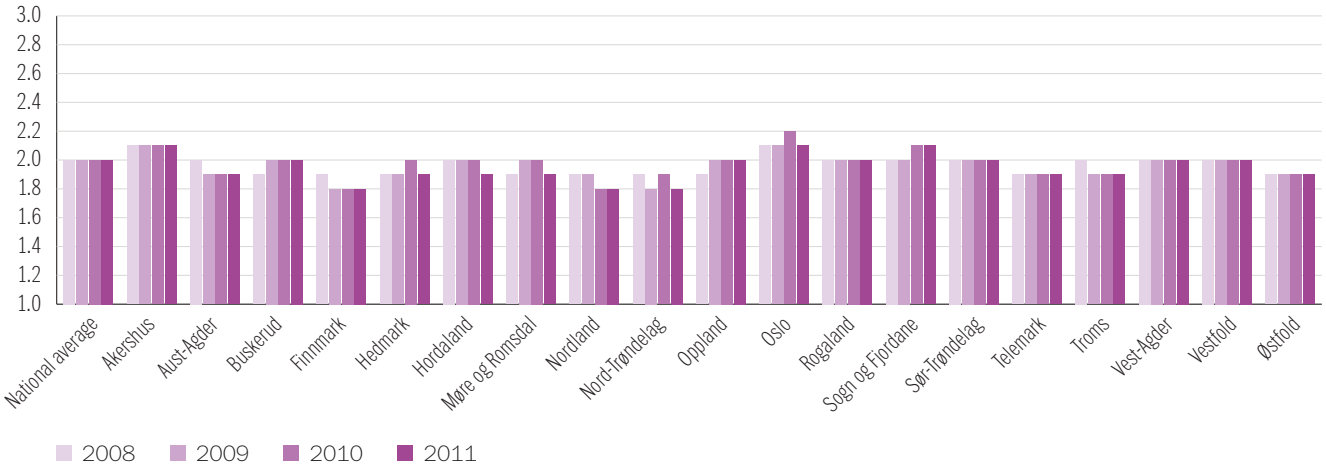
When it comes to examination marks in individual subjects in Year 10 and in upper secondary education and training, there is not any uniform pattern with regard to which county has the best outcomes. This is related to the fact that the number of pupils who take examinations is low in most subjects, which gives a more random variation than for national tests or lower secondary school points, both of which are supposed to include all of the pupils in an age cohort.

In Year 10, the marks in all four of the subjects with written examinations that are the same throughout the country were stable over a period of time in the counties. The average mark in large counties (with a high number of pupils) remains more stable than in smaller counties. In 2011, the biggest variation in examination marks is found in *Norwegian second-choice form*, where the difference between the counties with the highest and lowest marks is 0.7. In *Mathematics* there is a difference in marks of 0.6 among the counties and in *English* 0.4, whereas the smallest difference is in *Norwegian, first-choice form* with 0.2.

OVERALL ACHIEVEMENT MARKS AND EXAMINATION MARKS

The pupils receive overall achievement marks in all subjects at the end of lower secondary school and upon completion of each subject in upper secondary education and training. They are selected to take examinations in a small number of subjects. The basis for assessment in a subject is the pupils' achievement of goals relative to the overall competence goals in the curriculum for each individual subject. The pupils are given numerical marks on a scale of 1 to 6.

FIGURE 3.1 Mastering level on national tests in *Mathematics* in Year 5, broken down by county. 2008 to 2011. Average figures.



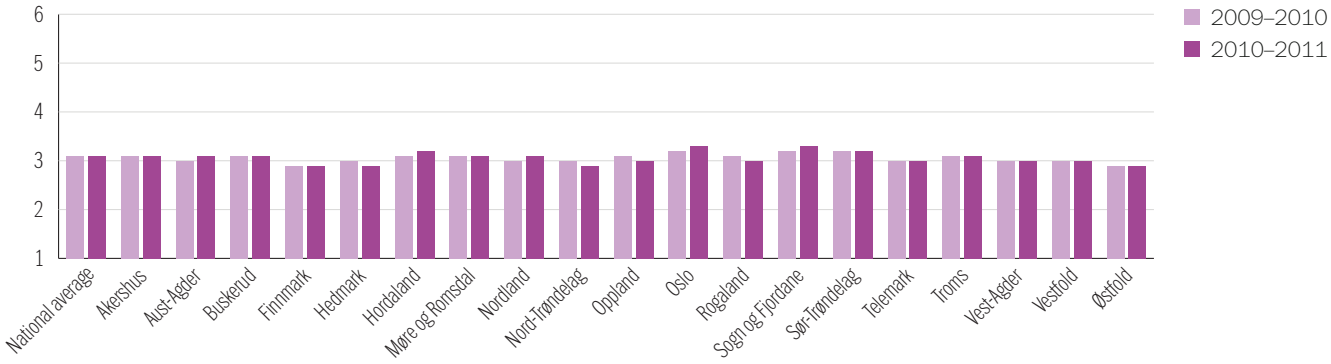
Source: The Norwegian Directorate for Education and Training 2011c

In upper secondary education and training, there is only a relatively small selection of the pupils who were chosen to take the examination in subjects other than *Norwegian, first-choice form* and *Norwegian, second-choice form* in general studies education programmes. Examination results vary somewhat among the counties. The difference between the highest and lowest average mark is 0.4 in *Norwegian, first-choice form* (see figure 3.2) and 0.7 in *Norwegian, second-choice form* (The Norwegian Directorate for Education and Training 2011e).

Nordland is the county that distinguishes itself with the best outcomes on trade and journeyman's examinations. This year, Nordland again had the highest percentage who achieved the mark of passed with distinction, whereas Oslo and Hordaland counties had the lowest percentage.

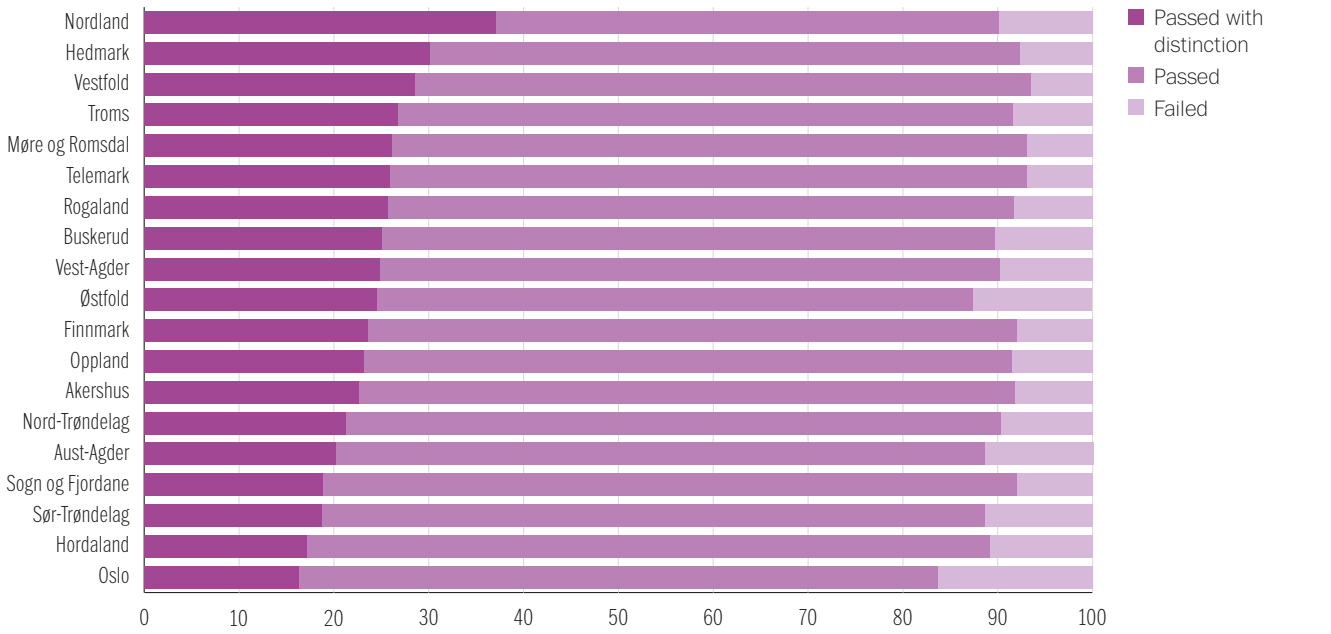
Oslo also had the largest percentage of pupils with the mark of failed (see figure 3.3). This may be related to the fact that there are far fewer pupils who apply for vocational studies in Oslo than in the rest of the country and that there are more pupils with poor marks from Year 10 in

FIGURE 3.2 Examination marks in *Norwegian, first-choice form* in general studies education programmes, broken down by county. 2009-2010 and 2010-2011 Average figures.



Source: The Norwegian Directorate for Education and Training 2011e

FIGURE 3.3 Passed trade and journeyman's examinations, by county. Preliminary figures 2011. Per cent.



Source: Statistics Norway

TRADE AND JOURNEYMAN'S EXAMINATIONS

Vocational education and training is upper secondary education and training in schools and training establishments that results in a trade certificate, a journeyman's certificate or other vocational qualifications. The trade or journeyman's examination is a test where the candidate plans the work, chooses methods, carries out, checks and documents the work and substantiates the choices that are made. The duration of the test can be from two to five days, depending on the subject. The assessment is carried out by an examination board with members who have no connection with the training establishment. The examination can be assessed as passed with distinction, passed or failed.

vocational studies in Oslo than in the rest of the country.

The number of those who took a trade and journeyman's examination shows little change from previous years. In excess of 22,000 persons took trade and journeyman's examinations in 2011. About 15,000 pupils took the examination as apprentices, scarcely 7,000 were candidates for experience-based trade certification and a little over 600 were pupils. 90 per cent passed the examination, a decline of 2 percentage points from the previous year. Almost one fourth were awarded the mark of passed with distinction.

Most of the graduates, almost three fourths, took the trade and journeyman's examination in an education programme within the structure of the Knowledge Promotion Reform. This was the second age cohort of apprentices within this structure. The percentage who pass, varies little between graduates from Reform 94 with 89 per cent and from the Knowledge Promotion Reform with 90 per cent.

The centrally located municipalities have the best outcomes

There is a clear correlation between achievement on national tests and how centrally the pupils residence is located (Statistics Norway 2012). Pupils in the most centrally located municipalities have the best outcomes. This is related to the fact that the level of education of the parents is higher across the board in the most centrally located municipalities. Pupils who live in centrally located municipalities and who do not have parents with a university or university college degree do not have better outcomes than other pupils.

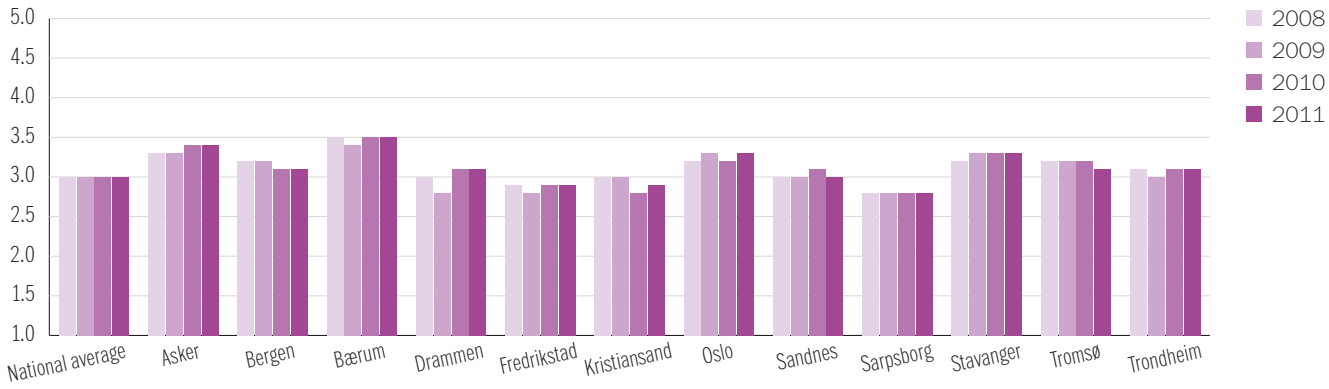
Figure 3.4 shows the average mastering level on national tests in *English* in Year 8 in the 12 largest municipalities, compared with the national level. Asker and Bærum municipalities lie well above the national average, closely followed by Oslo and Stavanger.

Differences in exemptions from national tests

Pupils with individual decisions on special needs education or Basic Norwegian for language minorities may be exempted from national tests when it is clear that the results of the tests will have very little effect on their education. A higher percentage of the pupils are exempted at Year 5 than at Year 8, and this percentage has increased each year since national tests were introduced. The percentage that are exempted varies among the municipalities and among the counties.

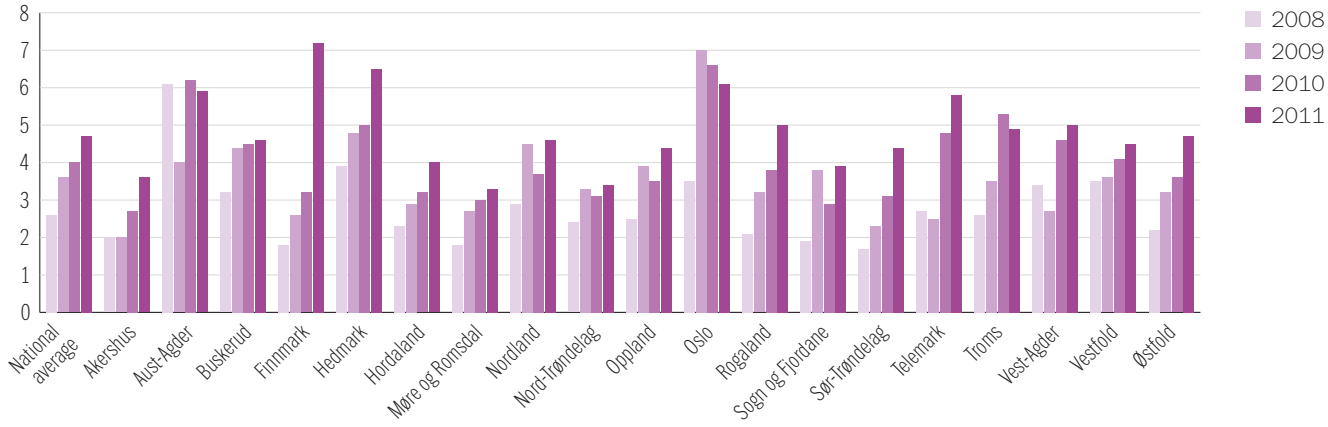
Pupils who are exempted from taking national tests shall first be registered in the test administration system

FIGURE 3.4 Mastering level on national tests in *English* in Year 8. 2008 to 2011. National level and the 12 largest municipalities. Average figures.



Source: The Norwegian Directorate for Education and Training 2011b

FIGURE 3.5 Pupils exempted from national tests in *Reading* in Year 5, broken down by county. 2008 to 2011. Per cent.



Source: PAS/The Norwegian Directorate for Education and Training 2011a

(PAS) before they are registered as exempted. An analysis shows, nonetheless, that many schools exempt a substantial percentage of the pupils from the national tests without this being registered in PAS in connection with the test administration (Bonesrønning et al. 2011). This becomes evident when we compare the number of pupils who take the national tests in Year 5 with the reported number of pupils in the Primary and Lower Secondary School Information System (GSI). Measured in this way, around 90 per cent of the pupils in Year 5 take national tests. Small municipalities have the biggest deviation between the number of pupils who are registered to take national tests and the number of pupils who are reported in GSI. This is partly because the absence of an individual pupil will have a more marked effect on the percentage who take the tests in small municipalities, but that is not the whole explanation. The data indicates that many pupils with individual decisions are not registered in PAS.

Data that shows an increase in the percentage of the pupils who are exempted over a period of time may be correlated with the fact that the schools have become better at registering all of the pupils in PAS (The Norwegian Directorate for Education and Training 2011a). Data from GSI shows that in this period there has also been an increase in the percentage of pupils who have an individual decision on SNE or Basic Norwegian for language minorities. Nevertheless, the largest changes from year to year for individual counties indicate that there is a difference in the ways in which the municipalities practice the exemption rules. We find the biggest exemption in the test in *Reading* in Year 5 (see figure 3.5).

The girls have better outcomes than the boys

Most of the sources we have for knowledge about learning outcomes show that the girls perform better than the boys. In international surveys, national tests and overall achievement and examination marks, the girls perform best. However, there are certain exceptions in individual subjects and on individual tests.

The results from PISA 2009 show that 15-year-old girls in all countries do better than boys in *Reading*. The gender gaps in *Reading* also appear to have increased in the period from 2000 to 2009. The gender gaps in *Mathematics* and *Natural Sciences* are very small (Kjærnsli and Roe 2010).

In 2009, Norway and 18 other countries took part in a survey that measured the skills of the pupils in a digital reading test. The entire test is taken on a computer, and all of the texts are

- hypertextual (various types of links enable the reader to jump between web pages and websites)
- interactive (by means of search engines or pull-down menus, the reader is given choices which enable him or her to decide themselves how the text will appear)
- and/or multimodal (content includes pictures, animation, audio and video in addition to text).

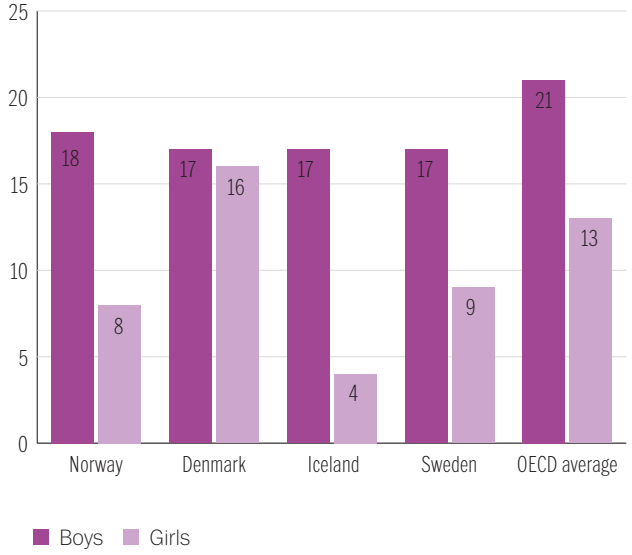
The results show that only New Zealand has a larger gender gap than Norway when it comes to *digital Reading* (Frønes et al. 2011). In all of the countries, the girls clearly score higher than the boys, but the differences are greatest in the English-language and Nordic countries. Nevertheless, the gender gaps are smaller in *digital Reading* than they are in *paper-based Reading*.

The results are divided into a scale that specifies competence levels 2, 3, 4 and 5 and above. The lower point limit for level 2 can be regarded as a critical limit when it comes to reading skills. In Norway, fully 18 per cent of the boys scored below level 2 compared with only 8 per cent of the girls (see figure 3.6). In all of the Nordic countries, there are more boys than girls in the weakest group of readers, but there is a lower percentage of weak readers in the Nordic countries than in the rest of the OECD area (13 per cent in Norway compared with an average of 17 per cent in the OECD).

On national tests, the boys achieve a somewhat better outcome on average than the girls in *Mathematics*, whereas the girls do better in *Reading*. In *English,* there is no distinct difference between the genders (Statistisk sentralbyrå 2012). The gender gaps are greater in Year 8 than in Year 5.

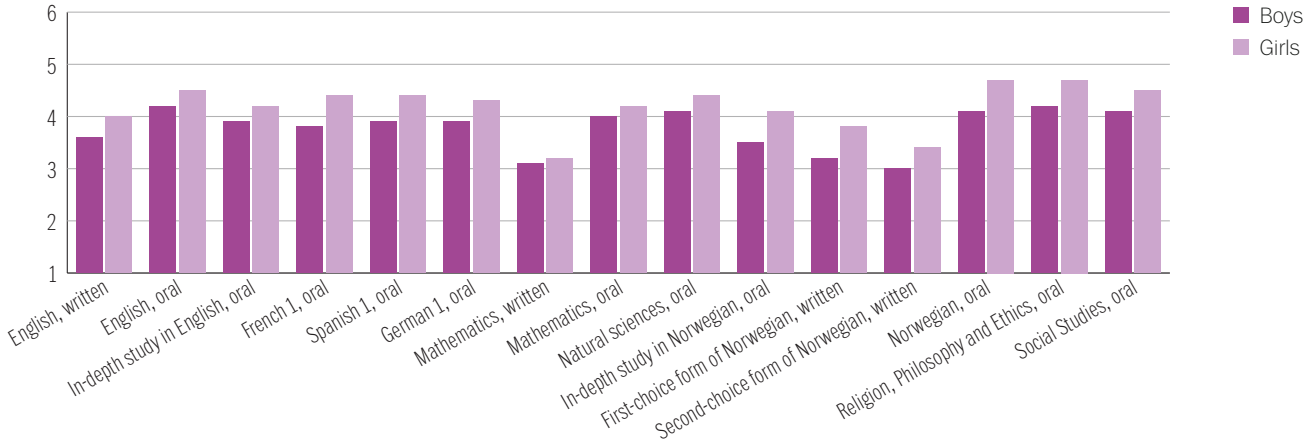
Girls get better marks than boys in most subjects in Year 10, both overall achievement and examination marks (see figure 3.7). The gap at the national level varies from 0.1 points on the written examination in *Mathematics* to 0.7 points in overall achievement in *Norwegian, first-choice form*. Thus, in Year 10, the girls have surpassed the boys in the subject of *Mathematics*, even though the boys did best on national tests in *Mathematics* in Year 8. The exception is *Physical Education* where the overall achievement marks for the boys were 0.2 points on average above the marks for the girls. The girls also have an average of 4.1 lower secondary school points more than the boys (The Norwegian Directorate for Education and Training 2011d).

FIGURE 3.6 15-year-old boys and girls who scored below level 2 in the digital reading test in PISA 2009. The Nordic countries and the OECD average. Per cent.



Source: Frønes et al. 2011.

FIGURE 3.7 Examination marks in Year 10 of the 2010-2011 school year, broken down by subject and gender. Average figures.



Source: The Norwegian Directorate for Education and Training 2011d

In upper secondary education and training, the girls have higher average marks than the boys in most common core subjects and in many programme subjects (The Norwegian Directorate for Education and Training 2011e).

The boys have better outcomes than the girls in the common core subject of *practical Mathematics*, and in the programme subject of *Chemistry 2*. In many of the subjects, however, it is difficult to find a clear indication of gender gaps in the marks because the number of pupils in each subject is low and because boys and girls sometimes make very different choices of education programme and subject (see chapter 1).

In the outcomes of trade and journeyman's examinations, there are only small gender gaps. Ninety per cent of the girls and 89 per cent of the boys passed the examination in 2011.

Pupils with parents who have a higher education get better outcomes

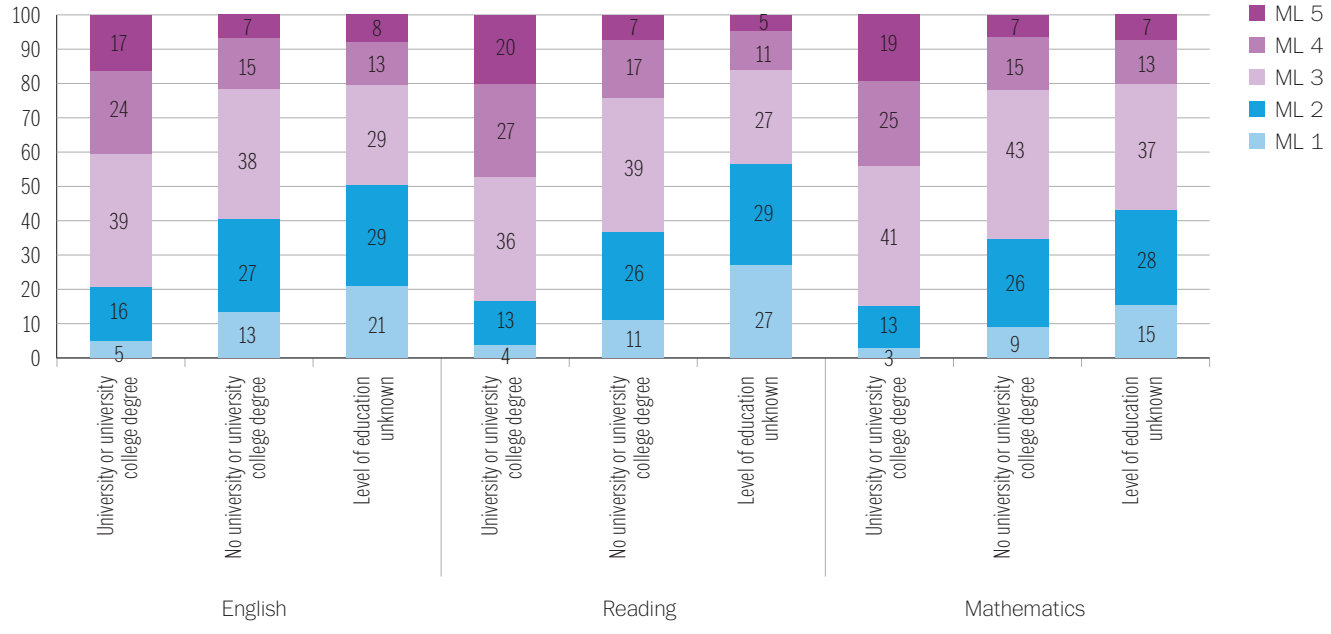
The level of education of parents explains much of the differences in achievement among pupils. The higher the parents' education, the better the children's learning outcomes. This is true regardless of the Year of schooling, whether we look at national tests, lower secondary school points or examination marks (Wiborg et al. 2011).

However, the results from PISA 2009 show that the correlation between home background (measured in the professional status, education and financial situation of the parents) and reading achievement is weaker in the Nordic countries than for the OECD average (Olsen and Turmo 2010). In all cases, cultural capital (measured through cultural objects such as classical literature, volumes of poetry and works of art in the home) is just as strongly correlated with reading achievement in Norway as in the OECD.

We see the clear correlation between the level of education of the parents and the outcomes of the pupils on national tests in figure 3.8. Children of parents with higher education score in the uppermost mastering level to a greater extent than other pupils. This is also part of the explanation for why Oslo and Akershus score high. In Oslo, the average level of education among the parents is considerably higher than in the rest of the country (Statistics Norway 2012).

The marks in Year 10 also co-vary with the level of education of the parents. Average lower secondary school points differ by almost 12 points between pupils who have parents with the lowest education and pupils who have parents with the highest education (Statistics Norway 2011a). The correlation between marks and educational background of the parents is strongest in the subjects

FIGURE 3.8 Outcomes from national tests in Year 8 in the autumn of 2011, broken down by tests, the level of education of the parents and mastering level. Per cent.



Source: Statistics Norway 2012

of *Mathematics*, *Natural Sciences* and *Social Studies*. The overall achievement mark in *Mathematics* varies by more than one and a half marks between pupils who have parents with the lowest education and pupils who have parents with the highest education. In the subjects of *Arts and Crafts*, *Physical Education* and *Food and Health* this correlation is less clear.

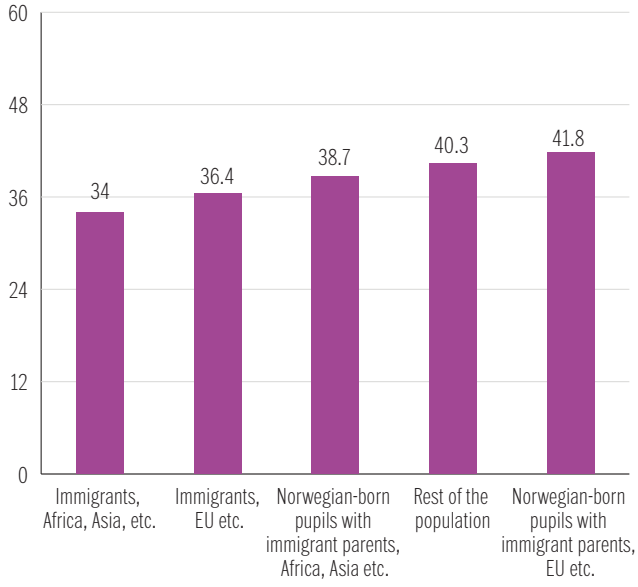
Pupils with an immigrant background have poorer outcomes than other pupils

There is a higher percentage of immigrants and Norwegian-born pupils with immigrant parents who score at the lowest level on national tests, and a lower percentage at the highest level than other pupils (Statistics Norway 2012). This gap is clearest in Year 5 and greatest in *Reading*. In Year 8, Norwegian-born pupils with immigrant parents score closer to the other pupils. How long they have lived in Norway also has an effect on the level of achievement of the immigrant pupils, but it appears to have more of an effect on immigrants from the EU/EEA area, the USA, Canada, Australia and New Zealand than for immigrants from Africa, Asia, Latin America, Oceania not including Australia and New Zealand and Europe outside of the EU/EEA area (Wiborg et al. 2011).

Pupils with an immigrant background also have consistently lower marks in Year 10 than pupils who do not have an immigrant background (Statistics Norway 2011a) The gap is clearest in subjects such as *Norwegian, first-choice form* and *Mathematics*, where the immigrants scored more than one and a half marks lower than other pupils. Norwegian-born pupils with immigrant parents have somewhat higher marks than immigrants, but somewhat lower average marks than other pupils.

Immigrants from Africa, Asia, Latin America, Oceania not including Australia and New Zealand and Europe outside of the EU/EEA area are the group of pupils who had the lowest lower secondary school points at the end of Year 10 in primary and lower secondary school (Wiborg et al. 2011). The group with the highest lower secondary school points was Norwegian-born pupils with immigrant parents from the EU/EEA area, the USA, Canada, Australia and New Zealand (see figure 3.9), but this is a small group.

FIGURE 3.9 Lower secondary school points, by immigration category and national background. 2010-2011. Average figures.



Source: Statistics Norway 2012

3.2 WHAT CAN EXPLAIN THE DIFFERENCES AMONG PUPILS AND AMONG SCHOOLS?

There are small differences in achievement among the schools in Norway

Pupils with different backgrounds are more evenly distributed among the schools in Norway than in many other countries, and there is little difference in learning outcomes *among* the schools in Norway compared with other countries. The differences in Norway are mainly *within* the individual school (Olsen and Turmo 2010). The results from the PISA studies have shown that the effect that schools have on the level of achievement of the pupils in other OECD countries can be as high as 30 to 40 per cent of the differences in achievement. In Norway, between 7 and 12 per cent of the differences in achievement on national tests at Years 5 and 8 are related to the school that the pupils attend, whereas the corresponding percentage in Year 10 is between 4 and 11 per cent for the various subjects (Wiborg et al. 2011).

Nevertheless, it is also the case in Norway that pupils with relatively similar backgrounds often attend the same school (Hægeland et al. 2011). This is especially true in Oslo, where there is social and economic inequality among the various school districts (Wiborg et al. 2011). Similar families usually choose the same residential area, and the pupils usually go to a school near their home. Thus, the schools are composed to a certain extent of groups of pupils with similar family backgrounds. The Norwegian Institute for Studies in Research and Higher Education's (NIFU) analyses of the primary school level indicate that all

of the groups of pupils can benefit from a certain amount of social and ethnic diversity in the school environment. A school that has a predominant element of pupils with married middle class parents mixed with a small percentage of pupils who have parents with a low level of education and perhaps also a minority background (i.e. a certain amount of socio-economic and ethnic heterogeneity) will on average have the greatest boost in achievement, especially for the weakest pupils (Wiborg et al. 2011). The results from the NIFU analyses also indicate that the Oslo schools compensate for inequality among the pupils to a greater extent than schools in other counties in that the 25 per cent of the pupils with the lowest achievement in Year 5 are the ones who undergo the greatest positive development.

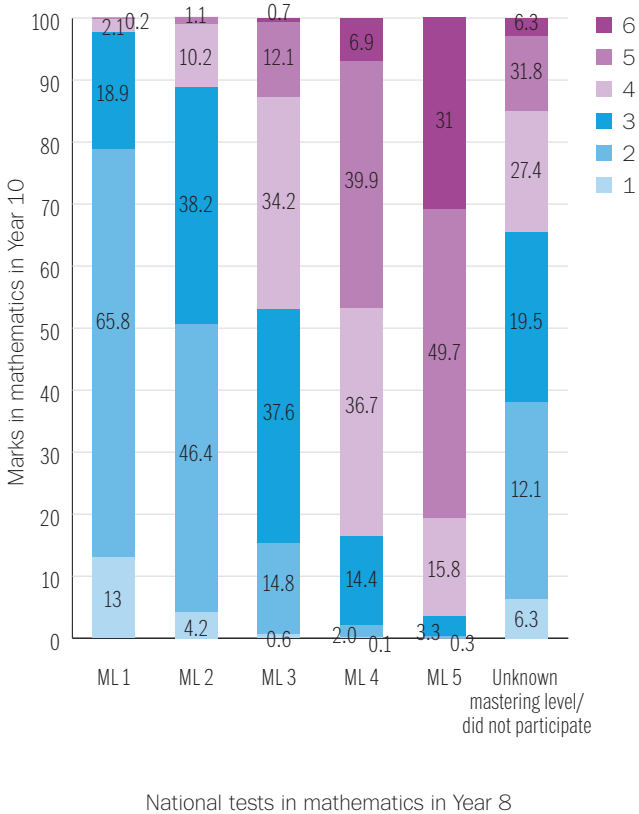
Previous outcomes explain a lot

There is a strong correlation among the outcomes on national tests in Years 5 and 8, marks in Year 10 and marks and completion in upper secondary education and training. If you know the former outcomes of the pupils, you can predict their outcomes in the higher levels of schooling beforehand with high probability, but this does not mean that schools cannot help the pupils improve; it simply means, for example, that it is already possible at Year 5 to know which pupils ought to be given special follow-up. Quite a few pupils have a development in achievement that improves or worsens their relative ranking in the distribution of achievement, but this mainly applies to those who rank near the middle. This is related to the fact that "the distance" to the next category is smaller in the mid-range categories since these pupils can both improve or worsen their rank, whereas the cleverest pupils, for example, can only get worse (Bakken 2010, Wiborg et al. 2011).

The magnitude of the correlation between the outcomes on national tests in Year 8 and marks in Year 10 vary from subject to subject. The correlation is clearest between national tests in *Mathematics* and overall achievement marks in *Mathematics* (Statistics Norway 2011a). Almost 80 per cent of the pupils who achieve the lowest mastering level on national tests in Year 8 are given marks of one or two in overall achievement in *Mathematics* three years later (see figure 3.10). 80 per cent of the pupils who achieve the mastering level of five on national tests get the overall achievement marks of five or six in *Mathematics* in Year 10. In *Reading* of Norwegian and in *English*, the correlation is somewhat weaker. It is important to remember that the overall achievement marks in individual subjects such as *Mathematics, Norwegian* and *English* shall provide information about the pupils' achievement of goals relative to the overall competence goals in the curriculum for each individual subject. National tests are not tests in subjects, but in basic skills in all subjects. The tests in *Reading* and *Mathematics* are not just based on the competence goals in *Norwegian* and *Mathematics*, but also in other subjects where the goals for *Reading* and *Mathematics* are integrated. The tests in *English* differ from the two other tests since they are based on competence goals in one subject.

The trend in the pupils' achievement throughout the educational pathway varies according to the background characteristics we have considered earlier in this chapter (Wiborg et al. 2011, Bakken 2010). The gender gaps appear to widen between the various levels of schooling. The girls' lead in *Reading* increases from Year 5 to Year 8, and they also have the biggest improvement in *English*. The boys' lead on national tests in *Mathematics* increases from Year 5 to Year 8, but in Year 10 it is the girls who do best in the subject of *Mathematics*. In lower secon-

FIGURE 3.10 Overall achievement marks in *Mathematics* in Year 10 in 2011, by the mastering level of the pupils in national tests in *Mathematics* in Year 8 in 2008. Per cent.



Source: Statistics Norway 2011a

dary school, the girls generally have a better improvement in achievement than the boys, since they consistently improve their relative achievement compared with the boys from Year 8 to Year 10.

The effect of the educational background of the parents also increases the farther we go along the educational pathway. From Year 5 to Year 8, the level of education of the parents has a greater effect on the outcomes of all three of the national tests. In lower secondary school, we see this increase especially in connection with overall achievement marks, whereas the level of education of the parents has somewhat less effect on the development in achievement measured by written examination marks.

As we have shown, pupils with an immigrant background have poorer outcomes on average than other pupils. In lower secondary school, however, it turns out that pupils with an immigrant background have a better improvement in achievement than pupils who do not have an immigrant background, especially when measured by overall achievement marks. In other words, the gap in achievement between the two groups decreases over a period of time. We find the strongest improvement in achievement in lower secondary school among Norwegian-born pupils with immigrant parents from Africa, Asia, Latin America, Oceania not including Australia and New Zealand and Europe not including the EU/EEA area, followed by immigrants from these areas (Wiborg et al. 2011).

With school performance indicators, we can measure how the schools influence pupils' learning outcomes

In recent years, most of the OECD countries have put increasing emphasis on the results quality in school. Thus, it is important to have good measuring instruments and indicators, which can say something about the variation in the extent to which the schools influence the pupils' learning outcomes. Uncorrected average outcomes at the school level, e.g. marks and outcomes of national tests, can be strongly influenced by factors that lie beyond the school's control. In addition to giving a picture of the level of competence and the achievements of the pupils, these goals for learning outcomes are also affected by the composition of pupils in the school (including the pupils' previous outcomes and levels of skill) and by random variation. In this way, they can give a misleading picture of a school's quality. The schools that score highest on pupils' pure learning outcomes do not necessarily make the biggest contribution to learning (Hægeland et al. 2011).

By comparing the outcomes of the same pupils in different Years, we can get a measure of how much the school affects the learning of the pupils in the period between the various measures of pupils' achievements relative to other schools. So-called value-added indicators, which give a measure of the quality in the upper primary level, can be developed by looking at national tests at Year 8 and correcting for gender and for all outcomes from national tests at Year 5. Indicators for lower secondary school can be developed by looking at marks in Year 10 and correcting for gender and for the outcomes from national tests in Year 8. When we first have corrected for previous outcomes, including family background has little effect (Hægeland et al. 2011).

Value-added indicators do not tell us anything about the absolute influence of the schools on the changes in the knowledge of the pupils, but give us a picture of the differences among the schools. The indicators must be considered in the context of other relevant information about the schools if we want to know anything about *why* some schools have more influence than others.

Even though school affiliation explains a relatively small amount of the total variation in the learning outcomes of the pupils in Norway, value-added indicators show significant differences among schools in their influence on the pupils' learning. There is a tendency for the influence of the school to be greater the better the unadjusted outcomes that the school achieves, even though there are many individual examples where the opposite is the case. Thus, schools that score high on national tests in Year 8 also tend to score high when we correct for earlier outcomes, but changes do occur in the schools that have great or little influence on the learning of the pupils, and this is most apparent in schools that are especially good or especially poor at influencing the learning. Going to one of the best schools as measured by the value-added indicators, compared with going to one of the worst, can be at least as important for the learning in the upper primary level as having highly educated parents relative to having poorly educated parents (Hægeland et al. 2011).

The learning environment has considerable effect on the improvement in achievement of the pupils

The learning environment has considerable effect on the improvement in achievement of the pupils between Years 5 and 8 (Wiborg et al. 2011). The effect of a good learning environment can be up to half as great as the effect of the level of education of the parents. It looks as if it is especially the pupils who were already doing well in Year 5 who benefit the most from a good learning environment. You can read more about the learning environment in Chapter 4.

4

Learning environment

How do Norwegian pupils experience their learning environment? Which factors help promote a good learning environment, and why is it especially important to work on class management? These questions are important in this chapter about the learning environment in Norwegian schools. In the first part, we take a closer look at the five characteristics that contribute to good learning environments. In the second part, we consider the ways in which the learning environment affects the improvement in achievement of different groups of pupils.

4.1 HOW DO NORWEGIAN PUPILS EXPERIENCE THEIR LEARNING ENVIRONMENT?

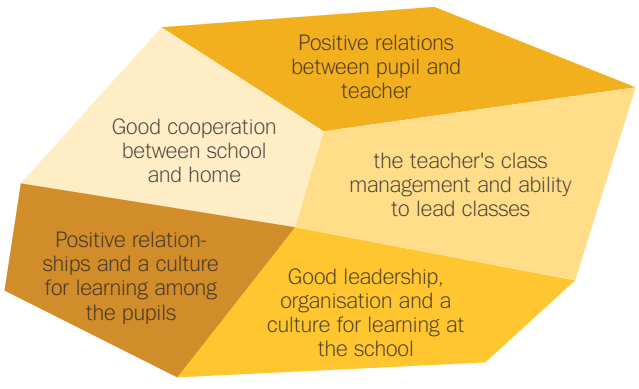
Norwegian pupils enjoy school. The analysis of the responses to the Pupil Survey 2011 show that pupils who feel that the teacher is there for them and shares generously of his/her time and effort feel more committed, become more industrious and are driven more by self-motivation than by the marks in themselves. The survey also shows that the school administrators who are present and develop good relations are most important for creating good learning environments in the schools (Wendelborg et al. 2011).

