



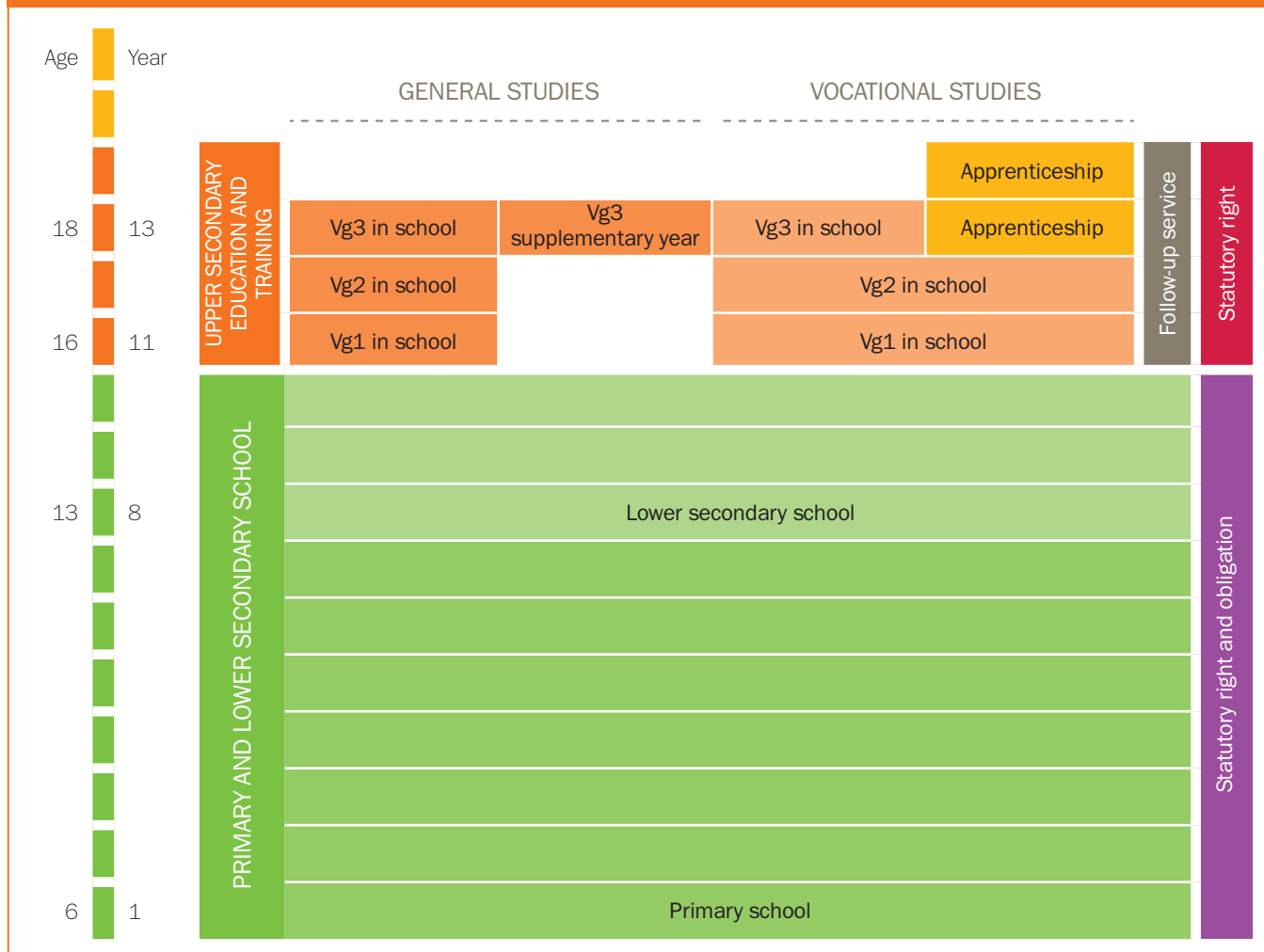
The Education Mirror

2011

Analysis of primary and secondary
education and training in Norway



PRIMARY AND SECONDARY EDUCATION AND TRAINING IN NORWAY



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Foreword

How well is the Norwegian school system doing? How big are the differences – among schools, municipalities or counties? How are the resources used and has this changed with time? These are some of the questions we want to answer in *The Education Mirror*.

In the introductory articles, we present a couple of examples of how municipalities can follow up their schools. These examples are not a blueprint, but we hope they will give you inspiration and ideas about how schools and school owners can work together to develop better programmes for the pupils.

How do Norwegian pupils experience their learning environment, and what actually distinguishes a good learning environment? In Chapter 4, we present five factors that are essential for a good learning environment. We also present research on which aspects of the learning environment seem to be especially good at promoting learning.

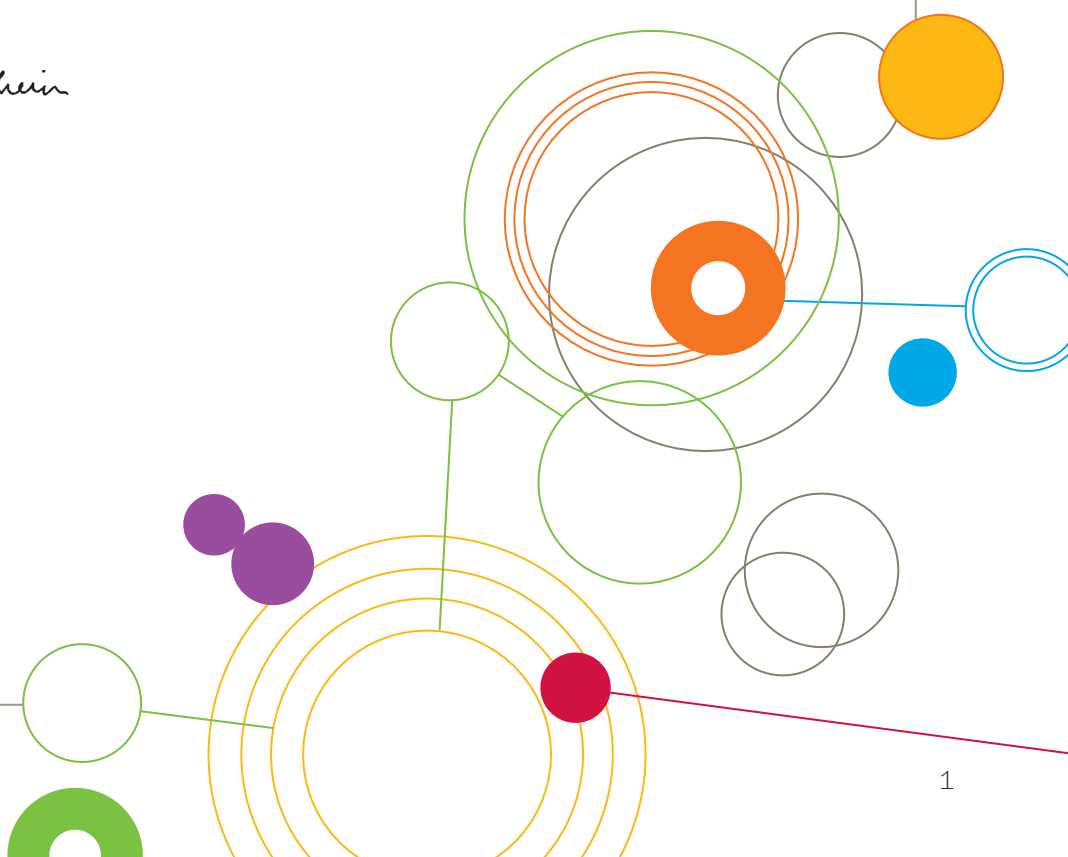
In Chapter 6 on *Quality improvement*, we make a comprehensive presentation this year for the first time of the various elements that are part of our system to ensure the quality of the education and training. This presentation is based on a report that the Directorate has drawn up for the OECD. The national quality improvement system is still under development. However, we hope that this summary will give you an overview of many of the key processes in the school system.

In December 2010, the results of the international PISA 2009 study were published. These results showed that our pupils have shown an improvement in all three of the areas that are included in the study: *Reading, Mathematics and Science*. Even though much is being done well and correctly in the Norwegian school system, it is important that we constantly work to improve further. In this way, the school system can help us succeed both as individuals and as a society.

Happy reading!

Petter Skarheim

Petter Skarheim



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Some glimpses into The Education Mirror

How can the school owner follow up its schools in a good way?
In the following articles, we will present some examples of ways in which
two municipalities are dealing with this.

DATA AND EXPERIENCES FROM THE CITY OF BERGEN

The first example of a municipality's efforts to follow up its schools comes from the city of Bergen. Here we have come along on a visit to Ortun Lower Secondary School, where they are going to hold a so-called academic follow-up meeting. We also present some of the reflections of those who took part in the meeting as to how they think it worked out.

A photograph of two men standing outdoors in front of a building. The man on the left is older, with white hair and glasses, wearing a dark jacket. The man on the right is younger, with glasses and a blue sweater, smiling. The background shows a building with a sign that says 'OR'.

Academic follow-up meeting at Ortun Lower Secondary School

It is a rainy February morning in Fyllingsdalen, a suburb of Bergen south of the city centre with 29,000 inhabitants, nine primary schools and two lower secondary schools. Around the table in the conference room at Ortun Lower Secondary School, the atmosphere is rather expectant.

Teachers, pupils and parent representatives are all fairly expectant, but most expectant of all is probably the head teacher, Ivar Skjelten. It has been one year since Øystein Berentsen and Vidar Hansen from the city of Bergen last visited the school. Now the follow-up team has returned to present documentation about how the school run by Skjelten has developed over the past year. The data is meant to inform the head teacher, teachers, pupils and parents about how the school has developed both academically and socially.

The documentation that is presented is the school's results on mapping tests and national tests, the scores from the Pupil Survey and the Parent Survey and much other data. Berentsen and Hansen

"Before we leave here today, we shall have reached agreement about what you do well here at this school and what you still have to work on improving."

Vidar Hansen

have also brought along some standards for the various topics they are going to discuss today: standards that tell us something about what the city of Bergen expects of a school such as Ortun Lower Secondary School.

"This is going to be an intense day," warns Hansen from the city of Bergen. "Before we leave here today, we shall have reached agreement about what you do well here at this school and what you still have to work on improving."

The first topic they are going to discuss is the psychosocial learning environment. As a projector begins to whir, a figure lights up the whiteboard in front of the gathering.

The room grows quiet.

The experiences behind the data

The results of the Pupil Survey for those who completed Year 10 last year are not promising. Satisfaction with the school environment has decreased. Hansen turns to the pupils' representatives. How do they explain this?

Christian Brundtland, a pupil in Year 10 replies.

"We have worked fairly extensively on the environment at the school throughout this entire school year. The problem is that we are quite separated into different groups here at school. In the breaks, there are some who gang up together and do vandalism. Some of the pupils who are behind this think it is good to provoke negative reactions."

The Pupil Survey also reveals that nine per cent of the pupils feel they are bullied.

STICK TOGETHER: Christian Brundtland (Year 10) and Kristine Andersen (Year 9) say that the pupils at Ortun Lower Secondary School are united with the administration in their desire to improve the school environment.



Vidar Hansen asks the pupils if the school is getting a grip on the problem.

"Yes. We are united on this and have initiated several measures. Every morning the school holds a school breakfast in the media library. We shall also have a LAN party, where we can stay up at night and play PC games, and a book vigil, where we can read books," says Kristine Andersen. She is a pupil in Year 9 and pupils' council representative, together with Christian Brundtland.

Two parent representatives are invited to the meeting. They have the impression that the school is on the ball and getting a grip on the social problems.

"Ortun, for example, has devoted a lot of resources on pupils who do not want to be in the classroom. Teachers take on the job of bringing them in; some of them even have to be picked up from their home.

"It worries us as parents that there has been a decline in the pupils' sense of well-being."

Marianne Grung Farsund, chair of the PWC

reminds the meeting that they must always keep in mind the number of pupils who lie behind a percentage change, when the data only pertains to a single year of schooling. There are longer-term trends that it is important to follow closely. Nevertheless, it is serious when five per cent of the pupils, for example, indicate that they experience bullying.

A tough point of departure

Head teacher Skjelten has waited patiently to say a few words. He has sat attentively and listened to what the pupils and parents had to say.

"I feel it is fair to add that we are starting from a tough point of departure when it comes to the social environment at this school and in this area of Bergen. I have been head teacher here for 15 years, and I have been involved in a 12-13 year-long process. I admit that we have some challenges, and we will probably always have them, but maybe we should focus the spotlight more on preventative measures now," he suggests.

"All of the teachers feel that some of the pupils are

"I admit that we have some challenges [...] but maybe we should focus the spotlight more on preventative measures now."

Ivar Skjelten, head teacher

more destructive than others," says Kristian Andersen. He is a member of the team of leaders at the school.

"We have worked extensively with the pupils who are not doing so well. Now we must pay more attention to the other 90 per cent. Therefore, we have initiated measures where the whole environment of the school has been put on the agenda."

The exchange of opinions among the teachers, the head teacher, the parents and the pupils continues.

Øystein Berentsen is responsible for summarising the things they agree on and the things they should make further

This goes far beyond their remit, but they do it nonetheless. However, it worries us as parents that there has been a decline in the pupils' sense of well-being. Does the school have an explanation for this?" asks Marianne Grung Farsund, chair of the Parents' Working Committee (PWC) at the school.

Vidar Hansen, who has presented the documentation,



CAN THE SCHOOL EXPLAIN? "Why has there been a decline in well-being among the pupils at the school?" asks Marianne Grung Farsund, chair of the PWC.



COUNT AND TELL:

The city of Bergen comes to Ortnun Lower Secondary School with data.

The teachers at the school do the telling. Together they must agree on what they do well at the school and what they have to make more effort to improve.

effort to improve. "I find that the school is making efforts to try to do something about the school environment and that the school manages to get the pupils involved in this work. The parents have confidence that something is being done. Am I right?"

Vidar Hansen and Øystein Berentsen urge the school to assess whether there is a need for an anti-bullying programme at the school. The teachers agree to undertake a new survey in the autumn, to see if the dissatisfaction is still there.

At this point, the pupils and parent representative leave the conference room. This is the only topic in which they will participate. New persons enter the room. The next topic is reading. This is a topic that the school itself has chosen to focus on this year.

The atmosphere around the table is noticeably lighter

The documentation in this area is mapping tests and national tests. The achievement of the pupils has improved drastically from last year. These are encouraging figures. The head teacher says that the

The library, which is now called the media library, has become the most important social meeting place in the school.

school has worked deliberately on reading after the first national tests, which were quite disheartening. Ortnun School devised a plan for improving reading skills.

Among other things, this plan involves giving all of the pupils in Year 8 a "reading starter kit" in the first two weeks of lower secondary school. They are invited to breakfast in the media library and taught how to use it.

"The young people practically knock down our doors," says librarian Pia Simonsen. The library, which is now called the media library, has become the most important social meeting place in the school. This has also resulted in much more lending out of books.

Vidar Hansen offers the sobering reminder that, despite their progress, the pupils at the school still score below the standard in *Reading* for the city of Bergen.

Their own point of departure

"It is of little importance to us what standard they set. We shall become better and better starting with our own point of departure," responds the head teacher emphatically. Vidar Hansen must simply agree: "We have come so far now that we have results from the same type of mapping tests for several years and for several different years of schooling.

This means that we can follow the same pupils over a period of time, and in that way can we see how those same pupils develop. We see that there has been an improvement. That is the important thing."

The discussion continues around the table. Many people ask why our pupils have become better readers.

"Have the teachers changed their attitude to the national tests?" asks Vidar Hansen. The teachers around the table confirm that they have.

"We see that the national tests have their uses. I think that is why we have become more positive. No one likes to waste time on nonsense. Moreover, we have now made all of the subject teachers responsible for seeing that reading is something we are all responsible for, not just the

"Moreover, we have now made all of the subject teachers responsible for seeing that reading is something we are all responsible for, not just the Norwegian teachers."

*Nina Haugsnes,
Norwegian teacher*

Norwegian teachers," says Nina Haugsnes.

The head teacher believes that the teachers' attitudes are spreading to others. When the school begins to take the tests more seriously, the pupils do so as well.

"We are in the process of becoming more secure about this now. At first, we were wary about letting the pupils practice

for the national tests, but we have changed our minds about that now. Some of the pupils come from primary schools that have been strongly criticised in the Bergen newspapers because they have scored so poorly on national tests. As a result of bad experiences with these tests, some pupils were so afraid of taking them that they wept. That was when we realised that we have to make them feel more secure about the form of the tests and the topics they will encounter on them."

Reading was a topic that the school brought up on its own initiative, so here it is also the school itself that summarises: Ortun has come a long way in improving its reading programme since last year, and much of the reason is that all subject teachers have become reading teachers and have acquired skills in this field.

"We have been given a very good opportunity for continuing education. As a result, many teachers are now interested in this. Now we even sit down during our coffee break and talk about teaching reading!" says Norwegian teacher Bente Myrtveit.

Agree and disagree

The day continues. *Mathematics*, *Science* and *ICT* are other topics that are discussed. The team from the municipality presents documentation on the development of the school since last year, and the discussion continues around the table. Sometimes the teachers and head teacher of the school agree with the follow-up team. On other matters, they disagree.

As the hour approaches four, the sun breaks through the cloud cover over Bergen. The light shines in through the windows of Ortun Lower Secondary School, but the people sitting around the table are quite clearly exhausted. It has been a long day with many topics coming up for discussion.

One of the teachers admits that some of them have been both a little nervous and a little annoyed prior to the meeting with the municipal inspectors.

"Nevertheless, it is very good that they come here. The first year they were here, they forced us to do a complete review of our *Natural Science* and *Mathematics* curricula. It was very useful."

The head teacher admits that this is not the only day that has been trying. The last few weeks prior to the meeting have also been stressful.

"At the same time, this is a great opportunity to focus attention on ourselves. Most of the things they have called attention to were things we

"We were especially impressed with the pupils' representatives always use the pronoun 'we' when they talk about Ortun. That indicates that they are communicating well here at the school."

Vidar Hansen and Øystein Berentsen

already knew, but we probably shape up in certain areas because we know they are coming."

Ordering more assistance

The follow-up team reminds everyone of the ongoing process.

"If they think that they will need us for anything in the coming year, they send in an order."

Vidar Hansen and Øystein Berentsen summarise:

"We are not worried about you. Ortun Lower Secondary School has a well-coordinated administration that thinks strategically. I suppose we were especially impressed that the pupils' representatives always use the pronoun 'we' when they talk about Ortun. That indicates that they are communicating well here at the school." ●



DEMANDING PREPARATIONS? Teachers and the head teacher at Ortun Lower Secondary School have been both a little annoyed and nervous prior to the academic follow-up meeting with the city of Bergen, but they are quite satisfied with having discussed themselves for a whole day with external advisors.

Do not just count

How can we elicit the reality that exists behind the numbers?

“If you only look at the numbers, then our school will appear to be a poor one. It is indispensable for us that we also be allowed to tell about the school we are working to improve. That will enable us to elaborate upon and explain the data,” says head teacher Ivar Skjelten. Once every year the city of Bergen pays a visit to see how things stack up at Ortun Lower Secondary School. The head teacher is very appreciative of their attention.

Vidar Hansen represents the team from the city of Bergen who come to examine head teacher Skjelten and his school:

“A few years ago, in connection with the urban district reform in Bergen, we held up a finger in the wind. That was when we realised that the municipal executive board and the city council knew very little about what was going on in the nearly 100 schools for which the municipality is responsible. We did not have the direct contact that could give us better information. We also lacked the opportunity to influence the quality of the schools. The schools were almost completely left to their own devices. The city of Bergen asked itself the question, What can we do to perform quality control of our schools?”

The inner life of the school

Before that, Vidar Hansen had led a three-year school improvement project for several schools in Bergen.

“One of the things we learned from the project was that it is okay to collect data relating to the schools, but those numbers do not tell us anything in particular about the ‘inner life’ of the schools. That was when we began to play with ideas that eventually developed into what we now call a Comprehensive system for quality improvement.”

The system in Bergen is composed of a number of elements. One of them is the academic follow-up meeting that the municipality holds with its schools. Each of the schools in Bergen is visited once a year by an academic follow-up team from the municipality. Together they hold a full-day meeting.