The study shows that the percentage of pupils who feel that they are being bullied is unchanged at the national level. In 8.3 per cent of the schools in 2011, none of the pupils state that they have been bullied, but only four per thousand schools reported no bullying over a period of three years. Keeping the school free of bullying over a period of time requires a continuous, systematic effort.

4.2 WHAT DISTINGUISHES A GOOD LEARNING ENVIRONMENT?

Learning environment is not an unambiguously defined academic field, and various academic circles have different understandings and definitions of the concept. The Norwegian Directorate for Education and Training has come up with the following definition of learning environment (2011): "We define learning environment as all of the cultural, relational and physical factors in the school that affect the pupils' learning, health and well-being."

FIGURE 4.1 Characteristics that are important for creating a good learning environment.



Source: The Norwegian Directorate for Education and Training

THE PUPIL SURVEY

The Pupil Survey is a web-based survey that gives the pupils an opportunity to express their opinions about factors that are important to learning and well-being in the school. In the spring of 2011, more than 370,000 pupils from Year 5 up to and including Vg3 responded to the survey, i.e. about 70 per cent of the pupils in these Years. This is the highest number of responses ever. Completion of the Pupil Survey is mandatory for Years 7, 10 and Vg1. At the national level, there are small variations in results from year to year. At the school level and among schools, there can be major differences from one year to another.

4.3 WHAT DO WE MEAN BY CLASS MANAGEMENT?

One of the five characteristics of a good learning environment is the teacher's class management and ability to lead classes. Class management deals with the teacher's ability to create a positive learning environment, where the pupils can concentrate on being motivated for learning and self-development.

The concept of class management is not always defined in the same way in different research reports. Some of them think it includes behaviour management and learning management (Plauborg et al. 2010). Others divide class management into instruction, learning and relation management (Jensen 2009). Still others think that class management and academic content are integrated elements (Hoel 2006 and Christensen 2008).

Research on class management consists of various traditions that are dependent on the level at which the concept is being analysed (classroom, school, teacher). The "classroom management" tradition is concerned wtih the ways in which class management reduces disturbances in the learning effort. Best known within this tradition is the American professor Jakob Kounin who has shown through his classroom studies (Kounin 1977) that regulation of behaviour has greater effects than techniques of disciplining pupils when the objective is to prevent disorder.

The "school effectiveness" tradition is concerned with the input factors that characterise schools that make positive contributions to the pupils' learning outcomes. The point of departure for this tradition was "The Coleman Report", which gathered data on school level and concluded that the pupils' background had a greater effect on the learning outcomes than the school's contributions.

This finding unleashed a debate on the correlations that it is possible to document empirically. For example, Robinson (2011) shows that management is important, but that it is difficult to show a direct correlation between management and the pupils' learning outcomes.

The "teacher effectiveness" tradition is based on research that shows that the teacher is the individual factor that is most important for the pupils' learning outcomes. This research is based on data at the class level, and through effect studies it shows the extent to which the teacher's different actions are important for the pupils' learning outcomes. Professor John Hattie and his metaanalysis (Hattie 2009) is one of the studies in this research tradition.

Many Nordic classroom studies have a socio-cultural approach to class management and are more dialogue-oriented. These studies emphasise that the teacher's relational, communicative and didactic competencies are fundamental in order to achieve good learning outcomes (Jensen 2009). The socio-cultural perspective has its origins in Lev S. Vygotsky's work from the 1920-30s. This perspective distinguishes itself from other research perspectives in that it emphasises the importance of social constraints on our actions. In a socio-cultural perspective, actions and knowledge must be related to contexts and activities.

Despite different views on class management, the advice given by researchers in these different traditions is surprisingly similar: The teacher must make preventative efforts rather than try to repair; the teacher must present clear academic goals, give the pupils challenges and have expectations that they shall achieve the goals and meet the challenges; the teacher must ensure that there are flexible transitions between different activities and between new and old materials; the teacher must be able to see the individual pupil and the class as a group simultaneously; and the instruction must be characterised by structure and well-known, common rules.

4.4 WHAT ARE THE FUNDAMENTAL PREMISES FOR GOOD CLASS MANAGEMENT?

Class management shall resolve a key educational paradox: How shall the teacher guide the pupils to guide themselves. How shall the pupils contribute to their own self-development through participation? The Norwegian Directorate for Education and Training has drawn up a description of the factors that characterise good class management: Rammeverk for skolebasert kompetanseutvikling på ungdomstrinnet 2012–2017 (Framework for school-based improvement of competence in lower secondary school 2012-2017) (The Norwegian Directorate for Education and Training 2012).

On the basis of research, practical experiences, the Education Act and the curriculum, the description emphasises four fundamental premises or job tasks for the teacher who wants to have an appropriate class management (Stensmo and Harder, 2009).

A positive and supportive relation to each individual pupil

Establishing and maintaining a positive relation to each individual pupil can be described as the cornerstone of class management (Marzano 2009). Research has shown that the teacher-pupil relation is important for pupils' learning outcomes (Hattie 2009) and for pupils' behaviour (Marzano 2009). A positive relation is based on the teacher's willingness to care about all of the pupils, show interest in the individual and his/her situation, be supportive and have expectations about academic and social development (Hattie 2009). This is important for all pupils and especially important for pupils who for various reasons are struggling in school (Bru 2011). Because parents are the most important adult person in pupils' lives, relationship building to the individual pupil will also involve the parents.

Establishment of a good learning culture and a learning community

In each class, norms will evolve regarding the things that are important, the ways in which those present shall relate to fellow pupils and teachers and the work that is expected or acceptable. This process, which is governed by expectations, interpretations and assessments, commences as soon as the group is gathered (Vaaland 2011). Events in the classroom occur in public and help determine individuals' position, interaction and understanding of what is important in the group. The teacher is the leader of the class and through his/her choices and actions will have a strong influence on the development of norms and values in the culture (Roland 1995). The teacher's task is to govern this social system so that it promotes learning, well-being and good health.

Establishment of structure, rules and routines

Establishment of rules and routines is a way of promoting learning and effectiveness in the group (Doyle 2006). It is also important for the group as a social system by giving a common reference, creating integration and giving signals

about desired social interaction (Evertson and Weinstein 2006, Roland 1995). In that way, rules and routines help create norms for interaction. A clear leader who is concerned with pupils' learning and development knows that it is necessary to have rules and routines in order to have a good, predictable working day. The teachers have to practise the rules and routines they choose to introduce in order for them to be incorporated into the class. That requires alertness, clarity and patience from the teacher (Doyle 1986). In order to achieve a consistent practice in the school, the school administrator must take responsibility for establishing rules and routines that are equal in all of the classes.

Clear expectations and motivation of the pupils

If the pupils in a class shall realise their potential for learning, it is crucial that the teacher have clear academic expectations of the pupils and be able to motivate the pupils to make an effort to learn. Studies have shown that when teachers clarify the aim of the activities, this has a beneficial effect on the pupils' learning outcomes (Hattie 2009). By referring to the aim of the activity and simultaneously clarifying expectations of the pupils, the teacher helps give the pupils an overview of their own learning.

The teachers ought to have both high and realistic academic expectations of the pupils, and there must be challenges and a high level of initiative in the learning activities. These expectations must be related to the pupils circumstances, but relatively speaking all pupils shall experience high expectations (Marzano 2009). This is especially important in relation to pupils who have poor learning outcomes or who have problems in other ways in and outside of school. However, the teachers must not just have academic expectations of the pupils, but also set academic requirements and have expectations of themselves as a leader and teacher (Nordahl 2012). Leadership of learning activity entails facilitating mastering among all pupils. Being in a situation that the pupil is unable to master can diminish his/her own expectations of mastering and thereby contribute to poor motivation.

Several competences are combined in good class management

Class management does not consist of individual factors. The important thing is the way those individual factors are combined in practice. When Nordenbo et al. (2008) point out that teachers must have relational competence, rule management competence and didactic competence, it is not enough to put these competences into practice on an individual basis. It is the combination of all three of them that affects the social system manifested by a class and the individual pupils. The pupils have different social and cultural backgrounds. They have different experiences with mastering learning and different expectations about what the school shall be for them and how they themselves shall contribute to their own learning and to a learning community. That requires that the teacher is alertly present and understands the dynamics of the classroom and has skills to resolve incidents in a way that helps create a mastering culture with a focus on the learning, well-being and health of all of the pupils.

INTERNET RESOURCES PERTAINING TO CLASS MANAGEMENT

At the beginning of the school year in the autumn of 2012, the Norwegian Directorate for Education and Training will publish updated Internet resources on the website:
http://www.udir.no/Laringsmiljo/

These Internet resources are meant to serve as a support to school-based competence development in class management. Among other things, you will find academic texts, films, evaluation forms and reflection exercises at this website. School owners and advisers can use these resources in their efforts to manage and help facilitate the improvement of competence.

4.5 WHAT IS THE CORRELATION BETWEEN CLASS MANAGEMENT AND ASSESSMENT FOR LEARNING?

We often talk about individual assessment as a final assessment of the pupils' competence. However, the concept also covers feedback under way in the pupils' learning process, which we can call assessment for learning. Both good class management and good assessment practices entail that there is a positive and supportive relationship between the teacher and the individual pupil and among the pupils. In an assessment context, this means that the pupils can be secure that their teachers and fellow pupils wish them well, that the objective of the assessment is further learning and development and that assessment is not used as a form of punishment or regulation of behaviour.

A good learning culture and a learning community are also important elements in assessment for learning. Together with clear expectations and motivation of the

FOUR PRINCIPLES FOR GOOD ASSESSMENT OF TEACHING

There is a close correlation between the national and international understanding of a good practice based on assessment for learning and the Norwegian Directorate for Education and Training's four principles for good ongoing assessment. The four principles indicate that pupils learn best when they are familiar with them:

- Understand what they are supposed to learn and what is expected of them.
- Are given feedback that informs them about the quality of their work or achievement
- Are given advice on how to improve
- Are involved in their own learning efforts, e.g. by assessing their own work and development

These principles are incorporated in regulations concerning Sections 3-1, 3-11, 3-12 and 3-13 of the Education Act. They shall be put into practice so that the pupils are motivated to improve their learning. They shall be further developed and stimulate the development of a sustainable, formative, assessment culture.

INTERNET RESOURCES FOR ASSESSMENT FOR LEARNING

At the following website, you will find a number of tools, films, video lectures and other resources for use in connection with competence development in assessment for learning in schools and training establishments:
http://www.udir.no/Vurdering-for-laring/

CLASS MANAGEMENT BASED ON SEVEN QUESTIONS

Involvement of pupils

- Are you allowed to take part in deciding what shall be emphasised when your work is to be assessed?
- In how many subjects do you take part in setting your own learning goals?
- Do the teachers ask about how you yourself assess your own school work?
- How often do the teachers tell you what you ought to do in order that you shall become better in the subjects?
- Do the teachers encourage the pupils to take part in deciding how you shall work in the subjects?

Use of work plans

- How often do you use written plans (weekly plan, plan for a certain period, etc.) when you are at school?
- How often do you use written plans (weekly plan, plan for a certain period, etc.) in the work on the subjects?

pupils, they constitute an important part of the framework around an assessment practice that promotes learning. Clear goals and criteria for the assessment work, a belief that the pupils can achieve the goals, motivating feedback that promotes learning and pupils actively participating in their own learning and assessment work are mutual factors that give good conditions for mastering.

A clear structure in the education and training makes it clear to the pupils what they are supposed to learn, what they are supposed to do and what will be emphasised in good achievement. That ensures predictability for the pupils and gives them the chance to understand their own learning process. Assessment for learning is closely related to good class management. Assessment for learning also allows for the participation of the pupils in the instruction.

4.6 WHAT CAN THE ANALYSIS OF THE PUPIL SURVEY 2011 TELL US ABOUT THE LEARNING ENVIRONMENT IN NORWEGIAN SCHOOLS?

Wendelborg et al. (2011) have conducted an analysis of the responses in the Pupil Survey 2011. The point of departure for the analysis is the ways in which different aspects of the learning environment are affected by the ways in which the teacher organises the lesson and varies the use of teaching methods.

In the analysis, class management is operationalised on the basis of five questions that are combined to measure the involvement of pupils and two more questions for measuring the use of work plans. Correspondingly, the teacher's relationship to the pupils and the learning culture among pupils were measured from a combination of 10 questions in the Pupil Survey. The learning outcomes were measured by means of the pupils' self-reported marks. The concept of class management contains more characteristics than those mentioned here. Work is underway to revise the Pupil Survey so that the other characteristics of class management are also covered by the questions.

Both pupils and teachers think that the use of work plans has a positive effect on well-being and motivation

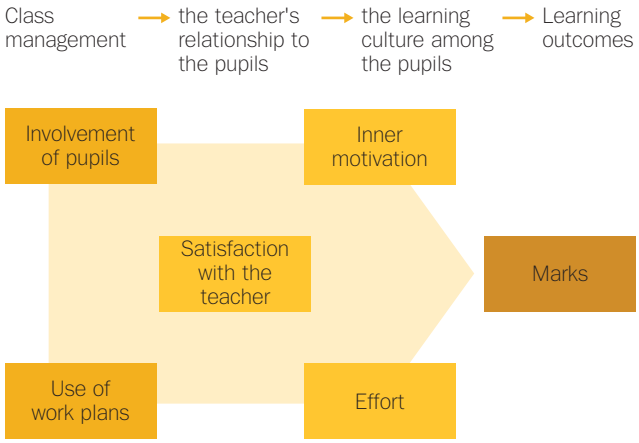
The analysis of the Pupil Survey 2011 shows clear correlations between the use of work plans and the pupils' satisfaction with teachers and the pupils' inner motivation, effort and marks. Interviews with pupils and teachers, among others, after the survey gave more in-depth information about what characterises a good relationship between pupil and teacher and what the use of work plans may specifically entail. The interviews also gave insight into other topics of importance for the pupils' learning environment, e.g. cooperation between school and home.

Figure 4.2 shows the assumptions on which Wendelborg et al. (2011) based their study of the ways in which various aspects of the learning environment affect each other. Class management is expected to affect the pupils' satisfaction with their teachers, a relationship that they assume affects the learning culture of the pupils and that is important in turn for the pupils' learning outcomes.

The assumed correlations between class management and various aspects of the learning environment were confirmed for the most part using a path analysis. The path analysis shows that factors in the pupils' learning environment can be directly and indirectly affected by good class management.

Table 4.1 shows that class management, measured as involvement of pupils and use of work plans, has a positive effect on the relationship between teacher and pupil, which in turn is important for the pupils' inner motivation and effort. This is a factor that the school can affect by working systematically and objectively on the pupils' learning environment. Furthermore, there is also a moderately strong correlation between the pupils' efforts and marks. This may strengthen the hypothesis that class management has a positive effect on the pupil's learning outcomes. It must be noted, however, that the path analysis found a weak negative correlation between the involvement of pupils and marks. This can be interpreted to mean that pupils who experience a high degree of involvement in the instruction are the same ones who need the most help and support because they are academically weak.

FIGURE 4.2 Theoretical model that shows assumed correlations among the pupils' responses to the Pupil Survey 2011.



Source: Wendelborg et al. (2011)

To a lesser extent, the questions in the Pupil Survey can explain the variation in the pupils' learning outcomes on the basis of the pupils' self-reported marks. That means that there are other factors that are not included in the model, which can better explain the variation in the pupils' marks. The pupils' abilities, the parents' education and attitude to the school are examples of factors that are not measured in the Pupil Survey (Wendelborg et al. 2011).

Previous analyses of the Pupil Survey have also shown that the pupils are more satisfied with the teachers in cases where the use of work plans is reported (Danielsen 2010). Analyses of data from the Pupil Survey can also be interpreted to mean that the use of work plans increases both the pupils' feeling of getting help from the teachers

TABLE 4.1 The total extent of the correlation among the aspects in the learning environment.

	Involvement of pupils	Use of work plans	Satisfaction with teachers	Inner motivation	Effort
Satisfaction with teachers	0.37	0.28	-	-	-
Inner motivation	0.35	0.32	0.47	-	-
Effort	0.27	0.47	0.42	0.66	-
Marks	-0.11	0.24	0.31	0.28	0.43

Source: Wendelborg et al. (2011)

EXCERPTS FROM INTERVIEWS WITH HEAD TEACHERS AND TEACHERS AFTER COMPLETION OF THE PUPIL SURVEY 2011 (1)

Head teacher: "To begin with I had a very positive attitude to work plans. What I am afraid of is that it shall become a mechanical plan. I do not want that to happen. So I am concerned with ensuring that the teachers must also be allowed to use their creative and strong sides. So if the work plan becomes too controlling of everything that is supposed to happen, I am skeptical of it... Some people would prefer more of a framework plan. But it will be discussed at the school here. So it is an ongoing process."

Teacher: "We have 'assessments of each other' at the end of the week. They assess each other. Sit together in pairs in the lessons. They discuss one subject at a time, look at the academic goals, and mark them with tics, smiling faces, etc. This gives them a period for self-assessment. Then we also include one of the questions from the Olweus programme: What have you done to be kind and considerate?"

Source: Wendelborg et al. (2011)

EXCERPTS FROM INTERVIEWS WITH PUPILS AND A TEACHER AFTER COMPLETION OF THE PUPIL SURVEY 2011 (2)

"A good teachers is one who notices that we are not fully comprehending the lesson, who will talk with us and help us without making it unpleasant for us to talk..." (Pupil)

"I think it is very important: that the teacher is motivated in the subject, that they are interested in what they are talking about, talk with enthusiasm, that they do not just lecture from a manuscript so to speak. That is really boring, and it nearly puts you to sleep." (Pupil).

"It is important that the reactions do not come as a surprise, that they know why they come. Clarify rules. And our mood is really important; trying to be in a good mood. We owe them that. We get a lot for free when there are good relations." (Teacher)

Source: Wendelborg et al. (2011)

and the pupils' knowledge about goals and requirements in the education and training. That results in turn in the pupils experiencing the instruction as better adapted to their own qualifications.

Interviews with teachers and head teachers after the Pupil Survey gave some in-depth examples of what the use of a work plan might mean for the instruction, cf. the separate text box.Not surprisingly, the two interviews reveal that work plans can be used as everything from a "mechanical plan" to an educational tool for structuring and evaluating the pupils' work. It is precisely through being an instrument for structure and systematic follow-up of the pupil that work plans can have a positive effect on the learning environment. Without comprehensive thinking about the use of the work plan, its use will not be able to give any gains.

The pupils are satisfied with their interactions with the teachers

One of the things that the statistical analysis of the Pupil Survey revealed was that the pupils' satisfaction with the teachers was important for their inner motivation and effort. Wendelborg et al. (2011) interviewed pupils at four lower secondary schools in order to get an in-depth understanding of these relationships, cf. the separate text box dealing with the question of what characterises a good relationhsip between pupils and teachers.

We may assume that the pupils' satisfaction with the teachers is affected, among other things, by whether the teacher recognises the individual pupil's social needs, is secure in the subject he/she is teaching and is interested in communicating the subject in an engaging way. As in all other relations, a general positive attitude is important.

Good cooperation between school and home helps create a good learning environment

In addition to the topics that the Pupil Survey asks about, the interviews gave insights into other topics of importance to the pupils' learning environment. One of those topics was the relationship between school and home (Wendelborg et al. 2011).

"It is extremely important to have a good relationship with the homes of the pupils. You can hardly get anywhere if you do not have that, not least with the pupils who try to master something and don't manage to do it. Those with major behaviour disorders, for example." (Head teacher)

Pupils and parents also regarded the cooperation between school and home as important, a cooperation that must deal with both academic and social aspects of the young people' schooling. It was emphasised that the contact in formal meetings at the school was a key factor. In addition, there was no doubt that the informal contact in everyday life is regarded as extremely important.

A good cooperation between school and home is one of five factors that are important for establishing and maintaining a good learning environment (see the Directorate's website about the national effort, Bedre læringsmiljø [Better learning environment]).

A visible and educationally active school administration helps promote a good learning environment

In the interviews, there were also examples of the ways in which the school administration plays an extremely important role in promoting a good learning environment. The school administrator's presence and commitment probably have a major effect on the teachers' sense of well-being and their motivation to teach (Wendelborg et al. 2011).

A head teacher explained how she had to intervene in a negative situation where the gap between the teachers and the pupils increased and where the relationship between the teachers and the pupils became narrower and concentrated more and more on the subjects and less on positive relationships that went beyond academic matters.

In the interviews with the head teachers, the classic time pressure between administrative and educational work also came more clearly to light. Not all head teachers were equally satisfied with their own results in this way, but some thought that they had been successful.

A good learning environment has an important impact on the improvement in the pupils' achievement

The analysis of the Pupil Survey showed that the questions in the survey can explain the pupils' marks to some extent, but other factors that are not included in the model will have a considerably greater explanatory power. In addition to insufficient explanatory power relative to the level of marks at a particular point in time, the Pupil Survey also says nothing about changes in the improvement in the pupils' achievement over a period of time. Such analyses require information about the pupils' learning outcomes at no less than two points in time, and it is only in recent years that it has been possible to conduct these analyses in a Norwegian school.

Based on the pupils' results on national tests in Years 5 and 8, as well as various examinations in Year 10, Wiborg et al. (2011) calculated changes in the pupils' achievements over a period of time and looked for explanations for these changes. Of the factors that were included in the analysis and that the schools themselves can affect, it turned out that the learning environment had the biggest effect on changes in the pupils' learning outcomes. In general, it turned out that the learning environment has an important effect on the improvement in the pupils' achievement regardless of the composition of pupils and other factors at the school.

4.7 ARE GOOD SCHOOLS GOOD FOR ALL OF THE PUPILS?

In general, Norwegian girls with highly educated parents are the ones who score best in primary and lower secondary school, but there are also some schools that boost the achievement of poorly achieving groups of pupils. In order to survey the factors that can boost the performance of poorly achieving groups, Bakken et al. (2011) carried out a study of six lower secondary schools that distinguished themselves in the sense that the achievements of groups of pupils at these schools deviate from the average in the groups. At three of the schools, the boys, the minority pupils and pupils with poorly educated parents have done better than expected, and at the three other schools, these groups did worse than expected.

Major variations among classes and schools

The researchers found considerable variation among schools and classes in the extent to which good learning cultures were developed. The case studies indicate that the school administration is important in order to carry out the Knowledge Promotion Reform. The school administrators who bring about educational development work and who facilitate cooperation among the teachers as a collegium, between teachers and pupils and for school-home cooperation have more energy to work on the reform. The best instruction with the best learning outcomes was in the case where the teachers came prepared, had a structured and varied lesson plan with clear assignments and where they were able to maintain a high tempo with rapid responses in the teaching.

Even though only two out of six schools were chosen on the basis of the pupils' class and/or the group of pupils with poorly educated parents, observation in the classrooms indicated that “class” was a factor that recurred in all six of the schools in the case study. These findings may indicate that “class” is a more important “mental category” than ethnicity for the teachers. A student advisor at a school with 60 per cent minority language children specifed this point in the following way,

“Where our imagination ends, their reality begins. We cannot conceive what it is like for some of them at home. It is not just a matter of pupils with a minority background.

There are also Norwegian children from poor families who live in the school district." (Student advisor)

Difficult to reduce the gaps among various groups of pupils

Based on analyses of quantitative data, a great number of observations and many interviews, Bakken et al. (2011) conclude that good schools are good for all pupils regardless of socio-economic background, gender or ethnicity. Likewise, poor schools are probably poor for all types of pupils.

Among the schools with pupils that achieved above average, Bakken et al. (2011) did not find that the gaps among different groups of pupils had diminished. It seems difficult to raise the level of achievement of all pupils and simultaneously reduce the gaps among different groups of pupils. This conclusion is supported by Wiborg et al. (2011). As we have seen above, they found that a good learning environment has a positive effect on the improvement in the pupils' achievement, but the positive effect on the improvement in achievement was greatest for the pupils who were initially the strongest academically.

Year 8 pupils Hannah Engeskaug Nilsen and Erik Olav Rindal think the teachers at Biri Lower Secondary School take them seriously and listen to their opinions about things. “It is very good that we can talk and crack a joke with them.” say the two pupils.

From rules to management

The teachers at Biri Lower Secondary School used to be presented as if they were all the same. Now the pupils have been told that there are differences among them.

TEXT: SIW ELLEN JAKOBSEN
PHOTO: KNUT ERIK LANDGRAFF

When teacher Hans Erik Brostuen enters the classroom, one of the things he expects is that all of the pupils have taken off their caps and hats. If the pupils keep them on, it disturbs his teaching. When teacher Bodil Bilit Sveen enters the same classroom, she pays no attention to caps and hats.

The lower secondary school in Gjøvik municipality used to have a rule that caps and hats should be taken off when the instruction began. Teacher Mari Ann Markeng felt she was letting down Brostuen and other colleagues. She was unable to enforce this rule. “I would not have noticed whether the pupils were wearing hats, even if I had been asked to watch out for them,” she said.

Inspector Bodil Bilit Sveen can't help laughing, “I do not know how many hours we have spent discussing caps and hats! Both in the teacher collegium and not least with the pupils.”

We are different!

After the teachers at Biri began to work consciously on class management, both headwear and many other topics for discussion have been canned. The teachers want to get away from rules and pay more attention to better leadership. Now each individual teacher decides the rules in his/her classroom. They are supposed to be leaders who are so secure in their own limits that they don't have to threaten pupils with breaches of the rules.

> THEY ARE SUPPOSED TO BE LEADERS WHO ARE SO SECURE IN THEIR OWN LIMITS THAT THEY DO NOT HAVE TO THREATEN PUPILS FOR BREAKING THE RULES.

The message that teachers have now given the pupils is: “We are different. Some of us allow you to eat, fill water bottles, chew gum, and wear caps and hats during the lesson. Others do not. You have to accept that we have differnet limits, and you have to accept our limits in order for us to be able to do a good job here.”

“This has gone very well,” says head teacher Hilde Dahl Lønstad.

“Some children here at Biri seem like they were born in their caps, but when Hans Erik enters the classroom, they take them off. When Mari Ann enters, they leave them on. We teachers ought to spend more time teachng and less time discussing trivialities,” she believes.

Wants the pupils to be more clever

In the last three years, the lower secondary school on the west side of Lake Mjøsa has worked consciously on class management. Not because there was any sense of crisis at the school. The school and the school's pupils are more or less the same as all other schools and pupils in this area, but more and more attention has been paid to the problem of drop-outs in upper secondary school.

The index of living conditions shows that people at Biri are doing fine, but traditionally, this has been an area with a low level of education and rather low motivation for school. The teachers felt that instead of just thinking "that's the way it is at Biri", they ought to try to improve this attitude.

"Therefore, the project *Better learning environment* (see box) was like a gift to us. For a long time we had been thinking and saying that we ought to make a more conscious effort to improve the learning environment in the school. There is no reason why we should accept that it should be difficult to be good at school. The pupils here can achieve much better school results," argues the head teacher.

"Our motivation was that the pupils shall be given a good foundation when they go from lower secondary school to upper secondary school. When the possibility arose to join this project, it really hit the mark!" says the head teacher, who was so impatient to get under way that she "jumped the gun" on the project a half year before it was actually supposed to begin.

Equal footing

The teachers at Biri were inspired by the research of recent years, e.g. from Thomas Nordahl at Lillehammer University College, which shows that there are a number of factors in addition to the instruction that mean something for the pupil's learning outcome. In particular, it is the teacher who is the leader, and it is his or her ability to create a positive climate in the class, establish classroom order and motivate the pupils to make a good effort that has been in focus. Pupil surveys at Biri Lower Secondary School indicated that there were too many disturbances during the lessons. Now the teachers want to take command.

However, the pupils at Biri have not got more authoritarian leaders. In addition to clearer leadership, the teacher collegium has emphasised developing the relational competence of the staff. The point of departure is that people are most satisfied and develop best when their relations are on an equal footing.

"At the bottom lies the desire to have a dialogue on an equal footing between teacher and pupil. In school, we have been much occupied with explaining characteristics. We have blamed situations on the pupil being like this or that, which has made it difficult to do our job. We have paid less attention to whether there are

> THE POINT OF DEPARTURE IS THAT PEOPLE ARE MOST SATISFIED AND DEVELOP BEST WHEN THEIR RELATIONS ARE ON AN EQUAL FOOTING.

BETTER LEARNING ENVIRONMENT

Better learning environment (2009-2014) is a five-year effort to improve the pupils' learning environment. The Norwegian Directorate for Education and Training has initiated local development projects and disseminates research-based knowledge. The Directorate also offers web-based instruction and materials that can be used in the efforts to ensure the pupils' right to a good learning environment.

A total of 40 school owners and 86 schools are taking part in local development projects. The goal is to strengthen the local efforts to improve the pupils' learning environment. Based on local conditions and needs, the participants shall bring about lasting improvements in the pupils' learning environment. The projects are allocated funds for a total of four school years.

The comprehensive goal of this effort is that all pupils shall feel that they have a good, inclusive learning environment that promotes their security, health, well-being and learning. If this is to become a reality, all of you who are school owners, school administrators and teachers must conduct a systematic, continuous, knowledge-based effort to improve the pupils' learning environment. The goal of Better learning environment is to help ensure that improving the pupils' learning environment is given high priority by all school employees and school owners. The Directorate also wants to help promote quality improvement and greater competence in the whole education sector.

The teacher collegium at Biri Lower Secondary School has worked actively on class management in recent years. They regard it as a painful, but necessary process. From the left: Hans Erik Brostuen, Hilde Dahl Lønstad (head teacher), Bodil Bilit Sveen, Mari Ann Markeng and Ole Gudbrand Stubbene.

things that could be changed in ourselves or the environment. For instance, we have told pupils, 'If you hadn't been so disorderly today, I would have been able to give you a good lesson.' We have to get away from that attitude. We have to understand why the individual pupil behaves like he or she does. As a point of departure, we shall assume that there is always a positive intention behind the things people do. This is a completely different way of thinking," says the head teacher at Biri.

"As soon as you begin to blame the pupil, he or she gets defensive. At that point, the game is lost," believe the other teachers, who have complained less to each other about individual pupils after the project began. Now they look more at their own role. What are they doing that may deadlock the situation?

The teacher is responsible

The way in which they organise the project, Better learning environment, differs from one school to another. Biri Lower Secondary School is the only school in its municipality that is involved in the project; in other municipalities all of the schools in the municipality are taking part. Some arrange the project as an individual study; others as group work.

A common criterion is that all schools shall be linked to an environment providing academic instruction. Biri has chosen an academic milieu in the town of Hamar, Institutt for Relasjonsbasert Ledelse AS. They have done so because the municipality of Gjøvik has focused on relation-based management for many years and used this milieu in its education and training.

"All of the staff at the school had already taken a four-day course in this academic environment and knew the instructor. That was a big advantage. We have put in a lot of effort on instruction of the individual teacher. That has been painful," admits the teacher collegium at the school.

"There have been many tears and many revelations. It used to be easier for us to blame the pupil when something went wrong, but now we are asked, "And what about you? What have you done?" You setting yourself up to get cut down," says Hans Erik Brostuen.

"I don't think it's something we owe. I think responsibility is a more correct concept. In a pupil-teacher relationship, it is I as the tacher who is responsible for the relationship, not the pupil. It is useful to be reminded about that," says his colleague Ole Gudbrand Studbbene.

Uses role play

The instruction occurs both individually and in a team. In a team, the teachers have often used role play in order to try to better understand the pupils and the difficult situations.

Eskil Ramsrud Skogli, Kevin Stuldalen and Per Helge Hvalbye in Year 8 at Biri Lower Secondary School feel that their teachers have become clearer in setting their own limits in the classroom.

"Suddenly, you are sitting there and you realise that you yourself actually have responsibility. Then you may feel a little exposed with regard to your colleagues. We have never revealed so much of ourselves to each other before," says Bodil Bilit Sveen.

She thinks that she has gained a completely different view of the pupils through this method. She thinks more about why they do or say things in a particular way.

For example, the instructor drills the teachers on how they should address the pupils.

"I think this has been the biggest challenge in the project, teaching yourself to ask the "open" questions instead of "closed" questions. If you say to a pupil, 'Now you have behaved stupidly, can you tell me why?' that is a typical example of a closed question. We are working quite a lot on how we can address the pupils in a more open way. Here I feel that I have even more to learn," says Hans Erik Brostuen.

> WE ARE WORKING QUITE A LOT ON HOW WE CAN ADDRESS THE PUPILS IN A MORE OPEN WAY. HERE I FEEL THAT I STILL HAVE MORE TO LEARN.
> *Hans Erik Brostuen*

In some cases, the instructor has joined the teacher in the classroom and observed the teaching. The teachers are also open to being able to observe each other, but they have not done this very much.

"We are planning to use video and then to discuss the class situation in the team afterward. We are dreading this a little, so we have delayed it a little," admits the head teacher.

Structure and predictability

More attention to structure and predictability. There is another part of class management that the research has found to be important. The teachers at Biri have already been working on this for a number of years.

When the day begins, the teacher goes through the day and explains what is supposed to happen from hour to hour. Often this is written down on blackboards. There are clear routines for the beginning of, transitions in and the close of lessons.

"This makes many pupils feel more secure. They need this structure and predictability in their everyday life," says the head teacher.

"Another initiative that works well here is that the teachers write a report each month that the pupils take home with them. This report lists the tests that the pupils have taken or shall take,

> WE USE DEMERITS MORE AS DOCUMENTATION OF ORDER AND CONDUCT, NOT AS PUNISHMENT.
> *Ole Gudbrand Stubbene*

marks, demerits, absenteeism and other messages. This keeps the parents informed at all times about the state of things. The document must be signed and returned. I am in favour of this. Now there are fewer complaints from parents and pupils that messages have not been given."

Ole Gudbrand Stubbene thinks that both the teachers and the pupils have acquired a somewhat different view about getting demerits after the project commenced.

"It used to be almost like a declaration of war between the teacher and pupils when we gave demerits, but now the attitude to demerits has gradually changed. We use demerits more as documentation of order and conduct, not as punishment. If you do not document that a pupil comes too late to lessons 40 times in lower secondary school, then it will certainly become a problem in upper secondary school and in employment. That means that we are not doing our job. When we explain to the pupils why we are giving demerits, they understand it."

Relations among the pupils

In the opinion of the teachers, the view of bullying has also been somewhat altered through the project.

"The instructor has made us more aware that all bullying starts with a conflict between two people. Not necessarily because one person is beating up another. Thus, our strategy is to get involved in conflicts at a very early stage. We take the pupils in and talk with them one at a time before the problem gets out of hand. We can see in the pupil surveys that this has worked. We now have a lower score there when it comes to bullying," says the head teacher.

She thinks the pupils also are grateful for this arrangement. Now they often come in themselves and let us know when they need help in resolving conflicts. We didn't dare to do that when we were in school, did we?" the head teacher asks the other teachers.

"There is a lot of common sense involved here. If you notice that there is some squabbling between two pupils, it is important to call them in and talk with both of them - separately. That way you get to hear both sides of the story and quickly find out whether or not this is something you should pursue further. I think we have got better at dealing with these situations because we have worked a lot harder on relationships in general," says Ole Gudbrand Stubbene.

Better learning?

The whole basis for the project has been better learning and better school results. Can the head teacher and the teachers claim that they see results already?

The head teacher is very afraid of counting her chickens before they are hatched, but the national tests at Biri Lower Secondary School give her a hint that positive things are happening with regard to results. She wants to be careful in deciding what that is due to.

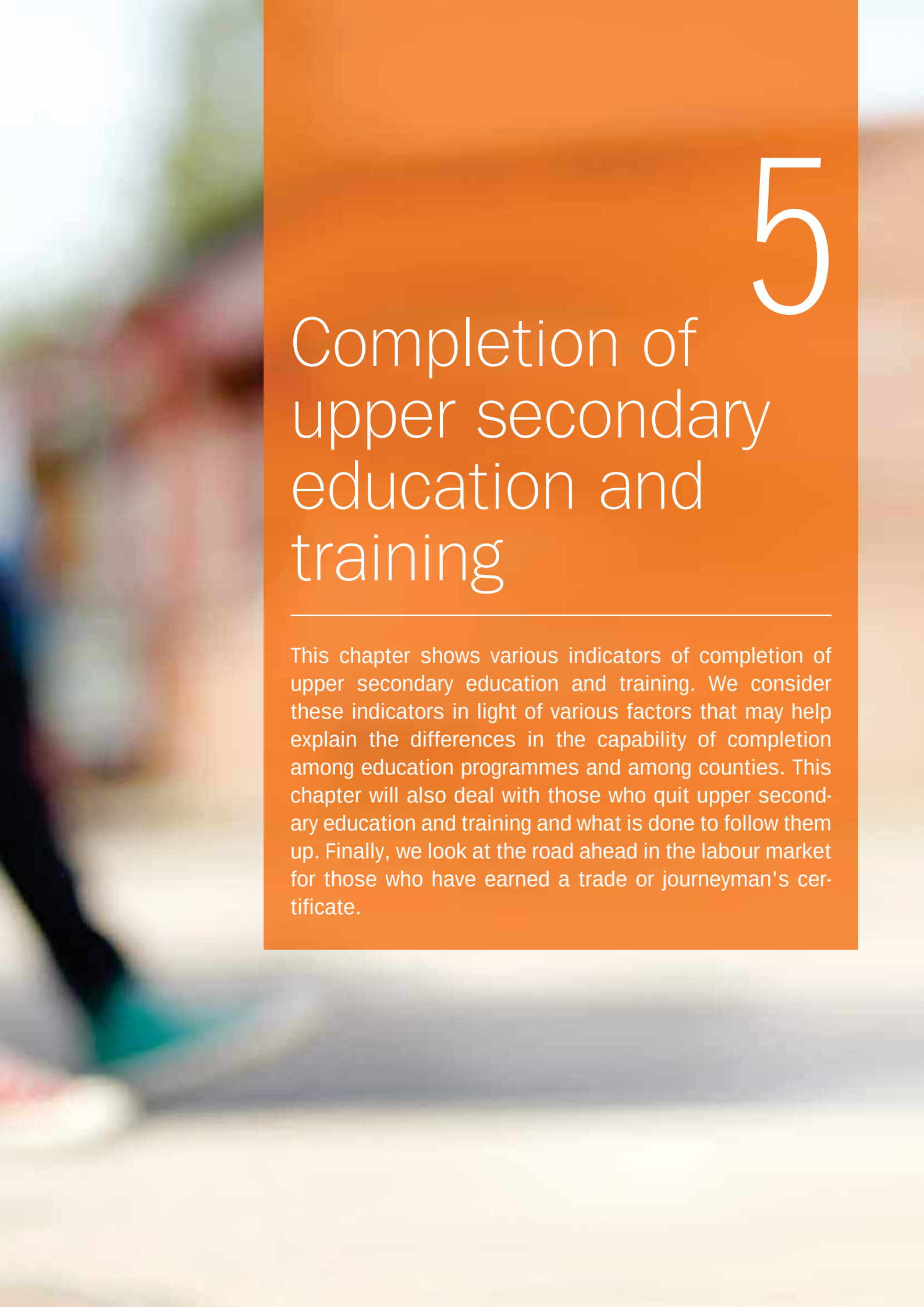
"It is too early to say. To me, the most interesting thing is that the teachers say that they feel they have more time to do their teaching work now and that they have come further in their subjects than they did before. That ought to be reflected in better results in the long run."

The teachers agree that they spend more time on their subjects when they have made their limits clear to the pupils. They have also become more coordinated so that they do not need to spend time defending each other to pupils.

The fact that the project has taken and will take a lot of time is something everyone has accepted, but it is completely crucial in order to get anything out of this, they agree.

"What we learn in the instruction lessons today, we use in the classroom tomorrow. We do not waste any time," says Mari Ann Markeng. She has enormous faith in the way the school at Biri has organised this project, namely by working in teams instead of each of the teachers reading a syllabus and regularly submitting lessons.

"When we can talk with each other and get each other's viewpoints under way, I think the learning outcomes become better." ■



5 Completion of upper secondary education and training

This chapter shows various indicators of completion of upper secondary education and training. We consider these indicators in light of various factors that may help explain the differences in the capability of completion among education programmes and among counties. This chapter will also deal with those who quit upper secondary education and training and what is done to follow them up. Finally, we look at the road ahead in the labour market for those who have earned a trade or journeyman's certificate.

5.1 WHY IS IT IMPORTANT TO COMPLETE UPPER SECONDARY EDUCATION AND TRAINING?

Early conclusion of education has negative consequences

Persons who have not completed upper secondary education and training will have worse prospects in the labour market than those who have completed their upper secondary schooling. Research shows that on the average these persons have lower income and higher unemployment and make use more often of public benefits and national insurance. In addition, there is a strong correlation between dropping out of upper secondary school, social exclusion, crime, poor health and poor material living conditions (Falch et al. 2009; Falch et al. 2010).

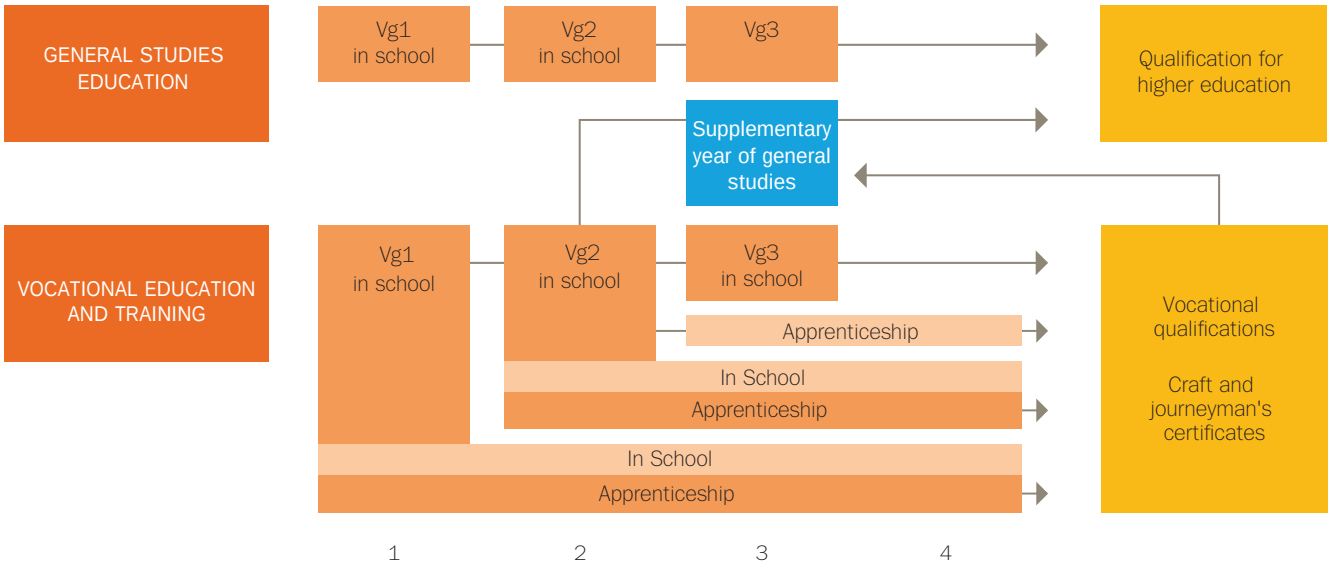
Failure to complete school and delayed completion also have substantial socio-economic costs. Calculations performed at the Centre for Economic Research (Falch et al. 2009) show that if completion of upper secondary education and training for an age cohort of pupils increases from 70 to 80 per cent, it will entail a cost reduction for the society of between NOK 5.4 and 8.8 billion for the whole life cycle of each age cohort. Falch et al. (2009) also calculated that if everyone who completes school had done so in the stipulated time, the society would have saved about NOK 2 billion for each age cohort.

NY GIV IN ORDER TO INCREASE COMPLETION

It is a political priority to increase the completion of upper secondary education and training. Ny GIV (New possibilities) is a three-year project that started up in 2010 and that aims to establish a lasting collaboration between the central government, the county authorities and the municipalities in order to get more young people to complete and pass upper secondary education and training. In reality, the Ny GIV project is composed of three projects:

1) *Gjennomføringsbarometeret* (the Norwegian Report on Upper Secondary Completion) – common goals for better completion of upper secondary education and training and a common data and statistical basis for assessing the achievement of those goals.
2) The Follow-up project – better cooperation between the county authorities and the Norwegian Labour and Welfare Administration (NAV) with regard to young people who have dropped out of education and training and been unemployed for a while.
3) The transition project – systematic cooperation between the municipality and county authorities with regard to a close follow-up of poorly achieving pupils who are at risk of not mastering upper secondary education and training.

FIGURE 5.1 Paths to full upper secondary competence under the Knowledge Promotion Reform.



Source: The Norwegian Directorate for Education and Training

5.2 HOW DOES THE COMPOSITION OF PUPILS VARY AMONG COUNTIES AND AMONG EDUCATION PROGRAMMES?

The percentage who complete upper secondary education and training is not the same for all counties and education programmes. This may be attributed to the variation in the population base from county to county, and the fact that different pupils choose the different education programmes. This section reveals two features that are related to completion of upper secondary education and training.

Major regional differences in educational choices

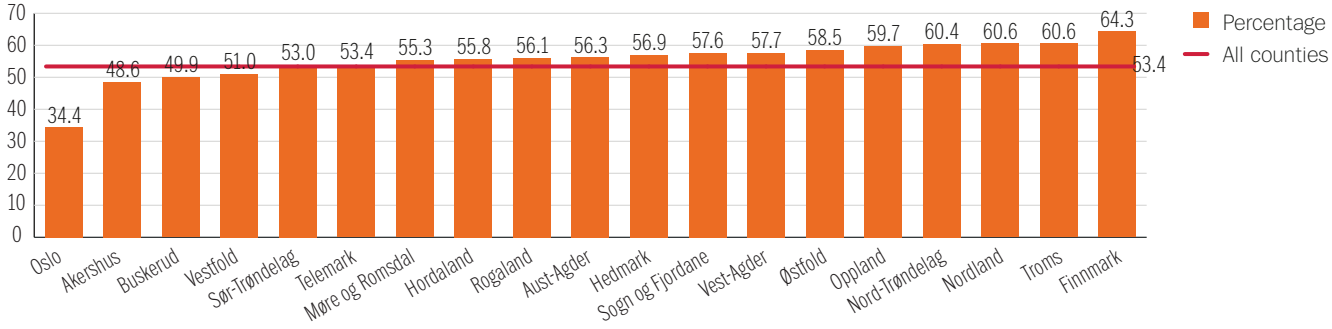
All in all, there are about just as many persons in vocational education programmes in upper secondary education and training as in general studies, with apprentices included. In Vg1, most of the pupils are in vocational education programmes, whereas the trend has reversed in Vg3 and/or apprenticeship, and there are most students in general studies. This is attributed to the fact that many vocational pupils go over to a *supplementary year qualifying for higher education* and that the drop-out rate under way is substantially greater in vocational studies. In addition, the vocational education programmes *Media and Communication* and *Agriculture, Fishing and Forestry* have a pathway that gives qualification for higher education.

Figure 5.2 shows the percentage of pupils in Vg1 that are enrolled in a vocational education programmes. There are major differences among the counties in the pupils' educational choices in Vg1. The percentage of pupils in vocational Vg1 varies from 34 per cent in Oslo to 64 per cent in Finnmark County. All in all, 53 per cent of the pupils begin in vocational education programmes.

Big differences in the pupils' level of marks in different education programmes

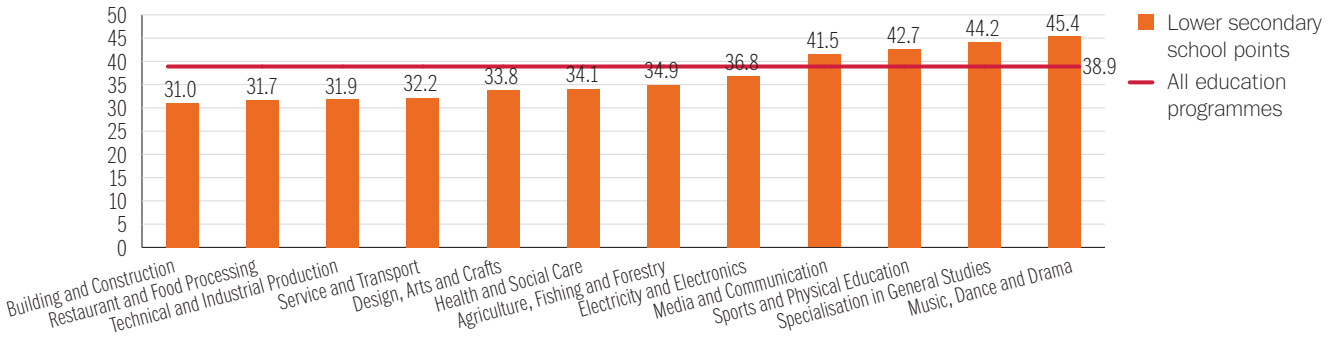
Figure 5.3 shows average lower secondary school points for the pupils who begin Vg1 in the various education programmes. The national average for all pupils in Vg1 is also displayed. It is clearly evident that pupils who do well in

FIGURE 5.2 Pupils in vocational programmes in Vg1 by county. 2010-2011. Per cent.



Source: The Norwegian Directorate for Education and Training

FIGURE 5.3 Lower secondary school points by education programme in Vg1. 2010. Average figures.



Source: Statistics Norway

school choose general studies education programmes over vocational studies. All vocational education programmes with the exception of *Media and Communication*, lie below the average for all Vg1-pupils, while all of the general studies education programmes lie above the average. Average lower secondary school points vary from 31.0 in *Building and Construction* to 45.4 in *Music, Dance and Drama*. The relative relationship between the education programmes has been very stable in recent years.

5.3 HOW MANY PUPILS COMPLETE UPPER SECONDARY EDUCATION AND TRAINING?

The percentage has been stable for many years

The completion indicators give a picture of the effectiveness of the education system – how many complete and pass within the desired period of time. The percentage who complete and pass within five years after beginning upper secondary education and training has been stable since the age cohort that began upper secondary education and training in 1994.

Figure 5.4 mainly shows that the percentage who complete and pass within five years has remained stable between 67 and 70 per cent since 1999. After 1999, the percentage who have completed and passed declined up to the 2003 age cohort. After that, the percentage has begun to increase again, and for the 2005 age cohort, the level is the same as in 1999.

In the NY Giv (New possibilities) project, a national goal has been set to increase the percentage who complete and pass from 69 per cent for the 2004 age cohort to 75 per cent for the 2010 age cohort. The dotted line shows the trend that must be followed if this goal is to be achieved. The increase in the percentage who complete and pass from the 2004 to the 2005 age cohort means that nationally we are on schedule to meet the goal of 75 per cent who complete and pass.

Big differences among the counties

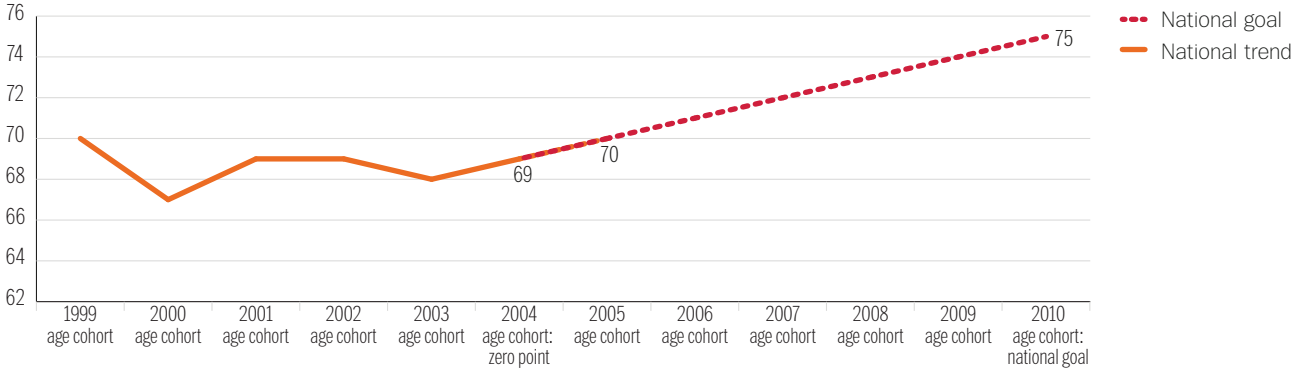
The percentage who complete and pass varies greatly among the counties. Figure 5.5 shows the total completion by county for the 2004 age cohort within two years beyond the stipulated time. There are relatively large differences among the counties, from 79 per cent completed and passed in Sogn og Fjordane to 55 per cent in Finnmark.

In addition, the figure shows that the percentage who complete and pass is consistently higher for pupils who begin in general studies than it is for pupils who begin in vocational education programmes. Nationally, the difference between the two is 21 percentage points. However, the difference between the two varies considerably among the counties from 16 per cent in Rogaland to 29 per cent in Østfold.

Big differences between youth who begin in general studies and vocational studies

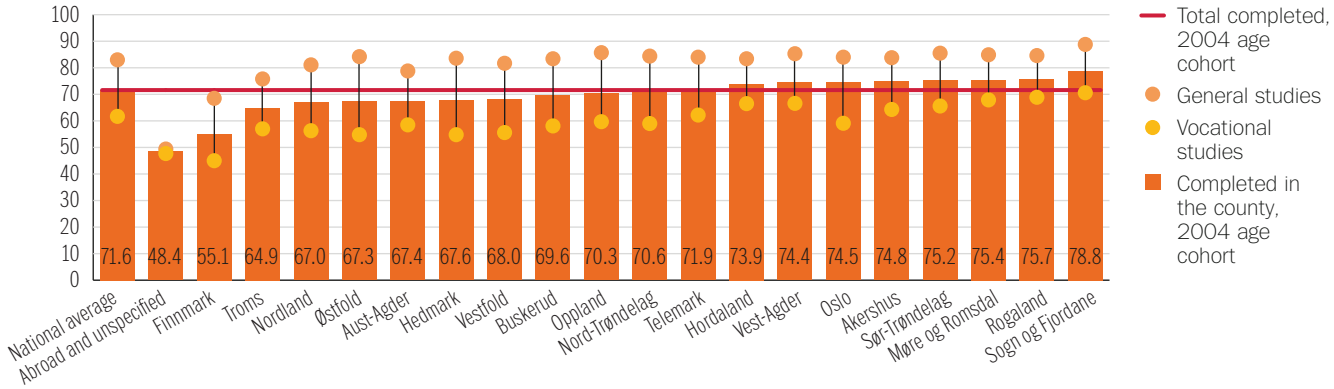
The completion indicator also shows whether the education and training was completed and passed in the stipulated time or in more than the stipulated time. In addition, it contains information about the percentage that is still in upper secondary education and training, the percentage that has completed and passed and the percentage that has dropped out under way.

FIGURE 5.4 Pupils and apprentices who complete and pass within five years. The national trend seen in light of the national objective specified in the Ny GIV project. The 1999-2010 age cohorts. Per cent.



Source: *Gjennomføringsbarometeret 2012:1* (the Norwegian Report on Upper Secondary Completion 2012:1)

FIGURE 5.5 Completed and passed within two years beyond the stipulated time for the 2004 age cohort, by county and type of education programme. Per cent.



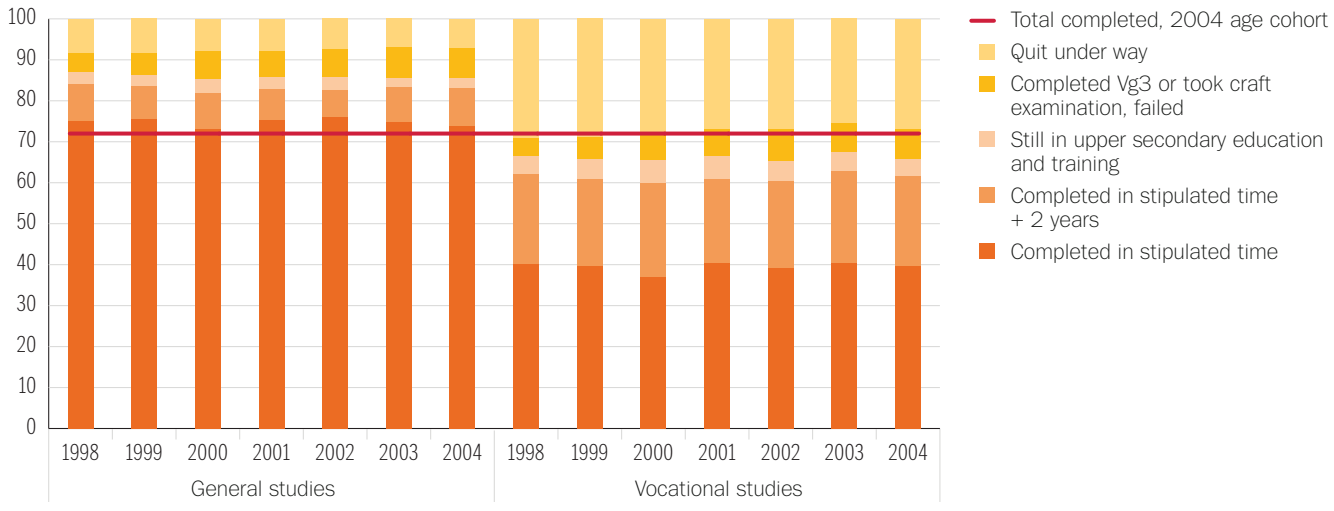
Source: Statistics Norway

Figure 5.6 shows completion after the stipulated time + two years for the 1998-2004 age cohort. The completion pattern for pupils who began in upper secondary education and training in 2004 deviates only slightly from previous age cohorts. Like previous age cohorts in upper secondary education and training, over 80 per cent of the pupils who began in the general studies basic course in 2004 achieved qualifications for higher education or vocational qualifications within five years. The corresponding percentage for the pupils who began the vocational basic course is in excess of 60 per cent. There are no major changes either in the percentage of pupils who are still taking education and training, who complete without passing or who drop out under way. These groups are larger among the pupils who begin in vocational studies than among those who begin in general studies.

Many achieve basic competence

Most pupils who begin in upper secondary education and training complete and pass it. The percentage who do not complete and pass in five years has been stable at around 30 per cent since the 1994 age cohort. Many of those

FIGURE 5.6 Completion after the stipulated time + two years for the 1998-2004 age cohorts, by the type of education programme. Per cent.



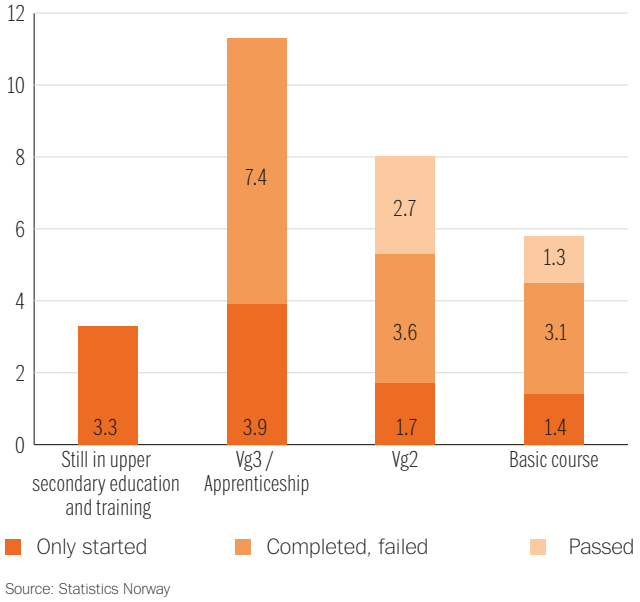
Source: Statistics Norway

who do not receive a diploma or a trade or journeyman's certificate have completed parts of the education and training and have achieved what is called basic competence. For some individuals this is a planned educaton path, whereas for others it was not planned.

Of the 28 per cent of the 2004 age cohort who had not completed and passed, 3 percentage points were still in upper secondary education and training. One third (11 percentage points) came to the last year, and over half of these completed the last year. This means that around one out of four who have not completed and passed have taken all of the years of upper secondary education and training, but lack one or more subjects in order to get a diploma or a trade and journeyman's certificate. Eight percentage points came to Vg2, and one third of these pupils passed this level without beginning Vg3. Only a small percentage of those who began Vg2 dropped out. Six percentage points did not go further than the basic course, but most of them completed the first year.

In short, Figure 5.7 shows that many of those who have not completed and passed have achieved a basic competence that they can later build on to obtain full upper secondary qualifications. However, there is also a group of pupils who have planned to achieve basic competence because they do not have an opportunity to achieve full competence.

FIGURE 5.7 Competence achievement among the pupils in the 2004 age cohort who do not complete and pass within the stipulated time plus two years. Per cent.



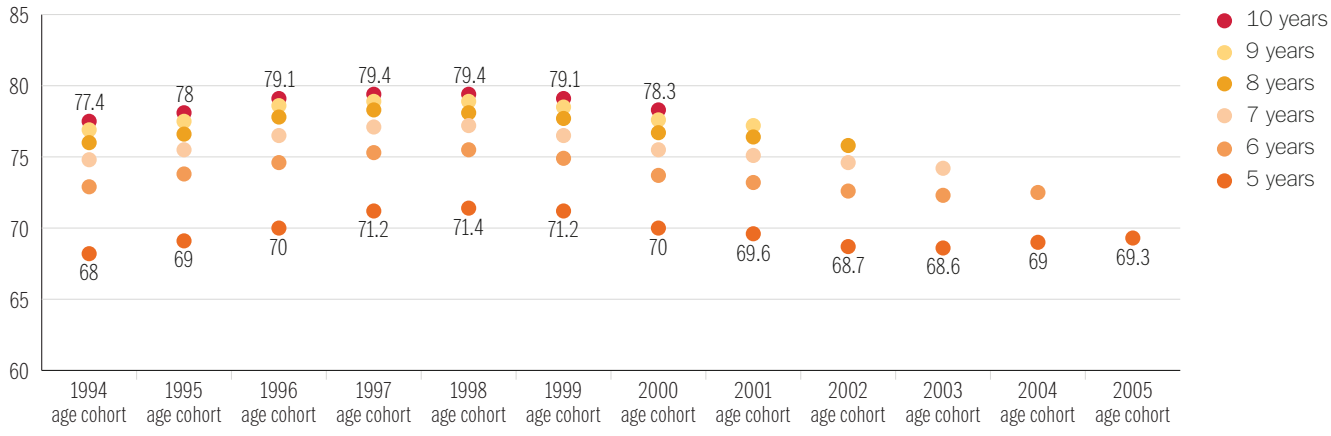
Source: Statistics Norway

Many pupils complete and pass after ten years

If we shift the time of measurement up to ten years after the start of upper secondary school, the percentage who complete and pass increases by around nine percentage points, and the differences between the education programmes and the counties lessen.

Figure 5.8 shows the percentage who complete and pass after five to ten years for the age cohorts since 1994. First and foremost, the figure shows that the percentage who complete and pass increases when we shift the time of measurement from five to ten years.

FIGURE 5.8 The percentage who have completed and passed in the 1994 to 2005 age cohort by number of years since commencement of study. Per cent.



Source: Statistics Norway

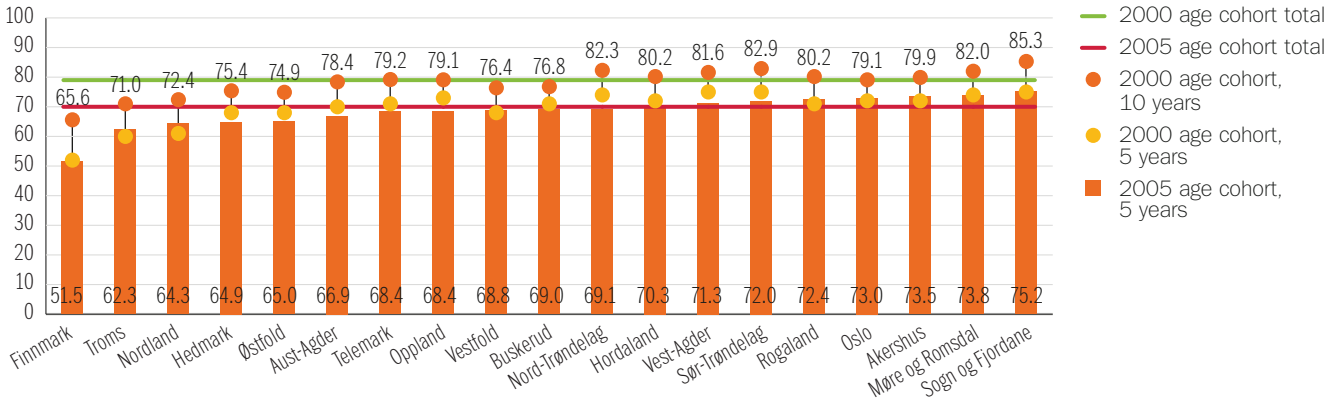
The figure also shows that the difference among the age cohorts in the percentage who complete and pass after five years is somewhat lower after ten years, but that there are still differences. There are 3.4 percentage points of difference between the 1994 and the 1998 age cohort in the percentage who complete and pass within five years. After ten years, the difference is reduced to two percentage points.

There are differences in the percentage who complete and pass among counties and among education programmes. Figures 5.9 and 5.10 show the percentage who completed and passed within five years in the 2005 age cohort by county and by education programme. In the same figures, there is information about the percentage who completed and passed after five and ten years for the 2000 age cohort.

Figure 5.5 showed that for the 2005 age cohort, there are relatively big differences among the counties in the percentage who complete and pass in five years. In Sogn og Fjordane County, 75.2 per cent of the young people who began upper secondary education and training in 2005 complete and pass, whereas the corresponding percentage in Finnmark County is 51.5 per cent.

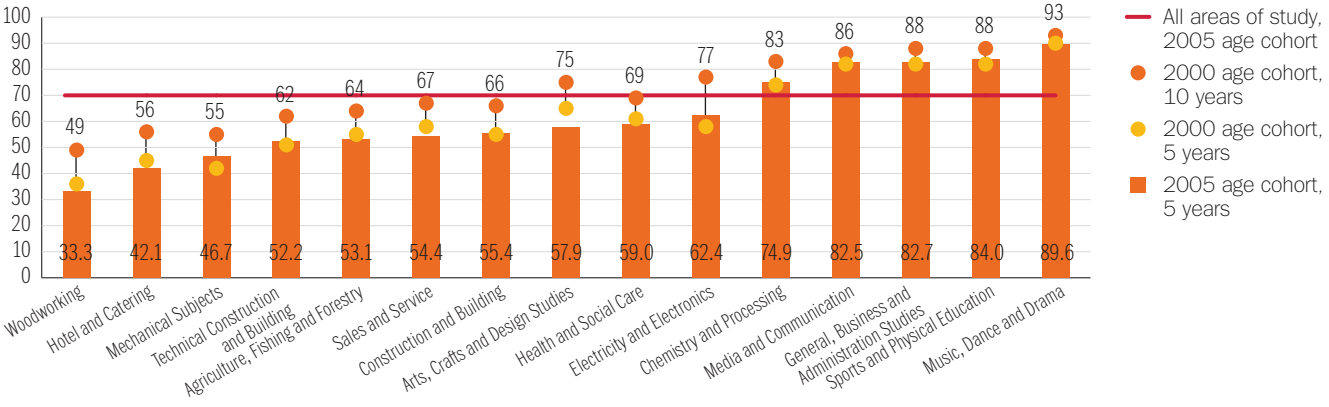
For the 2000 age cohort, there were also big differences among the counties in the percentage who completed and passed within five years. The interesting thing is that the percentage who complete and pass on a national basis increases by 8 percentage points to 78 per cent when

FIGURE 5.9 The percentage who have completed and passed within five years in the 2005 age cohort compared with the 2000 age cohort, by county. Per cent.



Source: Statistics Norway

FIGURE 5.10 The percentage who have completed and passed in the 2005 age cohort compared with the 2000 age cohort, by area of study. Per cent.



Source: Statistics Norway

measured after ten years. The size of this increase varies among the counties. Finnmark has an increase of 13 percentage points, which is the biggest change in the nation. The smallest change is in the counties of Buskerud and Oppland, where six percentage points more complete and pass after ten years. In other words, some of the difference that we find among the counties after five years diminishes after ten years.

Figure 5.10 shows that for the 2005 age cohort there were relatively large differences among the education programmes in the percentage who complete and pass. As previous figures have shown, the highest percentage who complete and pass is among pupils who began in general studies education programmes. In all three of the general studies programmes, more than 80 per cent of the pupils complete and pass within five years, and the highest percentage is in *Music, Dance and Drama* (89.6 per cent). Among the vocational studies, the percentage who complete and pass after five years is lowest in *Woodworking* and highest in *Media and Communication*.

The percentage who complete and pass increases when it is measured after ten years. The size of this increase varies among the education programmes. In general we can say that the biggest changes occur in vocational studies. We find the biggest change in the percentage completed and passed in *Electricity and Electronics*, where 19 percentage points more pupils complete and pass after ten years than after five years, which can be attributed to the fact that many of the education paths in Electricity and Electronics are longer than the main model (2+2 years). We find the smallest change in *Music, Dance and Drama*. In other words, some of the difference that we find among the education programmes after five years is reduced after ten years.

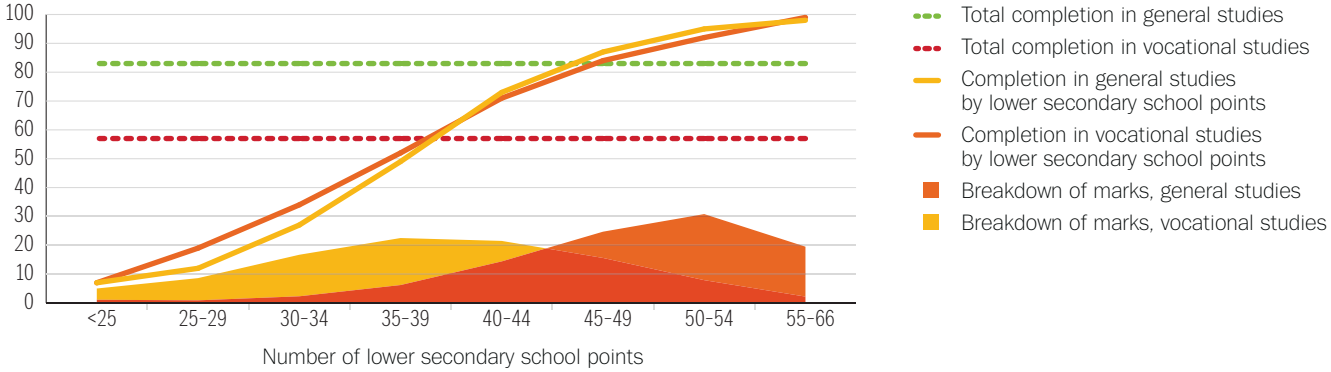
Marks from primary and lower secondary school are important

There are systematic differences between general studies education programmes and vocational programmes in the percentage who complete and pass. Various reasons have been suggested for this, but perhaps the most important factor is the systematic differences in the number of lower secondary school points between young people who begin in vocational programmes and young people who begin in general studies programmes (see Figure 5.3). Figure 5.11 shows that the difference between vocational and general studies education programmes in the percentage who complete and pass is almost non-existent if we take into account the difference in the number of lower secondary school points.

The horizontal dotted lines show what we have seen before: There is a greater percentage who complete and pass among those who begin with general studies than with vocational programmes. Among the pupils who began in general studies areas of study in 2005, an averge of 83 per cent have achieved qualifications for higher education or vocational qualifications within five years, whereas the corresponding average for vocational areas of study was 57 per cent. The 2005 data deviate little from data from previous years.

The curves show the percentage who complete and pass broken down by the number of lower secondary school points. In general studies areas of study, 12 per cent of the pupils with 25-29 lower secondary school points complete and pass, whereas the corresponding percentage for pupils with 45-49 lower secondary school points is 87 per cent. This patternis very similar for general studies and vocational areas of study. In other words, when we take into account

FIGURE 5.11 The percentage who have completed and passed within five years in the 2005 age cohort, by type of education programme and number of lower secondary school points. Per cent.



Source: *Gjennomføringsbarometeret 2012:1* (the Norwegian Report on Upper Secondary Completion 2012:1)

the number of lower secondary school points, there are not any major differences between general studies and vocational areas of study in the percentage who complete and pass. Among the pupils with more than 40 lower secondary school points, the percentage who complete and pass is somewhat higher in general studies areas of study than in vocational areas of study, whereas it is somewhat higher in vocational areas of study among pupils with fewer than 40 lower secondary school points.

The coloured areas at the bottom of the figure show the breakdown of marks. There are over four times as many pupils with over 50 lower secondary school points who begin in general studies compared with vocational programmes, and there are over five times as many pupils with less than 40 lower secondary school points who begin in vocational programmes rather than general studies.

In other words, the big difference between general studies and vocational programmes in the percentage who complete and pass can be explained by the fact that the pupils who begin in vocational programmes have systematically poorer qualifications for completing and passing than the pupils who begin in general studies.

Differences in the number of lower secondary school points can also be an explanation for differences in the percentage who complete and pass among the individual education programmes and among the counties. In Chapter 5.2, we saw how the pupils were broken down in the education programmes by the number of lower secondary school points. In accordance with what we found above, the average number of lower secondary school points was highest in the general studies education programmes. A difference among the counties in the percentage who begin in general studies can therefore have an effect on the percentage who complete and pass in the county. Oslo and Akershus counties, which have the lowest percentage in vocational programmes, are also among the counties with the highest percentage who complete and pass. Likewise, the counties with the highest percentages in vocational programmes - Nordland, Troms and Finnmark counties - are also the counties with the lowest percentage who complete and pass.

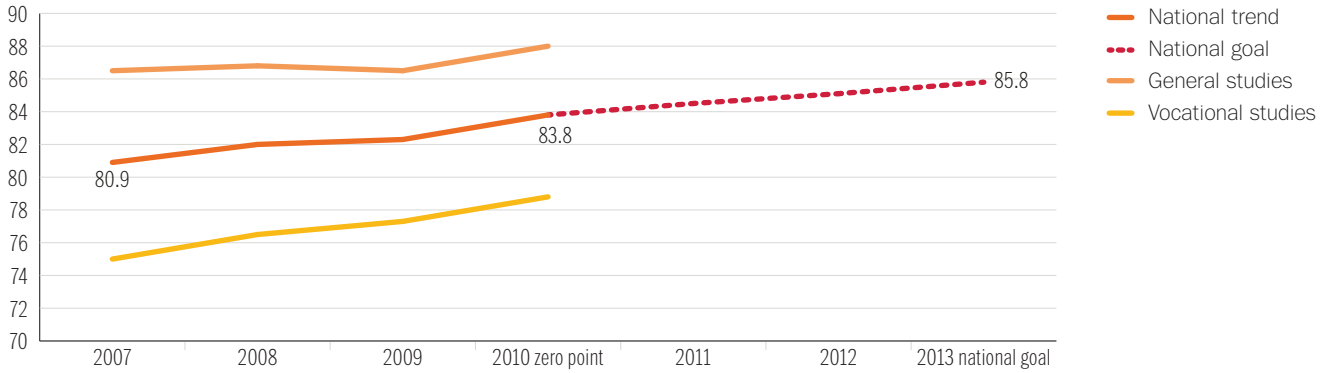
Most pupils begin in upper secondary education and training, but many quit under way

The statistics above have shown the percentage who have a diploma or trade and journeyman's certificate after five years. What we have not shown is when the young people quit in the education path. The upper secondary path is 3-4 years long - depending on whether or not they take parts of the education and training in a training establishment - and the young people quit at each transition: in the transition from primary and lower secondary school to upper secondary school, between Vg1 and Vg2, between Vg2 and Vg3/apprenticeship and from Vg3 to a diploma or trade and journeyman's certificates. The transition indicators give more detailed information about where in the education path the main challenges will come.

The vast majority of the pupils who graduate from primary and lower secondary school begin directly in upper secondary education and training. The percentage has remained between 96 and 97 per cent since 2006, and in 2010 the percentage with a direct transition from primary and lower secondary school was 96.6 per cent.

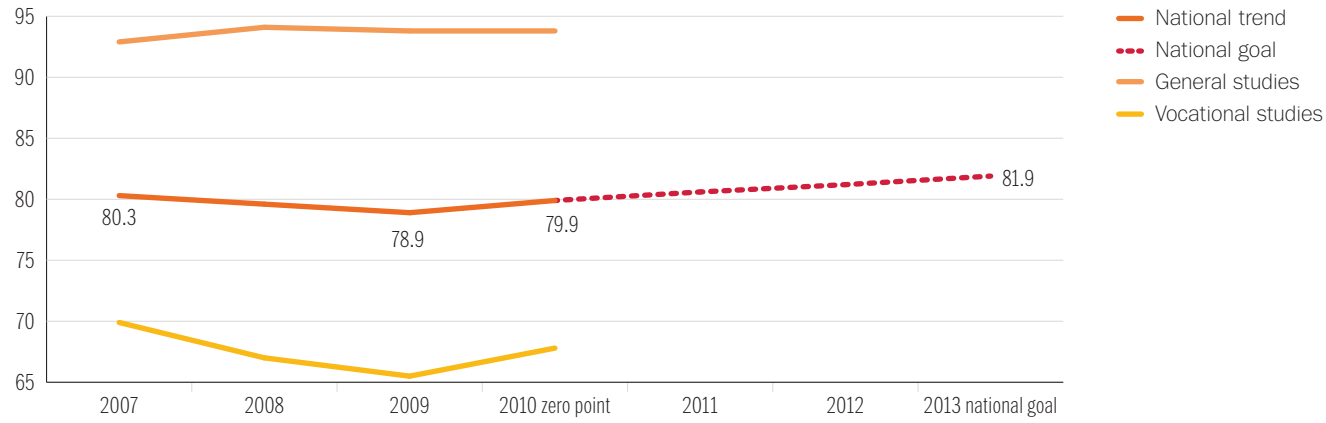
Figure 5.12 shows the size of the percentage of those who took Vg1 who continued in Vg2, in apprenticeship or in Vg3 the following year. The figure shows that the percen-

FIGURE 5.12 Pupils in Vg1 who begin in Vg2 or Vg3/apprenticeship. The national trend seen in light of the national objective specified in the Ny GIV project. Per cent.



Source: *Gjennomføringsbarometeret 2012:1* (the Norwegian Report on Upper Secondary Completion 2012:1)

FIGURE 5.13 Pupils in Vg2 who begin in Vg3 or apprenticeship. The national trend seen in light of the national objective specified in the Ny GIV project. Per cent.



Source: *Gjennomføringsbarometeret 2012:1* (the Norwegian Report on Upper Secondary Completion 2012:1)

tage with an ordinary progression from Vg1 has increased ever since the first age cohort in the Knowledge Promotion Reform went over to Vg2. In 2007, the percentage with an ordinary progression was 81 per cent, and the percentage increased to 84 per cent in 2010. In the NY Giv (New possibilities) project, a national goal was set to increase the percentage by another two percentage points by 2013. Less than half of those who do not continue in Vg2 take Vg1 again.

The percentage who continue in Vg2, in apprenticeship or in Vg3 is higher in the general studies than in the vocational education programmes, but the increase was greater in vocational education programmes than in general studies. The percentage with an ordinary progression from vocational education programmes has increased by four percentage points from 2007 to 2010. The corresponding increase for general studies is less than two percentage points.

Figure 5.13 shows the size of the percentage of those who took Vg2 who continued in apprenticeship or in Vg3 the following year. The percentage with an ordinary progression from Vg2 decreased from 2007 to 2009. In 2007, the percentage with an ordinary progression was 80 per cent, and the percentage decreased to 79 per cent in 2009. In 2010, the trend reversed, and the percentage with an ordinary progression was again around 80 per cent. Nationwide, a goal was set to increase the percentage by another two percentage points by 2013. About one fourth of those who do not continue in apprenticeship or Vg3, take Vg1 or Vg2 again.