They discuss the topics of *Reading, Mathematics, Science* and *ICT*. Documentation is submitted - i.e. data - of how the improvement has proceeded in the past year. Then the head teacher and teachers get an opportunity to tell about the reality that exists “behind” the numbers.

After the meeting, it is time to sum things up: What is the school good at? What should the school work more to improve? The school can then order what they need in the way of assistance from the

academic follow-up team for the rest of the year.

When Ortun Lower Secondary School was visited this year, social skills and/or the psychosocial learning environment were also topics for discussion. During this discussion, the pupil representatives and parent representatives also joined the meeting.

Both inspector and interlocutor

Head teacher Ivar Skjelten was sceptical during the first visit from the municipal inspectors. The current visit was the third time that the academic follow-up team came to Ortun Lower Secondary School.

“I must honestly admit that the first year we felt that an inspection of this sort was a little unreasonable. For an inspection, it is indeed. The city of Bergen is supposed to ensure that we follow the guidelines that we are required to follow. Having seen how it works, however, we at Ortun now regard this process somewhat differently. For in addition to being inspected, this is a very good opportunity for us to bring external interlocutors and advisers into the efforts at school improvement that we ourselves are making. The

“In addition to being inspected, this is a very good opportunity for us to gain external interlocutors and advisers in the efforts at school improvement that we ourselves are making.” Ivar Skjelten



NO LONGER KING: Head teacher Ivar Skjelten (at left) is glad he has been able to improve as head teacher over a number of years, without too much external control from Vidar Hansen and his colleagues from the city of Bergen, but both agree that the school owner has a need for more inspections.

follow-up team can confirm that we are on course or give us advice about how we can adjust our course. Both of these contributions are very good.”

“Yes, of course there is an element of control in this,” agrees Hansen.

“There is an element of control in the fact that the academic follow-up is based on a set of standards that serve as quality goals for the Bergen school system. There is also an element of control in the fact that the academic follow-up team represents the administrative level in the municipalities and in the fact that the conclusions from the academic follow-up meeting have been reported to the administrative authorities in the municipality. However, if we had only been looking for a control and supervisory function, there would probably have been much less dialogue, nor would a guidance portfolio related to the academic follow-up have been developed. In addition to control, the academic follow-up also has a pronounced improvement perspective,” he says.

Skjelten thinks it is absolutely essential that the municipality emphasised more than just national tests, mapping tests and other forms of quan-

titative measurement when they are going to “measure” the schools.

Ortun Lower Secondary School is located in Fyllingsdalen, a suburb of Bergen. It is no secret that both this urban district and Ortun Lower Secondary School have to deal with their share of problems. Both are frequently mentioned in the local media.

“The population base from which the pupils come is quite different from that in many other areas of Bergen. Many things are more challenging here than elsewhere in the vicinity. Thus, numbers are insufficient when we want to give a complete picture of our school and the ways in which it is improving. If you only describe it with numbers, Ortun Lower Secondary School will appear to be a sub-standard school. It is indispensable to us that we also be allowed to tell the city of Bergen and vicinity about our school,” says the head teacher.

No longer “King of the Mountain”

For ten years, Skjelten improved his skills as a head teacher at Ortun without much bothersome external control. He admits that he is happy that


“Numbers are insufficient when we want to give a complete picture of our school and the ways in which it is improving.” Ivar Skjelten

he had those years.

“I see now that as the municipality tighten its grip, you have much less room to manoeuvre as a head teacher, but I also see that the school owner has a need for more control over the head teachers, who have been ‘king of the mountain’ now for quite some time. The room for the head teachers to manoeuvre will probably continue to diminish in the future. Personally, I am glad to have had an opportunity to try out a number of things on my own. I was hired with a clear desire to change course here at the school, and I was given the authority to appoint both department heads and the teachers myself. That has been incredibly important. We have devoted a great deal of energy to finding the right teachers for this school.”

Vidar Hansen offers some consolation:

“No one has any intention of depriving a head teacher of his/her room to manoeuvre when it comes to appointing the people that he or she



“Quality improvement can be many things. A lot depends on listening to the people who know how the shoe fits.” *Vidar Hansen*

wants to hire. The municipality has selected certain areas on which the city of Bergen is focusing, but each school must select and prioritise the areas on which it wants to focus. I do not think the follow-up diminishes their room to manoeuvre, but nevertheless the focus on certain areas is part of an effort to develop a more uniform school system in Bergen. Quality improvement can be many things. A lot depends on listening to the people who know how the shoe fits.”

Statutory requirements for quality monitoring

Section 13-10 of the Education Act: SCOPE OF RESPONSIBILITY

Pursuant to section 2-12, the municipality or county authority and the school owner of a private school shall have a satisfactory system for assessing compliance with the requirements of the Education Act and regulations issued pursuant to the Act. Pursuant to section 2-12, the municipality or county authority and the school owner of a private school shall have a satisfactory system for monitoring the results of these assessments and national quality assessments conducted by the Ministry pursuant to section 14-1, fourth paragraph.

Section 5-2 of the Private Education Act: THE BOARD'S TASKS

The Board shall have a satisfactory system for assessing the requirements in current laws and regulations and ensuring that the conditions for approval are met. The board shall have a satisfactory system for following up the results of these assessments and national quality assessments conducted by the Ministry pursuant to section 7-2, fifth paragraph.

Subsequent assistance

The academic follow-up meetings at all of the primary and lower secondary schools in Bergen take place in January, February and March. When the series of meetings is over, it is up to each school to choose its own priorities and order assistance from the academic follow-up team. Hansen explains that there is considerable variation here.

“Some schools have big orders; others order nothing. In the first case, we have to enter into a lengthy process with the school. There are four or five of us on the team who work solely on continuing the work from the academic follow-up during the rest of the year. Two of my colleagues, for example, are specialists in *Reading* and work on developing a reading curriculum for the schools that need one. Other schools need help in finding structures for digital learning, and we can send one of our experts to help them with that. We do not guarantee that we can help everyone. Sometimes we end up advising the school to get help from others. The main thing that comes out of the academic follow-up meetings is the orders that schools make for support of their own quality assessment, but the knowledge that emerges through the meetings is also used as a basis for the planning of priority areas and as a basis for the quality reports. In the last five years, the city of

Bergen has written an annual report on the state of the quality in the school system. This report will be discussed in the municipal executive board and in the city council,” says Hansen.

“The Pupil Survey and the Parent Survey are attempts to listen to the voices of these two groups.” *Vidar Hansen*

Open up the academic discussion?

At present, pupil representatives and parent representatives in Bergen only attend the meeting that focuses on the psychosocial learning environment.

“We are considering whether we should also open up the academic discussions to include pupils and parents. The Pupil Survey and the Parent Survey are attempts to listen to the voices of these two groups. However, it is quite obviously best to include them in the actual discussion. Yet anonymity can be a challenge.”

“I really hope that academic follow-ups will continue,” says head teacher Ivar Skjelten, but he also has some suggestions for improvements.

“It would be good if we could reduce the five topics we have at present to fewer. At present, too little time is spent on each topic; it gets too intense. The teachers have many things they would like to demonstrate and ask about. It would be wonderful if once in a while we could have had a long session on only one topic.”

MONITORING SCHOOLS IN LÆRDAL MUNICIPALITY

In the articles below, we get an insight into how Lærdal works to obtain an overview of the ways in which the schools in the municipality function and the kind of areas on which they want to specifically focus. We close with comments from some of the teachers and the County Education Director on the development of the schools.

Are the schools achieving our goals?

The municipal council in Lærdal considers the status report

Ingrid Steine Bortne is a newly hired educational adviser in Lærdal municipality. She has planned her input to the municipal council in detail.

It is the first time the politicians in Lærdal are going to consider a status report on the three schools in the small municipality at the head of the Sognefjord. This will give the elected representatives a unique insight into the schools in the municipality. Steine Bortne is curious to see whether she will be able to engage the municipal politicians and the school owners.

The main points in the memo she has before her are simple and clear: What are we good at? What can be improved?


The educational adviser in the municipality begins by presenting data from the Pupil Survey. They show that the pupils in Lærdal are doing very well in school and are quite satisfied with their teachers. There is no cause for concern about their overall achievement marks and the examination marks either. On the other hand, the outcomes from national tests have varied, but greater learning pressure has yielded results: in the autumn of 2010, the pupils improved considerably.

While Steine Bortne is speaking and explaining, many


of the politicians are studying the figures. They compare the data from Lærdal with data from other municipalities in Sogn og Fjordane County, the data for the whole county and the national data. When Steine Bortne comes to the point about bullying, there are many politicians who clearly pay extra close attention. It turns out, in fact, that the municipality lies somewhat above the average in this area, both when compared with neighbouring municipalities, with the whole county and with the whole nation.

When Steine Bortne comes to the point about bullying, there are many politicians who clearly pay extra close attention.


WHAT DOES THE SCHOOL OWNER THINK? "Are our schools achieving their goals?" asks educational supervisor Ingrid Steine Bortne from the municipal council in Lærdal municipality. She has presented a status report for the schools in Lærdal for the first time this year.



Hallvard Trohaug



Olaug Skjerdal



Jan Olav Fretland

After she has guided the municipal politicians through a series of graphs, Steine Bortne reports on some measures that have already been initiated to improve the primary and lower secondary schools in Lærdal. One of them just happens to be a closer dialogue with the school owner.

“Are our schools achieving their goals?” asks Steine Bortne and tries to answer his own question.

“Our pupils are thriving and coping well; they enjoy themselves at school. Our academic results tell me that our schools are good. Yet I think that we are still not good enough,” she says before she hands the ball to the politicians:

“Now I wonder what the school owners think. Do they think that our schools in Lærdal have achieved their goals?”

A personal story

Hallvard Trohaug (Labour Party) is the first to speak. He is very happy that the municipality has

got underway with the work on the status report. The local architect also feels calm when he sees the results. Then he offers a personal story:

“I struggled with classic dyslexia and know that coping in school is one of the most important things. Everyone can master something. Everyone laughed at me when I read aloud in *Norwegian* class, but in the *Math* class I was best. Even someone like me, with learning difficulties, can have an academic career. But it requires early intervention,” says Trohaug.

He is also concerned about the campaign against bullying:

“It is the most important investment we can make in a small municipality, as well as a way to provide for more jobs. If our young people are going to move back to their rural homes when they become adults, they must experience the place where they grow up as the best place to live for their own children. We must take a closer look to see whether what is being reported is bullying. Is it just a matter of teasing for a short period of time, or is it something more serious? We need to find out,” he says.

“We are in fact the school owners”

Olaug Skjerdal (Centre Party) says that she is so happy that the educational adviser in the municipality is making the

“I do not doubt that we have good schools in Lærdal, but there is much that can be done even better.”

Olaug Skjerdal (Centre Party)

municipal politicians aware that they are the school owners.

“We had a theme day not so long ago where all of the politicians visited schools and day-care institutions in the municipality. It was very useful to get an insight into their daily lives. The same is true of this report; it reminds us that it is actually we who are the school owners. The status report does not give us the complete, comprehensive picture of the situation in the schools in Lærdal. I do not doubt that we have good schools in Lærdal, but there is much that can be done even better. This report gives us an important tool that we can use to continue our efforts at school improvement in our municipality.”

“The most interesting thing is to see how our municipality does it in comparison with other municipalities.”

Jan Olav Fretland (Socialist Left Party)

Jan Olav Fretland (Socialist Left Party) praises the new coordination of efforts to improve the schools in the municipality.

“And I am not just talking about the status report, but also that everything relating to the schools will be systematised. This gives the municipality a boost. We should be happy to be challenged as school owners. The most interesting thing is to see how

“Even someone like me, with learning difficulties, can have an academic career. But it requires early intervention.”

Hallvard Trohaug (Labour Party)



“It is important to make politicians aware of the importance of their role in the matter.”

Ingrid Steine Bortne

our municipality does it in comparison with other municipalities. I think there are a couple more factors that they should consider including in the next status report. One is the physical environment, and the other is the working environment for teachers. We need to know more about that,” he says.

Three more representatives have comments with regard to “Status report on primary and lower secondary education in Lærdal in 2010” before chairman Arne Sanden pounds his gavel on the table and declares that the status report has been adopted.

Decrease the distance

Ingrid Steine Bortne can breathe a sigh of relief. She is pleased that the municipal politicians have got so involved and that there was so much input from the rostrum on this matter.

“Local politicians are indeed concerned about the

schools; it is a topic that concerns many of us in a little community such as ours. We have come a long way here in Lærdal by decreasing the distance that often exists between the school sector and the politicians, but it is important to make politicians aware of the importance of their role in the matter.”

She says that a group of politicians, school administrators, the educational adviser and others has now been appointed to revise the policy document titled “Goals for the schools in Lærdal.” This work commenced this spring and shall be given political consideration this autumn.

“This document must be based on the findings presented in the status report,” says Steine Bortne, who thinks that the status report will be an important tool for developing the schools in Lærdal in the right direction.

“We have been given a tool that gives us an assessment of the things that are good about our schools and the things that are not so good. I think this makes it easier for the politicians in Lærdal to closely monitor the growth area

in the municipality and remain continuously informed about processes that we are involved in or are going to initiate.”

She also thinks that this work increases her own awareness and that of others who are working on the growth area in the municipality.

“It is important that we have a common understanding of tasks and projects in the municipality that must be implemented and put into effect.”

Ingrid Steine Bortne

“In the coming months, we shall make sure that the politicians are familiar with pupil surveys and analyses of our schools. It is important that we have a common understanding of tasks and projects in the municipality that must be implemented and put into effect. It is also important that the various roles are clarified, so that we can distinguish between administrative responsibility and political responsibility”, she says. ●

A BOOST: Chairman Arne Sanden (left) and the Lærdal municipal council consider the status report for the Lærdal schools for the first time. The report gives them an important tool for the ongoing efforts at school improvement.

CLOSER DIALOGUE: Educational supervisor Ingrid Steine Bortne believes it is important to make municipal politicians aware of how important their role is in school matters.



The outcomes have improved

The teachers tell about their efforts to improve the outcomes



When Year 8 at Lærdalsøyri School scored poorer than they would have liked in the national tests, the school exerted strong pressure to improve the outcomes. Through hard, focused work, Year 9 has achieved a much better outcome this year than it did last year.

“I was shocked when I saw the outcomes on the national tests last year. After that we sat down and devised a plan for improvement. It has paid off this year”, says teacher Anders Inge Hundere.

Hundere and his colleague Hans Christian Hansen worked extensively to improve the class environment during the past year.

“We know that disturbances in the class result in poor comprehension and little mastery of the subjects,” say the two lower secondary school teachers.

The teachers welcome the status report for the schools in Lærdal

“If we are going to increase the learning pressure, we have to know what we should prioritise. For that reason, it is important to properly document our results.”

The educational adviser has given the two teachers and their colleagues in the Lærdal schools the task of carefully reading the status report. On the next planning day, she will go to each school to discuss the content of the report.

“Then we can jointly discuss the findings and consider solutions, measures and challenges. The report will also be discussed in the coordinating committee at each school,” explains Ingrid Steine Bortne.

“Some measures have already been initiated to improve the schools in Lærdal, such as further education of the teachers in *English*. Another measure that may be relevant now is to devise a general action plan to curtail bullying,” says Steine Bortne.



IMPROVED OUTCOMES: Lower secondary school teachers Hans Christian Hansen (top of the page) and Anders Inge Hundere (in the classroom) have managed to improve the outcomes in their classes in the course of one year. They believe in documentation.



Sogn og Fjordane has one of the best school systems of any county in the country. Since national tests and user surveys were introduced, the outcomes have put the county on the podium every year. The County Education Director is happy to reveal the secret of their success.

A tradition of sharing

Thoughts about why the schools in the county have done so well for several years

In many national statistics for Norway, Sogn og Fjordane scores near the bottom, but when it comes to education, the county scores near the top. If County Education Director Åslaug Krogsæter were to briefly summarise why the county does it so well in education, she would emphasise the following: "We have a tradition of sharing".

The status report

In the spring of 2011, Krogsæter had been County Education Director for a year and a half. At about the same time that she was hired, the first "Report on the status of education" was issued - the annual report that the school owners are now required to draft. Krogsæter sincerely welcomed the status report:

"We saw that it was possible to work together to achieve high quality in the efforts that each individual municipality was supposed to make," she says.

"For us, this was not a completely new way of working. We have a long tradition in Sogn og Fjordane of cooperating systematically among the municipalities, the county authority, the Norwegian Association of Local and Regional Authorities (KS) and the Union of Education, but we regarded the status report as a good opportunity to systematise our cooperation even more. In this way, the

"We have a long tradition in Sogn og Fjordane of cooperating systematically among the municipalities, the county authority, the Norwegian Association of Local and Regional Authorities (KS) and the Union of Education Norway."

THE STATUS REPORT

All school owners are required to prepare an annual report on the status of education and training (cf. Section 13-10 of the Education Act and Section 5-2 of the Private Education Act). The status report should provide information about learning outcomes, dropping out and the learning environment. The report shall be discussed by the school owner (the municipal council, the county council or the top administrator of the private primary and lower secondary schools). The goal for the status report is to give the school owner a specific basis for the further improvement of the quality of its own schools. The Norwegian Directorate for Education and Training provides a tool in the School Portal that should make it easier for the school owner to draw up the annual report.

DEVELOPS COMMITMENT: Åslaug Krogsæter, County Education Director in Sogn og Fjordane, thinks that many school owners develop a completely different level of commitment to school issues when the status report is published.



“The template we have received from the Directorate for Education and Training has made it very easy to gather data, and that is why it has not been difficult to persuade the municipalities to get involved in this.”

status report has enabled us to take the sharing of knowledge to a completely different level.”

Knowledge Sharing

Already in the middle of the 1990s, Sogn og Fjordane County developed the website Skoleutvikling.no. Development plans for all of the schools in the county were gathered there. An overview of all of the competence-building measures in the county was also presented there.

“With this website, we have given each other ideas about good practices and let ourselves be inspired by each other. Over a period of time, we have seen that the need for sharing knowledge and for learning at the municipal level has increased. When the requirement for a status report was issued, we agreed to establish the website www.kunnskapsdeling.no instead, and now all of the status reports are entered there. The idea is to share experiences both by making reports easily accessible and

by discussing the ways in which we can achieve good processes when the County Governor and KS hold regular meetings with the municipalities,” says Krogsæter.

“The template we have received from the Directorate for Education and Training has made it very easy to gather data, and that is why it has not been difficult to persuade the municipalities to get involved in this. All of the municipalities in our county have produced status reports, and we have made most of those reports available on the website,” she tells us.

Sogn og Fjordane County has 26 small municipalities, many of which have a very small population. The school owner level may be weak in many places.

“Sharing information and experiences with each other can help ease the problem of being small municipalities. It gives the work a greater push, and it provides a basis for learning and knowledge development.”

Open to criticism

“When the municipal level has to do the job of the status report itself, the focus is shifted from the schools to the school owner,” says Krogsæter.

“In many municipalities, it is quite an eye-opener in the town

hall when they get the outcomes on the national tests at the schools and have to follow them up themselves. Municipalities that do not have good outcomes suddenly want to give the school sector a boost.”

The County Education Director points to Lærdal municipality as an example:

“The municipality, which had good outcomes on the national tests for many years, suddenly had worse outcomes in 2008 and 2009. The municipal politicians in Lærdal have not just drawn up a status

“After the politicians in the municipality got more involved, there is a completely different commitment and more cooperation among the various levels.”

report. They have also visited schools and day-care centres to take a look at everyday life there. After the politicians in the municipality got more involved, there is a completely different commitment and more cooperation among the various levels. Remember that the school sector is characterised by a lot of tribal language. Many politicians have probably found it difficult to gain access to this world, but



HARD WORK: Through hard, focused work, pupils in Year 9 at Lærdalsøyri School have achieved a much better outcome than they did the previous year.



many of them want to,” says Krogsæter.

“When the status reports are published, the schools are open to criticism from local newspapers and other media. This is a challenge,” admits the County Education Director.

“In order to get the local community and the local politicians interested in the status report, you have to make the message more pointed. At the same time, we have to be careful with what we put in the report so that we do not make individual schools and individuals the scapegoats. It becomes a balancing act between being self-critical and still somewhat cautious,” says Krogsæter, who points out that local newspapers usually care a lot about their local environment and will behave properly in most cases.