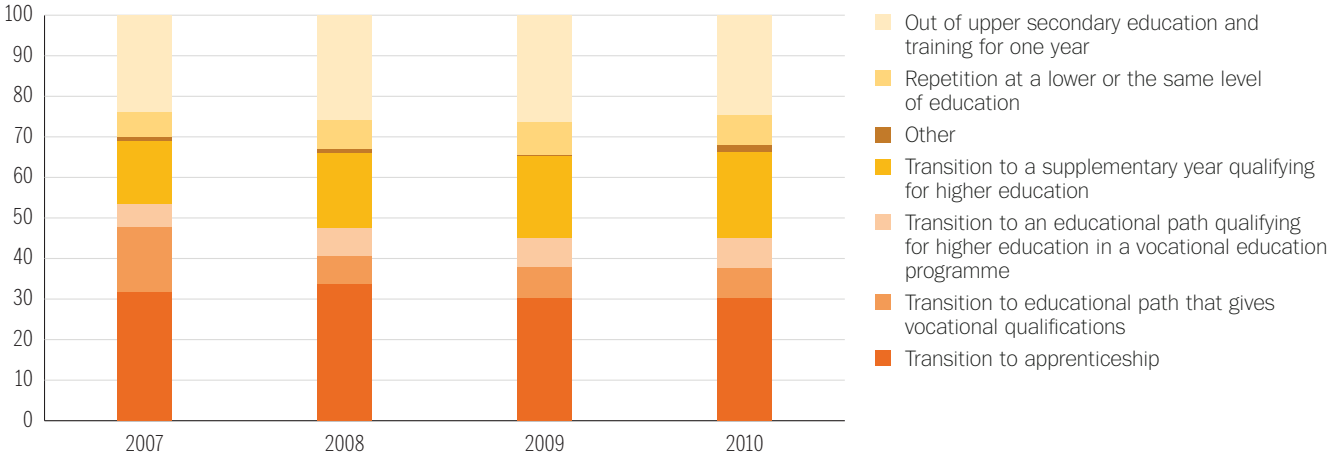
The percentage with an ordinary progression is higher in general studies than in vocational education programmes. For the general studies education programmes, the percentage with an ordinary progression was relatively stable at about 94 per cent from 2007 to 2010. In the same period, there was a decline for the vocational programmes from 70 per cent in 2007 to 65 per cent in 2009. In 2010, the percentage increased again to 68 per cent.

It is especially interesting to follow the transition from Vg2 vocational programmes to apprenticeships. Figure 5.14 presents an overview of what the pupils from vocational Vg2 are doing on 1 October in the subsequent school year. For 2010, the figure shows that under one out of three pupils is in education and training in a learning establishment – the main model in vocational education and training. All in all, only 45 per cent continue directly in an apprenticeship, a vocational programme or qualification for higher education in a vocational programme. In other words, we can say that less than half of the pupils continue in the education path that they have followed for two years. Almost one out of four go over to a supplementary year qualifying for higher education. Some of them are from vocational education programmes with general studies disciplines. 25 per cent were not taking any instruction on the date of measurement, but some of them begin as apprentices at a later date.

Figure 5.14 shows the trend from 2007 to 2010. The biggestdifference is the increase in the percentage who have a transition to a supplementary year; this percentage has increased from 15.6 in 2007 to 21.3 in 2010.

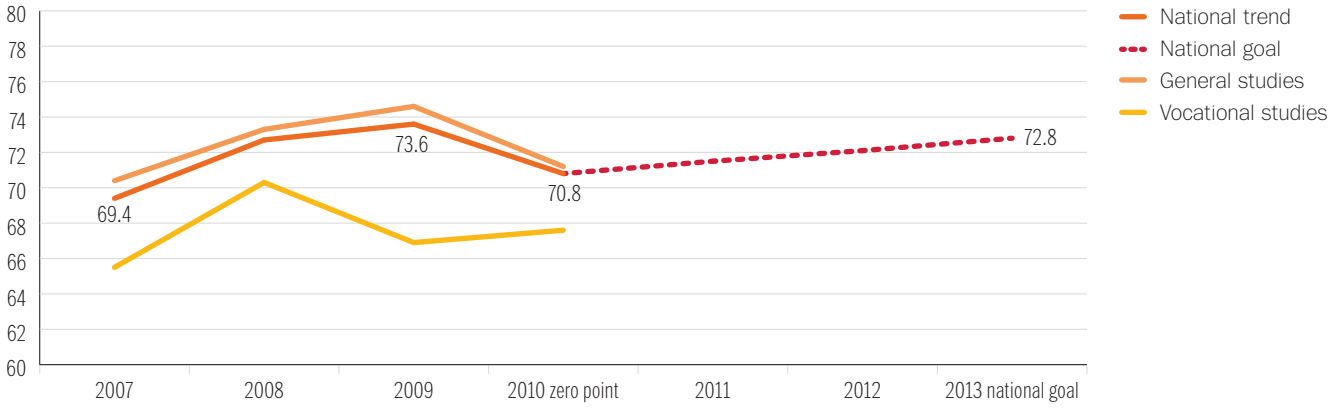
Figure 5.15 shows the percentage of pupils in Vg3 who earned a diploma, trade or journeyman's certificate or con-

FIGURE 5.14 Pupils in Vg2 vocational programmes, broken down by educational activity the following year. 2007-2010. Per cent.



Source: *Gjennomføringsbarometeret 2012:1* (the Norwegian Report on Upper Secondary Completion 2012:1)

FIGURE 5.15 Pupils in Vg3 who complete and pass or begin an apprenticeship. The national trend seen in light of the national objective specified in the Ny GIV project. Per cent.



Source: *Gjennomføringsbarometeret 2012:1* (the Norwegian Report on Upper Secondary Completion 2012:1)

tinued in apprenticeship the following year (the figure does not include apprentices in learning establishments that take trade or journeyman's certificates). The figure shows that the percentage with an ordinary progression from Vg3 increased from 2007 to 2009. In 2007, the percentage with an ordinary progression was 69.4 per cent, and the percentage increased by four percentage points (to 73.6 per cent) in 2010. In 2010, the trend has reversed, and the percentage with an ordinary progression was again almost back at the 2007 level – just slightly above 70 per cent. Nationwide, a goal was set to increase the percentage by two percentage points.

The percentage with an ordinary progression is higher in general studies than in vocational education programmes. The percentage with an ordinary progression from general studies education programmes increased by about three percentage points from 2007 to 2009 and decreased by roughly the same amount from 2009 to 2010. It is this decrease that results in a reduction for the whole Vg3. For vocational education programmes, the trend has varied more, which can be attributed to the fact that there are few persons who are registered in vocational Vg3 so that random variations have a greater effect. We do not have equivalent figures for apprentices.

§ **THE EDUCATION ACT**
The follow-up service

Section 3-6 of the Education Act:
The county authority shall provide a follow-up service for young people who have the right to education and training pursuant to Section 3-1 and who are neither attending a course of education nor are employed. The service shall be made available until the end of the year during which the person concerned reaches the age of 21.

Section 13-1 of the Regulations associated with the Education Act:
The purpose of the follow-up service is to ensure that all young people who belong to the target group, cf. Section 13-2, are given an offer of education and training, employment, other competence-building measures, or possibly a combination of these offers. This programme shall primarily aim to lead to qualification for higher education, vocational qualifications or basic competence in upper secondary education and training.

Section 13-2 of the Regulations associated with the Education Act:
The target group for the follow-up service is young people who are covered by the statutory right to upper secondary education and training and who in the current school year:
a) have neither applied for nor accepted a place or an apprenticeship, or
b) interrupted this kind of education and training, or
c) are unemployed, or
d) have lost the right as a result of a decision about exclusion from the teaching pursuant to Section 3-8 of the Education Act, or as a result of a decision concerning rescission of an apprenticeship contract or training contract in accordance with Section 4-6 of the Education Act.

The Follow-up project
The Follow-up project is one of three sub-projects in the government's efforts to promote increased completion of upper secondary education and training, the Ny GIV project. The target group in the project is young people who are registered in the Follow-up service (OT). The goal of the project is to motivate young people who have dropped out of ordinary education and training and employment to return to upper secondary education and training or to employment. The follow-up shall be based on an inter-agency and professional collaboration aimed at the target group.

5.4 WHAT IS THE FOLLOW-UP SERVICE?

The Follow-up service (OT) is a county service that is supposed to follow up young people who are entitled to education and training pursuant to Section 3-1 of the Education Act, but who are not in education and training or employed. OT is supposed to give an offer of education and training, employment or other competence-building measures, possibly combinations of these measures, to all young people who belong to OT's target group. OT is also responsible for coordinating the interdisciplinary effort aimed at these young people (see fact box).

An evaluation perfomed by SINTEF (The Foundation for Scientific and Industrial Research at the Norwegian Institute of Technology) in 2011 (Buland et al. 2011) emphasises that OT's biggest challenge is to become better known among pupils. For many pupils, OT is an unknown service. The evaluation also points out that the multi-agency collaboration is a challenge for OT. Strengthening the multi-agency collaboration, with a special focus on the cooperation between OT and NAV, is a key factor in the Follow-up project in Ny GIV.

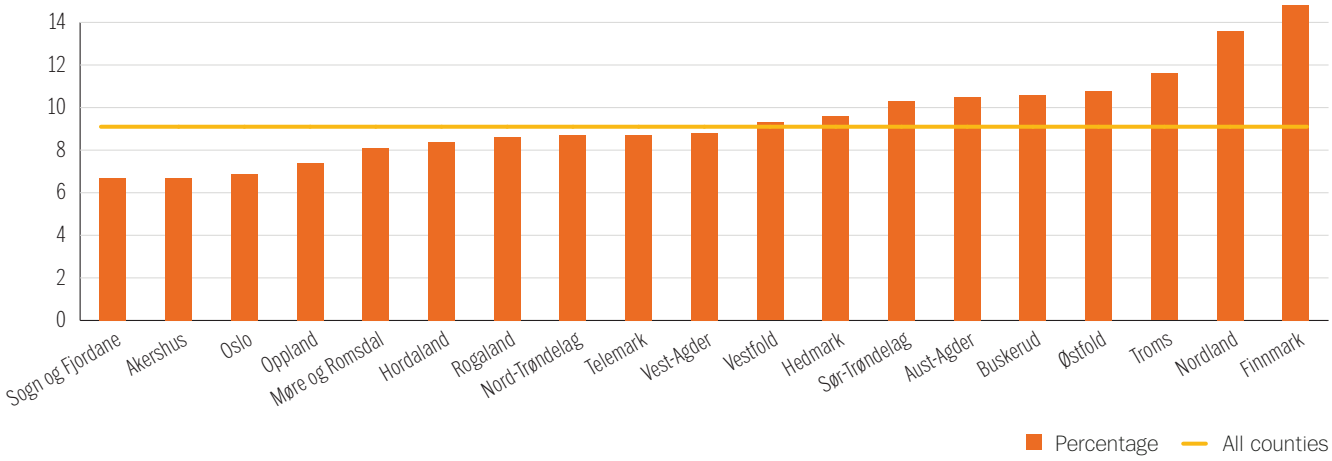
Nine per cent of the young people with the youth right are registered in the Follow-up service

The county authorities shall have an overview of all young people who are registered in OT. The registration and follow-up of young people occurs continuously throughout the school year as the young people are reported to OT. As per 1 February 2012, nine per cent of the young people with the youth right up to age 21 were reported to OT. Figure 5.16 shows that the percentage of young people who are reported to OT varies among the counties.

What are the reasons why young people are registered in OT?

The main reason why young people are reported to OT is that they have not applied for upper secondary education and training (see Figure 5.17). This is the case for half of the young people who are in OT. One out of four young people in OT has turned down a place in a programme of study, and 16 per cent are in the Follow-up service because they have dropped out of upper secondary education and training during the school year. The number of young people who are reported to the Follow-up service because they drop out will increase during the school year because young people who quit school or an apprenticeship shall be reported continuously to OT. At the close of

FIGURE 5.16 Young people up to age 21 who have the youth right and who are reported to OT, by county. Status as per 1 February 2012. Per cent.



Source: The Norwegian Directorate for Education and Training

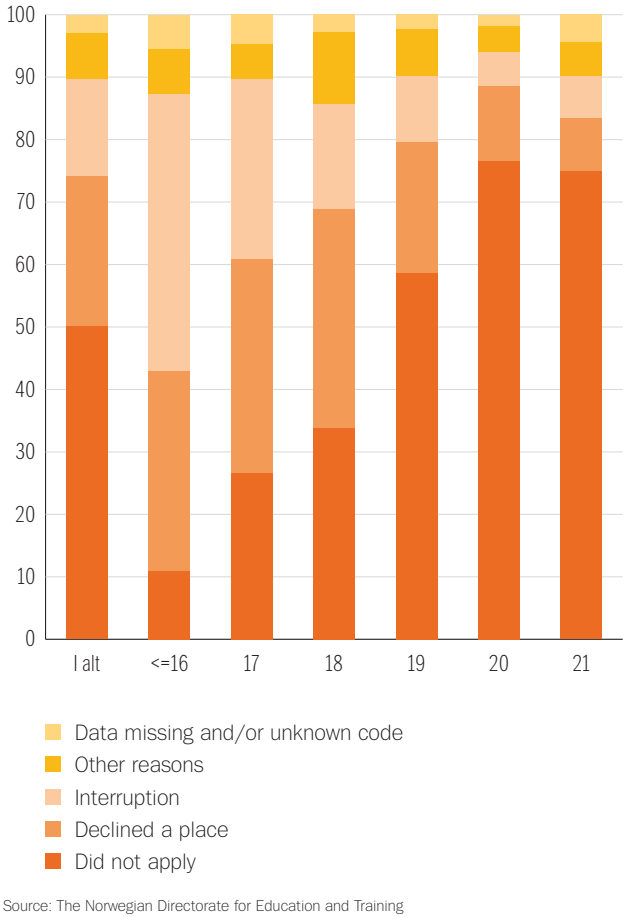
the previous school year, 2010-2011, the percentage of young people in OT who had dropped out during the school year was 21 per cent.

The reasons why young people are reported to OT clearly vary with age (see Figure 5.17). 44 per cent of the young people who are age 16 or younger are reported to OT because they have turned down a place in a programme of study. This percentage decreases with age. Eight per cent of the 21-year-olds in OT are registered because they turned down a place in a programme of study.

The percentage of young people who are reported to OT because they have not applied to a school or apprenticeship rises rapidly with age. Among the youngest, age 16 or younger, 11 per cent are in OT because they have not applied. Among 21-year-olds in OT, 75 per cent of those who are in OT have not applied to school or an apprenticeship.

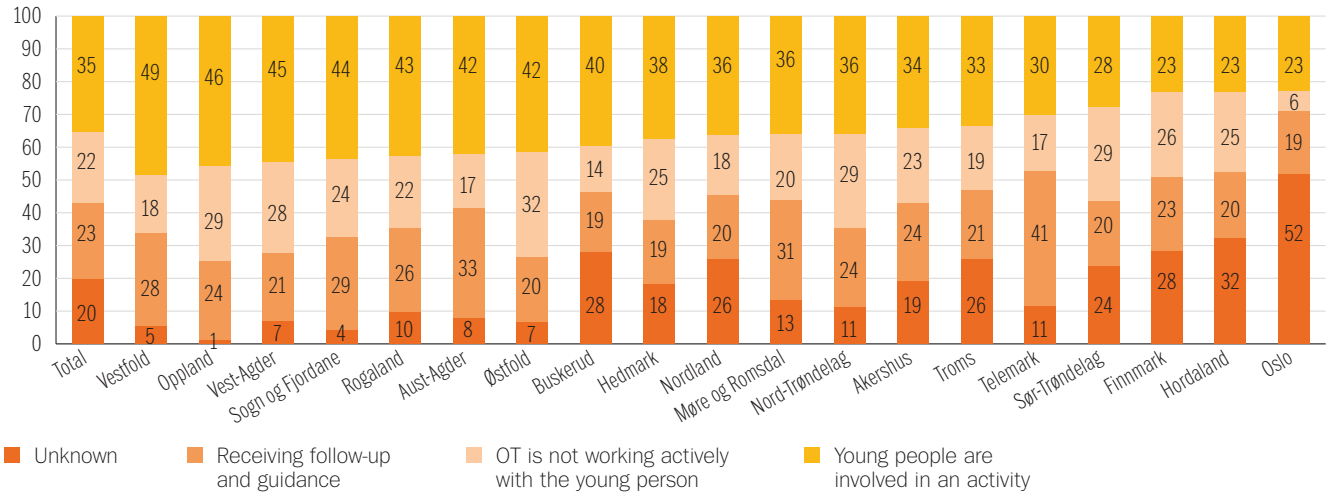
In other words, there are significant differences in reasons for reporting cases among young people in OT when broken down by age. The youngest young people apply to school or an apprenticeship, but turn down a place in a programme of study, while the older young people rarely apply to school or an apprenticeship. There is also a greater percentage among the youngest who are reported to OT because they have interrupted their education and training than there is among the older young people.

FIGURE 5.17 Reasons for reporting cases to OT, total and by age. 2011-2012. Status as per 1 February 2012. Per cent.



Source: The Norwegian Directorate for Education and Training

FIGURE 5.18 Young people in OT, broken down by status codes and county in the 2011-2012 school year. Status as per 1 February 2012. Per cent.



Source: The Norwegian Directorate for Education and Training

One out of five young people is unknown to OT

Of the 20,090 young people who were registered in OT, 3,925 were unknown; i.e. OT has not come in contact with 20 per cent of the young people in OT or cannot give an account in some other way of the situations for these young people (see Figure 5.18). There are major differences among the county authorities in both the number and percentage of unknown young people. The number of young people with whom OT is not in contact varies during the year. At the beginning of the school year, the number of unknown young people is higher than at the close of the school year because by then OT has had time to survey the young peoples' situations.

The number of unknown young people has never been lower than it was as per 1 February 2012. There are probably several explanations for this. The Follow-up service has worked hard in recent years at registering young people in the case officer systems and at specifying correct codes that best describe the young peoples' situations. Starting in the 2011-2012 school year, OT reports statistics three times a year to the Norwegian Directorate for Education and Training, compared with two times a year before. More frequent reporting gives greater attention to registration and follow-up of OT young people throughout the entire school year. In addition, the Follow-up project in the Ny GIV project has resulted in greater attention being paid to OT in general and in particular to the necessity of reducing the number of unknown young people in the service.

One out of three young people in OT has got involved in some form of activity

The objective of OT is to ensure that all young people in the target group receive an offer of education and training, employment or some other competence-building measure. 35 per cent of the young people who were registered in OT as per 1 February 2012 have got into some form of activity after they were reported to OT. In this context, activity is defined as young people

- in education and training (pupil, apprenticeship or planned basic competence)
- Employed
- who take part in measures, either a county measure or a measure under the auspices of the Norwegian Labour and Welfare Administration (NAV)

There are major regional differences in the percentage of young people who have got involved in activity after they were reported to OT. The percentage varies from 23 to 49 per cent (see Figure 5.18). Reports on the Follow-up service point out that the human resources in OT vary from county to county. In addition, the service itself has a limited array of policy instruments at its disposal, and so it must be based to a great extent on the resource situation in other agencies in order to be able to offer the young people an undertaking (Buland et al. 2010 and 2011). This may contribute to the development of gaps among the counties.

One out of five young people in OT is in a follow-up and guidance situation

22 per cent of the young people are in a follow-up and guidance situation with OT. These are young people who are given follow-up and guidance regarding their rights and opportunities without being in a specific measure. Many young people start their contact with OT by being in a follow-up and guidance situation before they eventually get involved in education and training, employment or some other type of activity. Some young people may be in a follow-up and guidance situation throughout the entire school year.

A number of young people are in a situation where upper secondary education and training and employment are not relevant

For various reasons, OT does not work actively with some young people after they have come in contact with them and clarified their situation. This group constituted 23 per cent of all of the young people in OT on a national basis as per 1 February 2012. These are young people who

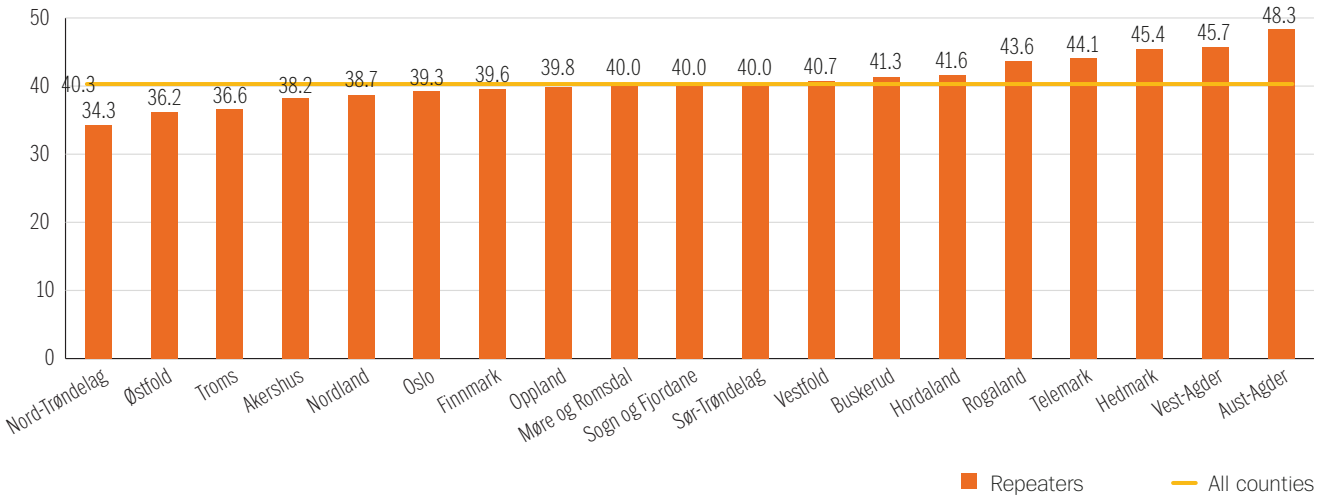
- are sick and/or are given follow-up in an institution, 24 per cent
- decline follow-up, 21 per cent
- are involved in informal education and training, 18 per cent
- have children, 18 per cent
- OT does not manage to find a suitable programme for, 10 per cent
- are in the military, 9 per cent

The group of young people with whom OT is not working actively is not a homogeneous group. Some of these young people return to education and training or employment on their own. Among other things, we see that young people who are involved in informal education and training, are in the military or decline follow-up from OT have been registered two years in a row in OT to a lesser extent than young people who are sick and/or are given follow-up in an institution and young people who have children. Young people who take informal education and training may have a planned year with a break from upper secondary education and training in order to attend a folk high school. 33 per cent of these young people are in also in OT in the following school year, but most of them are back in education and training or employment. However, over half of the young people for whom sickness and/or follow-up in an institution and care of children is the reason why the young people cannot take part in education and training, employment or some other measure are involved in OT two school years in a row.

40 per cent of the young people in OT are repeaters

We call young people who are registered in OT two school years in a row repeaters. Of the young people who were reported to OT at the close of the school year in 2010-2011, 40 per cent were also reported to OT in the 2011-2012 school year; i.e. of the 20,343 pupils in OT in the previous school year, 8,203 of them were also reported to OT in this school year as per 1 February2012.

FIGURE 5.19 Young people registered in OT in 2010–2011 who are also registered in OT the following year. Status as per 1 February 2012. Per cent.



Source: The Norwegian Directorate for Education and Training

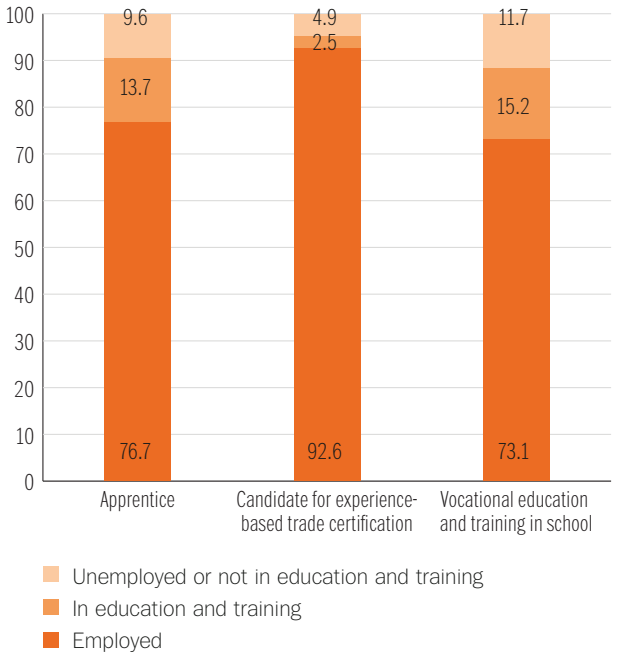
There are differences among the counties. Nord-Trøndelag, Østfold and Troms counties had the lowest percentage of repeaters with 34, 36 and 37 per cent respectively of the young people registered in OT two years in a row. Aust-Agder, Vest-Agder and Hedmark counties had the highest percentages with 48, 46 and 45 per cent repeaters. Of the young people who are reported to OT, it is those who are given follow-up in an institution or are sick who are most often repeaters in OT.

5.5 HOW IS THE LABOUR MARKET SITUATION FOR SKILLED WORKERS WHO HAVE RECENTLY EARNED THEIR TRADE OR JOURNEYMAN'S CERTIFICATE?

Report no. 31 (2007-2008) to the Storting "Kvalitet i skolen" (Quality in the Schools) and Report no. 44 (2008-2009) to the Storting "Utdanningslinja" (Education Strategy) ask for information about what is happening to apprentices after completed education and training. In the autumn of 2011, the Norwegian Directorate for Education and Training surveyed the labour market outcomes for skilled workers who earned a trade or journeyman's certificate in 2008-2009 and 2009-2010.

There is programmes offering a trade or journeyman's certificate in over 180 recognised trades. These vary in size from small trades, where trade and/or journeyman's examinations are not taken each year to major trades with over 2,000 new skilled workers annually. Trade or journeyman's examinations are taken by apprentices, candidates for experience-based trade certification and pupils in alternative Vg3. The apprentices have undergone an apprenticeship in a training establishment or in a business enterprise. For most of the recognised trades, this is a period of two years, where there is one year of education and training and one year of generating wealth. The pupils are the ones who have not been awarded an apprenticeship and who have therefore been given vocational education and training in school. These have not undergone the wealth generation part of the training. The candidates for experience-based trade certification are adults with sufficient vocational experience to take an examination without a previous apprenticeship. On the average, the candidates for experience-based trade certification are older and have more vocational experience than the two other groups. The number of persons who take the examination as a pupil is small, and in most of the results that are presented, apprentices and pupils are combined in one group.

FIGURE 5.20 The employment status as per November 2010 for skilled workers who earned a trade or journeyman's certificate in the 2009-2010 school year, broken down by type of graduate. Per cent.



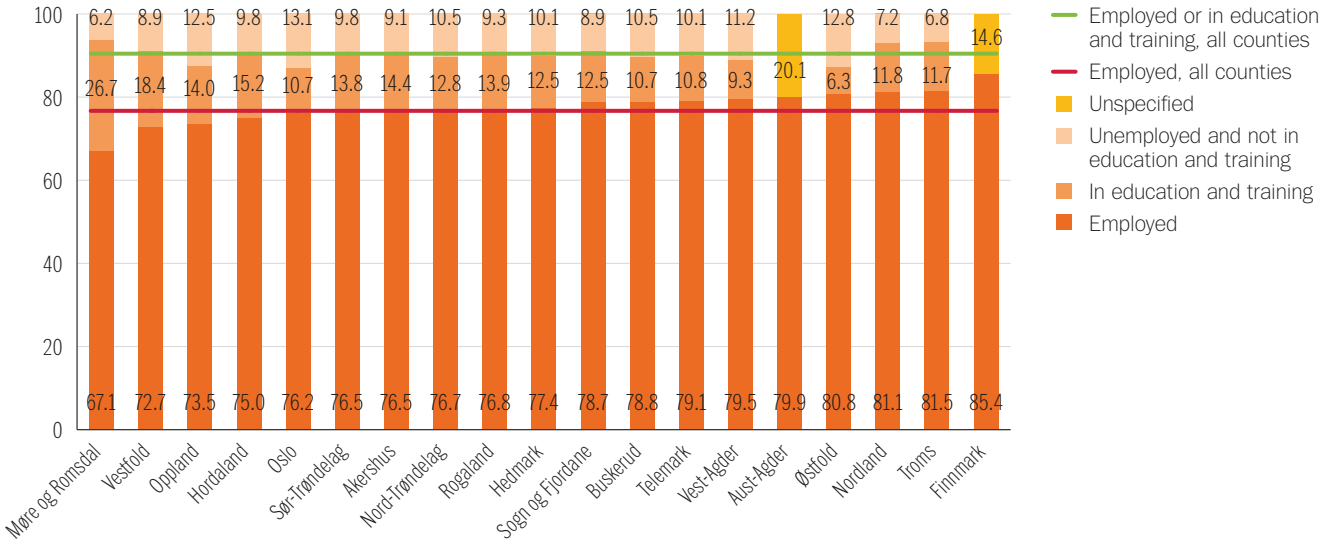
Source: Statistics Norway

Candidates for experience-based trade certification are employed after earning a trade or journeyman's certificate

A total of 21,003 persons earned a trade and/or journeyman's certificate in 2009-2010. These could be broken down into 14,044 apprentices, 6,676 candidates for experience-based trade certification and 283 pupils. Figure 5.20 shows a survey of the percentage in employment, in education and training and unemployed or not in education and training for all of those who earned a trade and/or journeyman's certificate in the 2009-2010 school year. All in all, 82 per cent were employed, 10 per cent were in education and training and 8 per cent were neither employed nor in education and training.

Each of these categories may include persons in activities which can be extremely different in some cases. For example, the category "neither employed nor in education and training" includes those who are registered as unemployed, those who are included in measures or are completing their national service, and persons who are not registered with any activity or benefit. The "employed" category does not distinguish between full-time and part-time

FIGURE 5.21 The employment status as per November 2010 for apprentices and/or pupils who earned a trade or journeyman's certificate in the 2009-2010 school year, broken down by county. Per cent.*



Source: Statistics Norway * The category "unspecified" means that at least one of the categories "in education and training" or "unemployed or not in education and training" includes too few individuals to allow the number, according to Statistics Norway's guidelines, to be published.

employment or whether the employment is relevant to the vocational education and training, and the "in education and training" category can mean higher education, vocational education and training or upper secondary education and training. Persons in both employment and education and training are placed in the "in education and training category" if they are registered in full-time education and training and in the "employed" category if they are registered in part-time education and training.

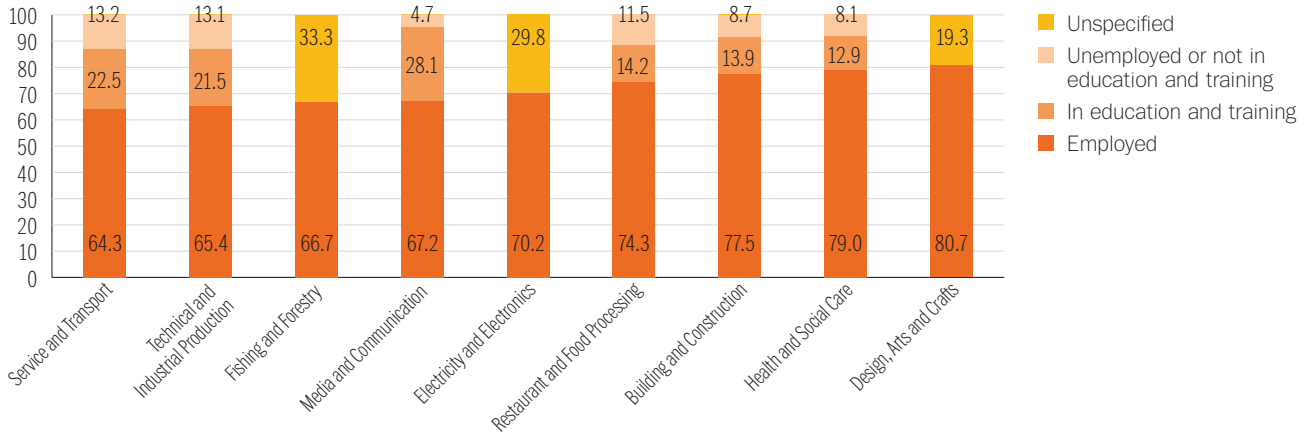
The percentage who are employed is greatest for the candidates for experience-based trade certification, where fully 93 per cent are employed. These are primarily adults who have a job before they earn a trade certificate. For apprentices and pupils, the percentages of those who have a job are 77 and 73 per cent respectively.

Small regional differences in the percentage who are neither employed nor in education and training

The percentage who are employed is consistently high for all candidates for experience-based trade certification. Thus, when we look at differences among counties and education programmes, we focus on those who have earned a trade or journeyman's certificate as an apprentice or as a pupil with vocational education and training in school.

Figure 5.21 shows the percentage of those who earned a trade certificate as an apprentice or pupil in 2009-2010 who are employed, are in education and training, or are neither employed nor in education and training. In Finnmark and Aust-Agder counties, the number who take education and training or who are neither employed nor in education and training is too small to publicise out of consideration for the protection of personal privacy, and the percentage who are not employed is therefore listed as "unspecified". The percentage of newly educated skilled workers in employment varies from 67 per cent in Møre og Romsdal to 85 per cent in Finnmark County. However, Møre og Romsdal County has the highest percentage in education and training. This is a pattern that repeats itself in most of the counties. The counties that have a lower percentage in employment have a higher percentage in education and training. Nevertheless, the percentage of those who are neither employed nor in education and training is almost twice as high in Oslo and in Østfold County (13 per cent) as in Møre og Romsdal (6 per cent).

FIGURE 5.22 The employment status as per November 2010 for apprentices and/or pupils in the Knowledge Promotion Reform who earned a trade or journeyman's certificate in the 2009-2010 school year, broken down by education programme. Per cent.*



Source: Statistics Norway * The category "unspecified" means that at least one of the categories "in education and training" or "unemployed or not in education and training" includes too few individuals to allow the number, according to Statistics Norway's guidelines, to be published.

Highest percentage of pupils in *Design, Arts and Crafts* get a job right after their education and training.

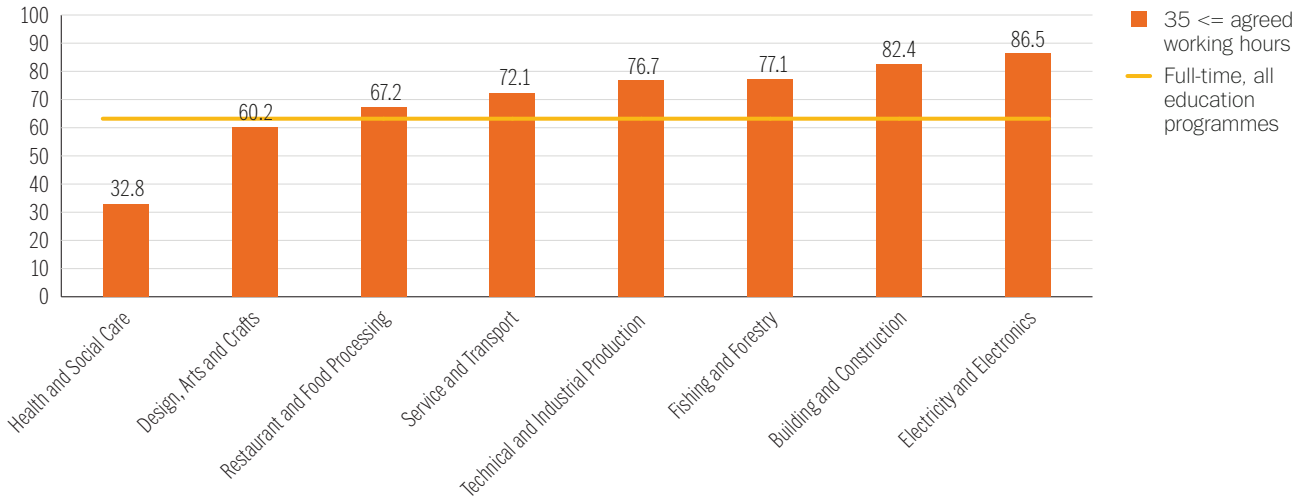
For passed trade and journeyman's examinations, the phasing out of the old scheme, Reform 94, has not yet been completed. That is why there were just about as many apprentices and/or pupils who passed trade or journeyman's examinations in 2009-2010 under Reform 94 as under the Knowledge Promotion Reform. Since there is not any accordance between the areas of study in R94 and in the education programmes in KL06 (the Knowledge Promotion Reform), they cannot be directly compared with each other. The rest of this chapter will mainly emphasise examinations that have been taken and passed in the new scheme.

Figure 5.22 shows labour market outcomes for those who passed a trade examination in 2009-2010 broken down by education programme in KL06. There are relatively big differences among the education programmes. The highest percentage in employment was in *Design, Arts and Crafts* with 81 per cent. The lowest was in *Service and Transport* and *Technical and Industrial Production* with 64 and 65 per cent employed respectively. On the other hand, these two education programmes have very high percentages in education and training, but nevertheless over 13 per cent of the skilled workers who have recently passed an examination are neither employed nor in education and training.

We see that the percentage who take further education is consistently higher in education programmes where the percentage employed is low, and the percentage who are neither employed nor in education and training varies less among these various education programmes than the percentage who are employed. Thus, the education programmes distinguish themselves from each other with regard to whether the trade certificate is the final goal of the education and training or whether the vocational education and training is a step on the way to another education. Another factor is that many pupils choose to go over to *a supplementary year qualifying for higher education* instead of completing their vocational education and training. However, these are not included in the group we are looking at, where everyone has completed his/her vocational education and training.

Health and Social Care is an education programme without the same apprenticeship traditions as Arts and Crafts, for example, and many of the pupils want to achieve qualification for higher education. Nevertheless, there is a smaller than average percentage who are in education and training right after they have been awarded a trade certificate. This is probably related to the fact that a high percentage of those who begin in *Health and Social Care*, have switched to a supplementary year *qualifying for higher education* instead of entering into an apprenticeship. It is expected that the percentage who take further education will be particularly high among these pupils. However, they

FIGURE 5.23 At least 35 agreed working hours as per November 2010 for those who earned a trade or journeyman's certificate in the 2009-2010 school year, broken down by education programme. Per cent.



Source: Statistics Norway

have not completed their trade certificate, so they are not included in the group we are analysing here.

It is different for the education programme *Service and Transport*. Other data (see *Skoleporten* [the School Portal]) show that this education programme has the highest percentage of Vg2 pupils with a transition to *a supplementary year*. At the same time, apprentices and/or pupils in *Service and Transport*, who actually complete their vocational education and training also have the highest percentage who are in education and training after earning a trade or journeyman's certificate.

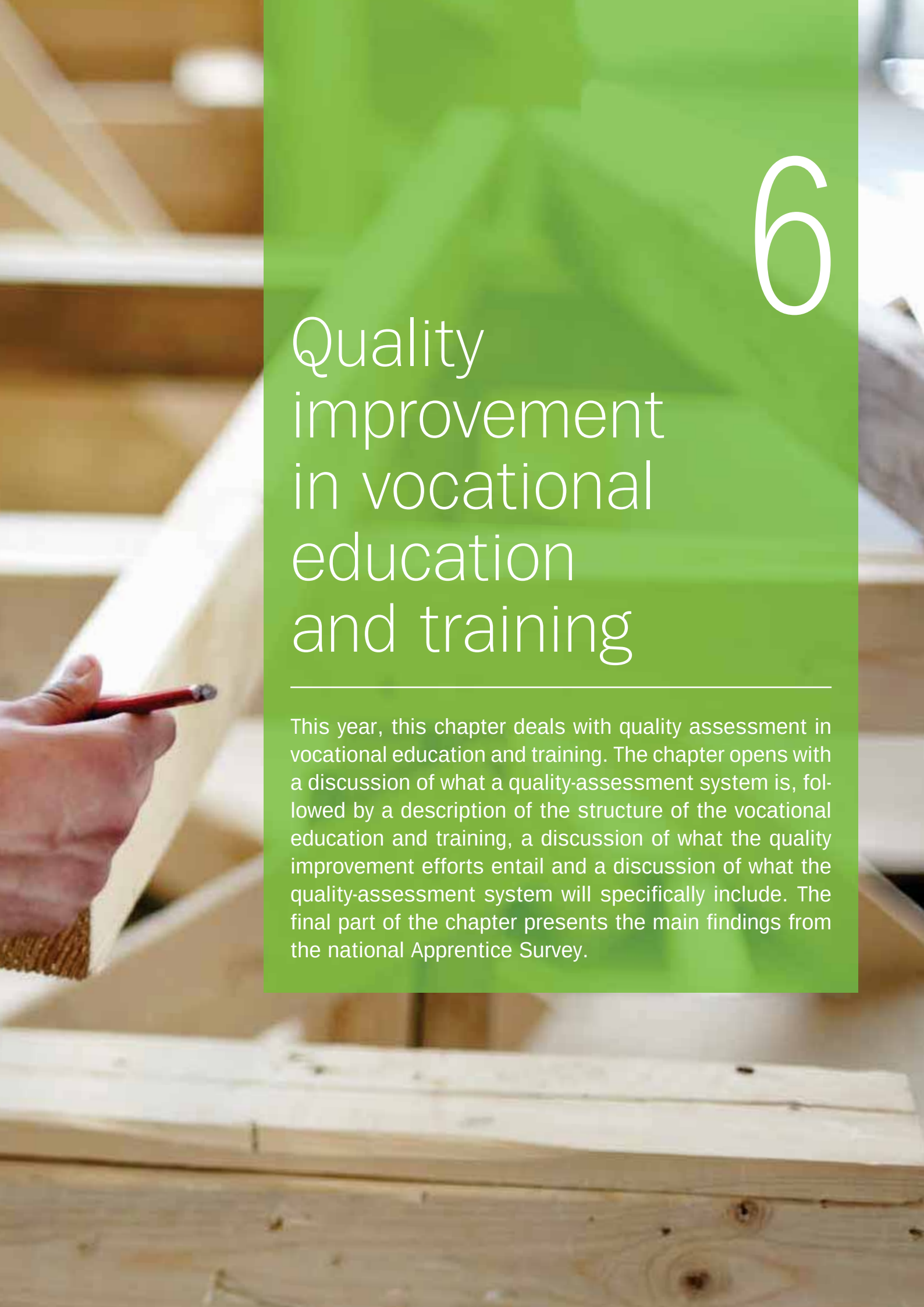
One out of three from *Health and Social Care* have a full-time position

Up to now, being employed has been defined as being registeredin a job as per 1 November. However, this says nothing about the scope of the work. We shall conclude this chapter by looking at the working hours of the skilled workers who are registered as being employed.