Do not cry wolf

“If the status reports are to be used, it is important to consider the trends over a period of several years and not just for each individual year,” says the County Education Director in Sogn og Fjordane.

“We must not get lost in the data and draw hasty conclusions, and we must resist the temptation to misuse the report in the competition for municipal funds. If we cry wolf, every time the report is published, it will lose its credibility.”

How to use the data?

However, as Krogsæter sees it, the biggest challenge with the status report is: how should the school, the municipality and the county use all of the information that is provided there?

“For example, what do



HEAD OF THE SOGNEFJORD: In Lærdal, a small municipality at the head of the Sognefjord, the elected representatives have gained a unique insight this winter into what is happening in their schools.

we do when the outcomes at a school are extremely disparate? What do we do if the pupils are very good in *Norwegian* and *English*, but not in *Mathematics*?” The teacher competence in the subjects may become very clear when the data is publicised. In that case, the school must analyse: does it have to bring in another mathematics teacher, or should it improve the competence of the current math teacher? Or perhaps the teaching efforts are better in the other subjects than they are in *Mathematics*?

“In the school sector, we have often not been very fact-oriented in our discussions. We have lots of subjective opinions and feelings. With this new tool, we get the facts on the table. Then it also becomes easier to discuss education,” says the County Education Director.

Not just outcomes

Krogsæter is pleased that the status report considers knowledge about the learning environment to be just as important as knowledge about the outcomes.

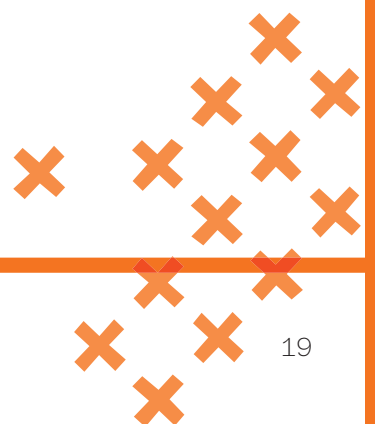
“It is nice that they are juxtaposed. The outcomes are much more than just national tests and examination results; the learning environment of the pupils is also an important factor. When the Pupil Survey is included in the report, and the answers to questions such as, ‘Are they getting any professional guidance?’ are seriously considered, it provides the basis for a better dialogue. In this way, the dialogue with the parents is also improved. Remember that if the school owner is open for debate, then the school owner will also gain more trust”, concludes Krogsæter. ●



1

Facts about primary and secondary education and training

This chapter presents the state of primary and secondary education and training in Norway. At the national level, statistics will show a fairly similar picture from year to year. However, the development trends we have seen in recent years with a reduction in the number of small schools and an increase in the number of pupils receiving special needs education are continuing this year as well.



PRIMARY AND LOWER SECONDARY SCHOOL

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

1.1 HOW IS THE STRUCTURE OF PRIMARY AND LOWER SECONDARY EDUCATION IN NORWAY CHANGING?

Fewer small schools

In the autumn of 2010, there were 2,957 mainstream primary and lower secondary schools and 71 special schools in Norway. Figure 1.1 provides an overview of the distribution of small, medium-sized and large primary and lower secondary schools. There are fewer and fewer primary and

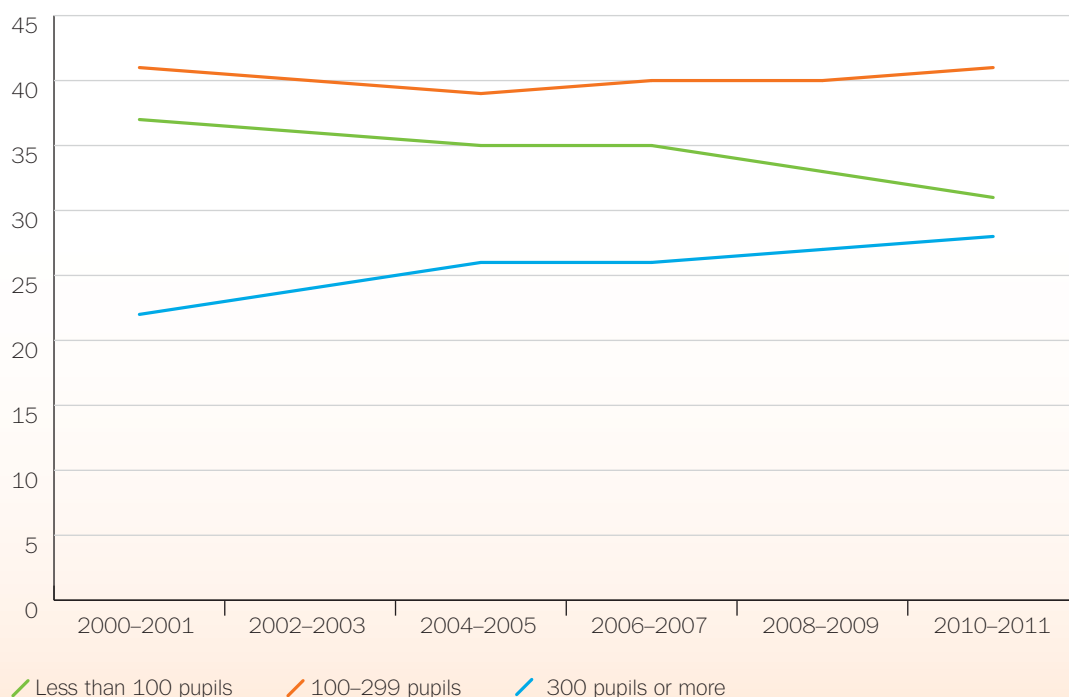
lower secondary schools with less than 100 pupils, and there are more and more schools with more than 300 pupils. This is because many small schools are being closed or merged. In the autumn of 2010, 31 per cent of the schools had less than 100 pupils, whereas 28 per cent of the schools had 300 or more pupils.

In keeping with this trend, the percentage of pupils who attend schools with 300 or more pupils increased, while the percentage of pupils in small and medium-sized schools decreased. This trend has levelled off somewhat in recent years. In the 2010-2011 school year, 54 per cent of the pupils attended schools with 300 or more pupils, while only seven per cent of the pupils attended schools with less than 100 pupils. By comparison, 48 per cent of the pupils attended schools with 300 or more pupils in 2000-2001. Since the 2002-2003 school year, more than half of the pupils have been attending schools with 300 or more pupils.

Schools are closed because of a low number of pupils or for economic reasons

From the 2009-2010 to the 2010-2011 school year, 58 mainstream primary and lower secondary schools were closed. All of them were

FIGURE 1.1 The distribution of small, medium-sized and large mainstream primary and lower secondary schools, 2000-2001 to 2010-2011. Per cent.



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

**Section 2-1 of the Education Act:
RIGHT AND OBLIGATION TO ATTEND PRIMARY
AND LOWER SECONDARY EDUCATION**

Children and young people are obligated to attend primary and lower secondary education and are entitled to a public primary and lower secondary education in accordance with this Act and regulations pursuant to this Act. This obligation may be met by means of public primary and lower secondary schools or by means of other equivalent education.

municipal. At the same time, eighteen mainstream primary and lower secondary schools were opened: fourteen of them municipal and four private. One special school was also opened. A survey conducted in the spring of 2010 showed that the most common reasons for school closings were a low number of pupils, a poor municipal economy and a desire to improve resource utilisation (Norwegian Directorate for Education and Training 2010h).

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

In the 2010-2011 school year, 160 private primary and lower secondary schools were approved in accordance with the Private Education Act and were thereby entitled to state funding. Six of these schools were special schools. There were four more mainstream primary and lower secondary schools approved in accordance with the Private Education Act than in the previous year. In addition, five private schools that were approved without the right to government grants (Section 2-12 of the Education Act) are operating. These include international and foreign schools in Norway. The number of private primary and lower secondary schools increased rapidly from 2000-2001 (89 private primary and lower secondary schools) to 2005-2006 (150 private primary and lower secondary schools). Since 2005-2006, the increase in the number of private primary and lower secondary schools has levelled off. In 2003, the Independent School Act replaced the Private Education Act. The Independent School Act did not require that the schools had to be operated on a specific basis. The Independent School Act was repealed in 2007 and replaced with a

PRIVATE PRIMARY AND SECONDARY SCHOOLS

Private primary and lower secondary schools are privately owned schools approved pursuant to the Act relating to state grants to private schools offering primary and secondary education (the Private Education Act) or to Sections 2-12 and 3-11 of the Act relating to primary and secondary education (the 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. These schools must be run in accordance with the Private Education Act, regulations pursuant to this act and decisions of approval. The schools shall perform 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 requirements concerning a special basis do not apply, however, to already approved schools that were in operation by year-end 2007.

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.

new Private Education Act that reintroduced the requirement that the schools must be operated on a religious or recognised educational basis.

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

As of 1 October 2010, there were 614,020 pupils at public and private mainstream primary and lower secondary schools, 92 more than in 2009. The number of pupils in mainstream primary and lower secondary schools increased until the 2005-2006 school year, only to decline slightly in the next three years. In the autumn of 2010, there were 1,881 pupils in special schools and 754 pupils in Norwegian primary and lower secondary schools abroad.

Marked increase in the number of pupils up to 2020

The number of pupils in primary and lower secondary school is expected to increase from about 615,000 in 2010 to about 647,000 in 2020 (Statistics Norway 2010a). The number of pupils in primary and lower secondary school is expected to decline slightly in the period from 2011 to 2014 and then rise again up to 2020. The growth will mainly be in the primary schools, where the number of pupils will increase from 422,000 in the autumn of 2010 to about 458,000 in 2020. The number of pupils in the lower secondary schools will decrease from just under 192,000 to about 189,000 in 2020.

The trend in the number of primary school pupils will vary widely among the counties. In 10 counties, there will probably be a growth in the number of pupils. The largest increase is expected in Oslo, Akershus, Rogaland and Hordaland counties. Oslo will have the greatest growth, with an expected increase of approx. 16,000 pupils (28 per cent). The sharpest declines in the number of pupils in primary and lower secondary school are expected in Nordland, Oppland, Finnmark, and Sogn og Fjordane counties.

1.3 WHICH SUBJECTS CAN THE PUPILS IN PRIMARY AND LOWER SECONDARY SCHOOL CHOOSE?

In primary and lower secondary school, most of the subjects are mandatory, but in lower secondary school, the pupils can choose from among various foreign languages or in-depth language studies in *Norwegian*, *English*, or *Sami*. In some schools, they can also choose *Working life skills*, which has been offered on a trial basis since 2009.

Spanish is most popular

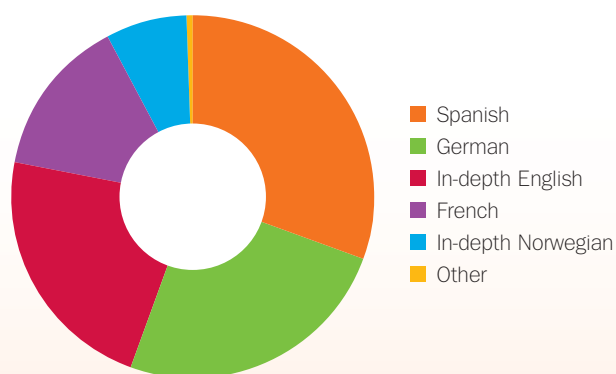
The most popular second foreign language in the lower secondary schools in 2010 was *Spanish*. Thirty-one per cent of the pupils chose this language. In addition to the major languages in Figure 1.2, a small number of pupils also take languages such as *Italian*, *Russian* and *Sami in-depth*. The percentage of pupils taking the various languages has changed little in recent years.

When a pupil has chosen either a foreign language or *In-depth Study in Norwegian* or *English*, the pupil shall normally take the subject

Regulations pursuant to the Norwegian Education Act: Section 1-8: 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.

FIGURE 1.2 Foreign languages and in-depth language studies. Years 8-10. Mainstream primary and lower secondary schools, 2010-2011. Per cent.



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

throughout all of lower secondary school. Under certain circumstances, the pupil may change his/her course at a later point in time. The number of transfers to a different language is greatest in *French*. Twenty per cent of the pupils who took *French* in Year 8 in 2008-2009, did not take *French* in Year 10. The change of language is greatest between Year 8 and Year 9.

Many choose working life skills, especially boys

In the 2009-2010 school year, *working life skills* were introduced as a pilot project in

sixteen schools in five municipalities. In 2010-2011, the experiment was expanded to include 133 schools throughout all of the counties. The subject is offered to all pupils in lower secondary school who participate in the experiment, and it can be chosen as an alternative to a *second foreign language* and *Norwegian* (for pupils with a different mother tongue) and *In-depth Study in English*.

In Report No. 22 (2010-2011) to the *Starting Motivation - Mastery - Opportunities* (Ministry of Education and Research 2011), it is proposed that the experiment with working life skills be expanded so that municipalities that so desire may introduce working life skills as a pilot scheme starting in the autumn of 2012. After the experiment has been evaluated and the findings summarised in 2013, it will be decided whether the subject shall be introduced permanently to the curriculum.

The course should give pupils greater opportunities to do practical work and try out their interest in a vocational education. The overall goal is to improve the pupils' academic motivation. At the same time, the new subject shall maintain the basic skills in a good way. The subject is based on the vocational education programmes in upper secondary education and training, but is adapted to the lower secondary level.

In the 2010-2011 school year, 2,435 pupils were registered in the subject. 1,955 of these pupils were in Year 8, 444 in Year 9 and 36 in Year 10. The reason for the uneven distribution by Year is that the experiment was expanded in the 2010-2011 school year. At that time, 19 per cent of the pupils in Year 8 in the relevant schools took the subject. Sixty-seven per cent of the pupils were boys. One out of four boys chose the subject, whereas only one out of eight girls did so.

The *In-depth Study* courses in *Norwegian* and *English* have been losing enrolment since the *working life skills* were introduced. Of the 117 schools that tried out this subject in 2010, 69 schools offered *In-depth Study* in Norwegian the previous year, whereas only 23 schools continued that offer in the current school year. So far, the data show no noticeable decrease in the percentage of pupils who choose a second foreign language in the schools that have introduced working life skills (Ministry of Education and Research 2011).

1.4 DO THE PUPILS GET INDIVIDUAL ADAPTATION OF THE EDUCATION?

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

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

In the 2010-2011 school year, there were 739 pupils in 112 primary and lower secondary schools who took subjects at the upper secondary level. The number of pupils who take advantage of this scheme has increased slightly from 2008-2009, when there were 620 pupils who took advantage of the scheme. Over 90 per cent of the pupils who took subjects at the upper secondary level in 2010-2011 were in Year 10.

Regulations pursuant to the Norwegian Education Act: Section 1-14: 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 receive 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.

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

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

In the 2010-2011 school year, 2,238 pupils in mainstream primary and lower secondary schools had hours reassigned that were stipulated in the individual subjects. 435 of them were in the Years 1 to 7, and 1,803 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). Feedback from the Offices of the County Governors also suggest that some school owners have trouble distinguishing this scheme from other forms of individual adaptation, such as special needs education (SNE). As a result of this, too many pupils may be registered as taking part in this scheme in the Primary and Lower Secondary School Information System (GSI).

Continued increase in the number of pupils receiving SNE

In the autumn of 2010, 50,266 pupils in mainstream primary and lower secondary schools received individual decisions on SNE. In addition, 1,555 pupils received SNE at special schools. All in all, this amounted to 8.4 per cent of all of the pupils in primary and lower secondary school. As shown in table 1.1, there has been a steady increase in the percentage of pupils receiving SNE since 2006. In 2010-2011, Østfold and Akershus counties had the lowest percentage of pupils with individual decisions on SNE. Seven per cent of the pupils in mainstream primary and lower secondary schools in these counties received SNE. The highest percentages of pupils with individual decisions on SNE were in Aust-Agder and Nordland counties. Just over 10 per cent of the pupils in those counties received individual decisions on SNE in 2010-2011.

Seven out of ten pupils who received SNE in the 2010-2011 school year were boys. The gender gap in the percentage of pupils who received

SNE, is somewhat reduced from the previous school year.

Report No. 16 (2006-2007) to the Storting ... *and no one was left behind. Early intervention for lifelong learning* (Ministry of Education and Research 2006) emphasised the importance of giving pupils who have learning difficulties assistance as soon as the problem is identified. It is important that measures be put in place as soon as possible.

The percentage of pupils with SNE increases during primary school and throughout lower secondary school. In the autumn of 2010, 4.1

Section 5-1 of the Education Act: RIGHT AND OBLIGATION TO ATTEND PRIMARY AND LOWER SECONDARY EDUCATION. RIGHT TO SPECIAL NEEDS EDUCATION

Pupils who either do not or are unable to benefit satisfactorily from ordinary education and training programmes are entitled to special needs education.

Section 5-3 of the Education Act: EXPERT ASSESSMENT

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

The expert assessment shall consider and determine the following:

- the pupil's benefit from ordinary education and training programmes
- learning difficulties the pupil may have and other special conditions of importance to the education and training
- realistic educational goals for the pupil
- whether it is possible to provide help for the pupil's difficulties within the ordinary education and training programmes
- the kind of education and training that it is appropriate to provide.

TABLE 1.1 Pupils with individual decisions on SNE by gender, 2006-2007 to 2010-2011. Mainstream primary and lower secondary schools. Number and per cent.

School year	Pupils with SNE			Pupils with SNE, by gender	
	All pupils Number	SNE Number	Per cent	Girls Per cent	Boys Per cent
2010-2011	614,020	50,266	8.2	32.0	68.0
2009-2010	613,928	46,873	7.6	31.2	68.8
2008-2009	614,033	43,164	7.0	30.8	69.2
2007-2008	616,388	39,028	6.3	30.8	69.2
2006-2007	619,038	36,669	5.9	30.7	69.3

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

per cent of the pupils in Year 1 had individual decisions on SNE. In Year 10, the percentage of pupils with SNE was 11 per cent. There has been an increase in the percentage of pupils with SNE in all Years in the period 2006-2007 to 2010-2011. The increase has been greatest in Years 5 to 7 and in Year 10, and least in Year 1.

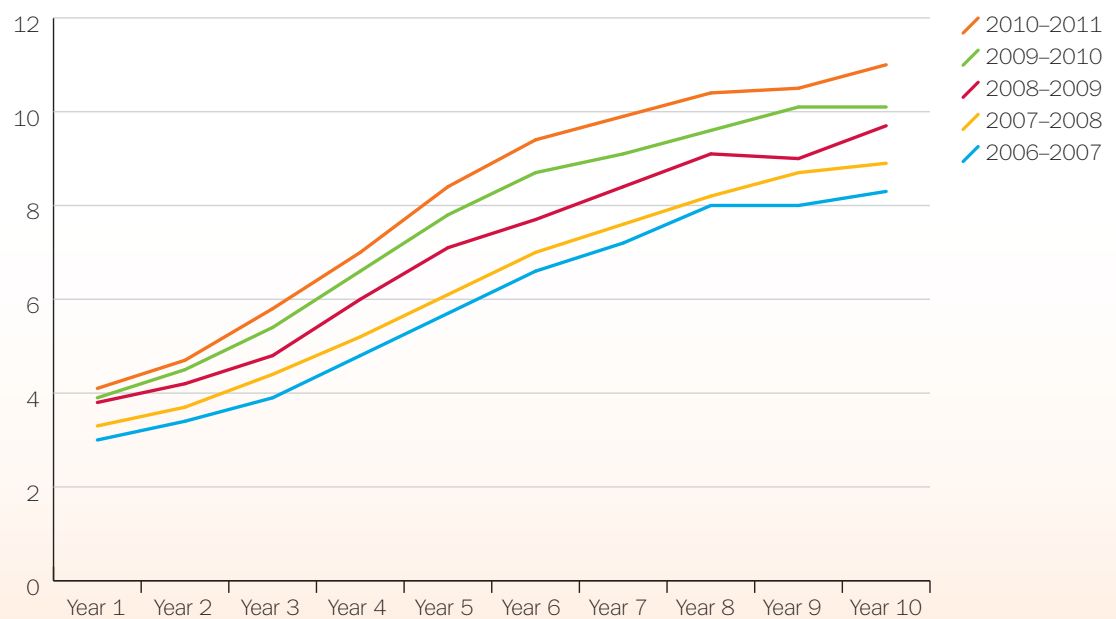
Ninety-five per cent of the pupils in mainstream primary and lower secondary education who had individual decisions on SNE received SNE from teaching staff. Forty-eight per cent of pupils with SNE received periods with an assis-

tant. Only a few pupils had individual decisions that only pertained to periods taught by an assistant.

More pupils with adapted education in Norwegian

According to Section 2-8 of the Education Act, pupils in primary and lower secondary school who have a mother tongue other than Norwegian or Sami are entitled to adapted education in Norwegian until they are sufficiently proficient to follow the normal instruction in the school.

FIGURE 1.3 Pupils with individual decisions on SNE, by Year in the period 2006-2007 to 2010-2011. Mainstream primary and lower secondary schools. Per cent.



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

**Sections 2-8 and 3-12 of the Education Act:
ADAPTED LANGUAGE EDUCATION FOR PUPILS
FROM LANGUAGE MINORITIES**

Pupils attending the primary and lower secondary school and/or upper secondary education and training who have a mother tongue other than Norwegian or Sami are entitled to adapted education in Norwegian until they are sufficiently proficient in Norwegian to follow the normal instruction in the school. If necessary, such pupils are also entitled to mother tongue instruction, bilingual subject teaching, or both.

The mother tongue instruction may be provided at a school other than that normally attended by the pupil.

When mother tongue instruction and bilingual subject teaching cannot be provided by suitable teaching staff, the municipality and/or county shall as far as possible provide for other instruction adapted to the pupils' abilities.

The municipality and/or county shall survey the pupils' proficiency in Norwegian before any decisions are made about adapted language education. This survey shall also be conducted during the instruction for pupils who are given adapted language education 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.

In the autumn of 2010, there were 43,854 pupils receiving adapted education in Norwegian in mainstream primary and lower secondary schools, an increase of six per cent from the previous year. The number of pupils with adapted education in Norwegian increased during the period from 2006-2007 up to 2010-2011. 16,576 of these pupils received education and training according to the curriculum in basic Norwegian.

The percentage of pupils receiving adapted education in Norwegian varies widely among the counties. Oslo has the highest percentage with 24 per cent, and Nord-Trøndelag has the lowest with 2.8 per cent of the pupils.

Pupils receiving adapted education in Norwegian are also entitled, if necessary, to mother tongue instruction and/or bilingual subject teaching (Section 2-8 of the Education Act). Mother tongue instruction is given to pupils with a mother tongue other than Norwegian and Sami in addition to the number of regular teaching hours. Bilingual subject teaching 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 2010, there were 2,664 pupils who, in addition to adapted education in Norwegian, only received mother tongue instruction. The number of pupils who only receive mother tongue instruction has been declining

FIGURE 1.4 Pupils with adapted education in Norwegian, by county, 2010-2011. Mainstream primary and lower secondary schools. Per cent.

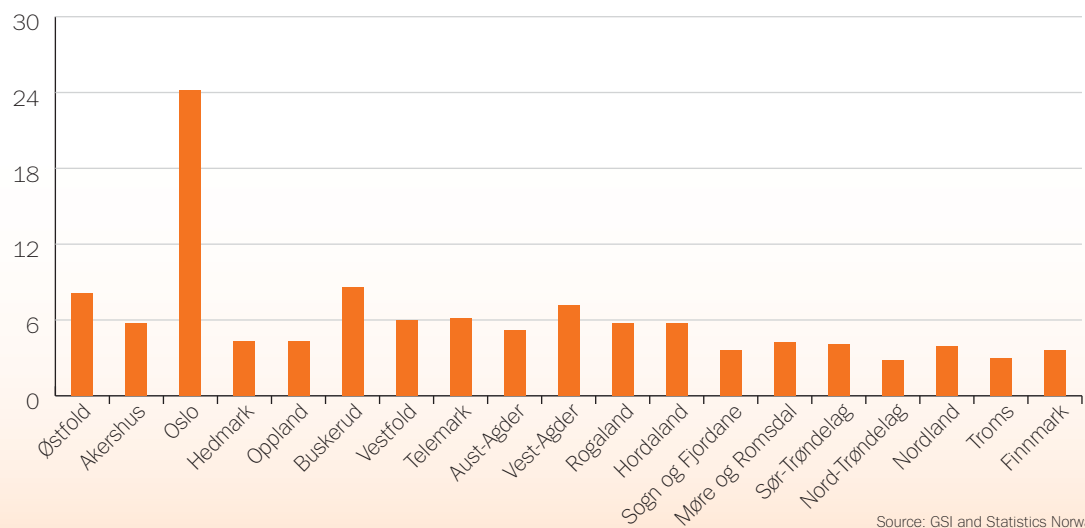
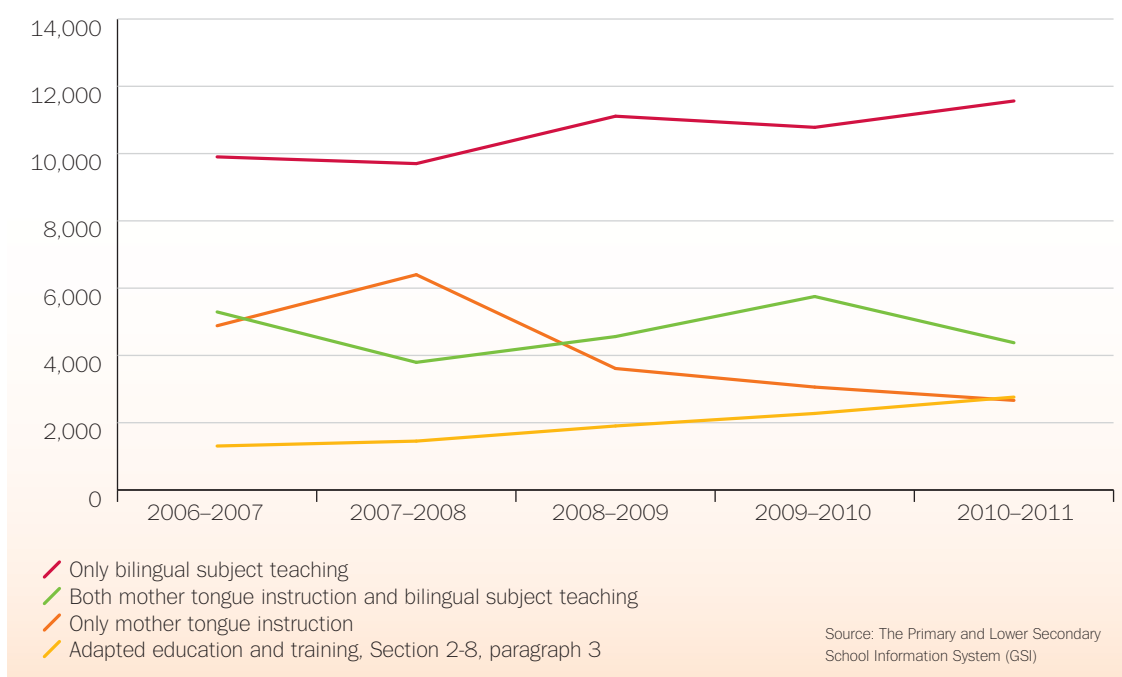


FIGURE 1.5 Pupils who are given mother tongue instruction and/or bilingual subject teaching, 2006-2007 to 2010-2011. Mainstream primary and lower secondary schools. Number.



since 2007-2008. 4,377 pupils received both mother tongue instruction and bilingual subject teaching in addition to adapted education in Norwegian.

11,564 pupils received only bilingual subject teaching in addition to adapted education in Norwegian. The number of pupils who receive bilingual subject teaching has increased since 2006-2007.

Pursuant to Section 2-8, paragraph 3 of the Education Act, if mother tongue instruction or bilingual subject teaching cannot be given by the school's own teaching staff, the municipality shall arrange some other form of education and training adapted to the pupil's circumstances to the extent that this is possible. In the autumn of 2010, 2,761 pupils received adapted education and training on this basis. The number of pupils who received this kind of education and training has increased throughout the entire period from 2006-2007 up to 2010-2011.

In the autumn of 2010, mother tongue instruction and/or bilingual subject teaching were given in 119 different languages. The dominant languages among pupils who received mother tongue instruction and/or bilingual subject teaching and training were Somali, Arabic and Urdu.

1.5 | HOW MANY PUPILS TAKE ADVANTAGE OF THE HOMEWORK ASSISTANCE PROGRAMME?

Starting in the autumn of 2010, pupils in Years 1 to 4 were offered homework assistance. The pupils participate on a voluntary basis. The school owners are free to choose whether the homework assistance programme shall be organised under the auspices of extracurricular activities programmes or of the school. In Years 1 to 4, the scope of this programme shall be at least eight hours each week. Each Year shall have at least one hour of homework assistance per week.

Section 13-7a of the Education Act: REQUIREMENT FOR THE MUNICIPALITY TO HAVE A HOMEWORK ASSISTANCE PROGRAMME

The municipality shall have a homework assistance programme for pupils in Years 1 to 4. This programme 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.

TABLE 1.2 Pupils who participated in homework assistance as per 1 October 2010. Mainstream primary and lower secondary schools. Number and per cent.

	Number	Percentage of the pupils in each Year
Year 1	26,926	45.0 %
Year 2	33,549	56.5 %
Year 3	33,238	57.1 %
Year 4	30,498	51.3 %
Total	124,211	52.4 %

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

Table 1.2 shows that over half of the pupils in Years 1 to 4 participated in homework assistance as per 1 October 2010. On behalf of the Directorate for Education and Training, Norwegian Social Research (NOVA) is conducting an evaluation of the homework assistance programme. The results of this evaluation will be published in the spring of 2013.

1.6 HOW IS THE RELATIVE USE OF THE TWO FORMS OF NORWEGIAN CHANGING?

Most pupils in primary and lower secondary school are taught in Bokmål (Dano-Norwegian, one of the two official forms of the Norwegian language) (87 per cent). The percentage of pupils taught in Bokmål has increased by 1.7 percentage points in the last ten years. In 13 of the counties, over 90 per cent of the pupils had Bokmål as their first-choice form of Norwegian. Møre og Romsdal (53 per cent) and Sogn og Fjordane (97 per cent) are the only two counties where a majority of the pupils are taught in Nynorsk (New Norwegian, the other official form of the Norwegian language). Thirteen per cent of the pupils had Nynorsk as their first-choice form of Norwegian in the autumn of 2010. In Finnmark, about 8 per cent of the pupils were taught in Sami.

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 educa-

tion and training that shall lead to qualification for higher education or vocational qualifications. Preliminary figures from KOSTRA (Municipality-State-Reporting) 2010 show that 91 per cent of all 16-18-year-olds were enrolled in upper secondary education and training in the autumn of 2010.

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

The number of upper secondary schools in Norway is diminishing

In the autumn of 2010, there were 437 upper secondary schools in Norway, 352 of which were county-administered, 83 private and two state-administered (Statistics Norway, preliminary figures for 2010).

Since 2001, the number of upper secondary schools in Norway has decreased by 60. From the 2009-2010 to the 2010-2011 school year, 12 upper secondary schools were closed, Eleven of these were municipal and one was private. In the same period, one private and nine county-administered upper secondary schools were established. The number of pupils per school has increased; in 2001 there were an average of 425 pupils per upper secondary school, whereas in 2010 there were 443 pupils.

1.8 HOW ARE THE APPLICATIONS TO UPPER SECONDARY EDUCATION AND TRAINING CHANGING?

Only small changes in the pattern of applications to upper secondary education and training

There were only small changes in the pattern of applications to upper secondary education and training after the introduction of the Knowledge Promotion Reform (KLO6). These changes are either of a limited nature or represent more prolonged trends that cannot be tied to the reform as such. (Frøseth et al. 2008).

More pupils are applying to the general studies education programmes, particularly to education programmes for *Specialisation in General Studies* (from 33 per cent in 2006 to 36 per cent in 2011).

**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 school 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 are entitled to education and training in accordance with the period of instruction stipulated in the curriculum.

Pupils, apprentices and trainees are entitled to education and training in accordance with this Act and regulations issued pursuant to the Act.

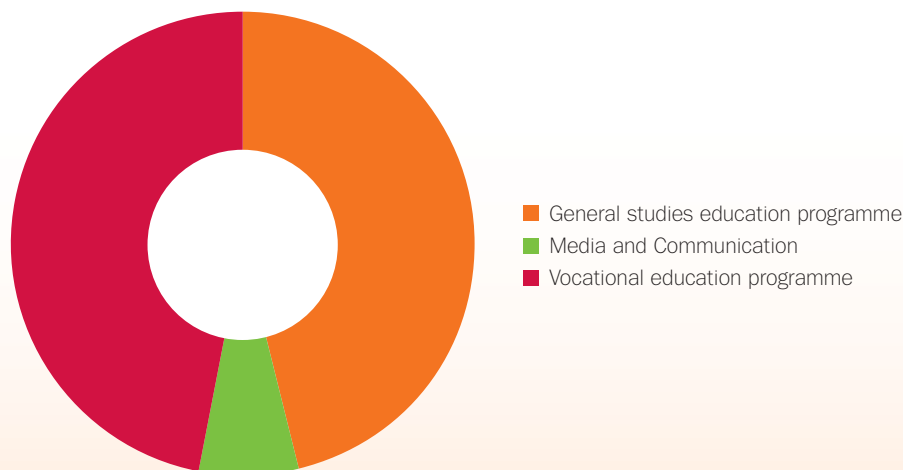
In previous years, pupils with a great need for adaptation of the education and training have been separated in the statistics. This year, these pupils are listed together with pupils without any such adaptation. This is the main reason for the increase in the percentage of pupils in *Specialisation in General Studies*. The two other general studies education programmes, *Music, Dance and Drama* and *Sports and Physical Education*, have undergone a slight decline from 2006 to 2011. There is a slight increase in the

percentage of pupils who are applying to the education programme, *Media and Communication*. This is a vocational education programme, but over 90 per cent of those who take it complete it with qualification for higher education. If we separate out *Media and Communication*, there has been a decrease in the percentage of pupils applying to a vocational education programme since the introduction of the Knowledge Promotion Reform. However, there was a slight increase again from 2010 to 2011.

Differences between boys' and girls' applications

There are still differences between boys' and girls' preferences when they apply to upper secondary education and training. The girls constitute 55 per cent of the applicants to education programmes for *Specialisation in General Studies*, whereas the boys constitute 59 per cent of the applicants to the vocational education programmes and apprenticeships. The differences become even clearer when we look at the individual education programmes. There is a predominance of boys in the applications to the technical education programmes such as *Building and Construction, Electricity and Electronics* and *Technical and Industrial Production*. There is a predominance of girls in the education programmes *Design, Arts and Crafts, Health and Social Care* and *Music, Dance and Drama*.

FIGURE 1.6 Applicants to general studies and vocational education programmes in Vg1 as per 1 March 2011. Per cent.



Source: The Norwegian Directorate for Education and Training/VIGO 2011

Figure 1.7 gives an overview of the applications to the various Years and courses of study in upper secondary education and training. The applications to the first two Years were greatest in the vocational education programmes. For Vg3, however, the situation is the opposite when we count *the supplementary year qualifying for higher education* together with the general studies programmes. There were about twice as many applicants to general studies and to the supplementary year qualifying for higher education as for applicants to apprenticeships and vocational programme areas in schools. The data on applicants that are presented in Figure 1.7 and Tables 1.3 to 1.6 are based on the applications as per 1 March and include only applications to education programmes within the structure of the Knowledge Promotion Reform. Applicants to private upper secondary schools are not included.

Increase in the number of applicants to Specialisation in General Studies in Vg1 and Vg2

Table 1.3 shows that there was a total of 75,866 applicants to Vg1 in the spring of 2011. This is about 1,100 more applicants than in the spring of 2010.

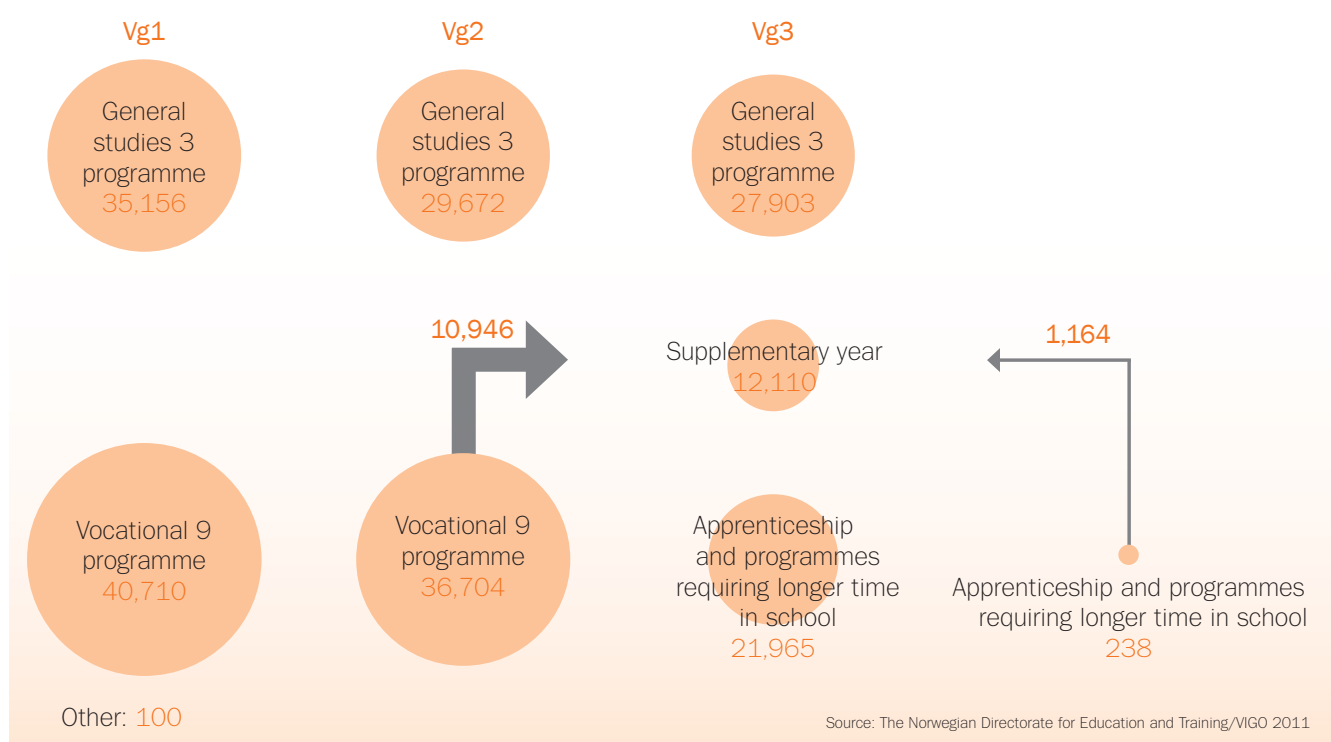
Media and Communication and Music, Dance and Drama have the most applicants per place

By comparing the number of pupils for the 2010-2011 school year with the applicants' first choice as per 1 March 2011, it is possible to see which education programmes are over or undersubscribed relative to the number of available study places. Being oversubscribed means that there are more applicants to the education programme than the number of places being offered to pupils for the 2010-2011 school year. This will usually be reflected in tougher admission requirements for those programmes.

The highest oversubscribing is in *Media and Communication*. There were 1,436 more applicants than there are pupils in the current school year, which amounts to 1.4 applicants per place in this school year. There is also considerable oversubscribing to *Music, Dance and Drama* with 1.4 applicants per place, and to *Electricity and Electronics* with 1.2 applicants per place.

The undersubscribing is greatest in *Specialisation in General Studies* with 1,587 fewer applicants than there are pupils in the current school year. This amounts to a little over 0.9 applicants per place. At the same

FIGURE 1.7 Applicants to upper secondary education and training as per 1 March 2011, by Year and educational pathway. Number.



time, *Specialisation in General Studies* is also the programme that has the most applicants. Other programmes that are undersubscribed are *Agriculture, Fishing and Forestry* with 0.8 applicants per place and *Design, Arts and Crafts* with 0.9 applicants per place.