Working in a part-time position is not always contrary to the employees own wishes. *Involuntary* part-time employment, on the other hand, is regarded as a problem for both the individual employee and the society at large. According to Report no. 29 (2010-2011) to the Storting: "Joint responsibility for a good and decent working life", 19 per cent of all part-time employees in Norway in 2010 wanted longer working hours. There were 67,000 part-time employees who wanted and had tried to get longer working hours.

Figure 5.23 shows the percentage of those who earned a trade certificate in 2009-2010 and who are employed who are in a full-time position (defined here as at least 35 hours of agreed working hours a week). This overview includes only education programmes where at least 100 pupils received a trade or journeyman's certificate in 2009-2010.

There are extremely big differences in agreed working hours for the different education programmes. *Health and Social Care* distinguishes itself with a high percentage of part-time employees. Of those who earned a trade certificate in *Health and Social Care* in KL06 in the 2009–2010 school year, only 33 per cent have agreed working hours of at least 35 hours. There are also many who work part-time in *Design, Arts and Crafts* and *Restaurant and Food Processing*. The male-dominated education programmes such as *Electricity and Electronics* and *Building and Construction* have high percentages in full-time positions. Very few who have earned a trade certificate in *Electricity and Electronics* under the Knowledge Promotion Reform because this education path is often longer than other education programmes, but also within Reform 94 *Electricity and Electronics* is the education programme where the most people get a full-time position after earning a trade certificate.



6

Quality improvement in vocational education and training

This year, this chapter deals with quality assessment in vocational education and training. The chapter opens with a discussion of what a quality-assessment system is, followed by a description of the structure of the vocational education and training, a discussion of what the quality improvement efforts entail and a discussion of what the quality-assessment system will specifically include. The final part of the chapter presents the main findings from the national Apprentice Survey.

6.1 WHAT IS A QUALITY-ASSESSMENT SYSTEM?

In 2004, a national quality-assessment system (NKVS) was established for the school system, which included national tests and *Skoleporten* (the School Portal). *Skoleporten* is a tool that presents numbers, statistics and indicators, e.g. about resources, learning outcomes and the learning environment. In addition, teaching aids have been developed to help compare and assess the information from the various sources. In 2009, it was decided to further develop NKVS in order to also cover the vocational education and training in training establishments (The Ministry of Education and Research 2008).

The goal of the national quality-assessment system is to be able to assess the extent to which the education and training factors meet the objectives for education and training and to identify areas where the quality can be improved over a period of time.

Quality - an expression for accordance between goals and results

White Paper no. 44 (2008-2009) to the Storting *Educational choices* uses the concept of quality as an expression for accordance between goals and results. We can say that quality in primary and secondary education and training is characterised by the extent to which the various goals for primary and secondary education and training are actually achieved. If there is good accordance between goals and results, we can say that vi have good results quality. The goals are expressed through laws, regulations and curricula.

The Education Act defines vocational education and training as a part of the primary and secondary education and training with the general goals for learning outcomes of the pupils and apprentices in Section 1-1. Among other things, learning outcomes include values, knowledge, skills, attitudes and learning environment. In addition, the goals for primary and secondary education and training are discussed in the government's policy documents. There are important national objectives that primary and secondary education and training shall help reduce social disparities and meet the society's needs for knowledge and manpower (Proposition no. 1 (2011-2012) to the Storting.) There is also a focus on getting pupils and apprentices to complete upper secondary education and training. The objective for vocational education and training is to help achieve a good learning outcome and help all of the pupils and apprentices to complete upper secondary education and training with a competence that qualifies them for employment or further studies.

Thus the results quality is an expression of the extent to which this objective is met. Accordance between goals and results is also dependent on structure and process. We can say that structural, procedural and results quality are closely related to the concept of quality. In connection with the education and training, the structural quality describes the external conditions in the operations, e.g. buildings and the formal qualifications of teachers and instructors. The procedural quality deals with the internal activities in the operations, the actual work in education and training (NOU 2002: 10).

In addition to the fact that there are national objectives for results quality, national and county governance documents can also specify objectives for results at the structural and procedural levels.

Quality assessment

The Norwegian education system understands the concept of "quality assessment" to mean a comparison of information and data in order to assess the condition internally in a business enterprise, a school or to assess the condition in larger parts of or the whole education sector. The quality assessment shall analyse whether there is accordance between goals and results and whether the procedural

FIGURE 6.1 Model for national quality-assessment system in vocational education and training.

and structural factors affect the results. When the quality assessment is performed regularly and systematically throughout the whole process, we can describe it as a quality assessment system.

Figure 6.1 shows the correlations among structural, procedural and results quality. The level of the results quality indicates the degree of achievement of goals. Correct structural quality creates the conditions for correct procedural quality, which in turn creates the conditions for correct results quality.

The arrows below (in Figure 6.1) illustrate how we can build up a system in order to assess the quality of the education and training and how we can determine whether there is accordance between expectations and results. Quality in one part of the system will affect the quality in other parts of the system. If there is low results quality, the reason for this may just as well be found in the structural quality as in the procedural quality. The quality-assessment system shall provide data that can tell us the extent to which the objectives have been realised, the possible reasons for the failure to achieve goals and the measures that can be initiated in order to improve the condition so that it is possible to achieve the goal in the future.

6.2 WHAT IS VOCATIONAL EDUCATION AND TRAINING?

Upper secondary education and training leads to qualification for higher education, vocational qualifications or basic competence. In Figure 6.2, the main paths are sketched in. In the structure of programmes in the Knowledge Promotion Reform, upper secondary education and training consists of nine vocational education programmes that can result in vocational qualifications in 194 different vocational educations (The Norwegian Directorate for Education and Training 2011).

VOCATIONAL EDUCATION PROGRAMME

The nine vocational education programmes are Building and Construction, Design, Arts and Crafts, Electricity and Electronics, Health and Social Care, Media and Communication, Agriculture, Fishing and Forestry, Restaurant and Food Processing, Service and Transport, and Technical and Industrial Production.

Vocational qualifications

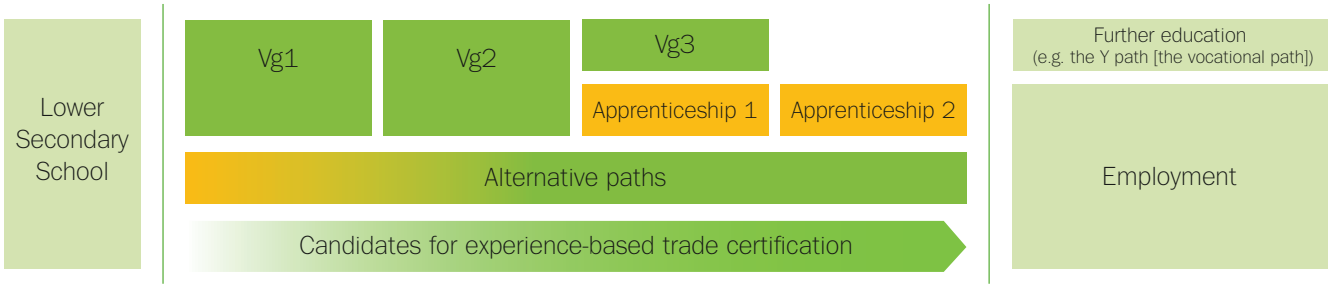
Vocational qualifications are achieved through either vocational education and training or three years of education and training in school. The main model for vocational education and training is two years of education and training in school (Vg1 and Vg2) followed by education and training in a training establishment (Vg3) divided over a two-year apprenticeship with a subsequent trade or journeyman's examination. This is often referred to as the 2+2 model.

Alternative models

Figure 6.2 shows that there are education paths that differ from the main model. Some trades have *a longer apprenticeship*, other recognised trades follow so-called *special paths*, i.e. one year of education and training in school and three years of education and training in a learning establishment (also referred to as the 1+3 model). In addition, there is an education path that gives *vocational qualifications without education and training* in training establishments. In that case, the education and training takes place over a three year period in school.

It is also possible to achieve vocational qualifications by earning a trade or journeyman's certificate as a *candidate for experience-based trade certification*. This is a documentation scheme that makes it possible to sit a

FIGURE 6.2 Paths in vocational education and training.



trade or journeyman's examination on the basis of sufficiently broad working experience in a trade of a duration that is 25 per cent longer than the stipulated apprenticeship period. The individual county authority decides whether the practical experience claimed by the candidate can be approved.

The trainee scheme is an individually adapted education path where the trainees conclude their vocational education and training with a certificate of competence but which does not result in a trade or journeyman's examination.

The certificate of practice scheme is a pilot scheme that was initiated in 2008. The education and training takes place over a two year period, where the pupils are employed in a training establishment at the same time as they are given instruction in the common core subjects, Norwegian, Mathematics and Social Studies one day a week. After this, the pupils are given a final assessment in the form of a so-called *certificate of practice*. So far, the pilot scheme shows that the majority of the pupils have gone on to apply to sit for a trade or journeyman's certificate.

University colleges admit students who have a trade or journeyman's certificate. This mainly applies to Electricity and Electronics and Chemistry and to admission to a specially adapted engineering degree. This scheme is called the Y-path (the vocational path).

Some county authorities offer a Vg3 supplementary year qualifying for higher education to those who have passed the trade or journeyman's examination. On 1 October 2010, 2,575 pupils were registered in a Vg3 supplementary year qualifying for higher education for persons who had a trade or journeyman's certificate.

An alternative path to general qualification for higher education is a Vg3 supplementary year qualifying for higher education after having passed Vg1 and Vg2 in a vocational education programme. As per 1 October 2010, 21.3 per cent of the pupils that took vocational Vg2 in the 2009-2010 school year are registered as pupils in a Vg3 supplementary year qualifying for higher education.

COMPLETION WITH CERTIFICATE OF COMPETENCE THAT QUALIFIES FOR EMPLOYMENT

About half of the age cohort of young people begins in vocational areas of study. Only about a fourth of these pupils have achieved full vocational qualifications after five years. One fourth have not passed necessary tests and/or examinations, one fourth have gone over to general studies education and training and a final fourth have quit. This picture can be made more specific and more nuanced, but the fact regardless is that the situation is a far cry from an achievement of the objectives that formed the basis for the education reforms of the last 20 years. (Autumn 2012)

I think we have good vocational education and training when the education and training situation consists of secure frameworks, good dialogue and mutual respect. In addition, it is necessary to have skilful instructors who can give good education and training in the competence goals in the curriculum.

We also need motivated apprentices who show interest in the trade and who comply with the training establishment's working hours and company regulations.

Marit Finseth Løberg
general manager of Matbransjens opplæringskontor (the food industry's apprenticeship training office)

6.3 HOW IS QUALITY ASSESSMENT INCLUDED IN THE QUALITY ASSURANCE WORK?

Quality in vocational education and training is created by organisations and players at various levels.

- National level (e.g. laws, regulations, grants, education of teachers)
- School owner level (e.g. organisation, administration, design)
- School and training establishment level (e.g. learning environment)
- Pupil/apprentice level (e.g. the qualifications that he/she brings with him/her from primary and lower secondary school)

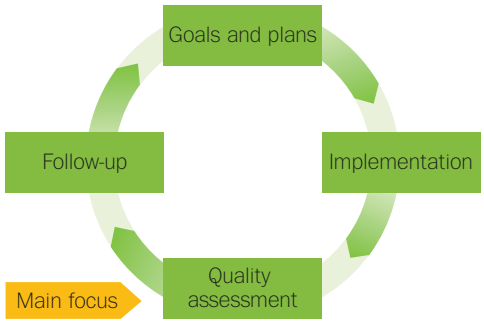
All of these levels take part in the quality assessment and contribute with measures that are well-suited to improve the quality in the education and training. It is appropriate that the person who is going to implement the quality improvement measures is also the one who determines the aims behind the measure. Therefore, it is a goal that the quality assessment shall be conducted to the greatest possible extent by the same players who shall put the improvement measures in practice.

Quality work is usually described as a circular process or a quality wheel (NOU 2008: 18 *Fagopplæring for framtida* (Vocational education for the future). Quality assessment is included as part of this process. The quality process consists of four phases:

- Planning of goals
- Implementation of measures in order to achieve the goal
- Assessment of whether or not the goal has been achieved and why
- Feedback to all affected parties and possible adjustments

Figure 6.3 shows how the quality assurance work is a continuous learning process with separate phases. All of the levels of players and the phases must be included in order for the quality assurance work to function appropriately.

FIGURE 6.3 The quality circle for quality-improvement efforts in vocational education and training.



Source: Deming 1982

GOALS FOR VOCATIONAL EDUCATION AND TRAINING IN OTHER EUROPEAN COUNTRIES

Already at the close of the 1990s, EU institutions such as Cedefop and European Training Foundation (ETF) began to approach quality and vocational education and training on the basis of the new wave of quality improvement. The basis is the goal of creating a European vocational education and training that shall both ensure the EU's competitive strength and also establish vocational education and training in Europe as a quality standard for the rest of the world (Autumn 2012).

Quality improvement work has been initiated for vocational education and training in the EU countries, e.g. by developing quality indicators through the EU initiative European Quality Assurance in Vocational Training and Education (EQAVET). Many of the EU countries have similar objectives for quality as those in Norway. The Netherlands, Germany and Austria, for example, focus on getting the pupils and apprentices qualified for employment. In Germany, there has also been an extra focus on seeing that the education and training enables the pupils and apprentices to adapt to new needs in the market and society. The Netherlands also has a goal that is similar to Norway's, where the vocational education and training shall also give an education that enables the pupils and apprentices to take part in the society.

In all of the above-mentioned European countries, emphasis has been given to the final assessment as the primary indicator of results quality. The extent to which the pupils and apprentices get relevant employment is also used as an indicator of whether the specified goals are achieved.

THE APPRENTICESHIP TRAINING OFFICES

In all of the counties, the apprenticeship training offices play an important role when it comes to education and training in training establishments. The apprenticeship training offices are a scheme where member firms cooperate on education and training of apprentices, where the apprenticeship training offices take care of administrative and formal matters, e.g. apprenticeship contracts, and follow up the apprentices professionally. The percentage of apprentices who sign an apprenticeship contract through an apprenticeship training office varies among the county authorities from 60 to 95 per cent of all of the apprentices.

The apprenticeship training offices help the training establishments hold the assessment interviews and follow up the work on the curriculum in the training establishment. In addition, they help organise the trade and journeyman's examinations for the apprentices. The apprenticeship training offices can also be important supporting players in the channelling of apprentices to training establishments. Many of the counties use the gatherings of apprentices in the apprenticeship training offices as an arena for answering the national Apprentice Survey.

Quality assessment in quality improvement and quality assurance

In Norway, quality assessment shall be a part of a learning process for national authorities, school owners, schools, apprenticeship training offices, training establishments, pupils and apprentices. It is important to have a close dialogue between the various players in order to achieve a good quality improvement. All players shall be involved and have real influence over changes and outcomes in the quality improvement. However, the quality assessment shall also provide information to the dialogue on governance among national authorities, the school owner and the school administrator.

In other European countries, more importance may be attached to quality assurance. According to the European Centre for the Development of Vocational Training (CEDEFOP 2009), quality asurance has a goal of avoiding developments that diminish the quality. The point of departure is that central-government authorities have delegated the responsibility for the education and training to local players, and the quality assessment is utilised as a control to ensure that the local education and training players meet their responsibility. The Netherlands is an example of a country where the quality assurance perspective is firmly rooted. Here they have a national inspectorate that regularly evaluates the tertiary vocational colleges in order to see whether they meet the minimum requirements for quality.

For me, good vocational education and training means varied and challenging job tasks. The person who supervises the apprentice must be willing to teach things and give the apprentice an opportunity to try out a lot of things on his own and to ask why and how you should do the job task in a particular way. The apprentice him-/herself should follow drawings instead of merely following instructions. What's more, it's good to get involved in various parts of the process, such as quality assurance.

Thomas Dybdal
carpentry apprentice at Syljuåsen, Oppland County

6.4 WHAT IS THE CONTENT OF THE NATIONAL QUALITY-ASSESSMENT SYSTEM FOR VOCATIONAL EDUCATION AND TRAINING?

The development of a national quality-assessment system for vocational education and training (NKVS FY) involves work in three main areas: knowledge, assessment tools and communication and support.

Knowledge

In order to be able to adjust or improve the quality in the education and training, it is important to have updated knowledge about the things that are happening both in school and in the training establishment. Through the work on the development of a national quality-assessment system, extensive research activity has been initiated. This research may give us input about players and factors that affect the quality of the education and training. In addition, the Norwegian Directorate for Education and Training is in a dialogue with the county authorities and has received input about their needs and challenges in connection with the quality assessment. This information is important both for developing the user surveys and for NKVS FY in general. Looking further ahead, research and a dialogue with the users will be important mainstays for the quality-assessment system.

The Norwegian Institute for Studies in Research and Higher Education (NIFU) in collaboration with the Institute of Applied Social Science (FAFO), the University of Bergen and Oslo University College have prepared the report *Kunnskapsgrunnlag og faglige perspektiver for en studie av kvalitet i fag- og yrkesopplæringen* (Platform of knowledge and academic perspectives for a study of quality in vocational education and training) (Autumn 2012) on commission from the Norwegian Directorate for Education and Training. The report has been structured according to four main themes:

1. Learning environment, completion and dropping out

A key aspect of this topic is questions about the relationship that the pupils and apprentices have to others, e.g. to teachers, instructors, other pupils and apprentices. In addition, the experiences that pupils and apprentices have of the academic knowledge field that they are included as a part of, whether they experience the learning goals as relevant and whether they experience the practical organisation as meaningful.

2. Content and assessment

Work on content and assessment deals with procedural quality. The frameworks around this education and training are different in schools and learning establishments and require various approaches to studies of quality. The final assessment can give valuable information about the level of the final competence after completion of education and training.

3. Quality assurance work, quality control and quality assessment

According to NIFU, quality assurance work, quality control and quality assessment can be understood as complementary concepts. Local quality assurance work, control of quality and a comprehensive quality-assessment system for vocational education and training are mutually conditional on each other.

NIFU indicates many challenges in the design of a national quality-assessment system, and especially the composition of the instruments of which the system shall be composed. NIFU points out that implementation of a comprehensive quality-assessment system faces a challenge in that it is necessary to establish and organise continuous problem-solving activities around the measures in order for the system to not end up as a symbolic policy. The indicators in a system of this kind must have legitimacy in the sector that is going to use the system. The report also calls attention to the challenge of emphasising similarities as opposed to differences between school and employment and of the ways in which the coordination of local quality assurance work in schools and training establishments shall be emphasised.

4. Vocational education and training as a gateway to employment

Vocational education and training as a gateway to employment deals with the extent to which the vocational education and training provide an opportunity for a stable and lasting connection to employment and the extent to which newly educated persons find relevant work. The report refers to recent research, which shows that a trade certificate serves as a gateway to employment to a varying extent and that this is dependent on the structure of the labour market. For example, a trade certificate is the most common gateway in vocations in Building and Construction, whereas the service sector trades only make use of competence acquired through vocational education and training to a slight extent.

Assessment tools

The assessment tools consist of various statistics, indicators and quality measures that can be used in order to follow the development of quality. User surveys are tools for gathering viewpoints and experiences (the Pupil Survey, the national Apprentice Survey and the Instructor Survey). In addition, data from other sources is used (e.g. Statistics Norway, the website VIGO and data from the Norwegian Directorate for Education and Training). Statistics, indicators, quality measures and new knowledge are available for quality improvement work through *Skoleporten* (the School Portal). Aids in *Skoleporten* (e.g. status reports) shall also be arranged and adapted relative to the vocational education and training.

Communication and support

In addition, new knowledge shall be communicated through relevant websites (e.g. Udir.no), publications (e.g. The Education Mirror) and meetings and conferences. Guides and courses on the use of the assessment tools shall also be developed.

Progress

The development work that is related to the quality-assessment system for vocational education and training (NKVS FY) is a continuous process that will not be given any closing date. However, the project has a time frame, which indicates that a first draft of a comprehensive quality-assessment system shall be completed early in 2013. The following years shall be used to further develop and implement the system. When the project is completed as a project, the work on quality assessment and quality improvement in vocational education and training shall continue as a continuous process both nationally and locally.

One of the most important tools in NKVS FY is the national Apprentice Survey. The purpose of this user survey is to obtain systematic information about the development of the learning and working environments in the training establishments. These are matters that we can classify under procedural quality in the education and training.

For me, good vocational education and training means a sound theoretical foundation in the practical work. Apprentices in our municipality are given practical education and training by skilled instructors as well as theoretical follow-up from a vocational administrator.

We emphasise quality in the education and training and so it is necessary that the apprentices see a correlation between theory and practice and can explain the reasons for the measures that they perform. Cooperation between school and training establishment is important in order to ensure that the whole education path is at a high academic level.

Kim van Groningen
vocational administrator for health worker apprentices in Lillehammer municipality

6.5 WHAT CAN THE NATIONAL APPRENTICE SURVEY GIVE US INFORMATION ABOUT?

In 2010-2011, there were ten counties that conducted the national Apprentice Survey. In these counties, second-year apprentices were invited to answer 76 questions in the survey. In most of the counties, the response rate was under 50 per cent. This is low and means that the results must be interpreted with caution. In the following section, we will present the main findings from the national Apprentice Survey. The descriptive statistics show the five academic areas with the most respondents. Here we present the results of two traditional subjects (Carpentry and Electrical Installation and Maintenance) together with three recognised trades with a shorter history (Child Care and Youth Work, Hairdressing and Health Work).

Most apprentices are satisfied in their workplace

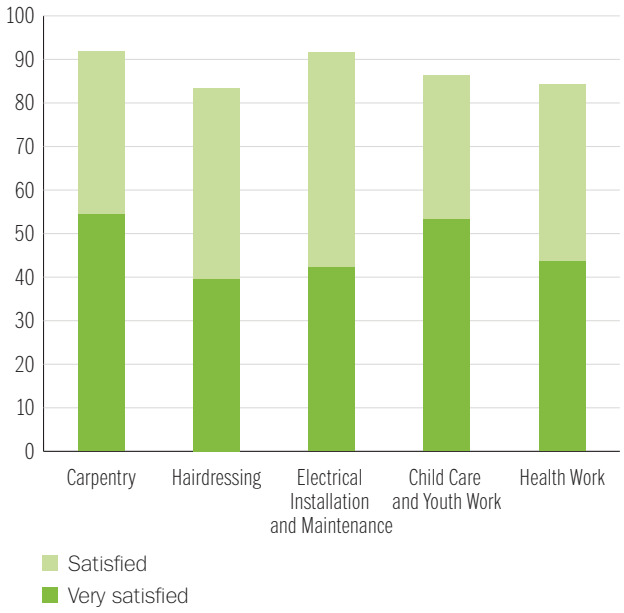
It appears as if most apprentices are satisfied in their workplace. Nine out of ten respond that they are very content or content in their workplace, see Figure 6.4. In addition, eight out of ten respond that they are satisfied with the education and training in their workplace. There are no marked differences among trades and among counties in the responses to these questions.

There is variation in the culture for providing guidance and feedback among the training establishments

The answers to specific questions about the regularity of professional guidance and feedback varied considerably. Under 50 per cent responded that they are given regular guidance and feedback from the instructor to a great extent or a very great extent in their professional development. The breakdown of responses is somewhat variable when the apprentices are asked whether they receive this kind of guidance and feedback from a colleague. This is illustrated in Figure 6.5.

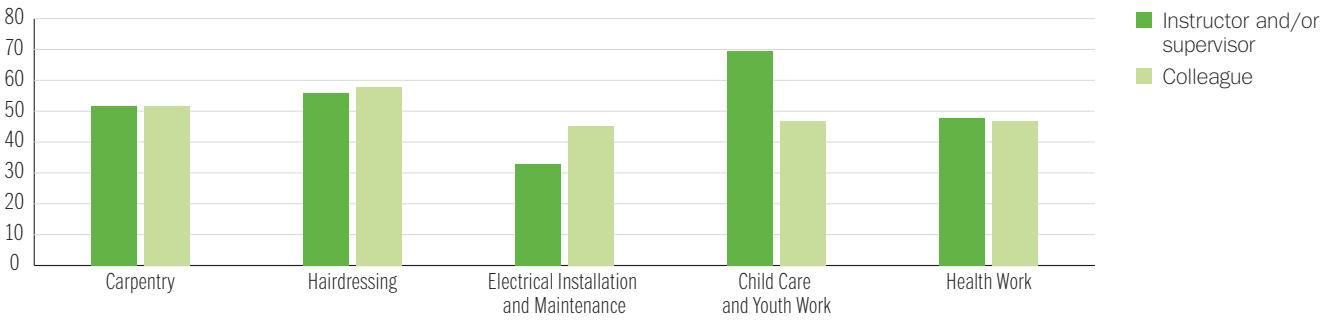
We see that a little over 30 per cent of the electricity and electronics apprentices respond that they are given regular guidance from an instructor and/or supervisor. On the other hand, the electricity and electronics apprentices get more guidance from colleagues. Among apprentices in Child Care and Youth Work, the opposite is the case. Here about 70 per cent receive regular guidance from an

FIGURE 6.4 Are you satisfied at your workplace?



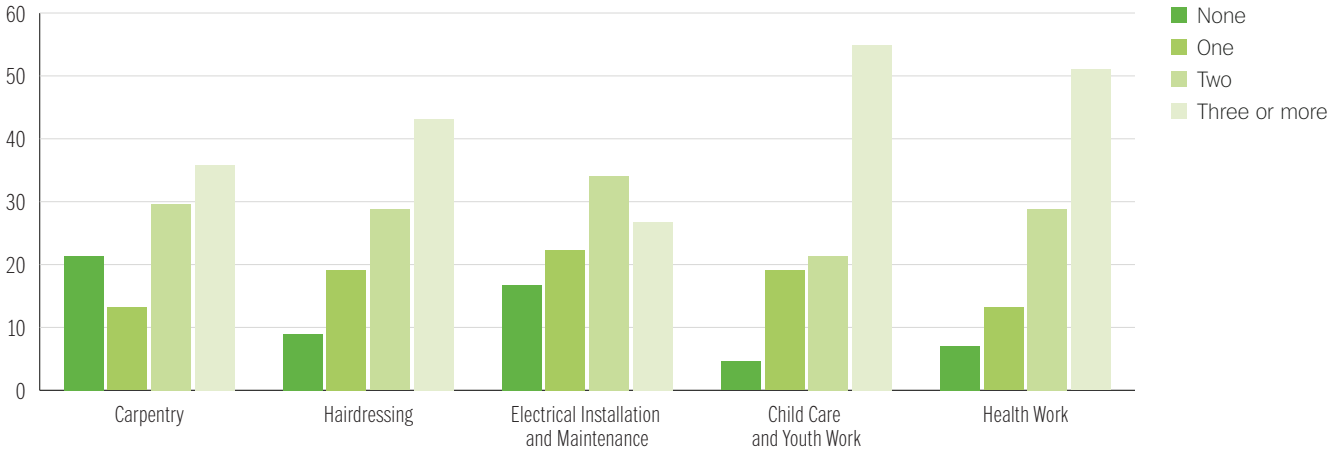
Source: Directorate for Education and Training 2010b

FIGURE 6.5 To what extent do you get regular guidance and feedback in your professional development?



Source: Directorate for Education and Training 2010b

FIGURE 6.6 How many organised assessment interviews have you had with an instructor?



Source: Directorate for Education and Training 2010b

instructor and/or supervisor, compared with 48 per cent who are given regular guidance from colleagues. When it comes to assessment interviews, we find a significant difference in the responses between new and traditional recognised trades.

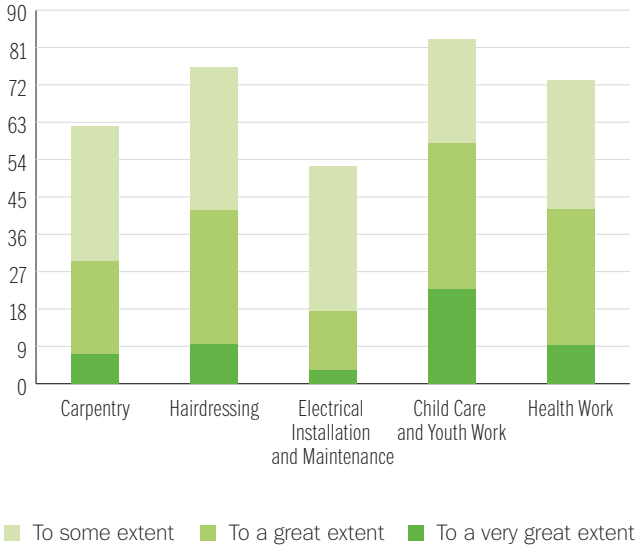
Figure 6.6 shows that far more apprentices in Child Care and Youth Work and Health Work have been given the assessment interviews to which they are entitled. In Carpentry, fully 21 per cent of the apprentices state that they have never had an assessment interview. This may indicate that the feedback culture in traditional recognised trades is somewhat weaker.

Considerable variation in the use of the curriculum in the education and training

Familiarity with and use of the curriculum can give an indication of how systematic the education and training is. About half of the respondents say that they are familiar with the curriculum to a great or very great extent. When it comes to the instructor and/or supervisor's use of the curriculum in the planning and assessment of the education and training, there are marked differences between the traditional and the new recognised trades, see Figure 6.7. It looks as if the curriculum is used to a lesser extent in the education and training in traditional recognised trades such as Carpentry and Electrical Installation and Maintenance.

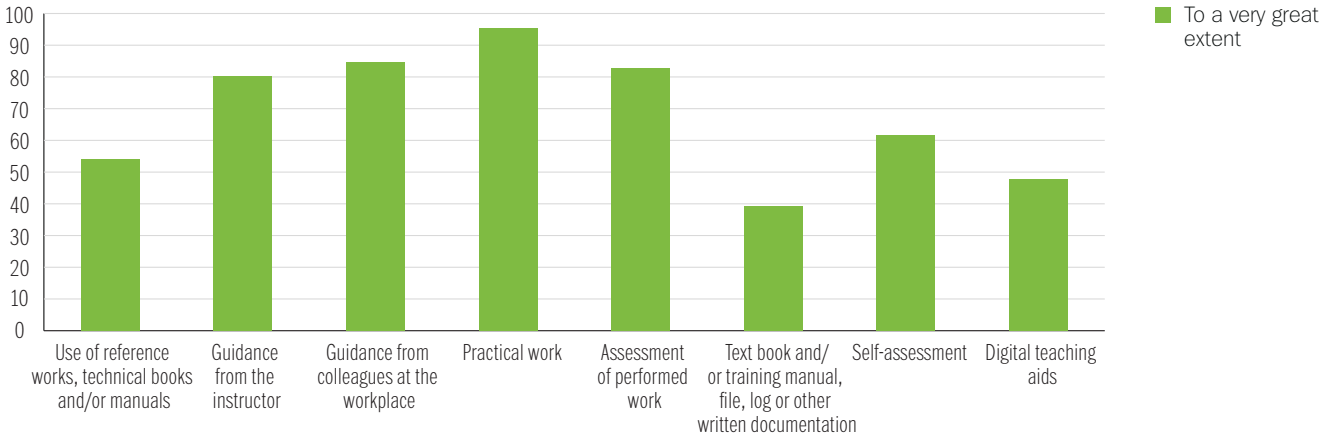
When it comes to the question of whether the apprentices have codetermination, there are clear differences among the subjects. In Child Care and Youth Work and Health Work, almost 80 per cent of the apprentices state that they participate actively to a great or very great extent in the planning of their work and/or education and training. In Electrical Installation and Maintenance and Carpentry, only a little over 40 per cent give the same response. Once again we see a significant difference between new and traditional recognised trades.

FIGURE 6.7 To what extent do you and the instructor and/or supervisor use the curriculum when you are going to plan and assess the education and training?



Source: Directorate for Education and Training 2010b

FIGURE 6.8 To what extent do you find that the factors below are important for your learning?



Source: Directorate for Education and Training 2010b

Practical work and guidance are the most important factors influencing the apprentices' learning

Nearly all of the apprentices (95 per cent) think that practical work is important for their own learning. This is illustrated in Figure 6.8 Over 80 per cent think that assessment of work that is performed or guidance from colleagues and an instructor are important. It is interesting, however, that more apprentices think it is more important to have guidance from colleagues than from the instructor. This is reflected in the data in response to the question about whom the apprentices get regular feedback from.

Good vocational education and training starts with good cooperation between upper secondary schools and the business community in order to survey what training establishments expect that pupils shall learn at school.

We all have a responsibility, both the school and the training establishment must take care of the young person who wants to get an education. Together we have to create a secure and predictable education path, where everyone feels that they are taken care of. Security enables us all to accomplish more and become more motivated to learn. This means that we get better skilled workers when they complete their training.

Jan Grøterud
construction site manager and vocational administrator at the contracting firm Syljuåsen Oppland AS

In order to have good vocational education and training, it is important that the learning establishment has academically competent teachers. You have to be serious and invest time in the apprentice. Some only use the apprentices as free manpower. That is not good vocational education and training. As an apprentice, I was personally lucky to encounter a committed chef instructor who gave me the inspiration to continue. That was good vocational education and training!

It is so wonderful to carry out vocational education and training. At Rica Hell Hotel, we are very proud of having been chosen as "Training establishment of the year".

Arild Vollan
food and beverage manager at Rica Hell Hotel, chosen as "Training establishment of the year in 2012" in Nord-Trøndelag County.

There are significant differences between new and old recognised trades in the organisation of the education and training

Based on the results of the national Apprentice Survey, it would appear that the recognised trades with long traditions use the curriculum least in the planning and assessment of the education and training. Why is that so?

According to Nyen et al. (2011), a failure to make use of the curriculum in old subjects may be because these subjects had established competence standards prior to the new curricula. Can it be the case that the traditional competence standards are still used in the education and training and the assessment instead of the new curricula? In that case, it may mean that the failure to make use of the curriculum does not necessarily mean that the education and training and assessment are unsystematic and lack structure.

Nyen et al. (2011) critically examine this conclusion themselves. One of the analyses they perform shows that there is a clear positive correlation between the use of the curriculum and the degree of satisfaction with the education and training in all of the major trades. The percentage who are very satisfied or satisfied is 50 per cent when the curriculum is not used at all, 67 per cent when it is used a little, and then rises to 81 per cent when it is used to some extent and 92 and 96 per cent respectively when it is used to a great or very great extent.. This indicates that the curricula help structure the education and training in the old recognised trades as well. This correlation can be interpreted to mean that apprentices in training establishments who make use of the curriculum are the most satisfied with the education and training, e.g. because they are also given more systematic and structured education and training when the training establishment uses the curriculum.

At present, there is too little research-based knowledge to draw conclusions like those indicated here. In order to improve our insight and obtain more certain knowledge, there must be extensive research in the field. The use of curricula and systematic education and training are included in the research that has now been initiated in connection with the establishment of a national quality-assessment system in vocational education and training.

The information from the national Apprentice Survey can be used in the efforts to promote further quality improvement

Since the national Apprentice Survey was launched in 2007, all but one county have conducted it one or more times. Oslo, Nord-Trøndelag and Oppland counties have conducted the survey annually.

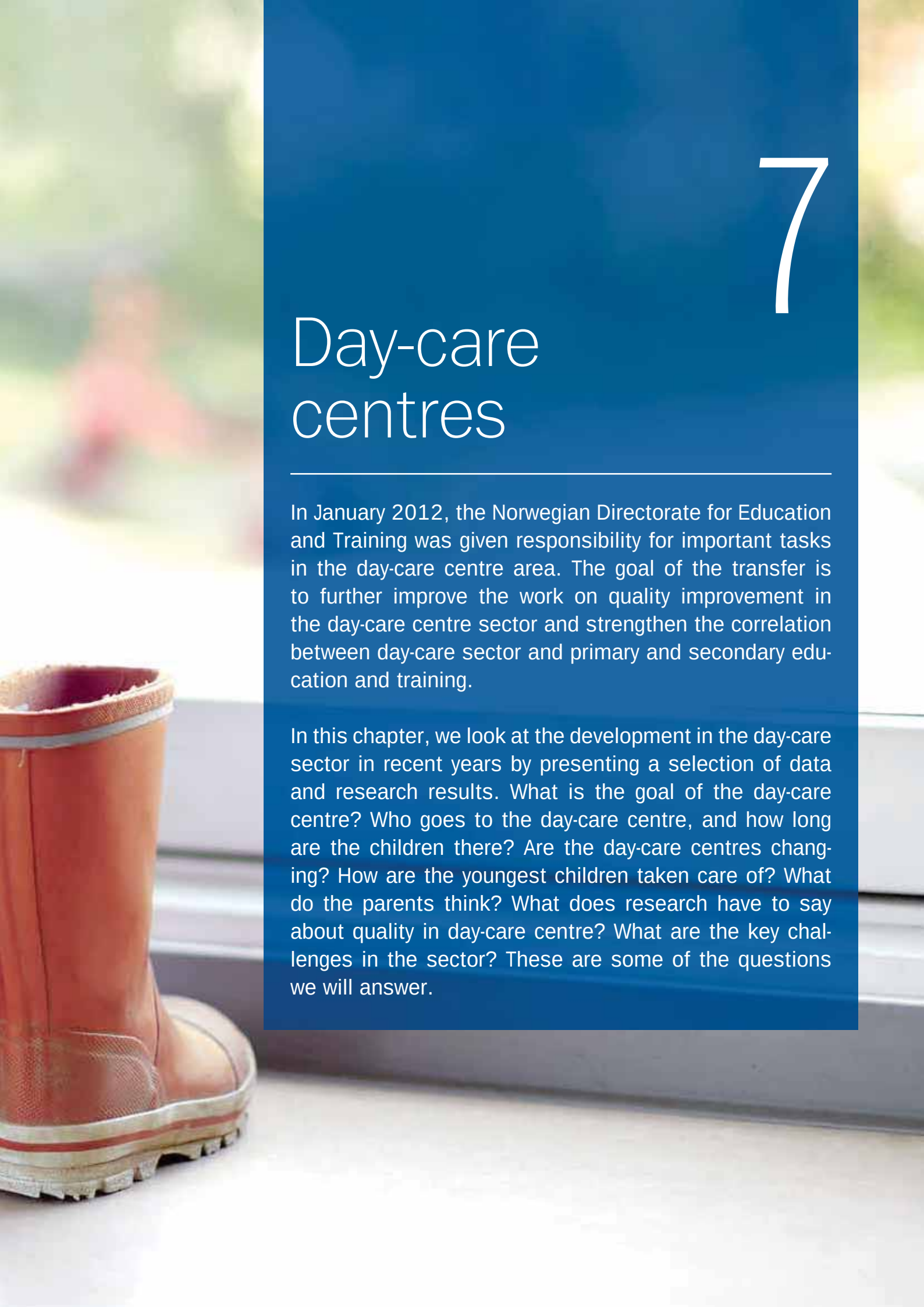
The analysis calls attention to the Vest-Agder county authority as a good example of how the results of the survey can be used in quality improvement. According to Nyen et al. (2011), it looks as if this county authority is also the one that has managed to use the survey to the greatest extent to initiate processes at the apprenticeship training office level. The Vest-Agder county authority has annual follow-up meetings with the apprenticeship training offices where the results from the national Apprentice Survey are one of the topics that are discussed. In this meeting, the apprenticeship training offices themselves assess what the problem areas are and how they want to deal with the problems. The apprenticeship training offices receive results for their subject areas, and they are also given the opportunity to gather data on their apprentices (as long as the apprentices cannot be recognised in the data).