There are a total of 66,376 applicants to

Vg2 in 2011, which is just over 1,400 more applicants than in the spring of 2010. A majority of the applicants, 55 per cent, have applied to vocational education programmes. The change in the number of applicants to Vg2 will largely reflect the changes in the number of applicants to Vg1 the previous year.

TABLE 1.3 Applicants to Vg1 as per 1 March 2011 by education programme. Number and per cent.

Education programme	Number	Per cent	Change from 2010 in percentage points
All programmes	75,866	100.0	
Specialisation in General Studies	27,351	36.1	1.5
Sports and Physical Education	4,495	5.9	-0.5
Music, Dance and Drama	3,310	4.4	-0.2
Health and Social Care	8,404	11.1	0.0
Technical and Industrial Production	6,625	8.7	-0.3
Electricity and Electronics	5,623	7.4	-0.1
Media and Communication	5,250	6.9	-0.4
Building and Construction	4,236	5.6	0.0
Service and Transport	3,108	4.1	0.3
Design, Arts and Crafts	2,917	3.8	-0.4
Restaurant and Food Processing	2,263	3.0	0.1
Agriculture, Fishing and Forestry	1,554	2.0	-0.1
Technical General Studies (TAF)	730	1.0	0.1

Source: The Norwegian Directorate for Education and Training/VIGO 2011

TABLE 1.4 Applicants to Vg2 as per 1 March 2011 by education programme. Number and per cent.

Education programme	Number	Percentage	Change from 2010 in percentage points
All programmes	66,376	100.0	
Specialisation in General Studies	23,899	36.0	0.5
Sports and Physical Education	3,754	5.7	-0.1
Music, Dance and Drama	2,019	3.0	-0.2
Health and Social Care	8,417	12.7	0.7
Technical and Industrial Production	6,178	9.3	-0.3
Service and Transport	4,518	6.8	0.2
Electricity and Electronics	4,425	6.7	0.0
Building and Construction	4,076	6.1	-0.4
Media and Communication	3,239	4.9	0.2
Design, Arts and Crafts	2,374	3.6	-0.4
Restaurant and Food Processing	1,942	2.9	-0.3
Agriculture, Fishing and Forestry	1,254	1.9	0.0
Technical General Studies (TAF)	281	0.4	0.1

Source: The Norwegian Directorate for Education and Training/VIGO 2011

Nine out of ten applicants to Vg3 in school are applying to the general studies education programme

After Vg2, the pupils can either become apprentices or apply to Vg3 in school. In the education programmes *Building and Construction*, *Restaurant and Food Processing*, *Service and Transport*, and *Technical and Industrial Production*, no programme is offered in Vg3 in school.

Table 1.5 shows that there were 44,476 applicants to Vg3 in the spring of 2011, which is about 400 more than in the spring of 2010. Of those applying to Vg3 in school, 89 per cent are applying to a general studies education programme or a supplementary year qualifying for higher education.

As the table shows, there are few applicants to vocational education in school. In some

subjects in *Health and Social Care*, *Media and Communication*, *Electricity and Electronics* and *Agriculture, Fishing and Forestry*, the pupils achieve vocational qualifications after Vg3 in school without an apprenticeship.

Ninety-five per cent of the applicants to *Media and Communication* applied to the general studies programme area. For example, barely three per cent are applying to *Media Design*, which gives vocational qualifications. Likewise, over 60 per cent of those who apply to *Agriculture, Fishing and Forestry* apply to the general studies programme area. Due to an insufficient number of apprenticeships, more pupils than indicated by the data on applications take the training part of their apprenticeship in school.

In 2011, about 11,000 pupils from the vocational education programmes applied for a

TABLE 1.5 Applicants to Vg3 in school as per 1 March 2011 by education programme. Number and per cent.

	Number	Per cent	Change from 2010 in percentage points
All programmes	44,746	100	
Specialisation in General Studies	22,385	50.0	-0.7
Supplementary year qualifying for higher education	12,110	27.1	1.1
Sports and Physical Education	3,583	8.0	0.1
Music, Dance and Drama	1,935	4.3	0.1
Media and Communication	2,186	4.9	-0.1
Electricity and Electronics	946	2.1	-0.2
Health and Social Care	740	1.7	-0.2
Agriculture, Fishing and Forestry	562	1.3	0.1
Design, Arts and Crafts	299	0.7	0.0

Source: The Norwegian Directorate for Education and Training/VIGO 2011

TABLE 1.6 Applicants to apprenticeships as per 1 March 2011 by education programme. Number and per cent.

	Number	Per cent	Change from 2010 in percentage points
Total	17,455	100	
Technical and Industrial Production	4,085	23.4	-0.2
Health and Social Care	2,872	16.5	0.5
Electricity and Electronics	2,841	16.3	0.6
Building and Construction	2,785	16	-2.0
Service and Transport	2,016	11.5	1.2
Restaurant and Food Processing	1,196	6.9	-0.2
Design, Arts and Crafts	850	4.9	-0.2
Agriculture, Fishing and Forestry	381	2.2	-0.1
Technical General Studies (TAF)	322	1.8	0.2
Media and Communication	107	0.6	0.1

Source: The Norwegian Directorate for Education and Training/VIGO 2011

Vg3 supplementary year qualifying for higher education. In addition, about 1,100 pupils applied for a supplementary year qualifying for higher education after they had completed their apprenticeship. About 19 per cent of those who began vocational studies in Vg1 in the autumn of 2009 applied for a supplementary year qualifying for higher education in the spring of 2011.

Slight increase in applicants for apprenticeship

Table 1.6 shows that there were 17,455 applicants for apprenticeships in the 2011-2012 school year, which is an increase of 715 applicants over the previous year. Apprentices who arranged for their own apprenticeship contracts with training establishments without applying are not included. They are included as applicants when their apprenticeship contract is approved by the counties.

The largest education programmes, *Technical and Industrial Production, Building and Construction, Health and Social Care* and *Electricity and Electronics*, also have the largest number of applicants for apprenticeships. The number of applicants to recognised trades has increased from 2010 to 2011 in all of the educational areas apart from *Building and Construction*.

There has been a decline in the percentage applying to *Building and Construction* in recent years and this trend continues this year (two percentage points). The percentage applying to *Building and Construction* has dropped from 22 per cent in 2008 to 16 per cent in 2011.

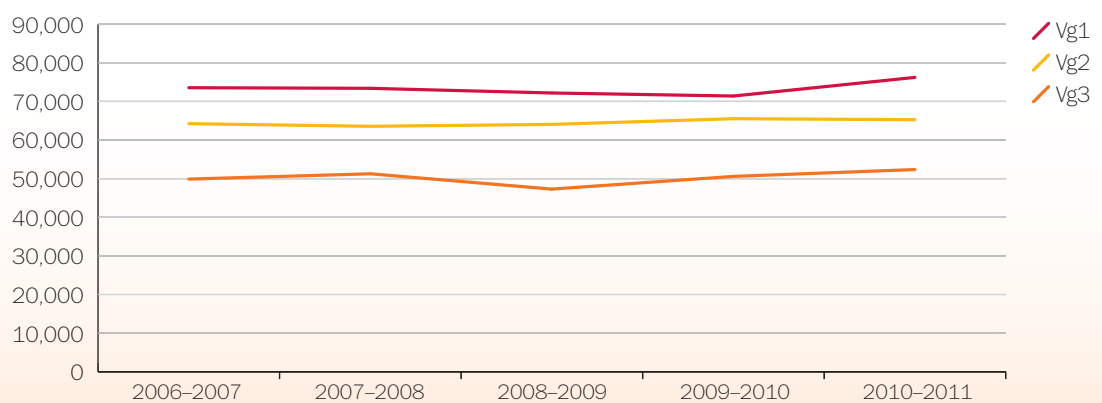
The percentage applying for apprenticeship in *Electricity and Electronics* has increased from 11 per cent in 2008 to in excess of 16 per cent in 2011. This is also a trend that has continued for several years.

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

Young people who have completed primary and lower secondary school or the equivalent are entitled to three years' continuous upper secondary education and training. In some recognised trades, the period of instruction is longer than three years. In such cases, the right is extended to cover the period of instruction that is stipulated for that subject. This right, which is often called *the youth right*, must normally be claimed during a continuous period of five years, or six years if the education and training is provided at a training establishment. In addition, the right must be claimed before the end of the year in which the person concerned turns 24 (Section 3-1 of the Education Act).

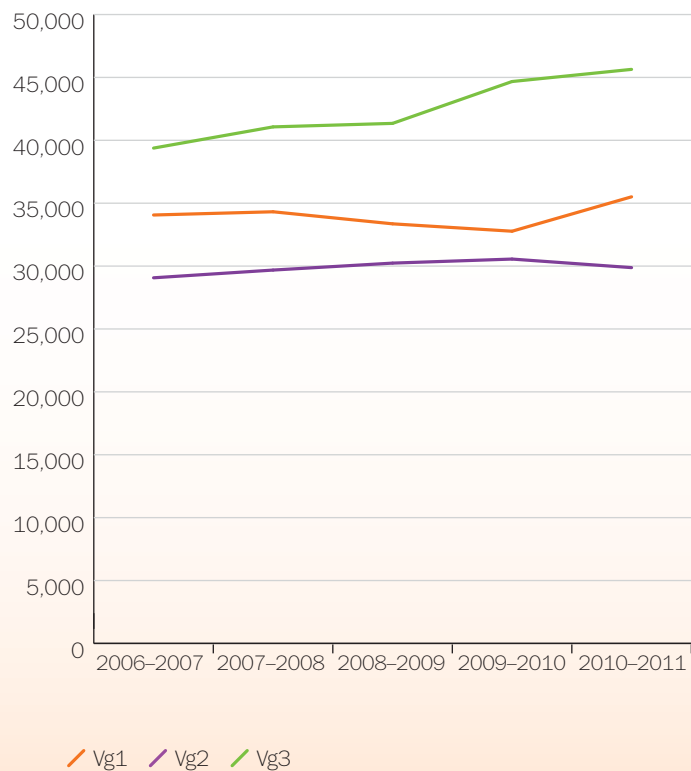
In the autumn of 2010, there were about 194,000 pupils in upper secondary education and training. Of these, there were 4,884 pupils with decisions about education and training leading to basic competence, and 1,086 pupils with vocational education and training in school. Note that the figures for Vg1 for 2010-2011 are not directly comparable with previous years because

FIGURE 1.8 Pupils in upper secondary education and training by level, 2006-2007 to 2010-2011. Revised figures (2010-2011 preliminary figures). Number.



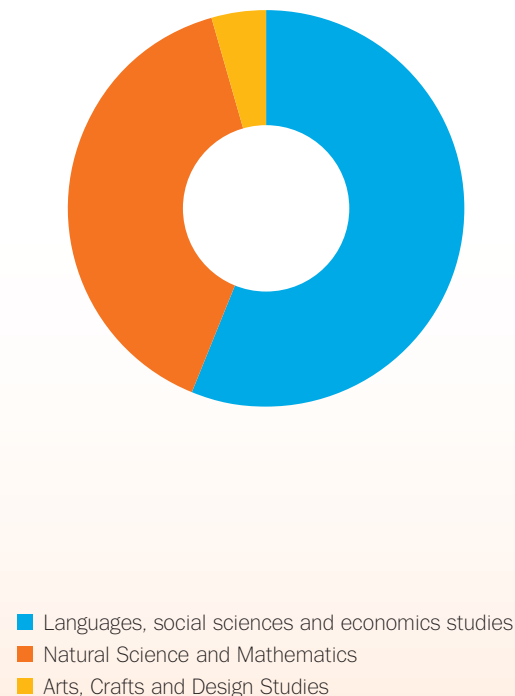
Source: Statistics Norway

FIGURE 1.9 Pupils in general studies education programmes by level, 2006-2007 to 2010-2011. Revised figures (2010-2011 preliminary figures). Number.



Source: Statistics Norway

FIGURE 1.10 Programme areas in Vg2 Specialisation in General Studies, 2010-2011. Per cent.



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

this year they include pupils who were previously separated in the category *alternative education and training*. These pupils are now called *pupils with decisions about education leading to basic competence* and are included in the other education programmes. This means that the apparently large increase in the number of pupils in Vg1 in Figure 1.8 is not real. The number of pupils in Vg2 declined by 258 pupils from 2009-2010 to 2010-2011, while the number of pupils in Vg3 increased by 1,775.

More pupils in general studies education programmes

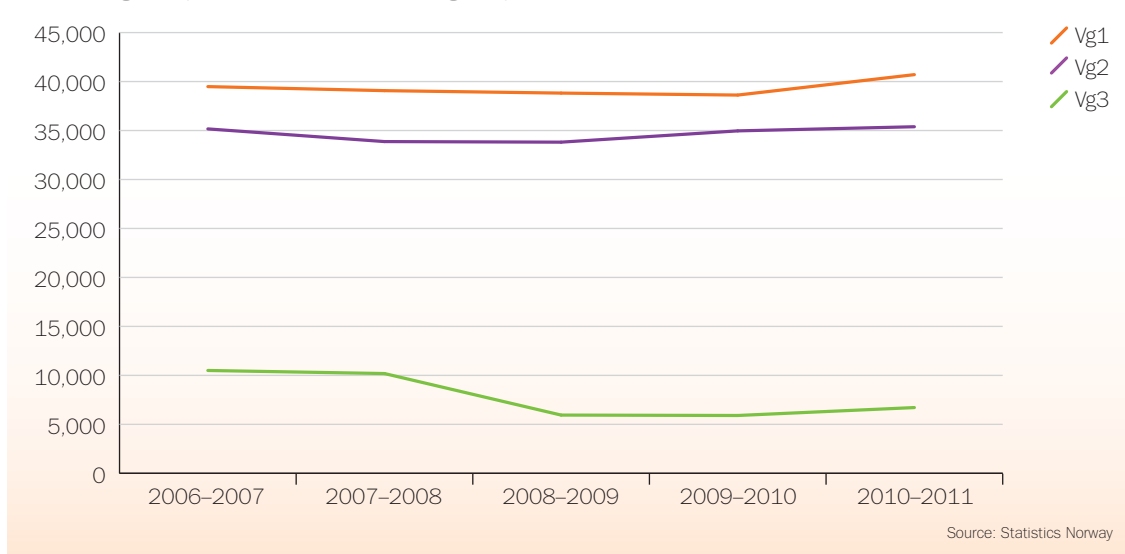
About half of the pupils who began in Vg1 in 2010, started in a general studies education programme. The percentage of pupils in general studies increases in Vg3. One reason for this is that many pupils in vocational education programmes choose to take a supplementary year qualifying for higher education after Vg2. Table 1.7 shows the breakdown among the various programmes that qualify for higher education.

TABLE 1.7 Pupils in general studies education programmes as per 1 October 2010, by education programme, preliminary figures. Number.

	Vg1	Vg2	Vg3
Specialisation in General Studies	28,922	24,221	26,651
Vg3 supplementary year qualifying for higher education			13,297
Sports and Physical Education	4,036	3,583	3,741
Music, Dance and Drama	2,364	2,073	1,949

Source: The Norwegian Directorate for Education and Training

FIGURE 1.11 Pupils in vocational education programmes by level, 2006-2007 to 2010-2011. Revised figures (2010-2011 non-revised figures). Number.



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

Of the 24,221 pupils who were registered in education programmes for *Specialisation in General Studies* in Vg2, the largest number of pupils were enrolled in the programme area for *languages, social sciences and economics studies* – almost 60 per cent of them.

This is also the area that increases the most. The number of pupils in the programme area of *Natural Science and Mathematics* has decreased slightly in the period 2008-2009 to 2010-2011. Among the pupils in *Specialisation in General Studies* *Sociology* and *Social Anthropology* is the most popular programme subject. 10,629 pupils have chosen this subject.

The number of pupils beginning in vocational education programmes is increasing

Figure 1.11 shows the number of pupils in Vg1, Vg2 and Vg3. As previously mentioned, the number of pupils dropped sharply in Vg3 in school because of the transition to apprenticeship or to a general studies education programme.

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 2010-2011, the lowest numbers of pupils in Vg1 and Vg2 were in *Agriculture, Fishing and Forestry*, and *Restaurant and Food Processing*.

In *Media and Communication*, the pupils can achieve general qualification for higher education. Thus, it is natural that this vocational education programme has a relatively high percentage of pupils in Vg3, compared with the percentage of pupils in Vg2.

Compared with 2009-2010, there was an increase in the number of pupils in all of the vocational education programmes at Vg3, with the exception of *Restaurant and Food Processing* and *Design, Arts and Crafts*. The biggest increases in Vg3 from 2009-2010 to 2010-2011 were in the education programmes *Media and Communication* (195), *Health and Social Care* (143) and *Electricity and Electronics* (82). Difficulty in obtaining an apprenticeship may be the reason why many pupils are offered and choose Vg3 in school as an alternative.

TABLE 1.8 Pupils in vocational education programmes as per 1 October 2010, by education programme, non-revised figures. Number.

	Vg1	Vg2	Vg3
Health and Social Care	8,810	8,545	1,109
Technical and Industrial Production	7,056	5,668	395
Electricity and Electronics	4,846	4,064	1,122
Media and Communication	3,814	3,216	2,368
Building and Construction	5,027	4,132	210
Service and Transport	3,404	3,932	217
Design, Arts and Crafts	3,327	2,291	361
Restaurant and Food Processing	2,543	1,994	14
Agriculture, Fishing and Forestry	1,879	1,544	917

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

Fewer apprentices

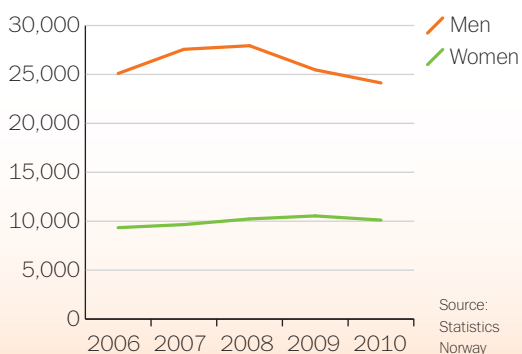
As per 1 October 2010, 34,248 apprentices and 1,311 trainees were registered in upper secondary education and training (Statistics Norway). The number of apprentices has decreased by about five per cent from the previous year, while the number of trainees has increased by six per cent from the previous year.

Over two thirds of the apprentices are men. At the same time, the number of male apprentices decreased by approximately five per cent, and the number of female apprentices decreased by about four per cent. The number of apprentices decreased the most in the male-dominated recognised trades, while the number of apprentices in the female-dominated *Health and Social Care* increased slightly. A possible explanation for the decline in the male-dominated recognised trades may be that these industries have been the most affected by the recession in connection with the financial crisis. This is the case, for example, with building and construction.

Section 4-1 of the Education Act: DEFINITION OF "APPRENTICE" AND "TRAINEE"

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 apprenticeship in accordance with regulations issued pursuant to section 3-4. Pursuant to this Act, a trainee 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.

FIGURE 1.12 Apprentices by gender. 2006-2010. Number.



ADULTS IN PRIMARY AND SECONDARY EDUCATION AND TRAINING

Pursuant to Section 4A-1 of the Education Act, adults who need primary and lower secondary education, but who are over the compulsory school age, are entitled to that education and training. This right applies to the subjects that are needed in order to get a diploma for completed primary and lower secondary education for adults. The right of adults to upper secondary education and training is regulated by Section 4A-3 of the Education Act and applies starting the year they turn 25.

1.10 WHAT PROGRAMMES IN PRIMARY AND SECONDARY EDUCATION AND TRAINING ARE OFFERED TO ADULTS, AND HOW IS THAT OFFER BEING USED?

273 municipalities have participants in programmes offering primary and lower secondary education to adults

Adults who need primary and lower secondary education and are not entitled to upper secondary education and training are entitled to primary and lower secondary education. Primary and lower secondary education for adults will usually include the written subjects *Norwegian*, *English* and *Mathematics*. In addition, they must choose two of the oral subjects *Social Studies*, *Science* or *Christianity with Comparative Religion and Ethics (RLE)*.

The education is free of charge, and the municipalities are responsible for organising primary and lower secondary education for adults.

In the 2010-2011 school year, 273 municipalities had participants in primary and lower secondary education for adults. 163 of these municipalities had participants in mainstream primary and lower secondary education, whereas 237 municipalities have adult participants who were given SNE in the area of primary and lower secondary education. Not all municipalities have adults who are being given primary and lower secondary education. This may be because the citizens do not need the programme, or they may need the programme, but not be well enough aware of it. Some municipalities also participate in inter-municipal cooperation on primary and

lower secondary education for adults, so some municipalities have participants from other municipalities.