This example clearly shows how the information from the national Apprentice Survey can be used systematically when key education and training players are involved, and they cooperate on developing the quality in the vocational education and training.

For me, good vocational education and training means that I come into a positive milieu that also understands me as a person. In my case, the road has been somewhat winding, but I have been given good follow-up from the training establishment. On the first day, I was given a mentor who took care of all vocational follow-up for me.

I have been given challenges the whole way. That has brought me to the level where I am now. At present, I am proud of my trade certificate in welding and my other certificates in Welding. The fact that I became "Apprentice of the year" probably says as much as needs to be said about my vocational education and training in the learning establishment Fosdalen Industrier AS.

Marius Christoffer Hjelde*apprentice at Fosdalen Industrier AS. He was "Apprentice of the year in 2011" in Nord-Trøndelag*



7

Day-care centres

In January 2012, the Norwegian Directorate for Education and Training was given responsibility for important tasks in the day-care centre area. The goal of the transfer is to further improve the work on quality improvement in the day-care centre sector and strengthen the correlation between day-care sector and primary and secondary education and training.

In this chapter, we look at the development in the day-care sector in recent years by presenting a selection of data and research results. What is the goal of the day-care centre? Who goes to the day-care centre, and how long are the children there? Are the day-care centres changing? How are the youngest children taken care of? What do the parents think? What does research have to say about quality in day-care centre? What are the key challenges in the sector? These are some of the questions we will answer.

7.1 WHAT IS THE GOAL OF THE DAY-CARE CENTRE?

According to *the Framework Plan for the Content and Tasks of Kindergartens,* the day-care centre shall offer children below compulsory school age a care and learning environment that is for the children's best (The Ministry of Education and Research 2006a). The day-care centre shall be both an educational activity and a welfare programme for the parents of small children. The content in the day-care centre shall be based on a comprehensive view of learning, where care, play, learning and education play key roles. It is important to note that the framework plan has both a here-and-now perspective and a future perspective. The children shall benefit from their stay in the day-care centre both while they attend the day-care centre and later in their lives. Research shows that day-care centre attendance helps many children to complete upper secondary education and training and to take education and training at higher levels and that they are more closely tied to the labour market when they become adults (Havnes and Mogstad 2009). The day-care centre gives families with small children support and relief in the daily care and is an important prerequisite for giving women an opportunity to get an education and employment and thereby ensure real equal status.

§ SECTION 1 OF THE KINDERGARTEN ACT
Purpose

"The Kindergarten shall, in collaboration and close understanding with the home, safeguard the children's need for care and play, and promote learning and formation as a basis for an allround development. The Kindergarten shall be based on fundamental values in the Christian and humanist heritage and tradition, such as respect for human dignity and nature, on intellectual freedom, charity, forgiveness, equality and solidarity, values that also appear in different religions and beliefs and are rooted in human rights.

The children shall be able to develop their creative zest, sense of wonder and need to investigate. They shall learn to take care of themselves, each other and nature. The children shall develop basic knowledge and skills. They shall have the right to participate in accordance with their age and abilities.

The Kindergartens shall meet the children with trust and respect, and acknowledge the intrinsic value of childhood. They shall contribute to well-being and joy in play and learning, and shall be a challenging and safe place for community life and friendship. The Kindergarten shall promote democracy and equality and counteract all forms of discrimination."

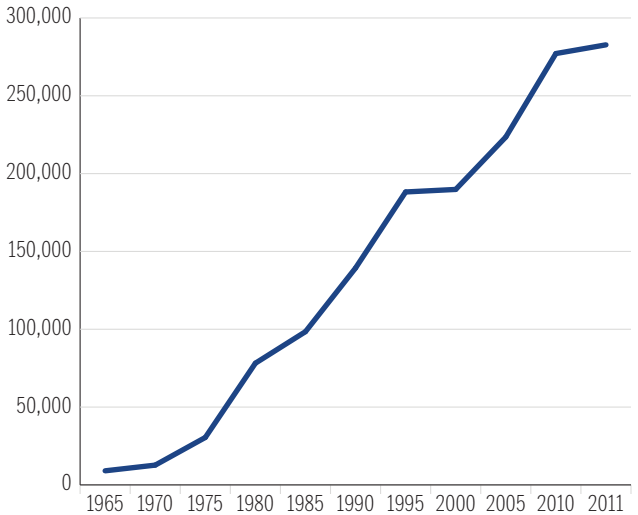
7.2 A FULLY DEVELOPED SECTOR?

In 2011, almost 283,000 children attended ordinary day-care centres or cooperative nurseries in Norway. In addition, about 5,700 children made use of open day-care centres. Data from 2010 show that 1,074 children attended Sami day-care centres and 59 children were given Sami language education and training in non-Sami day-care centres (Slaastad 2012).

The third largest service area in the municipalities

Figure 7.1 shows that the day-care sector has grown rapidly in recent years. It is now the third largest service area in the municipalities. An important reason for the high rate of development is the agreement on day-care policy that almost all of the parties in the Norwegian Storting signed in 2003. Key elements of the day-care agreement were the introduction of a maximum price that parents would have to pay, a duty to provide financially equivalent treatment of private and public-sector day-care centres in connection with public subsidies and increased construction of day-care centres. The maximum price that parents would be

FIGURE 7.1 Children in day-care centres, ages 0-6. 1965-2011. Preliminary figures 2011.



Source: Gullbrandsen 2007 and Statistics Norway, Day-care centre statistics

§ SECTION 12A OF THE KINDERGARTEN ACT
Right to a kindergarten place

Children who reach the age of one no later than by the end of August in the year a kindergarten place has been sought, are, upon application, entitled to a place in a kindergarten from August in accordance with this act with regulations.

The child is entitled to a place in a kindergarten in the municipality in which it is domiciled.

The municipality must have at least one admission process per year. The application deadline for the admission process will be set by the municipality.

required to pay was introduced on 1 May 2004 in both municipal and non-municipal day-care centres There may be an additional charge for meals. In addition, rules were introduced that gave the right to a discount for siblings in the charges to parents. Entitlement to a place in a day-care centre for one-year-olds was introduced in 2009.

More children, fewer day-care centres

In 2003, 205,172 children attended day-care centres. From year-end 2003 up to year-end 2011, nearly 77,500 more children have been given a place in a day-care centre. The municipalities and private developers have established about 101,300 new full-time places in day-care centres during the same period. The reason why there are more full-time places than new children is that many children who previously had a part-time place have gone over to a full-time place. The percentage of private day-care centres is high. In 2011, 54 per cent of the day-care centres were privately owned, and 47 per cent of all children in day-care centres attended private day-care centres.

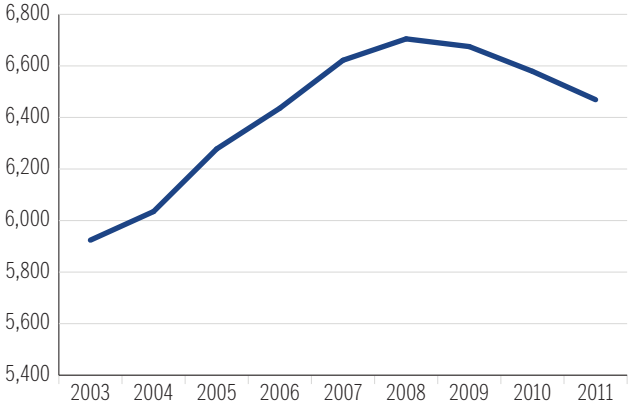
In the first five years after the day-care centre agreement, almost 800 new day-care centres opened. After 2008, the trend has reversed. Figure 7.2 shows that the number of day-care centres is gradually declining. At the same time, the number of children in day-care centres has risen each year, cf. Figure 7.1. This is related to the fact that the number of large day-care centres with over 75 children has increased, while there are fewer and fewer of the smallest day-care centres, especially cooperative nurseries.

7.3 WHO ATTENDS THE DAY-CARE CENTRES?

In 1975, seven per cent of children under school age attended day-care centres, whereas 90 per cent of 1-5-year-olds attend day-care centres at present. In just a few decades, the day-care sector in Norway has gone from being an offer for a minority of the families with children to become a key part of the everyday life of Norwegian children and parents. In 2011, 90 per cent of 1-5-year-olds attended a day-care centre.

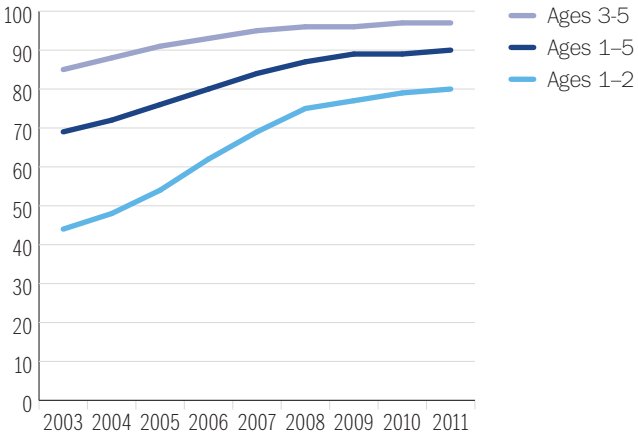
Figure 7.3 shows that the attendance of day-care centres has increased the most among 1-2 year-olds from 44 per cent in 2003 to 80 per cent in 2011.

FIGURE 7.2 Ordinary day-care centres, cooperative nurseries and open day-care centres. 2003-2011. Preliminary figures 2011.



Source: Statistics Norway, Day-care centre statistics

FIGURE 7.3 Children in day-care centres, ages 1-2, 1-5 and 3-5. 2003-2011. Preliminary figures 2011. Per cent.

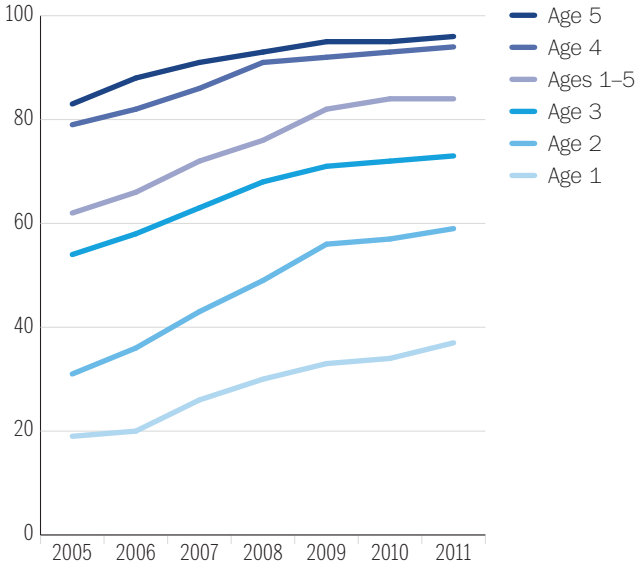


Source: Statistics Norway, Day-care centre statistics

More children from a language minority are attending a day-care centre

The day-care centre is an important arena for working with preventative measures for health, social inclusion and lifelong learning. Measures that are especially focused on fundamental language skills can provide a basis for reducing social disparities, especially among pupils with a minority as opposed to a majority language (Wollscheid 2010). A Statistics Norway study shows, for example, that free core time in the day-care centre improved the school achievements of minority girls ten years later (Drange and Telle 2010). In order for the day-care centre to function in a preventative manner, it is therefore important that children from all types of background attend day-care centres. The study *Barnefamiliers tilsynsordninger* (Care schemes for families with children) in the autumn of 2010, referred to as *"Barnetilsynsundersøkelsen 2010"* (The Child care survey 2010), shows that attendance of a day-care centre increases with the parents' income and education and when the mother is employed in a full-time job during the daytime. Children whose parents had a low education, children from families with low income and children whose mothers were housewives with a non-western background and with many siblings below school age had the lowest attendance (Moafi and Bjørkli 2011). The social disparities are greatest for the youngest children.

FIGURE 7.4 Children from a language minority in day-care centres, ages 1-5. 2005-2011. Preliminary figures 2011. Per cent.



Source: Statistics Norway, Day-care centre statistics

Compared with a similar study in 2002 (Pettersen 2003), the Child care survey 2010 shows that there has been greater social cohesion through the use of day-care centres. There was a greater percentage of children with an immigrant background and children of parents with low education and low income who attended a day-care centre in 2010 than in 2002. Nevertheless, a comparison of Figures 7.3 and 7.4 shows that the percentage of children from a language minority under age three who attend a day-care centre is far lower than the percentage of other children.

Differences in those who attend municipal and private day-care centres

A little over half of the children attending day-care centres attend municipal day-care centres, but findings in the Child care survey indicate that the social recruiting to these day-care centres is somewhat skewed. The majority of the children of parents with primary and lower secondary education and training (71 per cent), of unemployed single parents (71 per cent), of families with low income (67 per cent) and of non-western families (69 per cent) attend the municipal day-care centres (Moafi and Bjørkli 2011). In the non-municipal day-care centres, there are somewhat more one-year-olds than in the municipal centres.

Values are important to those who do not apply for a place in a day-care centre

Ten per cent of 1-5-year-olds do not attend a day-care centre. Figures from the Child care survey show that the parents who do not apply for a place in a day-care centre primarily explained this by stating that they think it is important for the child to be with the mother, that the parents are home regardless, that they do not need the place, or that the child is too young. The latter applies in particular to the parents of one-year-olds. For most families, their financial situation does not appear to play a significant role - only nine per cent state that price is a reason why they did not apply for a place - but in low-income families, a higher percentage say that the day-care centre is too expensive (Moafi and Bjørkli 2011). The NOVA report *Siste skanse* (Last Redoubt) shows that the financial situation and other practical and material conditions play a role, but this is rarely crucial on its own. Value-oriented considerations also play an important role for the parents (Seeberg 2009).

7.4 STARTING EARLY IN THE DAY-CARE CENTRES – THE NEW NORM?

More common with an early start in a day-care centre

Children under age three are the group that has increased the most in recent years, and they now constitute 36 per cent of all children in day-care centres, compared with 29 per cent in 2005.

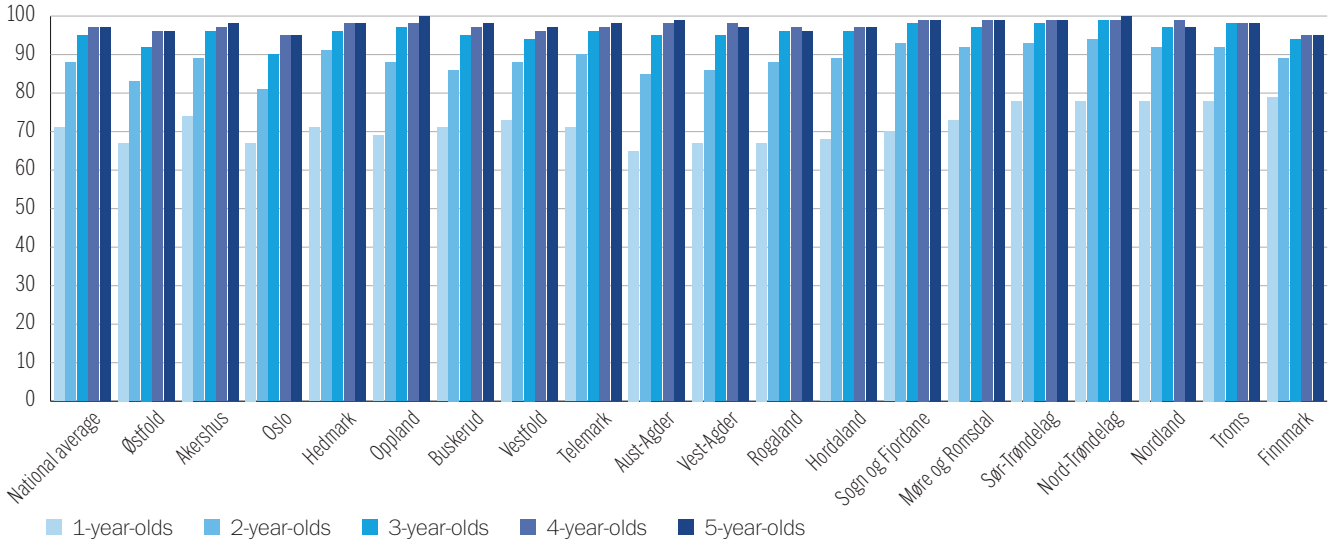
Figure 7.5 shows that for one-year-olds, the day-care centre attendance is highest in Finnmark, the Trøndelag counties, Troms and Nordland and lowest in the Agder counties, Oslo, Rogaland and Østfold. The coverage index for two-year-olds was lowest in Oslo, Østfold and Aust-Agder.

Need more research on the role played by an early start in a day-care centre

Starting early in a day-care centre is subject to debate. What are the effects of so doing, and do we know enough about them? A report from *The Norwegian Mother and Child Cohort Study* (MoBa) shows that neither the language skills nor the mental functioning of most five-year-olds is co-variant with the kind of child-care scheme they have been subject to, how old they were when they started in day-care or in some other form of child-care outside the home, whether they used a combination of child-care schemes or only one type, or in how many hours a week they were in the child-care scheme (Schjølberg et al. 2011). However, the report shows that boys who are cared for outside the home at an early age tend to have somewhat more language-related disorders and behaviour disorders as five-year-olds than boys who were cared for at home for the first 18 months. In addition, both boys and girls who were cared for outside the home for more than 40 hours a week when they were 18 months old had a marginally higher level of behaviour disorders when they were five years old. Another Norwegian study, *Barns sosiale utvikling* (Children's Social Development) (BSU), finds that two-year-olds who have started early in a day-care centre have a higher level of physical aggression and defiance. At the same time, these two-year-olds are more socially competent (Zachrisson et al. 2011).

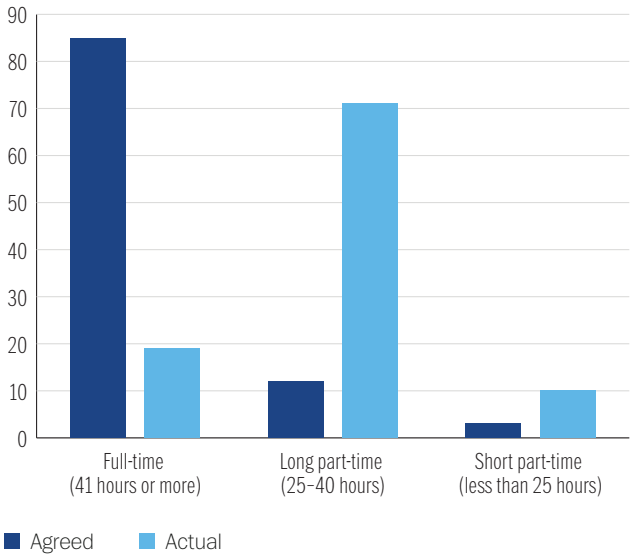
The reason for these differences may be that some children are especially vulnerable with regard to the time when they begin to be cared for outside the home or to the number of hours they are away from home. Other explanations may be found in the quality of the day-care programme. The different findings may also be explained by the fact that the two studies used different methods. MoBa, for example, is based on reporting from the parents whereas BSU asks the educational supervisors. Given that the two above-mentioned surveys cannot ascertain the reasons for the findings, we cannot say with certainty what role starting early in a day-care centre plays. In any case, there is a need for more research on the quality of day-care centres in general and on the programmes for the youngest children in particular.

FIGURE 7.5 Children in day-care centres by age and county. Preliminary figures 2011. Per cent.



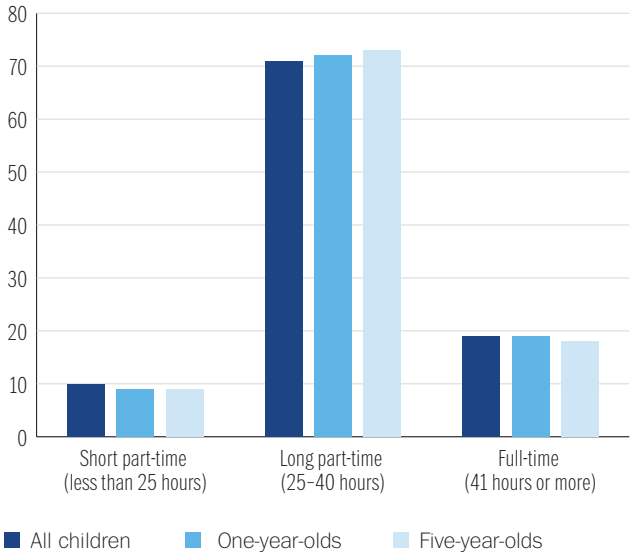
Source: Statistics Norway, Day-care centre statistics and Population statistics

FIGURE 7.6 Agreed and actual hours in day-care for 1-5-year-olds. 2010. Per cent.



Source: Moafi and Bjørkli 2011

FIGURE 7.7 Actual hours in day-care for one-year-olds, five-year-olds and 1-5 year-olds. 2010. Per cent.



Source: Moafi and Bjørkli 2011

7.5 HOW LONG DO THE CHILDREN ATTEND THE DAY-CARE CENTRES?

In 2011, 88.5 per cent of the children had a full-time place in a day-care centre, and their average agreed hours in day-care were 43.8 hours per week (Statistics Norway). Full-time places are those with 41 or more agreed hours in day-care per week. The percentage with a full-time place has gradually increased in recent years. In 2003, when the day-care agreement was passed in the Storting, 61 per cent of the children had a full-time place, and the average agreed hours in day-care was 38 hours per week. Agreed and actual hours in day-care are not necessarily the same. In the Child care survey, Statistics Norway asked the parents about both agreed hours in day-care and about when they usually drop off and pick up the children, i.e. the actual hours in day-care.

Figure 7.6 shows that the vast majority of children in day-care (about 70 per cent) are in the day-care centre for 25-40 hours per week. The average hours in day-care is 35 hours (Moafi and Bjørkli 2011). Scarcely 20 per cent of the children use the whole place. Thus, there are relatively few children who spend their whole agreed time in the day-care centre.

One and five-year-olds have equally long days

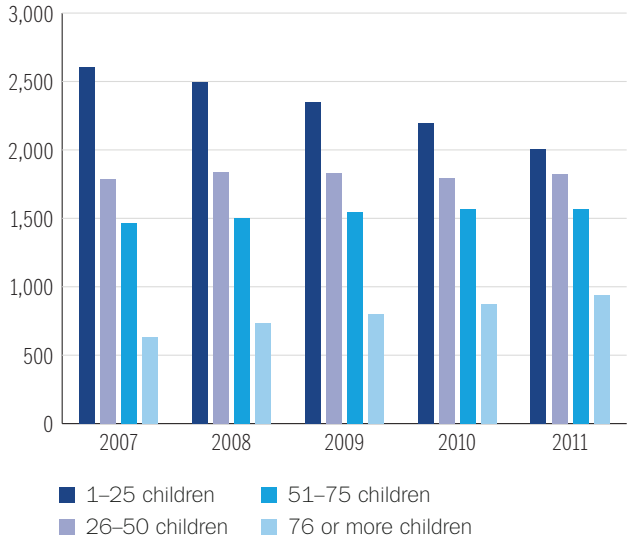
If we compare the youngest and the oldest children, we see that there is very little difference in their hours in day-care.

Figure 7.7 shows that one-year-olds are in day-care just as long as five-year-olds. An obvious explanation is that the working hours of the parents are the same.

Differences in hours in day-care between urban and rural municipalities

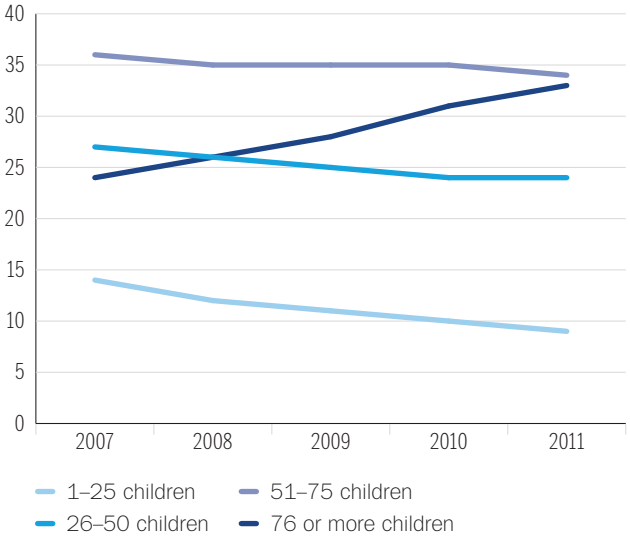
There are differences in actual hours in day-care between urban and rural municipalities. In municipalities with fewer than 10,000 inhabitants, fewer children have long days in day-care. In these municipalities, only 13-15 per cent of the children have more than 41 hours a week in day-care. This is the case for 1-2-year-olds as well as 3-5-year-olds. In the larger cities, 23 per cent of the 3-5-year-olds and 19 per cent of tht 1-2-year-olds have more than 41 hours per week in day-care.

FIGURE 7.8 Day-care centres, broken down by the size of the day-care centre. 2007-2011. Preliminary figures 2011.



Open day-care centres are not included in the data for day-care centres. Source: Statistics Norway, Day-care centre statistics

FIGURE 7.9 Children in day-care centres, broken down by the size of the day-care centre. 2007-2011. Preliminary figures 2011.



Source: Statistics Norway, Day-care centre statistics

7.6 ORGANISATION – FROM GROUP-BASED DAY-CARE CENTRES TO OPEN SOLUTIONS?

The number of large day-care centres is gradually increasing, cf. Figure 7.8 and more and more of the children who attend day-care go to these day-care centres.

Figure 7.9 shows that in 2011, 33 per cent of all children in day-care attended day-care centres with 76 or more children, compared with 24 per cent in 2007.

We find the same trend in the study *Barnehagenes organisering og strukturelle faktorers betydning for kvalitet* (The organisation of day-care centres and the importance of structural factors for quality) (Vassenden et al. 2011). It shows that even if the percentage of day-care centres with more than 80 children is low, one fourth of the children attend day-care centres with places for 60 or more children. On the average, there are 47 children in a day-care centre.

The percentage of traditional group-based day-care centres that are built has decreased, especially since 2005, compared with the construction periods around 1990 and at the end of the 1970s (Vassenden et al. 2011). Although it is still most common that the day-care centres are organised into groups, flexible forms of organisation and less tightly structured groups - so-called day-care centres with flexible grouping - are a new and much-discussed feature of Norwegian day-care centres. The concept of a day-care centre with flexible grouping is not completely unambiguous (Evenstad 2010), and there is reason to believe that there is great variation in what is defined as a day-care centre with flexible grouping or a group-based day-care centre. In the public exchange of opinions, for example, it looks as if the concept of "flexible grouping" may refer to both a physical area that many groups of children can take turns using and a "less tightly structured" group and/or unit of children. In addition, day-care centres can have intermediate forms, e.g. a group-based organisation with flexible solutions where they have flexible grouping for the older children, but not for the youngest ones. A survey shows that over half of the day-care centres (56 per cent) in the sample described themselves as traditional group-based day-care centres. Twenty-five per cent had elements of both group-based operations and operations with flexible grouping, whereas only six per cent described themselves as day-care centres with flexible grouping (Vassenden et al. 2011). Day-care centres with only one group and less than 30 children were regarded as a separate category and constituted 13 per cent. It was especially in the large day-care centres with more than 100 children that it was more common with an organisation with flexible grouping and intermediate forms (51 per cent).

The combination of more younger children and larger and larger day-care centres, often with open and flexible solutions, has generated a debate among parents and researchers. The big question is whether and how the youngest children are taken care of in the new way of organising day-care centres.

7.7 HOW ARE THE YOUNGEST CHILDREN TAKEN CARE OF?

Until the last few years, the majority of children in Norwegian day-care centres havebeen over three-years old. This has probably influenced both the content of the day-care centre and the focus of the pre-school teachers (Løkken 2004). NOKUT evaluated the pre-school teacher education in 2010 and noted there that in many places the education and training put too little emphasis on knowledge about the youngest children (NOKUT 2010).

Permanent adult contacts

Having a contact person available is a basic need for children who are around the age of one. Therefore, it is important for a small child to have at least one secure contact, whether it is at home or in the day-care centre, but preferably in both places (Drugli 2010). In a survey of the organisation of the day-care centre, 7 out of 10 day-care centres say that 1-2-year-olds have permanent adult contacts or contact persons. There is a clear increase in the percentage of day-care centres that say that the children have permanent contact persons as the size of the day-care centre increases. 93 per cent of the biggest day-care centres (those with over 100 children) have adults of this kind for the 1-2-year-olds, compared with 54 per cent of the smallest day-care centres (those with fewer than 30 children). According to the organisation model, there appears to be little difference in routines for the youngest children (Vassenden et al. 2011).

Separate room for shielding

The youngest children in the day-care centre have a stronger need for secure structures and for having contact with a few adults than the oldest children. Whether the day-care centre has separate rooms to shield 1-2-year-olds from the older children can therefore be important. Roughly nine out of ten day-care centres have rooms of this sort (Vassenden et al. 2011). This percentage is highest among the intermediate-sized day-care centres (99 per cent), but lower among the smaller day-care centres (88 per cent) and especially low among day-care centres with less than 30 children (75 per cent). There is a somewhat higher percentage among the day-care centres with over 100 children, where 92 per cent have rooms of this sort.

The organisation of the day-care centre appears to play a role here. It is the group-based day-care centres (92 per cent) that most often have rooms of this sort, whereas 86 per cent of the day-care centres with flexible grouping have these rooms. In the very smallest day-care centres - less than 30 children and only one group of children - only 57 per cent have a room to shield the youngest children from the oldest (Vassenden et al. 2011).

BOOKLET ABOUT THE YOUNGEST CHILDREN

To provide inspiration and a basis for reflection among the day-care centre staff, the Ministry of Education and Research has had a booklet prepared, *Temahefte om de minste barna i barnehagen* (Booklet about the youngest children in day-care centres). Among other things, this booklet discusses how important the need for contact is, especially for the youngest children.

7.8 GROUP SIZE – SMALL CHILDREN IN LARGE GROUPS?

A sample survey shows that the average group size for children under age three is 12.4 children. Table 7.1 also shows that for groups of children over age three, the number is 18.7 children, and for mixed groups of children over and under age three the group size is 17.6 children (Vassenden et al. 2011). The larger the day-care centre, measured in the number of children, the larger the groups of children become. As can be seen in table 7.1, there are also differences in group sizes by organisational form (group-based - flexible grouping). Day-care centres with flexible grouping have substantially higher numbers of children per group than group-based day-care centres. This is true regardless of the composition of the group of children (Vassenden et al. 2011).

TABLE 7.1 Children per group broken down by the organisation of the day-care centre. Average figures.

Type of group	Fully/partly group-based	Between group-based and flexible grouping	Day-care centres with fully / partly flexible grouping	Day-care centres with only one group	Total
Both young and older children	17.3	17.9	19.9	17.3	**17.6**
Only young children	12.2	12.6	14.8		**12.4**
Only older children	18.8	18.0	22.7		**18.7**

Source: Vassenden et al. 2011

Group size has different effects on two and three-year-olds

Preliminary findings in the Norwegian study, *Barns sosiale utvikling* (Children's social development) (Zachrisson et al. 2011), show that two-year-olds who are in groups of young children, i.e. where the oldest children are age three, have a lower level of defiance and better social skills than children in groups with both young and older children. The study also shows that there is not a correlation between group size and behaviour disorders or social skills among two-year-olds, but the findings are different for three-year-olds. The larger the groups of children that the three-year-olds are in, the lower the assessment of their social skills (Zachrisson et al. 2012).

7.9 WHAT KIND OF HELP DO CHILDREN WITH SPECIAL NEEDS GET?

The day-care centre should have a preventive function and work to ensure that all children, regardless of functional level, age, gender and family background, get to experience that they themselves and everyone in the group are important for the common good.

Data from the day-care centres' annual report form shows that in 2011, 14,948 children with impaired functionality or special needs had places in day-care centres. This constitutes 5.2 per cent of all children in day-care centres. Pursuant to Section 13, paragraph one of the Day Care Institutions Act, children with impaired functionality shall have priority in admission to a day-care centre. In many cases, admitting children with impaired functionality results in a need for extra resources for the owner of the day-care centre. For example, this may be resources for equipment, alterations and/or staff. In 2011, almost three per cent of all children in day-care centres were given extra resources.

Prior to the transition to block financing of the day-care sector in 2011, a government grant scheme helped enable children with impaired functionality to benefit from time spent in a day-care centre. This grant came in addition to the ordinary operating grant. After the grant scheme was incorporated into the municipalities' block grants, funds were no longer earmarked for arrangements for children with impaired functionality. Some municipalities find it problematic that the grant to children with impaired functionality has been included in the block grants and thereby becomes a part of the prioritisation discussion in the municipality (NOU: 1 2012).

The children who have greater need for assistance and adaptation than that which is possible within the ordinary plan and the resources for the day-care centre are entitled to special educational assistance pursuant to Section 5-7 of the Education Act. This assistance may include toy library activities, training and stimulation measures and instruction of staff in the day-care centre. In 2011, 6,482 children in day-care centres were given this kind of special educational assistance. This constitutes about 2.3 per cent of all children who attend day-care centres. A survey shows that 48% of the cases are related to challenges with language development, and twenty per cent are social or behaviour-related disorders (Cameron et al. 2011). By comparison, data from the Primary and Lower Secondary School Information System (GSI) show that about four per cent of all the pupils in Year one of primary school were given special needs education in 2011.

7.10 WHAT ARE THE PARENTS SATISFIED WITH?

Most parents are satisfied with the day-care centres. Day-care centres score better than schools in user satisfaction, and the private day-care centres do especially well (EPSI 2011). *Innbyggerundersøkelsen* (The national population survey) (DIFI 2010) also supports these findings.

Figure 7.10 shows that most of the parents are satisfied with the care the staff provide to the children (85 per cent), the opening hours (82 per cent) and the travel distance from home (80 per cent). The parents are least satisfied with the indoor environment (67 per cent), outside areas and group size (both 71 per cent). 75 per cent of the parents are satisfied with the educational qualifications of the staff (Moafi and Bjørkli 2011).

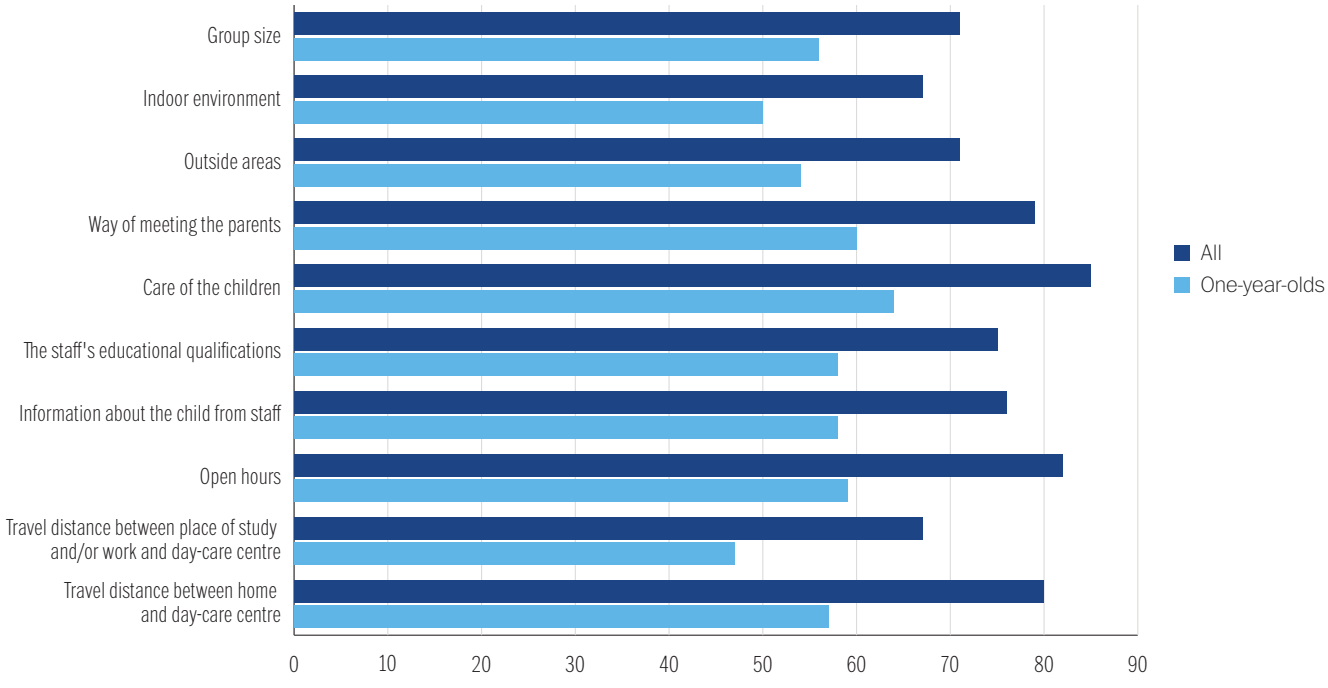
The parents of one-year-olds are less satisfied

It is worth noting that the parents of one-year-olds are significantly less satisfied than the parents of older children in day-care centres. Figure 7.10 shows that they are consistently 15-20 percentage points lower than the average in their responses to all of the questions. This applies in particular to the travel distance between school and/or work and the day-care centre, to the indoor environment and to the outside areas. Whether this concerns an actual lack of arrangements for the youngest children or whether the parents of the youngest children make higher demands on the day-care centre, or whether there is a combination of these two factors is difficult to say. The question of whether the staff can best take care of the youngest children is important for the parents regardless.

THE NATIONAL PARENTS' COMMITTEE FOR DAY-CARE CENTRES (FUB)

FUB is an independent advisory body for and with parents with children in day-care centres. FUB is also a commenting body for the Ministry of Education and Research on matters involving cooperation between home and day-care centre. Through information and guidance to the parents, FUB shall improve the parents' involvement and influence in the day-care centre. FUB has issued a resource booklet on cooperation between home and day-care centre.

FIGURE 7.10 Parents who are satisfied or very satisfied with various conditions at the day-care centre. 2010. Per cent.



Source: Moafi and Bjørkli 2011

7.11 WHAT DOES INTERNATIONAL RESEARCH HAVE TO SAY ABOUT QUALITY IN DAY-CARE CENTRES?

The quality of the day-care centre is crucial to the well-being and development of the children who attend there. Research shows that attending a high quality day-care centre is important, among other things, for language development, social skills and the development of friendships. A research survey (Zachrisson et al. 2010) points out the following characteristics that are repeatedly found in high quality day-care centres: high enough number of skilled staff, small groups of children and adequate and well-equipped playrooms and outdoor areas. In addition, good quality is characterised by the interaction between adults and children involving care, play and good stimulation of the children's learning. For the youngest children, the adults' ability to provide care is especially important.

The qualifications of the staff are a key factor

The fact that competent staff are an important framework factor for quality in the day-care centre is also emphasised in the OECD's review of the research (OECD 2010). American surveys find that highly qualified staff have better relations with and better quality in their interactions with the children, when compared with staff with lower qualifications (NICHD 2002). Staff with a pre-school teacher education are less authoritarian, ensure better security and health, and stimulate the children more often (NICHD 2000). Staff with a higher education are often more capable of creating a good learning environment and planning activities that promote the children's learning (Elliott 2006, Neumann 1999). For the youngest children, specialised and practical education and training of the staff has a good effect (Howes et al. 1992). When American surveys find connections between the education and training of the staff and the quality of the time spent with the children (NICHD 2002, HICHD 2000), it is important to emphasise the need for equivalent Norwegian studies. Both the pre-school teacher education and educational practices in many areas are different in Norway than in other countries, especially countries other than the Nordic countries.

Another important quality factor is the number of children per adult (OECD 2010). More adults provide an opportunity for better quality in relations and interaction. A low density of adults means that the child is given less attention, care, response and stimulation and that makes the children less good at cooperating with each other.

Large groups of children can have a negative effect on the quality in the interactions between children and adults in the day-care centre, but the research does not show any clear results here (OECD 2010). Therefore, it is uncertain whether large groups automatically give rise to poorer quality. A Norwegian report shows in turn that children in small groups of children have better social skills than children in large groups (Zachrisson et al. 2012).

7.12 WHAT DO WE KNOW ABOUT THE STAFF IN THE DAY-CARE CENTRES?

At year-end 2011, there were 88,822 staff who carried out 71,585 FTEs in the day-care centres. This is an increase of 1,373 FTEs from the previous year. Since 2008, the number of staff has increased by about 7,400 persons.

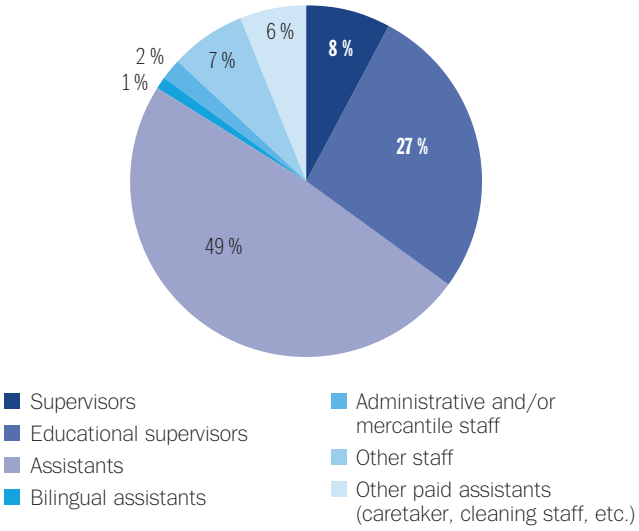
Table 7.2 shows that the number of children per FTE has been relatively stable at about four in the period 2008 to 2011.

TABLE 7.2 Staff in day-care centres. 2008-2011. Preliminary figures 2011.

	2008	2009	2010	2011
Staff	81,450	84,884	87,401	88,822
FTEs	65,155	68,096	70,212	71,585
Children per FTE	4.0	4.0	3.9	3.9
– in public-sector day-care centres	3.9	3.9	3.9	3.9
– in private day-care centres	4.1	4.1	4.0	4.0

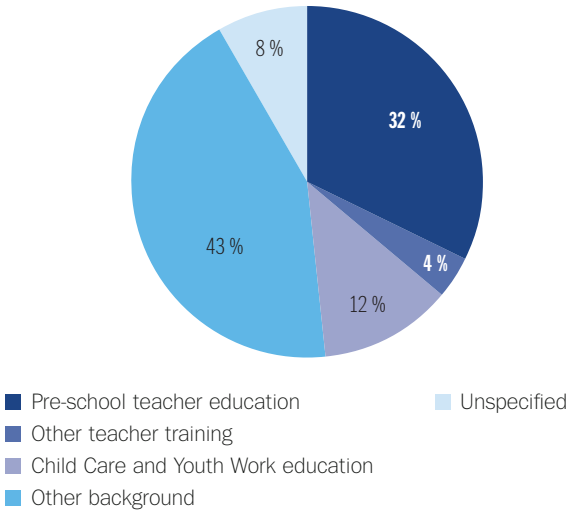
Source: Statistics Norway, Day-care centre statistics

FIGURE 7.11 Day-care centre staff, broken down by occupational groups Preliminary figures 2011. Per cent.



Source: Statistics Norway, Day-care centre statistics

FIGURE 7.12 Day-care centre staff, by education. Preliminary figures 2011. Per cent.



Source: Statistics Norway, Day-care centre statistics

Figure 7.11 shows that the assistants constitute the largest group of staff in the day-care centres. In 2011, 49 per cent were day-care centre staff were assistants, whereas 35 per cent were supervisors and educational supervisors. Only three per cent of the assistants had a pre-school teacher education or other teacher training, whereas 22 per cent had Child Care and Youth Work education and training.

Under half of the staff have teacher training or education and training specialising in children

Day-care centres with qualified staff are a necessary condition for being able to give all children a good educational programme. It forms the basis for the government's efforts to increase the quality of the day-care centre programme (The Ministry of Education and Research 2009).

The percentage of staff with pre-school teacher education was the same in 2011 as in 2010, even though the number of staff with this educational background had increased by 700. In the same way, the number of child care and youth workers has increased by 800, whereas the percentage has remained stable at 12 per cent. The reason for this is the increase in the number of staff in general.

Figure 7.12 shows that under half of the staff have teacher training or education and training specialising in children. The category "unspecified" consists of administrative and mercantile staff and other paid staff (caretaker, cleaning staff).

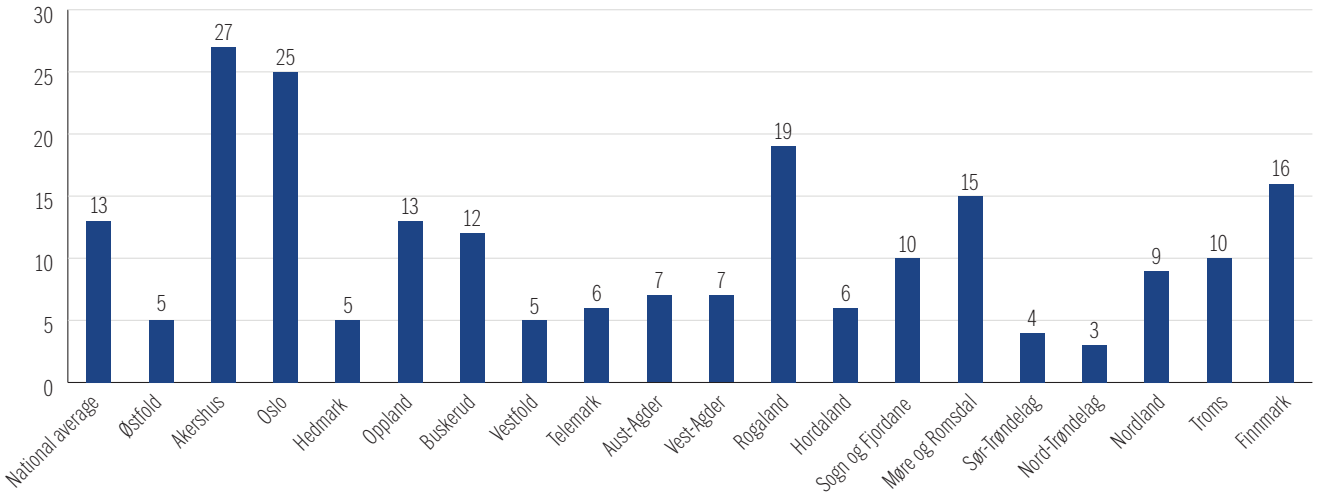
The number of supervisors and educational supervisors with teacher training, i.e. a pre-school teacher education or other teacher training, increased by 1,053 persons from 2010 to 2011. The trend is not the same throughout the whole country. In many places, there are sufficiently well-qualified teaching staff in the day-care centres, whereas in other places they have problems with recruitment.

Figure 7.13 shows that Akershus, Oslo and Rogaland are the counties that have the biggest difficulties recruiting enough teachers, whereas the Trøndelag counties, Hedmark, Vestfold and Østfold have the fewest supervisors and educational supervisors without an approved degree.

Many staff need more competence

The Ministry of Education and Research has initiated the project *GLØD*. The main goal of the project is to improve the competence of the staff and increase the status of work in day-care centres. More skilled workers, both pre-school teachers and child care and youth workers, are especially important when there are so many children under age three in the day-care centre. Having responsibility for the smallest children requires different knowledge and mastering of other forms of work than work with the bigger children (NOKUT 2010). The youngest children in the day-care centre - often called "toddlers" (Løkken 2004) - communicate a great deal through the things they do with their body and leave it to others around them to interpret

FIGURE 7.13 Supervisors and educational supervisors without an approved degree, broken down by county Preliminary figures 2011. Per cent.



Source: Statistics Norway, Day-care centre statistics

and put words on their actions. This makes considerable demands on the adults in the day-care centre.

The staff themselves mainly specify the following knowledge requirements in the coming years: children with special needs and the use of information technology. More knowledge about work with children under age three is also mentioned, but comes somewhat farther down the list (Gotvassli et al. 2012).

Still a long way from the goal of 20 per cent men in day-care centres

The framework plan's value base specifies that equal gender status shall be clearly evident in the education in the day-care centre. The day-care centre shall raise children to encounter and create a gender-equal society, and the day-care centre shall base its activities on the principle of equal gender status. At year-end 2011, about ten per cent of the staff in the day-care centres were men; i.e. about 9,200 persons. Table 7.3 shows that 8.3 per cent or about 6,200 of the staff in the core activities of the day-care centre are men. The core activities include the staff who work with the whole day-care centre group, i.e. supervisors, educational supervisors and assistants. In addition, 87 men worked as bilingual assistants and 418 as other staff. From 2010 to 2011, the number of men in the core activities has increased by about 100; i.e. an increase of about two per cent. This is a lower increase than in previous years. About 15 per cent of the day-care centres had at least 29 per cent men employed in core activities in 2010. 8.3 per cent men in the core activities is far below the government's goal of 20 per cent men in day-care centres, but Norway has a higher percentage of men than many other countries, especially non-Nordic countries.

TABLE 7.3 Men employed in day-care centres 2006-2011. Preliminary figures 2011. Per cent and number.

	2006	2007	2008	2009	2010	2011
Men employed in core activities	4,034	4,672	4,985	5,636	6,106	6,238
– in per cent of staff employed in core activities	6.9	7.3	7.3	7.9	8.3	8.3
Supervisors and educational supervisors	1,350	1,545	1,671	1,889	2,030	2,110
Assistants (not including bilingual assistants)	2,684	3,127	3,314	3,747	4,076	4,128

Source: Statistics Norway, Day-care centre statistics

7.13 WHAT ARE THE CHALLENGES IN THE SECTOR IN THE COMING YEARS?

In just a short period of time, the day-care sector has undergone extensive changes with regard to both structure and scope. There is also considerable variation in the day-care centre programmes offered in the country as a whole. In order to ensure that the regulations are well enough adapted to the current and future day-care sector, the Day Care Institutions Act committee has drafted a proposal for a new Day Care Institutions Act. NOU 2012: 1 *Til barnas beste* (In the best interests of the children) proposes stricter requirements for the qualifications of the staff, among other things. A new Report to the Storting on the day-care centre of the future is now being drafted. The proposals of the Day Care Institutions Act committee are among those that will be considered in this white paper.

In the following section, we point out some of the challenges with which many persons in the day-care sector are concerned.

Language survey of three-year-olds

In the framework plan, it is pointed out that children who have late language development or various language problems must receive assistance and support as early as possible. The day-care centre is in a unique position to discover whether children have delayed or deficient language development, and the day-care centre can facilitate an early effort and preventative measures. Therefore, in the long run all three-year-olds will be given an offer of a language survey in the day-care centre.

92 per cent of the municipalities have measures to survey the language skills of the children in municipal day-care centres, and 63 per cent of these have issued guidelines for the survey. 75 per cent of the municipalities that have private day-care centres have equivalent measures in the private day-care centres (Rambøll 2008).

In 2011, a broadly composed expert group reviewed the eight most used language survey tools in Norwegian day-care centres. The goal was to find out what kind of survey tools, which, used in the right way, give the best basis for language stimulation and prevention of language problems for both majority and minority children. Among other things, the expert group concluded that none of the survey tools meet all of the requirements that were made of the language survey on their own (The Ministry of Education and Research 2011b).

One survey shows that for the most part it is educational supervisors or other persons with special expertise who conduct the surveys, but half of the supervisors also respond that assistants conduct the surveys (Winsvold and Gulbrandsen 2009). It is important that the language survey is conducted by qualified personnel. This is a challenge in a sector with many unskilled workers. The Norwegian Directorate for Education and Training is now working with an advisor for language surveys and language stimulation in day-care centres.

Financing of the day-care centres

Up to and including 2010, the day-care centres were financed through government grants, unrestricted funds to the municipalities and payments from parents. In 2011, the main part of the government grant, NOK 28 billion, was incorporated into the block grants to the municipalities. The municipalities thereby assumed the main responsibility for the financing of the day-care centres. The fact that the day-care centre funds are no longer earmarked has aroused uneasiness in the sector. This is especially true of the private day-care centres. It is questionable whether the day-care centres will be given priority in the budget negotiations in the individual municipalities and whether any changes in priorities will affect the quality of the day-care centres. Therefore, it is important to follow the financing of the day-care centres in the coming years.


Vesta

Small steps into a big world

A quiet revolution has occurred in Bjerkås day-care centre and other day-care centres in Norway in recent years. The admission of one-year-olds requires something new of the day-care centres and of those who work there. Our youngest children need more attentive care. The world shall open up for them one small step at a time.

TEXT: SIW ELLEN JAKOBSEN
PHOTO: JOHANNE TORSETH

The birds are merrily twittering this spring morning outside Bjerkås day-care centre in Asker, Norway. Little two-year-old Alma twitters a little as well when she enters the door to Solstua, a group for children aged one to three. She is one of the last children to be brought in today. Mamma is at home with her newborn little brother, so Alma can be a little longer at home in the morning.

Yet when Alma walks throught the door to Solstua and the other ten children there, she is ready for a new day with her friends. She takes her packed lunch out of her pack. She quickly waves "goodbye" to mamma and her little brother before tucking her packed lunch under her arm and finding a table in the group. The other children have eaten breakfast and are already busily at play, but Alma has her routine. She is joined by Beate Granlien, an assistant in the group, who has a chat with her while the sandwiches are eaten. Alma is most attentive to the group of children playing on the floor. When the sandwiches have been eaten, she too is ready to play.

Secure parents – secure children

All parents who have had children in the day-care centre know that the situation when the children are handed over in the morning can be the toughest part of the day.

Waving goodbye to mama or papa can be painful and difficult when you are a small child, nor should we forget that it can also be tough for mama or papa, especially if this is their first child. And it leaves its mark on the child.

The head teacher at Bjerkås day-care centre, Anne Irene Bøe Hilden, is very aware of this. Therefore, the staff will work especially hard on this at the beginning of the autumn when new children arrive in the day-care centre.

"Our job is to create a sense of security. First and foremost, we shall have secure children, but we also regard it as our task to see that the parents also feel secure. If the children

> FIRST AND FOREMOST, WE SHALL HAVE SECURE CHILDREN, BUT WE ALSO REGARD IT AS OUR TASK TO SEE THAT THE PARENTS ALSO FEEL SECURE.
> *Anne Irene Bøen Hilden*

> THERE HAS BEEN A REVOLUTION IN NORWEGIAN DAY-CARE CENTRES AND IN THE CHILDREN'S EVERYDAY LIVES IN RECENT YEARS.
>
> *Anne Irene Bøen Hilden*

notice that the parents are hesitant about leaving them in the morning, it makes them feel insecure. Some children come up with routines for extending the time so that their parents can stay as long as possible. In these situations, we on the staff must be clear and instruct the parents in how this can be done more simply. It may be unpleasant, but it is best for both the parents and the child."

Alma is secure. When she comes to the day-care centre, she knows that it is okay to say "goodbye" to mama or papa out in the hall, but she must be allowed to continue the routine of eating her packed lunch after the others.

"If we had said, 'No, we are done eating breakfast now,' the situation might not have been so eady. Especially for Alma who now has a little brother, fixed routines in the day-care centre mean a great deal. Both for her and the other children it is important to be allowed to have a say in shaping their own everyday routine."

The quiet revolution

There has been a revolution in Norwegian day-care centres and in the children's everyday lives in recent years, but it has been a quiet one.

If you walked past Bjerkås day-care centre a few years ago, you would have seen mostly four and five-year-olds playing, laughing and crying. Now the activities at the day-care centre seem calmer. Nearly 70 per cent of Norwegian one-year-olds now attend a day-care centre. Asker municipality is no exception. "This has radically changed the everyday routines in the day-care centre," thinks head teacher Anne Irene Bøe Hilden.

"Both psychologists and others have expressed their opinions about possible latent damage to children who start going to the day-care

centre at an early age. I have got involved in this debate because I think it is fully possible to create a good life in a day-care centre for one-year-olds. If I had not believed that, I would have found something else to do, but making this happen makes demands on the staff and on their attitudes to the youngest children.

Care is a broad concept. We often think about care of small children as letting them sit in your lap, changing their diapers, giving them food, but the concept of care entails much more than that," says the administrator of the Asker day-care centre.

"At times, a small child feels a need to sit with his/her face pressed tightly against the chest of an adult. She or he shall be allowed to do that for a while. But it is also a form of care to help the child to turn his/her face out toward the world. They shall be given a sense of security in our lap at the same time as we open up the world to them with small steps. Combining this in a good way requires competent staff.

Information is the key word

The day-care centre administrator can understand that many people think it is too early to turn over one-year-olds to the day-care centre, usually for stretches of 8-9 hours a day. The youngest children are often worn out when they come home after a long day. Not all parents get very much time at home with their children before they have to go to bed.

"It is sad for the parents to be away from their children so long, but we have to arrange a programme so that the child is as well off as possible here in the day-care centre," says Bøe Hilden. She thinks information is the catchword for creating a sense of security.

"When the parents pick up their children, we must take the time to talk with them about what has happened during the day and how their child has been feeling. The parents should know that their child is doing fine here. Secure parents make secure children.

Each child in Bjerkås day-care centre has a primary contact person. As far as possible, these adults shall have contact with the child every day.

"Not all children need this. For some it is just as good to have contact with different adults, but the arrangement with primary contact persons provides an assurance both to us and to the parents that all of the children will be dealt with in the course of the day."

Allis Svavik is an educational supervisor at Bikuben (the Beehive), one of two groups for young children at Bjerkås day-care centre. She has worked with both the oldest and the youngest children in the day-care centre.

"The everyday life of the youngest children

in the day-care centre must be arranged in a different way than for the older children. There are not as many adult-controlled activities in a young children's group. There should be fixed routines, but the child should be allowed to explore the world at his/her own tempo. We must find a good balance between activities and rest, and we must meet every single child according to their individual needs."

THE TRANSITION FROM BEING AT HOME TOGETHER WITH MAMA OR PAPA TO HAVING TO GET ALONG WITH A GROUP OF CHILDREN IS A BIG ONE. THEREFORE, WE TRY TO ONLY TAKE ONE STEP AT A TIME.

Anne Irene Bøen Hilden

On a walk in the Hakkebakke Forest

Today is a day with a lot of activity. The two and three-year-olds are going on a trip to "the Hakkebakke Forest", their own little forest, located 100 metres from the day-care centre. Here there are trees to climb, and a teepee in which they can eat their packed lunch. In Bjerkås day-care centre, nature and the environment are the main target areas. That means that they are using nature as a place to learn, almost regardless of weather and temperature. Today, the educational supervisor has dressed in a "Grandma Mouse" costume. Allis Svavik has brought along her umbrella, mainly to protect her from the sun, and a basket of muffins. Today they are going to celebrate a birthday in the Hakkebakke Forest; Lisa will be turning three.

The one-year-olds stay behind in the day-care centre, where they are allowed to play

freely in small groups. Some of them need to sit on the lap of an adult; others look at a book. Some just want to see what the other children are doing. Administrator Anne Irene Bøe Hilden explains further,

"The transition from being at home together with mama or papa to having to get along with a group of children is a big one. Therefore, we try to take only one step at a time. We try to protect the youngest children from too many impressions. A one-year-old should experience a little bit during the day; the two-year-olds a little more and the five-year old should preferably experience quite a lot during a typical day in a day-care centre. Therefore, we divide the children into different activities by their age. They are going to be given challenges based on their personal level of development."

Not princes and princesses

When autumn arrives and many new one-year-olds start going to the day-care centre, it is a demanding time for the staff in the small children's groups. The children have come with many different rhythms for sleeping and eating. They shall be allowed to keep them. As the autumn progresses, the children will become coordinated and sleep and eat more or less at the same time. On the spring day that "The Education Mirror" visits Bjerkås, a total of ten children are taking a noonday nap or sleeping in their respective baby carriages outside the day-care centre. They had a meal together around 11, but those who do not want or are unable to sleep go inside and play. Nobody sleeps here by command.

> INVOLVEMENT ENTAILS THAT CHILDREN SHALL BE HEARD, UNDERSTOOD AND TAKEN SERIOUSLY.
> *Anne Irene Bøen Hilden*

"The children's involvement is important to us. I think there have been some misunderstandings about this matter of involvement, and some people have probably interpreted this too far in the direction of children's co-determination. Children shall be allowed to take part in making decisions, but we have no intention of letting there be a lot of little princes and princesses who are allowed to do whatever they want," says Bøe Hilden.

"Involvement does not mean letting the child decide whether they will have a pink or a green cup. Involvement entails that children shall be heard, understood and taken seriously."

Work on attitudes

Educational supervisor Allis Svavik thinks that the children's right to involvement is one of the most important changes that has occurred in day-care centres in recent years. Nowadays, we shall meet the child as a subject in his/her relation to adults. The children shall perceive that their voices are heard They shall not be met with the attitude "I am the adult, and you are only a little child". This is a view of children that has channelled the staff into a process where they are working on their attitudes.

"Among other things, we looked at the rules that existed in the day-care centre. This work led to a heightened awareness in the staff groups, and we often ask the questions:

'Who are these rules for, and how does the child perceive these rules?'

"We used to spend time enforcing rules that actually weren't very important. In this day-care centre, for example, the children themselves are allowed to decide which of the adults shall change their diapers or put them to bed for a nap. How important is it actually to me or some of the other adults whether or not a child gets to decide this? If it is important to the child and is practically possible for us, it is unnecessary to create a conflict out of a situation like this. The children have a right to be heard, and if it turns out that the one they "choose" is available, there is no reason why we should have rules that make them accept someone else," says Svavik.

Head teacher Anne Irene Bøe Hilden thinks that it is necessary to work on the attitudes in the staff groups all the time. She and the four educational supervisors in the day-care centre spend a lot of time on education and training and instruction of the unskilled workers.

"For example: A child cries many days in a row when his/her mother or father leaves. Instead of sighing in frustration about this, we can talk with the child and show understanding that he or she is unhappy. That way, we show respect for the child's feelings. A great deal has changed in the attitudes in the world of day-care centres in recent years," says the day-care centre head teacher.

Attitudes can be changed. But the people who work with small children have to be mentally present the whole time. It can be very exhausting work.

"We are only human. It ought to be part of the head teacher's role in the day-care centre to see signs that some of the staff are burnt out and talking about it. Both I and our other teachers spend a lot of time talking about what we are working on, what we are trying to achieve and what it means to be a competent adult."

BOTH I AND OUR OTHER TEACHERS SPEND A LOT OF TIME TALKING ABOUT WHAT WE ARE WORKING ON, WHAT WE ARE TRYING TO ACHIEVE AND WHAT IT MEANS TO BE A COMPETENT ADULT.

Anne Irene Bøen Hilden

Small flowers

When the smallest children wake up from their morning nap in the fresh spring air in Asker, they gather in a ring around Beate. She has created a puppet show about "The Three Billy Goats Gruff". The children listen with excitement to the story. They close out this period with a few well-known, popular children's songs. While some of them wholeheartedly sing *"Blomster små, gule blå, titter opp fra marken nå"* (Tiny flowers, yellow and blue, are poking up in the garden now), others try to follow the text of the song by moving their hands so as to illustrate flowers. Many of the children have not yet developed a verbal language, but all of them have a body language and can take part.

The two teachers we meet at Bjerkås day-care centre on this day think that those who are most critical to letting one and two-year-olds go to a day-care centre ought to pay Bjerkås a visit. Here they would have seen how much enjoyment even the youngest children get out of having friends and interacting with other children.

"It constantly amazes me how early the children show signs of friendship and interdependence. They really miss each other. If some of them have been away for a while, there is genuine mutual joy when they return. That is so wonderful to see!" ■

No two days are exactly alike

Fredrik Gunnerud is one of the two men on the staff of Bjerkås day-care centre. He has worked here for seven years, but only for two months in the small children's group. There are many routines here, but no two days are exactly alike," he tells us.

This young man with a background as an electrician decided that he would rather work with people. He has long been "the hero" among the older boys in the day-care centre, but now he has gone over to the youngest children. He thinks this is exciting.

"It is a completely different way of working. Here you sit on the floor and use your body to communicate with the children. I am a calm person, and I think that is important for the children's sense of security.

Gunnerud has not decided whether he is going to take a pre-school teacher education or whether he may get an education as a nurse or social educator.

"Children give me a great deal, but I also like working with the mentally ill a lot. The one thing I know for sure now is that I want to work with people.

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NOU 2002:10	2002	*Førsteklasses fra første klasse* (First class starting in Year 1)	The Ministry of Education and Research (KD), Oslo, Norway
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Supplementary tables

Supplementary table 1.1 to **FIGURE 1.1** Breakdown of small, medium-sized and large mainstream primary and lower secondary schools. 2011-2012. Per cent.

	Percentage
300 or more pupils	27.3
100-299 pupils	39.9
Less than 100 pupils	32.8

Source: The Primary and Lower Secondary School Information System (GSI)/The Norwegian Directorate for Education and Training

Supplementary table 1.2 to **FIGURE 1.2** Breakdown of pupils in small, medium-sized and large mainstream primary and lower secondary schools. 2011-2012. Per cent.

	Percentage
Less than 100 pupils	54.7
100-299 pupils	37.7
300 or more pupils	7.6

Source: The Primary and Lower Secondary School Information System (GSI)/The Norwegian Directorate for Education and Training

Supplementary table 1.3 to **FIGURE 1.3** Foreign languages and in-depth language studies in Years 8-10. 2011-2012. Per cent.

	Number	Percentage
Spanish	57,339	31.4
German	46,129	25.3
French	27,062	14.8
In-depth study in English	38,453	21.1
In-depth study in Norwegian	12,803	7.0
Other	815	0.4

Source: The Primary and Lower Secondary School Information System (GSI)/The Norwegian Directorate for Education and Training

Supplementary table 1.4 to **FIGURE 1.4** Pupils in primary and lower secondary school with individual decisions on special needs education, 2002-2003 to 2011-2012. Per cent.

	Boys	Girls	All
2002-2003	8.1	3.8	6.0
2003-2004	8.1	3.8	6.0
2004-2005	8.0	3.8	5.9
2005-2006	8.1	3.8	6.0
2006-2007	8.4	4.0	6.2
2007-2008	8.9	4.2	6.6
2008-2009	9.8	4.6	7.2
2009-2010	10.6	5.0	7.9
2010-2011	11.2	5.5	8.4
2011-2012	11.4	5.7	8.6

Source: The Primary and Lower Secondary School Information System (GSI)/The Norwegian Directorate for Education and Training

Supplementary table 1.5 to **FIGURE 1.5** Pupils with individual decisions on special needs education, broken down by Year. 2006-2007 and 2011-12. Per cent.

School year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
2006-2007	3.1	3.6	4.1	5.0	5.9	6.8	7.4	8.3	8.6	9.0
2011-2012	4.1	4.8	5.9	7.5	8.9	9.8	10.7	10.9	11.2	11.6

Source: The Primary and Lower Secondary School Information System (GSI)/The Norwegian Directorate for Education and Training

Supplementary table 1.6 to **FIGURE 1.6** Pupils with Basic Norwegian for language minorities, by county. 2011-2012. Per cent.

County	Percentage of pupils
Østfold	7.7
Akershus	5.7
Oslo, Norway	24.5
Hedmark	4.6
Oppland	4.6
Buskerud	8.4
Vestfold	5.8
Telemark	5.8
Aust-Agder	5.1
Vest-Agder	6.5
Rogaland	5.6
Hordaland	5.7
Sogn og Fjordane	3.5
Møre og Romsdal	4.3
Sør-Trøndelag	3.9
Nord-Trøndelag	3.0
Nordland	3.6
Troms	3.7
Finnmark	3.9

Source: The Primary and Lower Secondary School Information System (GSI)/The Norwegian Directorate for Education and Training

Supplementary table 1.7 to **FIGURE 1.7** Pupils who are given Mother tongue education and/or Bilingual technical training. 2007-2008 to 2011-2012. Number.

	Only Bilingual technical training	Only Mother tongue education	Both Mother tongue education and Bilingual technical training	Adapted education and training
2007-2008	9,763	6,503	4,376	1,458
2008-2009	11,174	4,154	4,714	2,136
2009-2010	11,037	3,218	5,807	2,289
2010-2011	11,765	2,794	4,482	2,763
2011-2012	11,346	2,484	3,987	2,904

Source: The Primary and Lower Secondary School Information System (GSI)/The Norwegian Directorate for Education and Training

Supplementary table1.8 to **FIGURE 1.8** Pupils who took part in the scheme to provide homework assistance as per 1 October 2011. Years 1-4. Per cent.

Year	Percentage of pupils
Year 1	42.4
Year 2	53.7
Year 3	57.8
Year 4	52.1

Source: The Primary and Lower Secondary School Information System (GSI)/The Norwegian Directorate for Education and Training

Supplementary table 1.9 to **FIGURE 1.10** Pupils in general studies education programmes, broken down by Year. 2011-2012. Preliminary figures. Number.

	Vg1	Vg2	Vg3
General studies education programmes	35,993	30,647	31,789
Vg3 supplementary year qualifying for higher education	0	0	13,742

Source: Norwegian Directorate for Education and Training 2012

Supplementary table 1.10 to **FIGURE 1.11** Programme areas in Vg2 Specialisation in General Studies. 2011-2012. Per cent.

Programme areas	Percentage of pupils
Languages, social sciences and economics studies	13,219
Natural Science and Mathematics	10,100
Arts, crafts and design studies	906

Source: The Norwegian Directorate for Education and Training

Supplementary table 1.11 to **FIGURE 1.12** Adults who are given education and training in the area of primary and lower secondary education. 2006-2007 to 2011-2012. Number.

School year	Number of participants who are given mainstream primary and lower secondary education	Number of participants who are given SNE	Total number of participants
2006-2007	4,268	6,352	10,620
2007-2008	4,128	5,610	9,738
2008-2009	3,879	5,479	9,358
2009-2010	4,100	5,402	9,502
2010-2011	5,472	5,031	10,503
2011-2012	5,648	4,677	10,325

Source: Statistics Norway Education Statistics (Preliminary figures)

Supplementary table 2.1 to **FIGURE 2.1** Operating expenses per pupil broken down by expenses for primary and lower secondary schools, special schools, and school premises and school transportation. Adjusted for wage and price increases. 2007-2011. Preliminary figures 2011. NOK.

	2007	2008	2009	2010	2011
Operating expenses per pupil for school premises and school transportation	17,671	17,726	18,633	18,975	18,437
Operating expenses per pupil for special schools	1,392	1,252	992	1,046	1,021
Operating expenses per pupil for primary and lower secondary schools	70,715	71,598	73,283	75,133	75,297

Source: Statistics Norway KOSTRA

Supplementary table 2.2 to **FIGURE 2.2** Municipalities and pupils broken down by operating expenses per pupil in primary and lower secondary school. Municipal primary and lower secondary schools. Preliminary figures 2011. Per cent.

	Percentage of municipalities	Percentage of pupils
Under 80,000	3	8
80,000-90,000	19	44
90,000-100,000	23	22
100,000-110,000	19	19
110,000-120,000	11	3
120,000-130,000	9	2
130,000-140,000	6	1
140,000-150,000	3	0
150,000-160,000	2	0
160,000-170,000	3	0
More than 170,000	2	0

Source: Statistics Norway KOSTRA and the Primary and Lower Secondary School Information System (GSI)

Supplementary table 2.3 to **FIGURE 2.3** Expenses per pupil broken down by number of pupils per school. Adjusted for wage and price increases. Municipal primary and lower secondary schools. Preliminary figures 2011. NOK.

	Number of pupils
0-100	136,791
100-150	110,055
150-200	101,772
200-250	93,141
250-300	89,481
300 or more	85,663

Source: Statistics Norway KOSTRA and the Primary and Lower Secondary School Information System (GSI)

Supplementary table 2.4 to **FIGURE 2.4** Expenses per pupil in upper secondary education and training. Preliminary figures 2011. NOK.

	2011
Total expenses	135,215
Common expenses	66,862
Direct expenses in general studies education programmes	57,605
Direct expenses in vocational education programmes	81,119

Source: Statistics Norway KOSTRA

Supplementary table 2.5 to **FIGURE 2.5** Expenses per pupil in general studies education programmes, adjusted for wage and price increases. 2010 and 2011. 2011 preliminary figures. NOK.

	2010	2011
Østfold	127,110	126,011
Akershus	125,315	122,509
Oslo	133,651	126,461
Hedmark	130,339	127,094
Oppland	123,470	122,439
Buskerud	127,357	119,220
Vestfold	119,906	114,469
Telemark	116,436	116,182
Aust-Agder	124,323	121,627
Vest-Agder	115,928	123,176
Rogaland	119,137	121,706
Hordaland	123,680	120,603
Sogn og Fjordane	148,535	143,485
Møre og Romsdal	118,448	120,717
Sør-Trøndelag	118,606	114,211
Nord-Trøndelag	130,230	135,898
Nordland	132,370	139,135
Troms	142,406	144,585
Finnmark	149,294	149,542
Average for all counties	126,016	124,467

Source: Statistics Norway KOSTRA

Supplementary table 2.6 to **FIGURE 2.6** Expenses per pupil in vocational education programmes, adjusted for wage and price increases. 2010 and 2011. 2011 preliminary figures. NOK.

	2010	2011
Østfold	153,661	152,731
Akershus	152,451	147,532
Oslo	157,543	146,501
Hedmark	153,844	148,579
Oppland	138,810	137,916
Buskerud	152,222	143,932
Vestfold	145,215	137,779
Telemark	141,940	140,909
Aust-Agder	150,444	148,090
Vest-Agder	145,676	139,460
Rogaland	143,603	143,133
Hordaland	148,821	144,429
Sogn og Fjordane	176,856	174,474
Møre og Romsdal	140,747	143,799
Sør-Trøndelag	136,544	131,853
Nord-Trøndelag	160,806	168,642
Nordland	163,160	165,773
Troms	171,019	166,408
Finnmark	163,143	167,386
Average for all counties	150,993	147,981

Source: Statistics Norway KOSTRA

Supplementary table 2.7 to **FIGURE 2.7** Teaching hours per pupil for mainstream education, special needs education and Basic Norwegian for language minorities 2001-2002 to 2011-2012. Number.

	Teaching hours per pupil in mainstream education	Teaching hours per pupil to special needs education and Basic Norwegian for language minorities
2001-2002	43.7	11.9
2002-2003	43.1	12.2
2003-2004	42.2	11.9
2004-2005	42.9	11.9
2005-2006	42.9	11.9
2006-2007	43.1	12.5
2007-2008	43.6	12.9
2008-2009	44.3	13.7
2009-2010	44.6	13.9
2010-2011	44.1	14.3
2011-2012	44.1	14.5

Source: The Primary and Lower Secondary School Information System (GSI)

Supplementary table 2.8 to **FIGURE 2.8** Group size 2 broken down by average school size in the municipality. Municipal primary and lower secondary schools. 2011-2012. Number.

	Number of pupils
0-100	11.0
100-150	14.1
150-200	15.6
200-250	17.1
250-300	17.5
300 or more	18.1

Source: The Primary and Lower Secondary School Information System (GSI)

Supplementary table 2.9 to **FIGURE 2.9** Level of education for staff in primary and lower secondary school who do not have teacher training, broken down by county. 4th quarter 2010. Per cent.

	Upper secondary education and training	Undergraduate university and / or university college degree	Graduate university and / or university college degree
Rogaland	49.0	42.7	8.3
Oslo	50.0	37.9	12.1
Vest-Agder	50.8	42.6	6.6
Hordaland	51.9	35.5	12.6
Sør-Trøndelag	52.6	38.4	9.0
Akershus	54.8	34.8	10.4
Sogn og Fjordane	56.8	35.4	7.9
Telemark	57.0	38.6	4.4
Aust-Agder	57.4	34.9	7.7
Møre og Romsdal	58.2	37.6	4.2
Østfold	59.2	35.4	5.3
Nord-Trøndelag	59.7	34.3	6.0
Buskerud	61.2	32.1	6.6
Troms	61.4	31.6	7.0
Oppland	61.9	30.7	7.4
Hedmark	68.4	25.7	5.9
Vestfold	69.2	25.4	5.4
Finnmark	72.1	24.7	3.1
Nordland	75.7	20.9	3.3
Total	57.9	34.1	8.0

Source: Statistics Norway

Supplementary table 2.10 to **FIGURE 2.10** Distribution of municipalities' percentage of teaching hours that go to special needs education. Municipal primary and lower secondary schools. 2005-2006 to 2011-2012. Number.

	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Under 10 per cent	61	52	45	37	31	24	17
10-15 per cent.	181	173	148	130	112	95	87
15-20 per cent.	144	144	149	156	158	159	166
20-25 per cent.	35	47	69	83	94	110	124
≥25 per cent	9	14	19	24	35	42	36

Source: The Primary and Lower Secondary School Information System (GSI)

Supplementary table 2.11 to **FIGURE 2.11** Distribution of individual decisions on special needs education with a teacher. Number of hours 2011-2012. Per cent.

	2011-2012
Less than two hours a week	6.8
2 to 5 hours a week	49.6
5 to 7 hours a week	18.0
More than 7 hours a week	25.6

Source: The Primary and Lower Secondary School Information System (GSI)

Supplementary table 2.12 to **FIGURE 2.12** Teaching hours per pupil for Basic Norwegian for language minorities, Mother tongue education, Bilingual technical training and Adapted language education. 2006-2007 to 2011-2012. Number.

Year	Basic Norwegian for language minorities by individual decision	Mother tongue education	Bilingual technical training	Adapted language education
2006-2007	2.5	0.5	0.8	0.1
2007-2008	2.4	0.4	0.8	0.1
2008-2009	2.3	0.4	0.9	0.1
2009-2010	2.3	0.3	0.8	0.1
2010-2011	2.3	0.3	0.8	0.1
2011-2012	2.3	0.3	0.8	0.1

Source: The Primary and Lower Secondary School Information System (GSI)

Supplementary table 2.13 to **FIGURE 2.13** Expenses per pupil for special needs education and special adaptation in upper secondary education and training. Adjusted for wage and price increases. 2009-2011. Preliminary figures 2011. NOK.

	2008	2009	2010	2011
Østfold	14,421	15,215	14,635	15,191
Akershus	13,988	14,318	14,396	14,559
Oslo	10,223	10,636	11,483	10,926
Hedmark	13,716	14,825	15,600	15,384
Oppland	12,965	13,976	13,717	13,454
Buskerud	14,867	15,803	15,849	15,294
Vestfold	12,968	15,872	16,322	15,709
Telemark	12,793	13,495	14,262	14,853
Aust-Agder	13,958	14,815	14,965	16,141
Vest-Agder	13,600	13,426	14,092	14,175
Rogaland	10,658	12,338	13,277	14,448
Hordaland	10,933	11,727	11,982	13,090
Sogn og Fjordane	16,527	16,308	16,898	15,166
Møre og Romsdal	10,278	11,227	12,205	13,208
Sør-Trøndelag	12,094	13,384	11,534	12,273
Nord-Trøndelag	10,143	9,486	10,810	11,593
Nordland	15,587	16,392	16,002	16,769
Troms	13,073	13,711	13,865	16,586
Finnmark	12,804	14,376	14,329	15,436
All counties	12,662	13,509	13,745	14,169

Source: Statistics Norway KOSTRA

Supplementary table 2.14 to **FIGURE 2.14** Breakdown of individual decisions on special needs education with assistants. Number of hours 2011-2012. Per cent.

Breakdown of individual decisions on SNE with assistants by number of hours 2011-2012	2011-2012
Less than two hours a week	4
2 to 5 hours a week	24
5 to 7 hours a week	14
More than 7 hours a week	59

Source: The Primary and Lower Secondary School Information System (GSI)

Supplementary table 2.15 to **FIGURE 2.15** Expenses per pupil broken down by main school level. Norway and OECD average. 1999-2008. Figures adjusted for purchasing power and presented in USD.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Primary school, Norway	5,920	6,550	7,404	7,508	7,977	8,533	9,001	9,486	9,922	11,077
Primary school, OECD average	4,148	4,381	4,850	5,313	5,450	5,832	6,252	6,437	6,741	7,153
Lower secondary school, Norway	7,387	8,185	8,365	8,536	9,208	9,476	9,687	10,075	10,603	11,860
Lower secondary school, OECD average	5,210	5,575	5,787	6,089	6,560	6,909	7,437	7,544	7,598	8,498
Upper secondary school, Norway	7,819	8,925	9,840	11,510	12,380	12,498	12,096	12,559	13,132	14,039
Upper secondary school, OECD average	5,919	6,063	6,752	7,121	7,582	7,884	8,366	8,486	8,746	9,396

Source: OECD

Supplementary table 2.16 to **FIGURE 2.16** Expenses per pupil in the OECD countries for 2008. Figures adjusted for purchasing power and presented in USD.