More adults in mainstream primary and lower secondary education

In the autumn of 2010, 5,472 adults were given mainstream primary and lower secondary education, while 5,031 adults were given primary and lower secondary education in the form of SNE.

The total number of adults in primary and lower secondary education has increased during the period from 2008-2009 to 2010-2011, after having decreased in the period from 2006-2007 to 2008-2009. The number of adults in mainstream primary and lower secondary education has increased the most in Oslo, where it increased by 799 persons from 2009-2010 to 2010-2011.

The percentage of adults from a language minority in primary and lower secondary education has increased from 33 per cent in 2006-2007 to 50 per cent in 2010-2011. This percentage has increased the most among the participants in mainstream primary and lower secondary education, where it has increased from 73 to 87 per cent in the period from 2006-2007 to 2010-2011. Ten per cent of those receiving SNE in the autumn of 2010 were from a language minority.

Half of the participants in primary and lower secondary education for adults were women. The number of adults from a language minority in mainstream primary and lower secondary education has increased for both men and women, but the increase has been greatest for men, with an increase of 78 per cent in the number of participants from 2006-2007 to 2010-2011.

FIGURE 1.13 Adults in mainstream primary and lower secondary education and SNE, 2006-2007 to 2010-2011. Number.

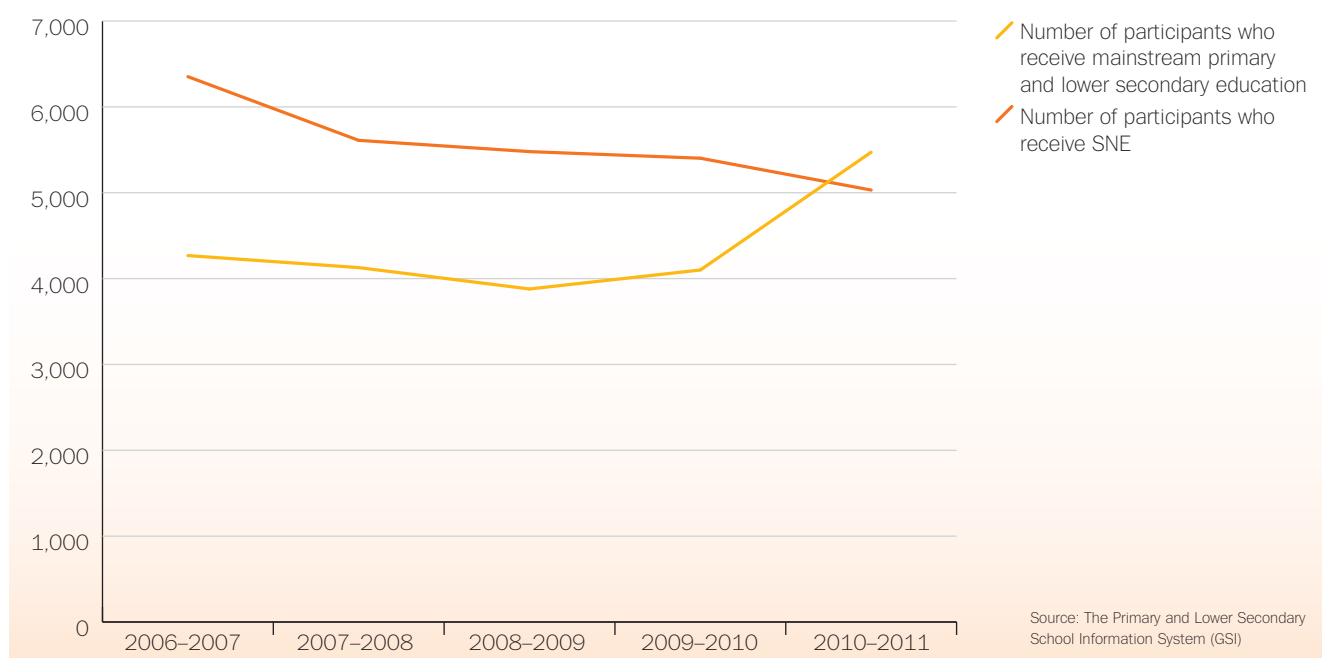


TABLE 1.9 Participants age 25 or older in upper secondary education and training. 2007-2008 to 2009-2010. 2009-2010 preliminary figures. Number.

	2007-2008	2008-2009	2009-2010
Apprentices and trainees	4,766	4,864	4,716
Candidates for experience-based trade certification	5,865	6,456	6,647
Pupils	14,717	12,943	8,870
Total	25,348	24,263	20,233

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

**Section 4A-3 of the Education Act:
THE RIGHT TO UPPER SECONDARY EDUCATION
AND TRAINING FOR ADULTS**

Adults entitled to upper secondary education and training have a right to assessment of prior learning and to a certificate of competence (assessment of prior learning).

**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 in a trade of a duration 25 per cent longer than the stipulated apprenticeship period. The county authority decides whether the working experience stated by the applicant can be approved and may in special cases approve periods of experience shorter than that indicated above (candidates for experience-based trade certification).

The age distributions for the participants in mainstream primary and lower secondary education and the participants who receive SNE are quite different. Sixty per cent of the participants in mainstream primary and lower secondary education are age 30 or younger, whereas only 26 per cent of the participants who receive SNE are age 30 or younger.

Fewer adults 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 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 adult pupils in upper secondary education and training has decreased slightly. However, the data base for adults in upper secondary education and training has been modified so that the numbers are not directly comparable with previously published statistics. In the new data base, data for adult participants in upper secondary education and training will be gathered only for participants who were active as per 1 October or who have achieved a result, such as a mark in a subject, or taken a craft or journeyman's examination or taken an examination for experience-based trade certification.

53 per cent of the adult participants in upper secondary education and training in the 2009-2010 school year were women. The average age of adult participants was 36. The greatest number of adult participants were in the education programme *Health and Social Care*. About a third of them were in this education programme in the 2009-2010 school year (includes only participants who take programmes within the structure of the Knowledge Promotion Reform). There was also a high percentage of participants in a supplementary year qualifying for higher education. About fifteen per cent of the participants took this education programme (includes only participants who take programmes within the structure of the Knowledge Promotion Reform).

Of the 20,233 adult participants in upper secondary education and training in 2009-2010, 2,820, or 14 per cent, had their prior learning assessed. This is a decrease from 2008-2009 when 20 per cent (4,834) of the adult participants had their prior learning assessed.

**1.11 | HOW HAS THE POPULATION'S
LEVEL OF EDUCATION EVOLVED
WITH TIME?**

Among other things, the results of the educational system may be assessed by examining the general level of education of the population. Figure 1.14 shows how the level has evolved over the past 30 years, broken down by gender.

The figure shows that the level of education has increased markedly over the past 30 years. In 2009, 45 per cent of the men and 40 per cent of the women had upper secondary education and training as their highest completed

education. Those who have completed upper secondary education and training are defined as those who have completed VKII (Advance course II) and/or Vg3 (upper secondary level 3) or have passed a craft examination. Those who have completed a shorter upper secondary education are categorised as having a primary and lower secondary education.

As the figure shows, the level of education increased most for women. There are now more women than men who have taken an education at the university or university college level.

1.12 WHAT DISTINGUISHES THE STAFF IN PRIMARY AND SECONDARY EDUCATION AND TRAINING: TEACHERS, ADMINISTRATORS AND ASSISTANTS?

Teachers in Norway are educated either through a four-year primary and lower secondary teacher training or through teacher training at the universities. In the autumn of 2010, a new teacher training programme was introduced for primary and lower secondary school in Norway. The main

GNIST

GNIST is a five-year effort to increase the status of teachers and to recruit more good teachers. This effort is a collaboration between the Ministry of Education and Research, the Union of Education Norway, the Norwegian Council for Teacher Education, the Norwegian Union of School Employees, the Norwegian Association of Local and Regional Authorities (KS), the Confederation of Norwegian Enterprise (NHO), the Norwegian Confederation of Trade Unions (LO), the Education Students in the Union of Education Norway, the National Union of Students in Norway, the School Student Union of Norway, the Norwegian Association of Graduate Teachers, and the Norwegian Association of School Leaders.

modification is that a student teacher may now choose to specialise in Years 1 to 7 or in Years 5 to 10.

Many studies show that teachers' formal qualifications have an impact on pupils' learning outcomes (Falch and Naper 2008; Opheim et al 2010; the Swedish National Agency for Education 2006).

FIGURE 1.14 The population's highest level of education. Persons age 20 and older by level of education and gender, 1982 to 2009. Per cent.

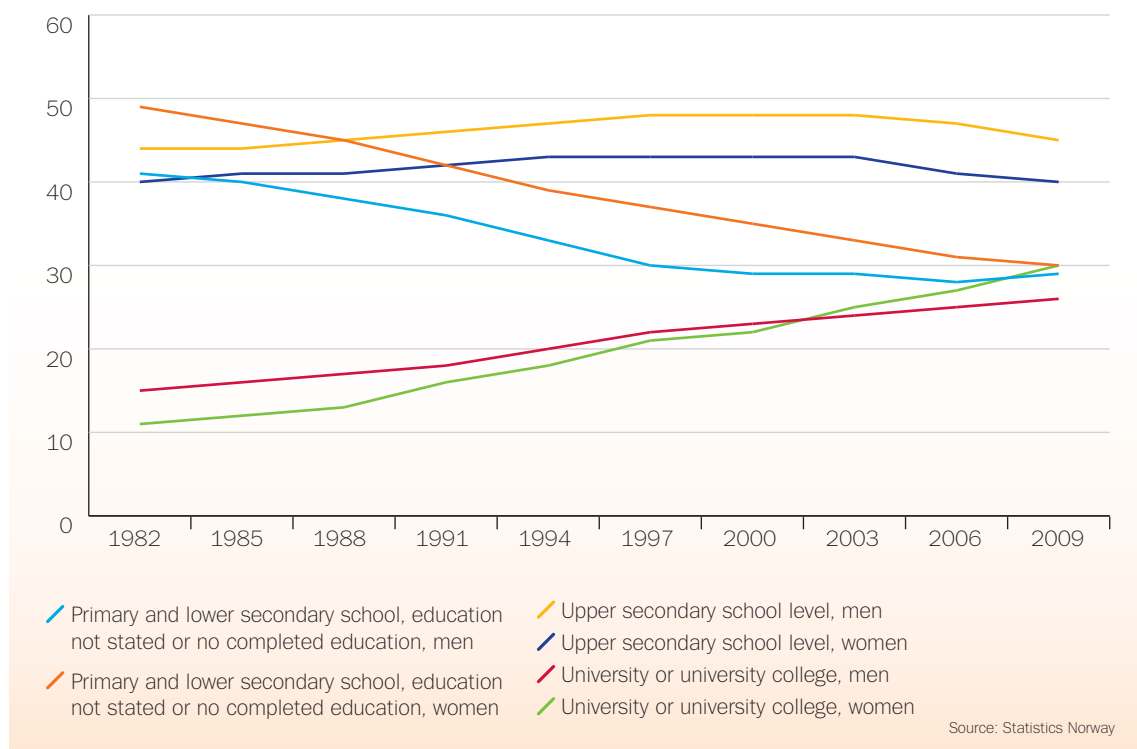


TABLE 1.10 Teachers, administrators and assistants in primary and lower secondary school by qualifications and gender. Fourth quarter 2009. Number and per cent.

	Total	Women	Men
Teachers			
Total number of teachers	67,200	49,852	17,348
Graduate university or university college degree with teacher training	3.9	3.3	5.3
Graduate university or university college degree without teacher training	1.0	0.8	1.5
Undergraduate university or university college degree with teacher training	83.9	85.2	80
Undergraduate university or university college degree without teacher training	4.5	3.9	6.0
Upper secondary or lower degree without teacher training	6.8	6.7	7.2
Administrators			
Total number of administrators	4,979	2,817	2,162
Graduate university or university college degree with teacher training	6.6	6.4	6.8
Undergraduate university or university college degree with teacher training	87.4	88.1	86.6
Administrators who do not have teacher training	6.0	5.5	6.7
Assistants			
Total number of assistants	13,942	11,873	2,069
Child and youth welfare worker education and training	17.1	18.8	7.4

Source: Statistics Norway

Most teachers have an undergraduate university or university college degree with teacher training

Table 1.10 presents a breakdown of the number of assistants, teachers and administrators in municipal and county-administered primary and lower secondary schools, by qualifications and gender. The figures contain information about all employees, including those who have a second job in the school system.

In 2009, 74 per cent of the teachers in primary and lower secondary school were women. Among the administrators, there was a more even gender distribution, with 56.5 per cent women. Eighty-five per cent of the assistants were women. The percentages of teachers and administrators without teacher training are shown in Tables 1.10 and 1.11, where they are defined as personnel without one of the following degrees: one-year undergraduate teacher training programme, general teacher training programme, three-year undergraduate programme in teaching of specific school subjects, training for pre-school teachers, training in SNE or other teacher training.

The increase in the percentage of teacher full-time equivalents (FTEs) without an approved degree has stagnated

The largest group of teachers who teach in primary and lower secondary school have an undergraduate university or university college degree

with teacher training. Only four per cent of those who teach in primary and lower secondary school do not have an approved degree for the Years that they teach. Teachers who do not have an approved degree are a fairly heterogeneous group consisting of both teachers who have taught for many years and younger people who have taken a break in their education. Many of the teachers who do not have an approved education are in the process of earning this kind of education (Nyen & Svensen, 2002).

Figure 1.15 shows that the smallest municipalities are distinguished by having a significantly higher percentage of teacher FTEs without approved qualifications for the Year they teach than other groups of municipalities. For municipalities of most sizes, the percentage of teacher FTEs without approved qualifications was slightly lower in the 2010-2011 school year than in 2009-2010.

The number has increased since the introduction of the Knowledge Promotion Reform in the 2006-2007 school year.

Nearly 12 per cent do not have an approved educational background (Statistics Norway). Data from Statistics Norway's Register of Employees indicate a slightly higher percentage of teachers who do not have an approved degree than the GSI statistics. The difference is partly because heads are counted in this register instead of FTEs as in GSI.

The percentage of teachers who do not have an approved degree varies with the size of the municipality (Figure 1.16). In particular, there is a difference in the percentage of teachers who only have upper secondary education and training as their highest completed education. In addition, teachers with a graduate university or university college education but without supplementary teacher training are employed to a greater extent in the largest municipalities.

School administrators in 36 small and medium-sized municipalities state that the challenges involved in recruiting teachers with approved educational qualifications are one of the main reasons why teachers who do not have these qualifications are hired in primary and lower secondary schools (Ramboll Management 2010). For the largest municipalities, on the other hand, the need for special academic

qualifications is more often indicated as the most important reason. This is consistent with the fact that, in addition to Troms and Finnmark counties, Akershus and Oslo are the counties that have the highest percentage of teachers who do not have approval.

The majority of school administrators are satisfied with the school owner's administration of the schools

In the Directorate for Education and Training's annual select query to school administrators and school owners, only three per cent of the municipalities state that they do not have the requisite academic competence in their staff or in a line of study. In addition, 62 per cent of the school administrators responded that they are fairly or very satisfied with the governance of the school sector in the municipality (Vibe et al 2010).

FIGURE 1.15 Percentage of teacher FTEs without an approved degree for the Year they teach in primary and lower secondary school, by size of municipality, 2004-2005 to 2010-2011. Per cent.

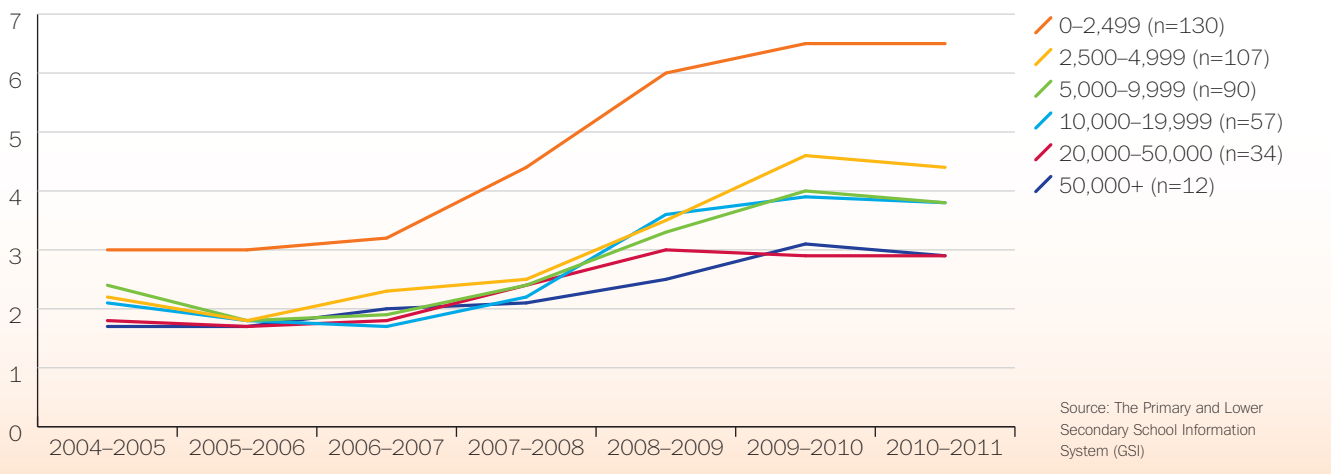


FIGURE 1.16 Percentage of teachers in primary and lower secondary school without a formally approved degree, by educational background. Fourth quarter 2009. Per cent.

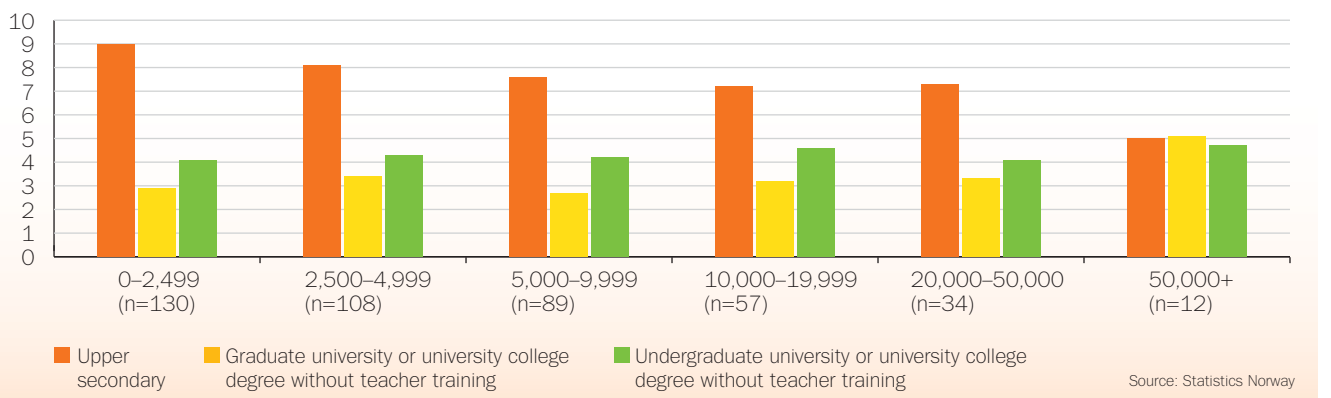


TABLE 1.11 Teachers and administrators in upper secondary education and training, by qualifications and gender. Fourth quarter 2009. Number and per cent.

	Total	Women	Men
Teachers			
Total number of teachers	25,348	12,543	12,805
Graduate university or university college degree with teacher training	21.7	22.1	21.2
Graduate university or university college degree without teacher training	6.7	6.0	7.4
Undergraduate university or university college degree with teacher training	53.9	57.4	50.4
Undergraduate university or university college degree without teacher training	9.3	9.7	8.9
Upper secondary or lower degree without teacher training	8.4	4.7	12.0
Administrators			
Total number of administrators	2,831	1,318	1,513
Graduate university or university college degree with teacher training	24.0	24.1	23.9
Undergraduate university or university college degree with teacher training	51.9	50.7	52.9
Administrators who do not have teacher training	24.1	25.3	23.1

Source: Statistics Norway

Many primary and lower secondary school teachers in the age groups 33–42 and 53–61

The average age of teachers and administrators in primary and lower secondary school is 44. This has remained virtually unchanged from 2007 to 2009. Figure 1.17 shows the age distribution among teachers and administrators in primary and lower secondary school.