	Primary school	Lower secondary school	Upper secondary school
Australia	6,723	9,200	8,821
Austria	9,542	11,533	11,956
Chile	2,707	2,596	2,548
Czech Republic	3,799	6,338	6,030
Denmark	10,080	10,268	11,160
Estonia	5,579	6,264	6,461
Finland	7,092	10,950	7,461
France	6,267	8,816	12,087
Germany	5,929	7,509	10,597
Hungary	4,495	4,852	4,471
Iceland	10,599	10,100	8,290
Ireland	7,795	10,583	11,205
Italy	8,671	9,616	9,121
Japan	7,491	8,621	9,559
South Korea	5,420	6,307	9,666
Luxembourg	13,648	19,791	20,002
Mexico	2,246	1,853	3,277
Netherlands	7,208	10,608	11,301
New Zealand	5,582	6,071	8,025
Norway	11,077	11,860	14,039
Poland	4,855	4,424	4,613
Portugal	5,234	6,910	7,924
Slovakia	4,137	3,716	4,174
Spain	7,184	9,108	11,113
Sweden	9,080	9,739	10,103
Switzerland	9,063	16,737	18,844
UK	8,758	9,737	9,307
USA	9,982	11,551	12,690
OECD average	7,153	8,498	9,396

Source: OECD

Supplementary table 3.1 to **FIGURE 3.1** Mastering level on national tests in *Mathematics* in Year 5, broken down by county. 2008 to 2011. Average figures.

County	2008	2009	2010	2011
National average	2.0	2.0	2.0	2.0
Akershus	2.1	2.1	2.1	2.1
Aust-Agder	2.0	1.9	1.9	1.9
Buskerud	1.9	2.0	2.0	2.0
Finnmark	1.9	1.8	1.8	1.8
Hedmark	1.9	1.9	2.0	1.9
Hordaland	2.0	2.0	2.0	1.9
Møre og Romsdal	1.9	2.0	2.0	1.9
Nordland	1.9	1.9	1.8	1.8
Nord-Trøndelag	1.9	1.8	1.9	1.8
Oppland	1.9	2.0	2.0	2.0
Oslo	2.1	2.1	2.2	2.1
Rogaland	2.0	2.0	2.0	2.0
Sogn og Fjordane	2.0	2.0	2.1	2.1
Sør-Trøndelag	2.0	2.0	2.0	2.0
Telemark	1.9	1.9	1.9	1.9
Troms	2.0	1.9	1.9	1.9
Vest-Agder	2.0	2.0	2.0	2.0
Vestfold	2.0	2.0	2.0	2.0
Østfold	1.9	1.9	1.9	1.9

Source: The Norwegian Directorate for Education and Training 2011c

Supplementary table 3.2 to **FIGURE 3.2** Examination marks in *Norwegian, first-choice form* in general studies education programmes, broken down by county. 2009-2010 and 2010-2011. Average figures.

County	2009-2010	2010-2011
National average	3.1	3.1
Akershus	3.1	3.1
Aust-Agder	3.0	3.1
Buskerud	3.1	3.1
Finnmark	2.9	2.9
Hedmark	3.0	2.9
Hordaland	3.1	3.2
Møre og Romsdal	3.1	3.1
Nordland	3.0	3.1
Nord-Trøndelag	3.0	2.9
Oppland	3.1	3.0
Oslo	3.2	3.3
Rogaland	3.1	3.0
Sogn og Fjordane	3.2	3.3
Sør-Trøndelag	3.2	3.2
Telemark	3.0	3.0
Troms	3.1	3.1
Vest-Agder	3.0	3.0
Vestfold	3.0	3.0
Østfold	2.9	2.9

Source: The Norwegian Directorate for Education and Training 2011e

Supplementary table 3.3 to **FIGURE 3.3** Passed trade and journeyman's examinations, by county. Preliminary figures 2011. Per cent.

County	Passed with distinction	Passed	Failed
Nordland	37.1	53.0	9.9
Hedmark	30.1	62.2	7.7
Vestfold	28.5	65.0	6.5
Troms	26.7	64.9	8.4
Møre og Romsdal	26.1	67.0	6.9
Telemark	25.9	67.2	6.9
Rogaland	25.7	66.0	8.3
Buskerud	25.0	64.7	10.3
Vest-Agder	24.8	65.4	9.8
Østfold	24.5	62.9	12.5
Finnmark	23.6	68.4	8.0
Oppland	23.1	68.4	8.5
Akershus	22.6	69.2	8.2
Nord-Trøndelag	21.2	69.1	9.7
Aust-Agder	20.2	68.4	11.5
Sogn og Fjordane	18.8	73.2	8.0
Sør-Trøndelag	18.7	69.9	11.4
Hordaland	17.1	72.1	10.8
Oslo	16.3	67.4	16.3

Source: Statistics Norway

Supplementary table 3.4 to **FIGURE 3.4** Mastering level on national tests in *English* in Year 8. 2008 to 2011. National level and the 12 largest municipalities. Average figures.

Municipality	2008	2009	2010	2011
National average	3.0	3.0	3.0	3.0
Asker	3.3	3.3	3.4	3.4
Bergen	3.2	3.2	3.1	3.1
Bærum	3.5	3.4	3.5	3.5
Drammen	3.0	2.8	3.1	3.1
Fredrikstad	2.9	2.8	2.9	2.9
Kristiansand	3.0	3.0	2.8	2.9
Oslo	3.2	3.3	3.2	3.3
Sandnes	3.0	3.0	3.1	3.0
Sarpsborg	2.8	2.8	2.8	2.8
Stavanger	3.2	3.3	3.3	3.3
Tromsø	3.2	3.2	3.2	3.1
Trondheim	3.1	3.0	3.1	3.1

Source: The Norwegian Directorate for Education and Training 2011b

Supplementary table 3.5 to **FIGURE 3.5** Pupils exempted from national tests in *Reading* in Year 5, broken down by county. 2008 to 2011. Per cent.

County	2008	2009	2010	2011
National average	2.6	3.6	4.0	4.7
Akershus	2.0	2.0	2.7	3.6
Aust-Agder	6.1	4.0	6.2	5.9
Buskerud	3.2	4.4	4.5	4.6
Finnmark	1.8	2.6	3.2	7.2
Hedmark	3.9	4.8	5.0	6.5
Hordaland	2.3	2.9	3.2	4.0
Møre og Romsdal	1.8	2.7	3.0	3.3
Nordland	2.9	4.5	3.7	4.6
Nord-Trøndelag	2.4	3.3	3.1	3.4
Oppland	2.5	3.9	3.5	4.4
Oslo	3.5	7.0	6.6	6.1
Rogaland	2.1	3.2	3.8	5.0
Sogn og Fjordane	1.9	3.8	2.9	3.9
Sør-Trøndelag	1.7	2.3	3.1	4.4
Telemark	2.7	2.5	4.8	5.8
Troms	2.6	3.5	5.3	4.9
Vest-Agder	3.4	2.7	4.6	5.0
Vestfold	3.5	3.6	4.1	4.5
Østfold	2.2	3.2	3.6	4.7

Source: PAS/The Norwegian Directorate for Education and Training 2011a

Supplementary table 3.6 to **FIGURE 3.6** 15-year-old boys and girls who scored below level 2 in the digital reading test in PISA 2009. The Nordic countries and the OECD average. Per cent.

Country	Boys	Girls
Norway	18	8
Denmark	17	16
Iceland	17	4
Sweden	17	9
OECD average	21	13

Source: Frønes et al. 2011

Supplementary table 3.7 to **FIGURE 3.7** Examination marks in Year 10 of the 2010-2011 school year, broken down by subject and gender. Average figures.

Subject / examination	Boys	Girls
English, written	3.6	4.0
English, oral	4.2	4.5
In-depth study in English, oral	3.9	4.2
French 1, oral	3.8	4.4
Spanish 1, oral	3.9	4.4
German 1, oral	3.9	4.3
Mathematics written	3.1	3.2
Mathematics, oral	4.0	4.2
Natural sciences, oral	4.1	4.4
In-depth study in Norwegian, oral	3.5	4.1
First-choice form of Norwegian, written	3.2	3.8
Second-choice form of Norwegian, written	3.0	3.4
Norwegian, oral	4.1	4.7
Religion, Philosophy and Ethics, oral	4.2	4.7
Social Studies, oral	4.1	4.5

Source: The Norwegian Directorate for Education and Training 2011d

Supplementary table 3.8 to **FIGURE 3.8** Outcomes from national tests in Year 8 in the autumn of 2011, broken down by tests, the level of education of the parents and mastering level. Per cent.

Test	The parents' education	Mastering level 1	Mastering level 2	Mastering level 3	Mastering level 4	Mastering level 5
ENGLISH	University or university college degree	5	16	39	24	17
	No university or university college degree	13	27	38	15	7
	Level of education unknown	21	29	29	13	8
READING	University or university college degree	4	13	36	27	20
	No university or university college degree	11	26	39	17	7
	Level of education unknown	27	29	27	11	5
MATHEMATICS	University or university college degree	3	13	41	25	19
	No university or university college degree	9	26	43	15	7
	Level of education unknown	15	28	37	13	7

Source: Statistics Norway 2012

Supplementary table 3.9 to **FIGURE 3.9** Lower secondary school points, by immigration category and national background. 2010-2011. Average figures.

Immigration category / national background	Lower secondary school points
Immigrants, Africa, Asia etc.	34.0
Immigrants, EU etc.	36.4
Norwegian-born pupils with immigrant parents, Africa, Asia etc.	38.7
Rest of the population	40.3
Norwegian-born pupils with immigrant parents, EU etc.	41.8

Source: Statistics Norway 2011a

Supplementary table 3.10 to **FIGURE 3.10** Overall achievement marks in *Mathematics* in Year 10 in 2011, by the mastering level of the pupils in national tests in *Mathematics* in Year 8 in 2008. Per cent.

Marks in Mathematics in Year 10 in 2011	National tests in Mathematics in Year 8 in 2008					
	MASTERING LEVEL 1	MASTERING LEVEL 2	MASTERING LEVEL 3	MASTERING LEVEL 4	MASTERING LEVEL 5	UNKNOWN MASTERING LEVEL/DID NOT PARTICIPATE
1	13.0	4.2	0.6	0.1	0.0	6.3
2	65.8	46.4	14.8	2.0	0.3	31.8
3	18.9	38.2	37.6	14.4	3.3	27.4
4	2.1	10.2	34.2	36.7	15.8	19.5
5	0.2	1.1	12.1	39.9	49.7	12.1
6	0.0	0.0	0.7	6.9	31.0	2.9

Source: Statistics Norway 2011a

Supplementary table 5.1 to **FIGURE 5.2** Pupils in vocational programmes in Vg1 by county. 2010-2011. Number.

	General studies	Vocational studies	Other vocational programmes
Oslo	4,586	2,402	34.4
Akershus	4,231	4,005	48.6
Buskerud	1,939	1,928	49.9
Vestfold	1,777	1,847	51.0
Sør-Trøndelag	2,176	2,455	53.0
Telemark	1,337	1,534	53.4
Møre og Romsdal	1,800	2,225	55.3
Hordaland	3,523	4,456	55.8
Rogaland	3,200	4,084	56.1
Aust-Agder	771	992	56.3
Hedmark	1,233	1,628	56.9
Sogn og Fjordane	777	1,054	57.6
Vest-Agder	1,243	1,699	57.7
Østfold	1,665	2,346	58.5
Oppland	1,118	1,655	59.7
Nord-Trøndelag	928	1,417	60.4
Nordland	1,579	2,424	60.6
Troms	1,031	1,586	60.6
Finnmark	468	843	64.3
All counties	35,382	40,580	53.4

Source: Norwegian Directorate for Education and Training 2012

Supplementary table 5.2 to **FIGURE 5.4** Pupils and apprentices who complete and pass within five years. The national trend seen in light of the national objective specified in the Ny GIV project. The 1999-2010 age cohorts. Per cent.

	National trend	National goal
1999 age cohort	70	
2000 age cohort	67	
2001 age cohort	69	
2002 age cohort	69	
2003 age cohort	68	
2004 age cohort: zero point	69	69
2005 age cohort	70	70
2006 age cohort		71
2007 age cohort		72
2008 age cohort		73
2009 age cohort		74
2010 age cohort: national goal		75

Source: *Gjennomføringsbarometeret 2012:1* (the Norwegian Report on Upper Secondary Completion 2012:1)

Supplementary table 5.3 to **FIGURE 5.5** Completed and passed within two years beyond the stipulated time for the 2004 age cohort, by county and type of education programme. Per cent.

	Total	General studies	Vocational studies
Finnmark	55.1	68.5	45.0
Troms	64.9	75.8	57.0
Nordland	67.0	81.1	56.3
Østfold	67.3	84.2	54.8
Aust-Agder	67.4	78.8	58.5
Hedmark	67.6	83.6	54.8
Vestfold	68.0	81.7	55.6
Buskerud	69.6	83.4	58.1
Oppland	70.3	85.7	59.7
Nord-Trøndelag	70.6	84.4	59.0
Telemark	71.9	84.0	62.2
Hordaland	73.9	83.4	66.5
Vest-Agder	74.4	85.3	66.6
Oslo	74.5	84.0	59.1
Akershus	74.8	83.8	64.3
Sør-Trøndelag	75.2	85.5	65.6
Møre og Romsdal	75.4	84.9	67.9
Rogaland	75.7	84.6	68.9
Sogn og Fjordane	78.8	88.8	70.6
Abroad and unspecified	48.4	49.4	47.7
National average	71.6	83.0	61.7

Source: Statistics Norway

Supplementary table 5.4 to **FIGURE 5.6** Completion after the stipulated time + two years for the 1998-2004 age cohorts, by education programme. Per cent.

		Completed in stipulated time	Completed in stipulated time + 2 years	Still in upper secondary education and training	Completed Vg3 or took trade examination, failed	Quit under way	Totally completed in 2004
GENERAL STUDIES	1998	75	9	3	5	8	72
	1999	76	8	3	5	8	72
	2000	73	9	3	7	8	72
	2001	75	7	3	6	8	72
	2002	76	7	3	7	7	72
	2003	75	9	2	8	7	72
	2004	74	9	2	7	7	72
VOCATIONAL STUDIES	1998	40	22	4	4	29	72
	1999	40	21	5	5	29	72
	2000	37	23	6	6	28	72
	2001	40	21	6	7	27	72
	2002	39	21	5	8	27	72
	2003	40	22	5	7	25	72
	2004	40	22	4	7	27	72

Source: Statistics Norway 2012

Supplementary table 5.5 to **FIGURE 5.7** Competence achievement among the pupils in the 2004 age cohort who do not complete and pass within the stipulated time plus two years. Per cent.

		Still in upper secondary education and training	Vg3 / Apprenticeship	Vg2	Basic course
GENERAL STUDIES	Only started	2.4	1.2	0.8	0.5
	Completed, failed		7.4	1.2	1.9
	Passed			0.7	0.8
VOCATIONAL STUDIES	Only started	4.0	6.3	2.4	2.2
	Completed, failed		7.3	5.7	4.1
	Passed			4.5	1.7
TOTAL	Only started	3.3	3.9	1.7	1.4
	Completed, failed		7.4	3.6	3.1
	Passed			2.7	1.3

Source: Statistics Norway

Supplementary table 5.6 to **FIGURE 5.8** The percentage who have completed and passed in the 1994 to 2005 age cohort by number of years since commencement of study. Per cent.

Age cohort	5 years	6 years	7 years	8 years	9 years	10 years
1994 age cohort	68.2	72.9	74.8	76.0	76.9	77.5
1995 age cohort	69.1	73.8	75.5	76.6	77.5	78.1
1996 age cohort	70.0	74.6	76.5	77.8	78.6	79.1
1997 age cohort	71.2	75.3	77.1	78.3	78.9	79.4
1998 age cohort	71.4	75.5	77.2	78.1	78.9	79.4
1999 age cohort	71.2	74.9	76.5	77.7	78.5	79.1
2000 age cohort	70.0	73.7	75.5	76.7	77.6	78.3
2001 age cohort	69.6	73.2	75.1	76.4	77.2	
2002 age cohort	68.7	72.6	74.6	75.8		
2003 age cohort	68.6	72.3	74.2			
2004 age cohort	69.0	72.5				
2005 age cohort	69.3					

*Includes pupils abroad (unlike the figures in *Skoleporten* [the School Portal]) Source: Statistics Norway

Supplementary table 5.7 to **FIGURE 5.9** The percentage who have completed and passed within five years in the 2005 age cohort compared with the 2000 age cohort, by county. Per cent.

County	2000 age cohort, 5 years	2000 age cohort, 6 years	2000 age cohort, 7 years	2000 age cohort, 8 years	2000 age cohort, 9 years	2000 age cohort, 10 years	2005 age cohort, 5 years
Finnmark	52	58	61	64	65	65.6	51.5
Troms	60	64	67	68	70	71.0	62.3
Nordland	61	65	68	70	71	72.4	64.3
Hedmark	68	71	73	74	75	75.4	64.9
Østfold	68	71	73	74	74	74.9	65.0
Aust-Agder	70	74	76	77	78	78.4	66.9
Telemark	71	75	76	78	79	79.2	68.4
Oppland	73	75	77	78	79	79.1	68.4
Vestfold	68	72	73	75	76	76.4	68.8
Buskerud	71	74	75	76	76	76.8	69.0
Nord-Trøndelag	74	77	79	81	82	82.3	69.1
Hordaland	72	76	77	79	79	80.2	70.3
Vest-Agder	75	78	80	81	81	81.6	71.3
Sør-Trøndelag	75	79	81	82	82	82.9	72.0
Rogaland	71	75	77	79	79	80.2	72.4
Oslo	72	75	77	78	79	79.1	73.0
Akershus	72	75	77	78	79	79.9	73.5
Møre og Romsdal	74	77	79	81	81	82.0	73.8
Sogn og Fjordane	75	80	82	84	85	85.3	75.2

Source: Statistics Norway

Supplementary table 5.8 to **FIGURE 5.10** The percentage who have completed and passed in the 2005 age cohort compared with the 2000 age cohort, by area of study. Per cent.

Area of study	2000 age cohort, 5 years	2000 age cohort, 6 years	2000 age cohort, 7 years	2000 age cohort, 8 years	2000 age cohort, 9 years	2000 age cohort, 10 years	2005 age cohort, 5 years
Woodworking	36	40	44	46	48	49	33.3
Hotel and Catering	45	50	52	54	55	56	42.1
Mechanical Subjects	42	48	51	53	54	55	46.7
Technical Construction and Building	51	56	58	59	61	62	52.2
Agriculture, Fishing and Forestry	55	58	59	61	63	64	53.1
Sales and Service	58	62	64	66	67	67	54.4
Construction and Building	55	60	63	64	65	66	55.4
Arts, Crafts and Design Studies	65	69	71	73	74	75	57.9
Health and Social Care	61	64	66	67	68	69	59.0
Electricity and Electronics	58	68	72	74	76	77	62.4
Chemistry and Processing	74	79	80	82	83	83	74.9
Media and Communication	82	83	85	85	86	86	82.5
General, Business and Administration Studies	82	85	86	87	87	88	82.7
Sports and Physical Education	82	84	86	87	88	88	84.0
Music, Dance and Drama	90	92	93	93	93	93	89.6

Source: Statistics Norway

Supplementary table 5.9 to **FIGURE 5.11** The percentage who have completed and passed within five years in the 2005 age cohort, by type of education programme and number of lower secondary school points. Per cent.

Lower secondary school points	General studies by lower secondary school points	Vocational studies by lower secondary school points	General studies total	Vocational studies total	Breakdown of marks, general studies	Breakdown of marks, vocational studies	General studies, number	Vocational, number
<25	7	7	83	57	1.1	5.0	304	1,540
25-29	12	19	83	57	0.9	8.6	268	2,664
30-34	27	34	83	57	2.3	16.7	659	5,164
35-39	49	52	83	57	6.2	22.5	1,777	6,964
40-44	73	71	83	57	14.4	21.5	4,095	6,662
45-49	87	84	83	57	24.7	15.6	7,041	4,821
50-54	95	92	83	57	30.8	7.9	8,792	2,454
55-66	98	99	83	57	19.5	2.2	5,567	694

Source: *Gjennomføringsbarometeret 2012:1* (the Norwegian Report on Upper Secondary Completion 2012:1)

Supplementary table 5.10 to **FIGURE 5.12** Pupils in Vg1 who begin in Vg2 or Vg3/apprenticeship. The national trend in light of the national objective specified in the Ny GIV project. Per cent.

	General studies	Vocational studies	National trend	National goal
2007	86.5	75.0	80.9	
2008	86.8	76.5	82.0	
2009	86.5	77.3	82.3	
2010 zero point	88.0	78.8	83.8	83.8
2011				84.5
2012				85.1
2013 national goal				85.8

Source: *Gjennomføringsbarometeret 2012:1* (the Norwegian Report on Upper Secondary Completion 2012:1)

Supplementary table 5.11 to **FIGURE 5.13** Pupils in Vg2 who begin in Vg3 or apprenticeship. The national trend in light of the national objective specified in the Ny GIV project. Per cent.

	General studies	Vocational studies	National trend	National goal
2007	92.9	69.9	80.3	
2008	94.1	67.0	79.6	
2009	93.8	65.5	78.9	
2010 zero point	93.8	67.8	79.9	79.9
2011				80.6
2012				81.2
2013 national goal				81.9

Source: *Gjennomføringsbarometeret 2012:1* (the Norwegian Report on Upper Secondary Completion 2012:1)

Supplementary table 5.12 to **FIGURE 5.14** Pupils in Vg2 vocational programmes, broken down by educational activity the following year. 2007-2010. Per cent.

	Transition to apprenticeship	Transition to educational path that gives vocational qualifications	Transition to a supplementary year qualifying for higher education	Transition to an educational path qualifying for higher education in a vocational education programme	Other	Out of upper secondary education and training for one year	Repetition at a lower or the same level of education	Ordinary progression
2007	31.7	16.0	15.6	5.7	0.8	23.8	6.3	69.8
2008	33.6	7.0	18.4	6.9	1.1	26.0	7.0	67.0
2009	30.3	7.5	20.3	7.2	0.2	26.3	8.1	65.5
2010	30.2	7.3	21.3	7.4	1.7	24.6	7.5	67.9

Source: *Skoleporten* (The School Portal)

Supplementary table 5.13 to **FIGURE 5.15** Pupils in Vg3 who complete and pass or begin an apprenticeship. The national trend in light of the national objective specified in the Ny GIV project. Per cent.

	General studies	Vocational studies	National trend	National goal
2007	70.4	65.5	69.4	
2008	73.3	70.3	72.7	
2009	74.6	66.9	73.6	
2010 zero point	71.2	67.6	70.8	70.8
2011				71.5
2012				72.1
2013 national goal				72.8

Source: *Gjennomføringsbarometeret 2012:1* (the Norwegian Report on Upper Secondary Completion 2012:1)

Supplementary table 5.14 to **FIGURE 5.16** Young people up to age 21 who have the youth right and who are reported to OT, by county. Status as per 1 February 2012. Per cent.

	Young people in OT's target group	Young people with the youth right	Percentage who are reported to OT
Sogn og Fjordane	349	5,246	6.7
Akershus	1,732	25,743	6.7
Oslo	1,252	18,257	6.9
Oppland	608	8,234	7.4
Møre og Romsdal	960	11,889	8.1
Hordaland	1,899	22,509	8.4
Rogaland	1,795	20,969	8.6
Nord-Trøndelag	567	6,526	8.7
Telemark	691	7,916	8.7
Vest-Agder	728	8,255	8.8
Vestfold	1,030	11,037	9.3
Hedmark	833	8,705	9.6
Sør-Trøndelag	1,351	13,088	10.3
Aust-Agder	547	5,232	10.5
Buskerud	1,220	11,543	10.6
Østfold	1,388	12,802	10.8
Troms	918	7,885	11.6
Nordland	1,668	12,288	13.6
Finnmark	554	3,749	14.8
Total	**20 090**	**221 873**	**9.1**

Source: The Norwegian Directorate for Education and Training

Supplementary table 5.15 to **FIGURE 5.17** Reasons for reporting cases to OT, total and by age. 2011-2012. Status as per 1 February 2012. Per cent.

Age in 2010:	Total	<=16	17	18	19	20	21
Did not apply	10,064	175	653	1,642	3,076	3,544	974
Declined a place	4,827	513	842	1,708	1,100	554	110
Interruption	3,120	711	705	815	551	249	89
Other reasons	1,475	115	140	559	397	194	70
Data missing and/or unknown code	604	89	115	136	121	86	57
Total in target group reported to OT	20,090	1,603	2,455	4,860	5,245	4,627	1,300

Source: The Norwegian Directorate for Education and Training

Supplementary table 5.16 to **FIGURE 5.18** Young people in OT broken down by status codes and county. 2011-2012. Status as per 1 February 2012. Per cent.

	Unknown	Receiving follow-up and guidance	Young people are involved in an activity	OT is not working actively with the young person	Total young people in OT's target group
Østfold	91	443	577	277	1,388
Akershus	330	396	591	415	1,732
Oslo	647	77	287	241	1,252
Hedmark	152	206	314	161	833
Oppland	6	177	278	147	608
Buskerud	340	168	486	226	1,220
Vestfold	56	183	500	291	1,030
Telemark	79	117	209	286	691
Aust-Agder	43	91	230	183	547
Vest-Agder	50	202	324	152	728
Rogaland	171	389	770	465	1,795
Hordaland	614	467	439	379	1,899
Sogn og Fjordane	14	83	152	100	349
Møre og Romsdal	126	193	346	295	960
Sør-Trøndelag	321	391	373	266	1,351
Nord-Trøndelag	63	162	204	138	567
Nordland	430	306	605	327	1,668
Troms	236	179	307	196	918
Finnmark	156	143	129	126	554
Total	**3,925**	**4,373**	**7,121**	**4,671**	**20,090**

Source: The Norwegian Directorate for Education and Training

Supplementary table 5.17 to **FIGURE 5.19** Young people registered in OT in 2010–2011 who are also registered in OT the following year. Status as per 1 February 2012. Per cent.

	Number of repeaters	Young people reported to OT	Percentage of repeaters
Østfold	601	1659	36.2
Akershus	681	1784	38.2
Oslo	390	993	39.3
Hedmark	343	755	45.4
Oppland	234	588	39.8
Buskerud	528	1279	41.3
Vestfold	473	1162	40.7
Telemark	339	768	44.1
Aust-Agder	251	520	48.3
Vest-Agder	297	650	45.7
Rogaland	776	1781	43.6
Hordaland	759	1826	41.6
Sogn og Fjordane	126	315	40.0
Møre og Romsdal	379	948	40.0
Sør-Trøndelag	564	1410	40.0
Nord-Trøndelag	274	800	34.3
Nordland	712	1841	38.7
Troms	296	809	36.6
Finnmark	180	455	39.6
Total	**8 203**	**20 343**	**40.3**

Source: The Norwegian Directorate for Education and Training

Supplementary table 5.18 to **FIGURE 5.20** The employment status as per November 2010for skilled workers who earned a trade or journeyman's certificate in the2009-2010 school year, broken down by type of graduate. Per cent.

	Total	Employed	In education and training	Unemployed or not in education and training	Percentage in employment	Percentage in education and training	Percentage unemployed or not in education and training
Apprentice	14,044	10,778	1,918	1,348	76.7	13.7	9.6
Candidates for experience-based trade certification	6,676	6,179	169	328	92.6	2.5	4.9
Pupil	283	207	43	33	73.1	15.2	11.7
Total	**21 003**	**17 164**	**2 130**	**1 709**	**81.7**	**10.1**	**8.1**

Source: Statistics Norway

Supplementary table 5.19 to **FIGURE 5.21** The employment status as per November 2010 for apprentices and/or pupils who earned a trade or journeyman's certificate in the 009-2010 school year, broken down by county. Per cent.*

	Total number of pupils	Employed	In education and training	Unemployed or not in education and training	Not stated
Møre og Romsdal	1,016	67.1	26.7	6.2	0.0
Vestfold	618	72.7	18.4	8.9	0.0
Oppland	513	73.5	14.0	12.5	0.0
Hordaland	1,655	75.0	15.2	9.8	0.0
Oslo	954	76.2	10.7	13.1	0.0
Sør-Trøndelag	952	76.5	13.8	9.8	0.0
Akershus	940	76.5	14.4	9.1	0.0
Nord-Trøndelag	477	76.7	12.8	10.5	0.0
Rogaland	1,981	76.8	13.9	9.3	0.0
Hedmark	424	77.4	12.5	10.1	0.0
Sogn og Fjordane	417	78.7	12.5	8.9	0.0
Buskerud	665	78.8	10.7	10.5	0.0
Telemark	537	79.1	10.8	10.1	0.0
Vest-Agder	723	79.5	9.3	11.2	0.0
Aust-Agder	348	79.9	0.0	0.0	20.1
Østfold	631	80.8	6.3	12.8	0.0
Nordland	851	81.1	11.8	7.2	0.0
Troms	454	81.5	11.7	6.8	0.0
Finnmark	171	85.4	0.0	0.0	14.6
Total	**14 327**	**76.7**	**13.7**	**9.6**	**0.0**

Source: Statistics Norway * The category "unspecified" means that at least one of the categories "in education and training" or "unemployed or not in education and training" includes too few individuals to allow the number, according to Statistics Norway's guidelines, to be published.

Supplementary table 5.20 to **FIGURE 5.22** The employment status as per November 2010 for apprentices and/or pupils in the Knowledge Promotion Reform who earned a trade or journeyman's certificate in the 2009-2010 school year, broken down by education programme. Per cent.*

	Total number of pupils	Employed	In education and training	Unemployed or not in education and training	Not stated
Service and Transport	770	64.3	22.5	13.2	0.0
Technical and/or Industrial Production	2,193	65.4	21.5	13.1	0.0
Agriculture, Fishing and Forestry	141	66.7	0.0	0.0	33.3
Media and Communication	64	67.2	28.1	4.7	0.0
Electricity and Electronics	215	70.2	0.0	0.0	29.8
Restaurant and Food Processing	668	74.3	14.2	11.5	0.0
Building and Construction	1,282	77.5	13.9	8.7	0.0
Health and Social Care	1,425	79.0	12.9	8.1	0.0
Design, Arts and Crafts	348	80.7	0.0	0.0	19.3
The total Knowledge Promotion Reform	**7 106**	**72.0**	**15.7**	**9.8**	**2.5**

Source: Statistics Norway * The category "unspecified" means that at least one of the categories "in education and training" or "unemployed or not in education and training" includes too few individuals to allow the number, according to Statistics Norway's guidelines, to be published.

Supplementary table 5.21: The employment status as per November 2010 for apprentices and/or pupils who earned a trade or journeyman's certificate in the 2009-2010 school year, broken down by area of study (R94). Per cent.

	Total number of pupils	Employed	In education and training	Unemployed or not in education and training	Not stated
Chemistry and Processing	25	60.0	16.0	24.0	0.0
General, Business and Administration Studies	101	64.4	19.8	15.8	0.0
Sales and Service	230	74.8	13.9	11.3	0.0
Agriculture, Fishing and Forestry	101	78.2	0.0	0.0	21.8
Hotel and Catering	269	78.4	7.8	13.8	0.0
Electricity and Electronics	2,502	79.3	12.6	8.1	0.0
Health and Social Care	349	79.9	6.0	14.0	0.0
Mechanical Subjects	1,367	80.4	11.1	8.5	0.0
Media and Communication	73	80.8	0.0	0.0	19.2
Arts, Crafts and Design Studies	512	85.7	0.0	0.0	14.3
Construction and Building	1,148	86.5	6.8	6.7	0.0
Technical Construction and Building	477	88.3	4.8	6.9	0.0
Woodworking	67				
Total R94	**7,221**	**80.6**	**9.2**	**7.8**	**2.4**

Source: Statistics Norway

Supplementary table 5.22 to **FIGURE 5.23** At least 35 agreed working hours as per November 2010 for those who earned a trade or journeyman's certificate in the 2009-2010 school year, broken down by education programme.

	Total	35 <= agreed working hours	Percentage where 35 <= agreed working hours
Health and Social Care	2,415	793	32.8
Design, Arts and Crafts	304	183	60.2
Restaurant and Food Processing	655	440	67.2
Service and Transport	1,199	865	72.1
Technical and/or Industrial Production	1,805	1,385	76.7
Agriculture, Fishing and Forestry	131	101	77.1
Building and Construction	1,551	1,278	82.4
Electricity and Electronics	222	192	86.5
Media and Communication	51	32	62.7
Total	**8,333**	**5,269**	**63.2**

Source: Statistics Norway

Supplementary table 6.1 to **FIGURE 6.4** Are you satisfied at your workplace?

	Very satisfied	Satisfied
Carpentry	54.37	37.54
Hairdressing	39.64	43.79
Electrical Installation and Maintenance	42.22	49.38
Child Care and Youth Work	53.23	33.08
Health Work	43.6	40.8

Source: Directorate for Education and Training 2010b

Supplementary table 6.2 to **FIGURE 6.5** To what extent do you get regular guidance and feedback in your professional development?

	To a very great extent or a great extent				
	CARPENTRY	HAIRDRESSING	ELECTRICAL INSTALLATION AND MAINTENANCE	CHILD CARE AND YOUTH WORK	HEALTH WORK
Instructor and/or supervisor	51.64	55.95	32.85	69.47	47.83
Colleague	51.64	57.83	45.21	46.97	46.85

Source: Directorate for Education and Training 2010b

Supplementary table 6.3 to **FIGURE 6.6** How many organised assessment interviews have you had with an instructor?

	None	One	Two	Three or more
Carpentry	21.38	13.16	29.61	35.86
Hairdressing	8.98	19.16	28.74	43.11
Electrical Installation and Maintenance	16.79	22.31	34.09	26.82
Child Care and Youth Work	4.58	19.08	21.37	54.96
Health Work	7	13.17	28.81	51.03

Source: Directorate for Education and Training 2010b

Supplementary table 6.4 to **FIGURE 6.7** To what extent do you and the instructor and/or supervisor use the curriculum when you are going to plan and assess the education and training?

	To a very great extent	To a great extent	To some extent
Carpentry	7.14	22.4	32.47
Hairdressing	9.52	32.14	34.52
Electrical Installation and Maintenance	3.23	14.14	34.99
Child Care and Youth Work	22.81	34.98	25.1
Health Work	9.2	32.8	31.2

Source: Directorate for Education and Training 2010b

Supplementary table 6.5 to **FIGURE 6.8** To what extent do you find that the factors below are important for your learning?

	To a very great extent or a great extent
Use of reference works, technical books and/or manuals	54.18
Guidance from the instructor	80.31
Guidance from colleagues at the workplace	84.74
Practical work	95.34
Assessment of performed work	82.79
Text book and/or training manual, file, log or other written documentation	39.10
Self-assessment	61.53
Digital teaching aids	47.78

Source: Directorate for Education and Training 2010b

Supplementary table 7.1 to **FIGURE 7.1** Children in day-care centres, ages 0-6. 1965-2011. Preliminary figures 2011.

	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010	2011
Children in day-care centres (ages 0-6)	9,053	12,711	30,479	78,189	98,454	139,350	188,213	189,837	223,501	277,139	282,735

Source: Gullbrandsen 2007 and Statistics Norway, Day-care centre statistics

Supplementary table 7.2 to **FIGURE 7.2** The number of ordinary day-care centres, cooperative nurseries and open day-care centres. 2003-2011. Preliminary figures 2011.

2003	5,924
2004	6,035
2005	6,278
2006	6,436
2007	6,622
2008	6,705
2009	6,675
2010	6,579
2011	6,469

Source: Statistics Norway, Day-care centre statistics

Supplementary table 7.3 to **FIGURE 7.3** Children in day-care centres, ages 1-5, 1-2 and 3-5. 2003-2011. Preliminary figures 2011. Per cent.

	2003	2004	2005	2006	2007	2008	2009	2010	2011
Ages 1-5	69	72	76	80	84	87	89	89	90
Ages 1-2	44	48	54	62	69	75	77	79	80
Ages 3-5	85	88	91	93	95	96	96	97	97

Source: Statistics Norway, Day-care centre statistics

Supplementary table 7.4 to **FIGURE 7.4** Children from a language minority in day-care centres, ages 1-5. 2005-2011. Preliminary figures 2011. Per cent.

	Age 1-5	Age 5	Age 4	Age 3	Age 2	Age 1
2005	54	83	79	62	31	19
2006	58	88	82	66	36	20
2007	63	91	86	72	43	26
2008	68	93	91	76	49	30
2009	71	95	92	82	56	33
2010	72	95	93	84	57	34
2011	73	96	94	84	59	37

Source: Statistics Norway, Day-care centre statistics

Supplementary table7.5 to **FIGURE 7.5** Children in day-care centres, by age and county. Preliminary figures 2011. Per cent.

	1-year-olds	2-year-olds	3-year-olds	4-year-olds	5-year-olds
National average	71	88	95	97	97
Østfold	67	83	92	96	96
Akershus	74	89	96	97	98
Oslo	67	81	90	95	95
Hedmark	71	91	96	98	98
Oppland	69	88	97	98	100
Buskerud	71	86	95	97	98
Vestfold	73	88	94	96	97
Telemark	71	90	96	97	98
Aust-Agder	65	85	95	98	99
Vest-Agder	67	86	95	98	97
Rogaland	67	88	96	97	96
Hordaland	68	89	96	97	97
Sogn og Fjordane	70	93	98	99	99
Møre og Romsdal	73	92	97	99	99
Sør-Trøndelag	78	93	98	99	99
Nord-Trøndelag	78	94	99	99	100
Nordland	78	92	97	99	97
Troms	78	92	98	98	98
Finnmark	79	89	94	95	95

Source: Statistics Norway, Day-care centre statistics and Population statistics

Supplementary table 7.6 to **FIGURE 7.6** Agreed and actual hours in day-care for 1-5-year-olds. 2010. Per cent.

	Full-time (41 hours or more)	Long part-time (25-40 hours)	Short part-time (less than 25 hours)
Agreed	85	12	3
Actual	19	71	10

Source: Moafi and Bjørkli 2011

Supplementary table 7.7 to **FIGURE 7.7** Actual hours in day-care for one-year-olds, five-year-olds and 1-5 year-olds. 2010. Per cent.

	Short part-time (less than 25 hours)	Long part-time (25-40 hours)	Full-time (41 hours or more)
All children	10	71	19
One-year-olds	9	72	19
Five-year-olds	9	73	18

Source: Moafi and Bjørkli 2011

Supplementary table 7.8 to **FIGURE 7.8** Day-care centres, broken down by the size of the day-care centre. 2007-2011. Preliminary figures 2011.

	2007	2008	2009	2010	2011
1-25 children	2,603	2,497	2,351	2,197	2,007
26-50 children	1,790	1,838	1,834	1,794	1,826
51-75 children	1,468	1,498	1,548	1,570	1,571
76 or more children	630	731	800	872	936

Ordinary day-care centres and cooperative nurseries and day-care centres that are not open are included in the figures for day-care centres. Source: Statistics Norway, Day-care centre statistics

Supplementary table 7.9 to **FIGURE 7.9** Children in day-care centres, broken down by the size of the day-care centre. 2007-2011. Preliminary figures 2011. Per cent.

	2007	2008	2009	2010	2011
1-25 children	14	12	11	10	9
26-50 children	27	26	25	24	24
51-75 children	36	35	35	35	34
76 or more children	24	26	28	31	33
	100.0	100.0	100.0	100.0	100.0

Source: Statistics Norway, Day-care centre statistics

Supplementary table 7.10 to **FIGURE 7.10** Parents who are satisfied or very satisfied with various conditions at the day-care centre. 2010. Per cent.

	One-year-olds	All
Group size	56	71
Indoor environment	50	67
Outside areas	54	71
Way of meeting the parents	60	79
Care of the children	64	85
The staff's educational qualifications	58	75
Information about the child from staff	58	76
Open hours	59	82
Travel distance between place of study and/or work and day-care centre	47	67
Travel distance between home and day-care centre	57	80

Source: Moafi and Bjørkli 2011

Supplementary table 7.11 to **FIGURE 7.11** Day-care centre staff, broken down by occupational groups. Preliminary figures 2011. Per cent.

Supervisors	8
Educational supervisors	27
Assistants	49
Bilingual assistants	1
Administrative and mercantile staff	2
Other staff	7
Other paid assistants (caretaker, cleaning staff, etc.)	6

Source: Statistics Norway, Day-care centre statistics

Supplementary table 7.12 to **FIGURE 7.12** Day-care centre staff, by education. Preliminary figures 2011. Per cent.

Pre-school teacher education	32.0
Other teacher training	4.0
Child Care and Youth Work education	12.0
Other background	43.0
Unspecified	8.0

Source: Statistics Norway, Day-care centre statistics

Supplementary table 7.13 to **FIGURE 7.13** Supervisors and educational supervisors without an approved degree, broken down by county. Preliminary figures 2011. Per cent.

National average	13
Østfold	5
Akershus	27
Oslo	25
Hedmark	5
Oppland	13
Buskerud	12
Vestfold	5
Telemark	6
Aust-Agder	7
Vest-Agder	7
Rogaland	19
Hordaland	6
Sogn og Fjordane	10
Møre og Romsdal	15
Sør-Trøndelag	4
Nord-Trøndelag	3
Nordland	9
Troms	10
Finnmark	16

Source: Statistics Norway, Day-care centre statistics

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