The ages of teachers and administrators in primary and lower secondary school have two peaks. Most teachers and administrators are between the ages of 33 and 42, but there is also a relatively high percentage between the ages of 53 and 61. Twenty-two per cent of teachers and administrators in primary and lower secondary school are over age 55. That is a slight increase from 2008. The percentage varies somewhat among the counties. The highest percentages of teachers and administrators over 55 are in Sogn og Fjordane with 26 per cent and in Møre og Romsdal with 27 per cent. The lowest percentages are in Rogaland and Finnmark, with 20 and 18 per cent respectively.

Higher percentage of teachers with a graduate university or university college degree in upper secondary education and training

In 2009, 21.7 per cent of the teachers in upper secondary education and training had a graduate university or university college degree with teacher training. This was higher than the percentage in primary and lower secondary school, where only 3.9 per cent had this kind of a degree.

Higher average age for teachers in upper secondary education and training

The average age of teachers and administrators in upper secondary education and training has remained stable at 49 since 2007. Figure 1.18 shows the age distribution among teachers and administrators in upper secondary education and training in the autumn of 2009.

Sixty per cent of teachers and administrators were over age 45, which is a slight decrease from 2008, whereas 33 per cent were over age 55, a slight increase from 2008. This percentage varies among the counties. The highest percentages of older teachers were in Oppland and Vestfold counties, where 38 and 37 per cent of the teachers and administrators respectively were over age 55. The lowest percentages were in Finnmark County and in Oslo, where 24 and 26 per cent of the teachers and administrators respectively were over age 55.

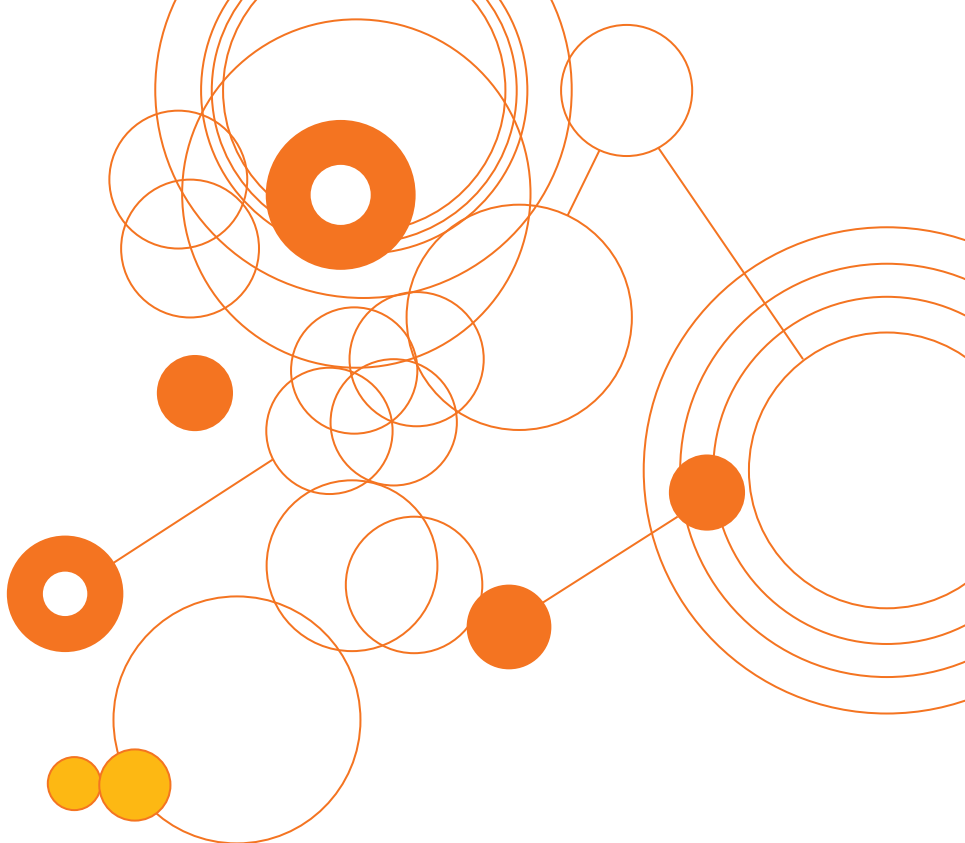


FIGURE 1.17 The age distribution of teachers and administrators in primary and lower secondary school. Fourth quarter 2009. Number.

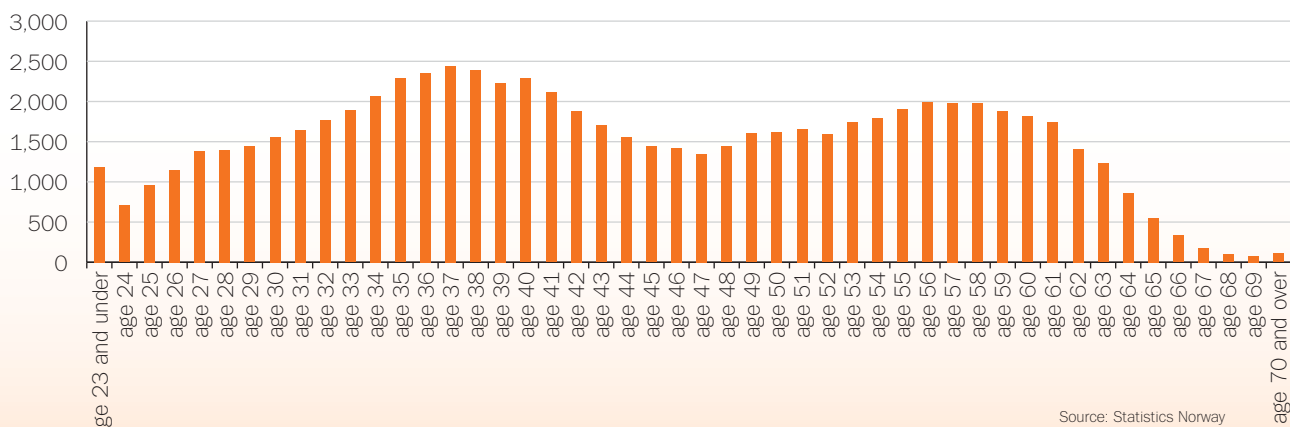
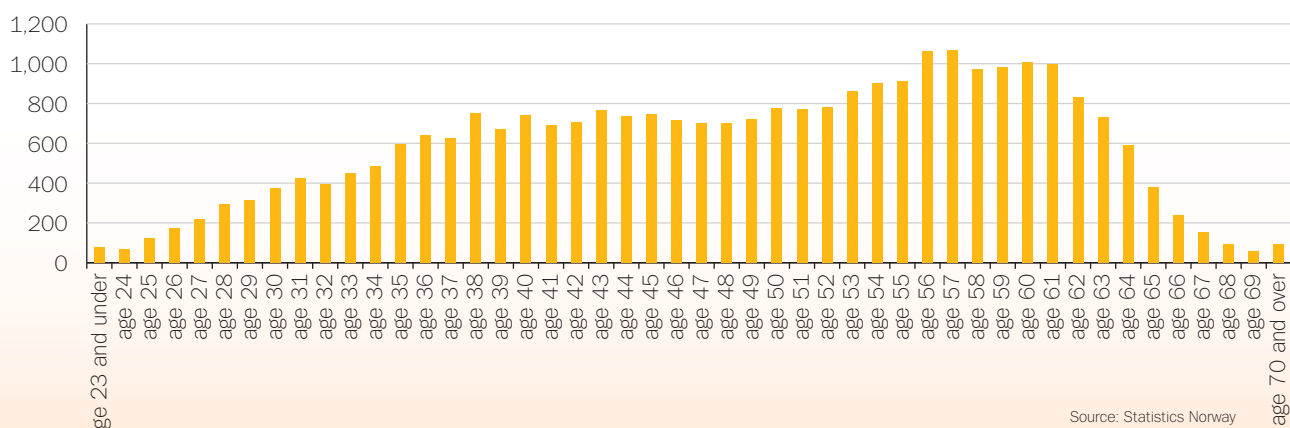


FIGURE 1.18 The age distribution of teachers and administrators in upper secondary education and training. Fourth quarter 2009. Number.





2

Resources

In Norway, we spend considerable resources on our schools relative to other countries. This chapter provides an insight into what those resources are used for and what lies behind Norway's relatively high resource use in primary and lower secondary school and in upper secondary education and training.

Norway's resource use is related to geographical conditions and its demographic structure. This also results in large disparities in the resource use in small as opposed to large municipalities.



2.1 HOW MUCH DOES PRIMARY AND LOWER SECONDARY EDUCATION COST?

In 2010, the cost of public primary and lower secondary education was NOK 90,463 per pupil. Payroll expenditures were the largest expense and had the greatest impact on total operating expenses (cf. Figure 2. 1). From 2009 to 2010, expenditures on primary and lower secondary education increased by 1.9 per cent (adjusted for price and wage inflation). Payroll expenditures have correspondingly increased by 2.2 per cent, which is less than the increase of 3.1 per cent from 2008 to 2009. Expenditures on school premises and transportation as a whole have increased by one per cent. When it comes to the small expense items, expenditures on fixtures and equipment increased by nearly 14 per cent, which is approx. NOK 100 more per pupil. As expected, expenses for teaching materials decreased by 4 per cent from 2009, after the introduction of the Knowledge Promotion Reform and associated teaching aids at all levels.

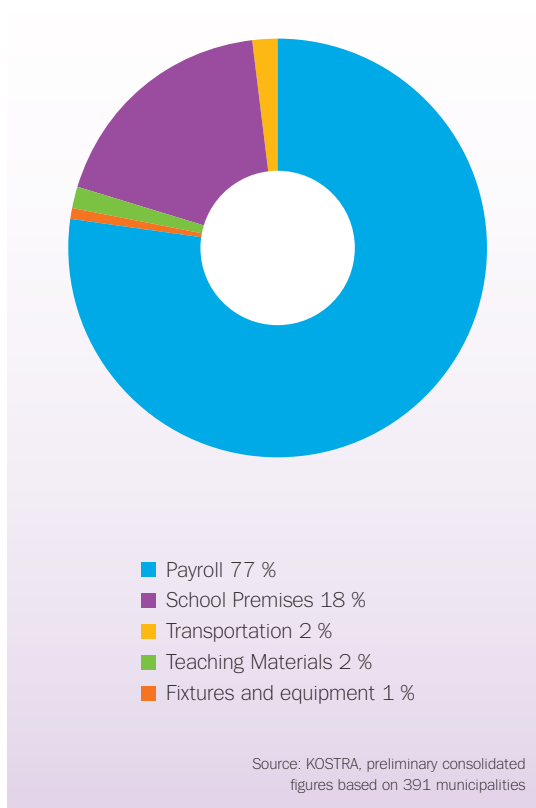
Small municipalities have higher expenses per pupil

Figure 2.2 clearly shows the relationship between expenditures on primary and lower secondary education and the size of the municipality. Many small schools entail higher administrative and operational expenses per pupil. Small municipalities often have a higher percentage of small schools compared with large municipalities. In particular, expenditures are affected by having few pupils per teacher. In addition, there will be sparser settlement in small municipalities, which in turn will increase the expenditures on school transportation. In order to be able to describe the ways in which the municipalities prioritise primary and secondary education and training, the share of the expenditures over which the municipalities have little control, such as the number of pupils and sparse settlement, must not be included in the calculations.

Number of pupils and travel distance to school explain much of the variation in expenses among municipalities

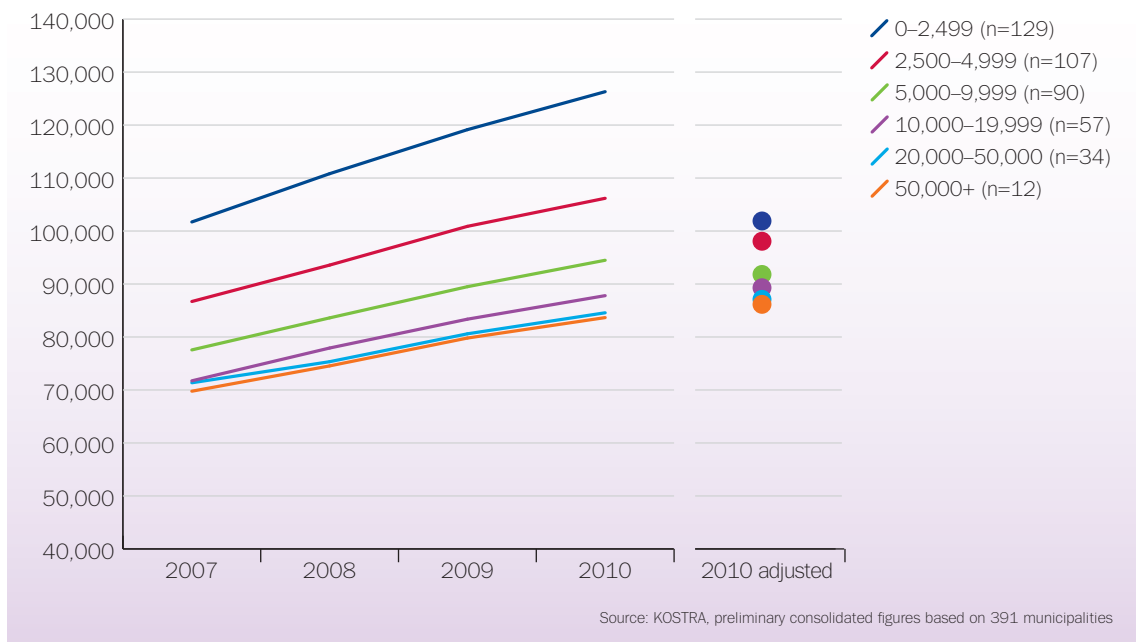
Figure 2.2 also shows expenses per pupil for 2010 after subtracting expenses that are attributed to variable conditions upon which the municipalities have little effect. These are the number

FIGURE 2.1 Expenses per pupil by payroll and operating expenses. 2010. Per cent.



of pupils, travel distance to school and percentage of pupils with an immigrant background (Falch and Tovmo 2007). The difference in average expenses per pupil between the largest and the smallest municipalities is reduced from NOK 42,000 to 14,000 per pupil by this adjustment. In analyses of municipal variation in spending per pupil, approx. 75 per cent of the variation is attributed to these variables (Hægeland et al 2009). Another variable that explains the variation in expenditure per pupil is unrestricted revenue. Unrestricted revenue consists of tax revenue and framework allocations and constitutes approx. 80 per cent of the municipality's total revenue in 2011. This is revenue that the municipalities may spend freely pursuant to the current laws and regulations. Rich municipalities spend more per pupil than the other municipalities on primary and lower secondary education. Hægeland et al. (2009) estimate that 5-6 per cent of the variation in municipal expenses per pupil can be attributed to unrestricted revenue. Other variables that affect the level of expenditure are the percentage of pupils with special needs, availability of personnel (the teachers'

FIGURE 2.2 Expenses per pupil by size of municipality. 2007 to 2010. NOK.



seniority and educational background will affect payroll expenditures), and finally the ways in which the municipality itself gives priority to the school sector as opposed to the needs in other municipal sectors.

Primary and lower secondary school's share of the budget more affected by the needs of the day-care institutions

The amendments to the Local Government Act in 1992 allowed for a reorganisation in the municipalities. This occurred simultaneously with a gradual transition to a more decentralised division of responsibility within the school system in several European countries. In 2009, roughly 2/3 of the municipalities in the country had a so-called flat organisational structure (Agenda Kaupang 2010). A flat organisational structure entails that the operational authority (responsibility for personnel and budgetary responsibility) are transferred from the school owner to the head teacher. At the same time, state subsidies are more frequently transferred by means of block financing. The municipalities can thus determine their resource priorities and the organisation of their activities to a greater extent, while the state specifies general goals for the performance of functions. Bonesrønning et al (2010) have taken a closer look at the ways in which the school sector's position in the municipal budget battle has changed from 2001 to 2008.

The analyses show that primary and lower secondary schools received a larger share of the municipal budget when the unrestricted revenue increases in 2008 than they did in 2001. The comparisons also show that the school sector's share of the budget was less affected by the needs in the nursing and care sector in 2008 than in 2001. On the other hand, the primary and lower secondary school sector is considerably more affected by the increase in the percentage of 0-5 year-olds in 2008 relative to 2001. This kind of development is relevant to consider in light of the introduction of the Child Care Compromise in 2003 and a municipal awareness of future resource needs in connection with the statutory right to a day-care place in 2009. A final finding in the analysis is that changes in the percentage of 6-15 year-olds had less impact on the increase in the primary and lower secondary school's share of the budget in 2008 than in 2001, but this change can also be attributed to increases in the number of pupil hours (2004-2005 and 2008-2009) in the primary and lower secondary schools.

One interpretation of these findings is that day-care institutions and schools are treated more as a single entity than they were before when drawing up the budget, which means that an expansion of day-care institutions may have a stronger negative impact on the school sector's budget (Bonesrønning et al 2010).

2.2 HOW MUCH DOES UPPER SECONDARY EDUCATION AND TRAINING COST?

The total operating expenses per pupil in 2010 came to NOK 108,764 for the three general studies and NOK 132,875 for the 9 vocational education programmes (Figure 2.3). This amounts to a slight decline of around 1 per cent for both education paths relative to 2009.

Higher payroll expenditures per pupil in the vocational education programmes

Payroll expenditures constitute about 61 per cent of the total expenses for the general studies and 64 per cent for the vocational education programmes (Figure 2.3). The higher percentage of payroll expenditures for vocational education programmes derives from the requirement of smaller basic groups in the instruction. The payroll expenditures decreased by 0.5 and 0.8 per cent and expenditures on other operations decreased by 2 and 1.6 per cent for the general studies and vocational education programmes respectively. This is because the total payroll expenditures did not increase as much from 2009 to 2010 as they did from 2008 to 2009. In addition, the number of pupils in upper secondary education and training increased from 2009 to 2010.

County expenses per pupil decrease

Sogn og Fjordane and the four northernmost counties distinguish themselves by spending more per pupil than the other counties (Figures 2.4 and 2.5). County disparities in unrestricted

revenue have previously been able to explain 40-50 per cent of the variation in operating expenses per pupil (Hægeland et al 2009). A positive correlation has also been found between settlement patterns and expenses per pupil for the counties, but the differences are less marked than they are for the municipalities. This may be because school transportation was not included in the total expenditures as it was for the municipalities. In addition, older pupils travel farther or decide to move in order to be able to attend a particular upper secondary school. Factors such as the number of pupils and the percentage of applicants for vocational education programmes have little relationship to expenses per pupil at the county level (Hægeland et al 2009).

For most counties, there was a real decline in expenses per pupil. In Oslo, Vest-Agder, Nordland and Troms counties, however, there was an increase in expenses. The distribution of pupils among the various education programmes has an effect on how much a pupil costs. For example, the relative increase of pupils in Specialisation in General Studies last year will reduce expenses per pupil for general studies education programmes because expenses per pupil for this education programme are somewhat lower than for Sports and Physical Education and Music, Dance and Drama. Likewise, the relative change in vocational programmes, where the percentage of pupils in Health and Social Care is increasing while the percentage of pupils in Building and Construction and Restaurant and Food Processing is decreasing, will result in lower expenses per pupil for vocational education programmes in total.

FIGURE 2.3 Expenses per pupil in general studies and vocational education programmes, adjusted for price and wage inflation. 2008-2010. NOK.

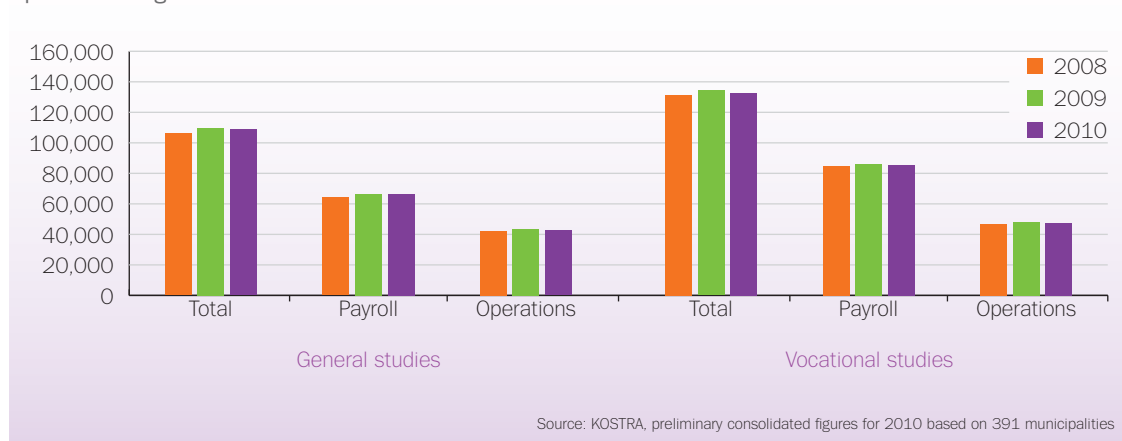
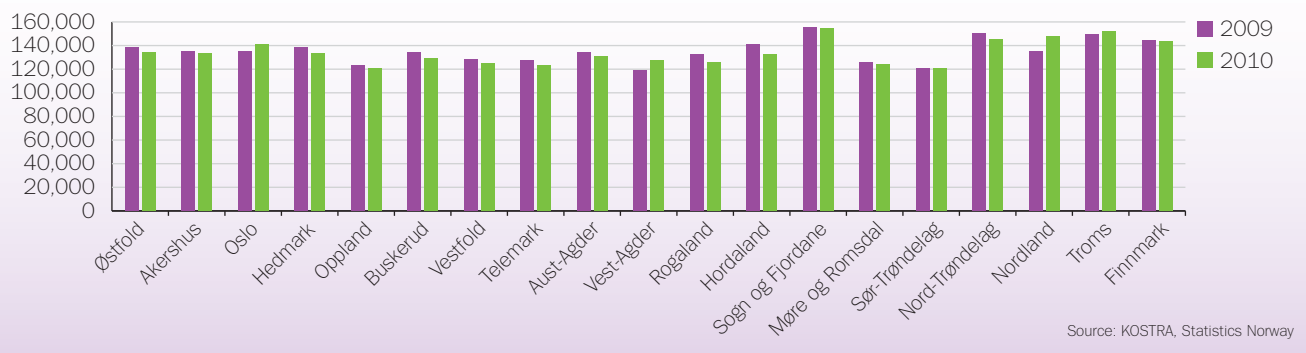


FIGURE 2.4 Expenses per pupil for general studies education programmes, adjusted for price and wage inflation. 2009 and 2010. NOK.



FIGURE 2.5 Expenses per pupil for vocational education programmes, adjusted for price and wage inflation. 2009 and 2010. NOK.



Lower expenditures on vocational education and training in the workplace

The percentage of total expenses for upper secondary education and training that goes to vocational training in the workplace decreased from 8.4 in 2009 to 7.9 in 2010, after having gradually increased since 2004 (KOSTRA). This follows the trend in the number of apprentices (cf. Chapter 1). Gross operating expenses per apprentice were NOK 57,400 in 2010, amounting to a real increase of 0.2 per cent from 2009.

2.3 HOW ARE THE HUMAN RESOURCES ALLOCATED AT THE MUNICIPAL LEVEL?

Largest increase in teacher density in small municipalities

The interest in teacher density derives from an expected relationship between the time a teacher devotes to each individual pupil and pupils' learning outcomes. Despite the fact that

several studies have attempted to show that such a relationship exists, they have only been able to find a slight correlation between teacher density and learning outcomes in marginal groups of pupils in Norway (Bonesrønning et al 2009). That does not necessarily mean that such a correlation does not exist. One problem with detecting such a correlation may be that there is too little variation in teacher density within schools that it is natural to compare for this to have any significant impact on pupils' learning outcomes (Opheim et al 2010). In addition, underlying factors, such as bringing in extra teaching resources as needed may occasionally mask the importance of teacher density.

The average number of pupils per teacher for Years 1 -10 in an average teaching situation is 13.7 when all teaching hours are included and 17 when hours for SNE and adapted education in Norwegian are excluded. The two measurements of group size increased slightly by 0.1 and 0.3 respectively from last year. This is a shift in the trend, which has been a slightly declining group size since the 2005-

2006 school year. The factor that had the greatest impact on the increase in group size 1 last year was an increase in the group size in Years 1 to 4, whereas for group size 2 the biggest increase was in Years 8 to 10. Statutory requirements (Section 1-3 of the Education Act) concerning the especially high teacher density in Years 1-4 in Norwegian and Mathematics that occurred in 2009 were thus difficult to trace at the national level.

Just over 30 per cent of the current pupils attend schools where group size 1 exceeds 16 pupils per teacher. This is a slight increase relative to last year.

It is clear from Figure 2.6 that group size has a strong correlation with the size of the municipality. This is because the size of the municipality often correlates with the size of the school. We know that over 2/3 of the variation found among municipalities in group size 1 can be explained on the basis of the average school size in the municipality (Directorate for Education and Training 2010h). For the 2010-2011 school year, there is an average of six more pupils that have to share a teacher in the largest municipalities relative to the smallest. The largest decline in group size was in the smallest municipalities (<2,500 inhabitants), whereas there has been an increase in the largest municipalities and in municipalities with 5,000-10,000 inhabitants. Disparate trends in average group size in small and large municipalities may be partly explained by the change in the number of 6-15 year-olds, but differing implementation of the requirements for higher teacher density may have also had an impact.

The number of pupils per form teacher increases most in the larger municipalities

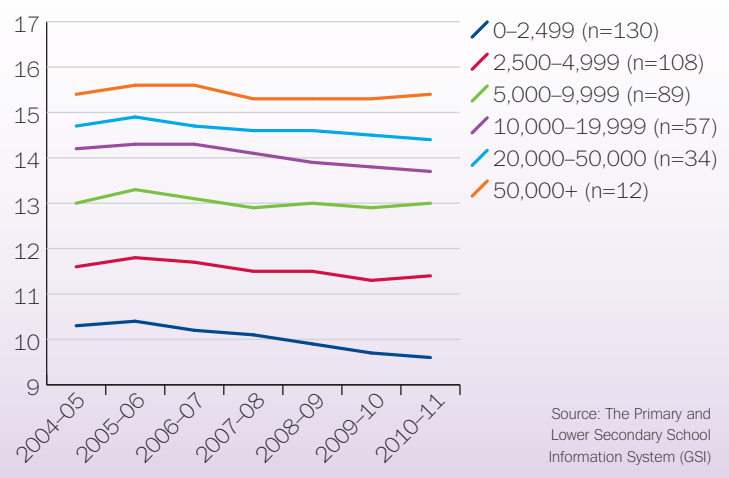
The form teacher scheme is regulated by Section 8 -2 of the Education Act and is a measure to promote a closer follow-up of each individual pupil, which should have a positive effect on performance, absenteeism and completion.

The average number of pupils per form teacher was 15.8 in 2010-2011 as it was in 2009 - 2010. As with the teacher density, the school size also has a strong effect on the number of pupils per form teacher. This is reflected by a significant negative relationship between pupils per form teacher and the size of the municipality (Figure 2.7). A form teacher in the largest municipalities has an average follow-up responsibility for

over five pupils more than a form teacher in the smallest municipalities.

Since 2007-2008, the number of pupils per form teacher has increased regardless of the size of the municipality, but the increase has been greatest in municipalities with more than 20,000 inhabitants. A teacher who serves as a form teacher is entitled to compensation in the form of higher pay and reduced teaching load. Local

FIGURE 2.6 Group size 1 for Years 1-10, by size of municipality. 2004-2005 to 2010-2011. Number.



MEASUREMENTS OF TEACHER DENSITY

Group size 1: This is a measurement of group size from the pupils' point of view, where average group size is an expression for the number of pupils per teacher in an average teaching situation.

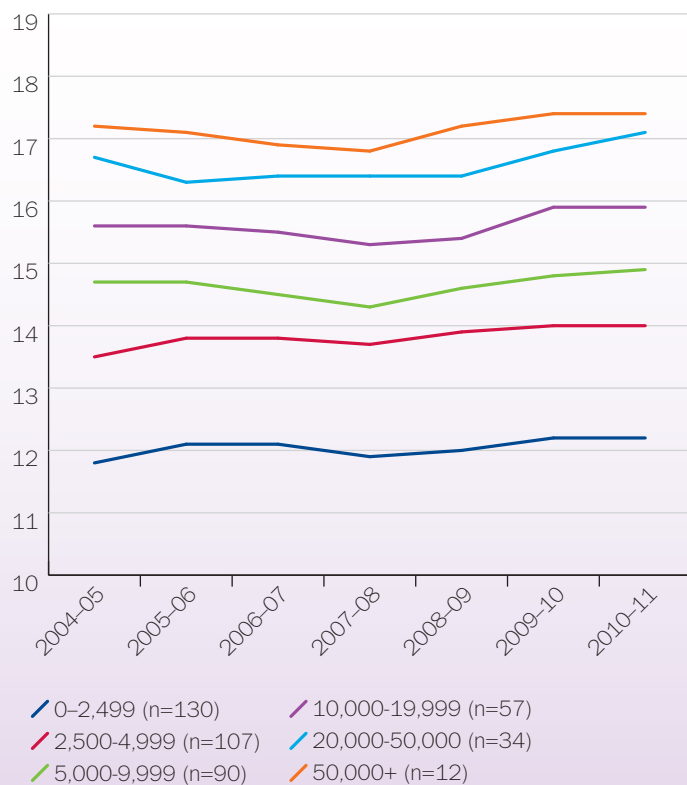
Numerator = the total number of teaching hours that the pupils are given.

Denominator = the total number of teaching hours that the teacher gives.

Since group size 1 includes all hours without regard to how the instruction is organised, this is suitable for comparison over a period of time, but it will give the impression that the teacher density is higher than it actually is for the pupils.

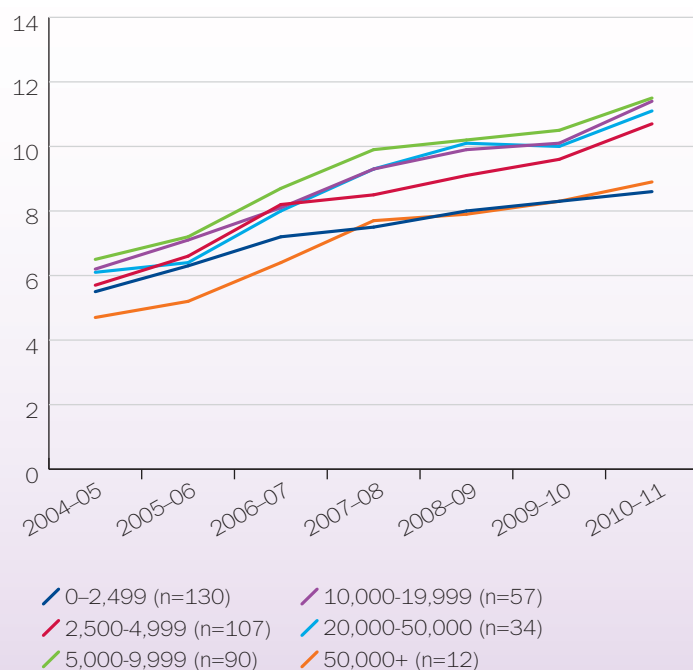
Group size 2: This is distinguished from group size 1 in that periods for special needs education (SNE) and for adapted education in Norwegian for language minorities are *excluded* from both teaching hours and pupil hours in the calculation. These groups of pupils are often physically separated from the rest of the pupils in the instruction. Thus, group size 2 gives a more realistic picture of the average group size, but at the same time it will be affected by the way in which the instruction is organised.

FIGURE 2.7 Pupils per form teacher for Years 1-10, by size of municipality. 2004-2005 to 2010-2011. Number.



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

FIGURE 2.8 Assistant FTEs per 100 FTEs for teaching staff, by size of municipality. 2004-2005 to 2010-2011. Number.



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

negotiations may result in additional supplements to those specified in the minimum requirements. Usually a teacher is a form teacher for the entire basic group if that group is below a certain size. The threshold for sharing the responsibility between two teachers is uncertain. At present, 61 per cent of all pupils attend schools where form teachers are responsible for an average of more than 15 pupils.

The use of assistants continues to increase

Since 2005, there has been a steady increase in the percentage of assistant full-time equivalents (FTEs) among the employees in primary and lower secondary schools. On average for the whole country, there were 10.4 assistant FTEs per 100 teaching FTEs in October 2010. In the previous year, that figure was 9.5 assistant FTEs per 100 teaching FTEs.

Figure 2.8 shows that the use of assistants is less prevalent in the largest and smallest municipalities relative to other municipalities. In addition, the growth in the use of assistants has not been as rapid in these municipalities as in the others.

Many assistants follow up pupils who need extra academic help

A questionnaire (based on responses from 96 school administrators and 174 assistants) about the assistants' background and the tasks they perform shows that the assistants' highest completed education is usually upper secondary school. More than half of these assistants have a craft certificate in child care and youth work (Rambøll Management 2010).

The survey shows that assistants' most important tasks are to assist pupils with practical, social, personal, academic and educational support. When it comes to the extent to which assistants perform educational tasks, however, there are big differences between the responses of the school administrators and those of the assistants themselves. The differences are especially large with regard to the extent to which assistants perform educational tasks alone. For example, 52 per cent of the assistants as opposed to only 27 per cent of the school administrators responded that the assistants help the teachers daily by taking pupils who need extra academic assistance into smaller groups. In addition, 17 per cent of the assistants as opposed to none of the school administrators responded that the assistants

provide daily instruction in classes without guidance from a teacher. This supports the findings of Nordahl and Hausstätter (2009) that assistants are occasionally responsible for instruction with academic goals.

Employment of assistants is usually based on the increasing need for closer follow-up of individual pupils in mainstream education and training and on the increase in the number of pupils with individual decisions on SNE. The need to increase the density of adults is also an important determining factor. The reasons why assistants are employed vary somewhat with the size of the municipality. Challenges with regard to the recruitment of teaching staff and the need for assistants to have adequate academic qualifications are given more often as explanations in small municipalities (<5000 inhabitants). Medium-sized (5,000 to 20,000 inhabitants) and large municipalities (> 20,000 inhabitants) cite the need for closer follow-up of pupils as an explanation more often than in small municipalities.

Teachers spend less time teaching

The teachers' FTEs (in GSI) encompass the time they spend teaching (the teaching load). In addition, a teacher's teaching load can be reduced if the teacher has other demanding tasks, such as serving as a form teacher or social and career

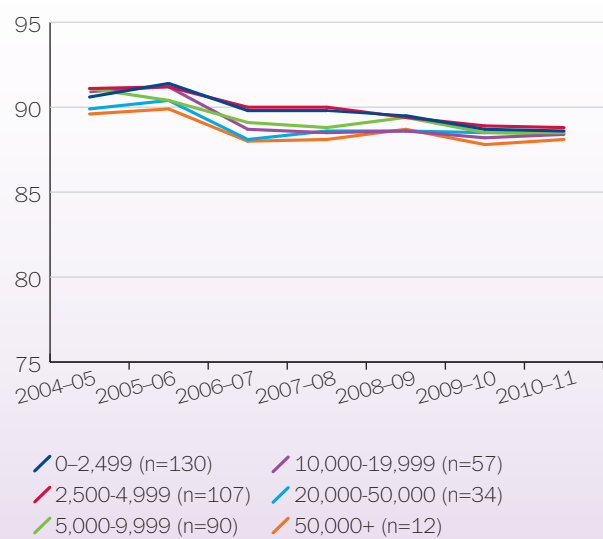
counsellor. As one of the senior measures, teachers over age 55 are also given a reduced teaching load. This entails that the teachers do not spend all of the time specified as the annual number of teaching hours for the purpose of teaching.

From the 2004-2005 school year up to 2010-2011, the percentage of teacher FTEs used for instruction declined from 90.3 to 88.2 per cent. Last year, there was little change in this percentage, with an increase of only 0.2 percentage points. As shown in Figure 2.9, there was little difference among municipalities of different sizes in the percentage of FTEs spent in a teaching situation, and the difference has also diminished with time.

Teaching hours for language minorities

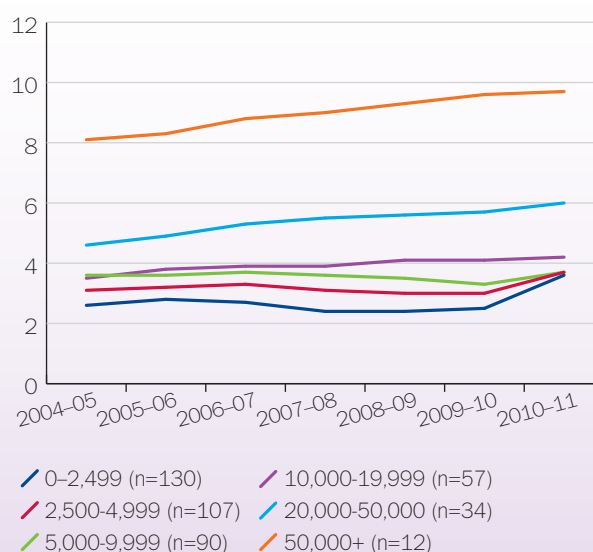
The percentage of pupils with decisions on adapted education in Norwegian has increased without regard to the size of the municipality over the past six years, although the increase has naturally been greatest in the largest municipalities (Figure 2.10). For the three smallest groups of municipalities (0 to 10,000 inhabitants), the largest increase occurred last year. This resulted in an increase in teaching hours for adapted education in Norwegian for these municipalities last year (Figure 2.11). The 12 largest municipalities, especially Oslo, have the highest percentage and

FIGURE 2.9 Percentage of estimated FTEs* for teaching staff used for instruction, by size of municipality. 2004-2005 to 2010-2011. Per cent.



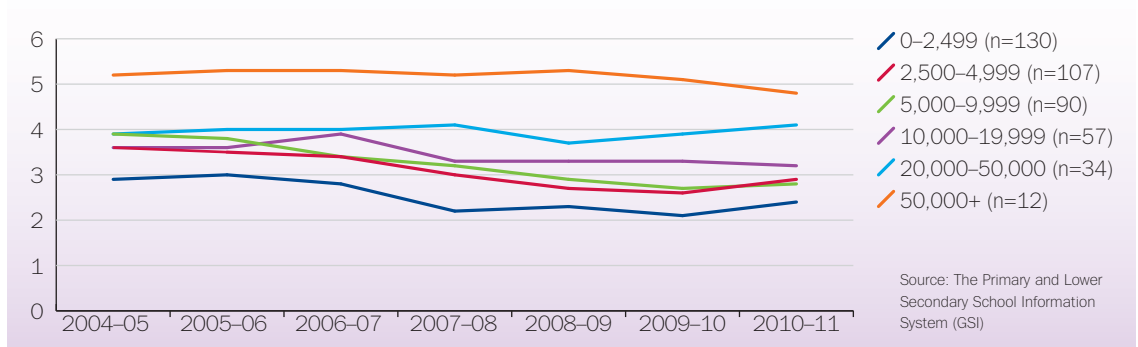
* FTEs are calculated on the basis of teaching hours per year
Source: The Primary and Lower Secondary School Information System (GSI)

FIGURE 2.10 Percentage of pupils with adapted education in Norwegian, by size of municipality. 2004-2005 to 2010-2011. Per cent.



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

FIGURE 2.11 Percentage of teaching hours for adapted education in Norwegian, by size of municipality. 2004-2005 to 2010-2011. Per cent.



the fastest growth in the percentage of pupils with adapted education in Norwegian. In spite of this, there was a decline in these municipalities in the percentage of teaching hours for adapted education in Norwegian from 2008-2009 to 2010-2011. This seems to indicate that a greater percentage of the instruction in adapted education in Norwegian takes place in larger groups in these municipalities.

Overall, this shows that an increase in the percentage of pupils with individual decisions on instruction in adapted education in Norwegian gives rise to a relatively greater need for teaching resources in small municipalities than in large municipalities.

2.4 WHAT AMOUNT OF RESOURCES IS SPENT ON SPECIAL NEEDS EDUCATION?

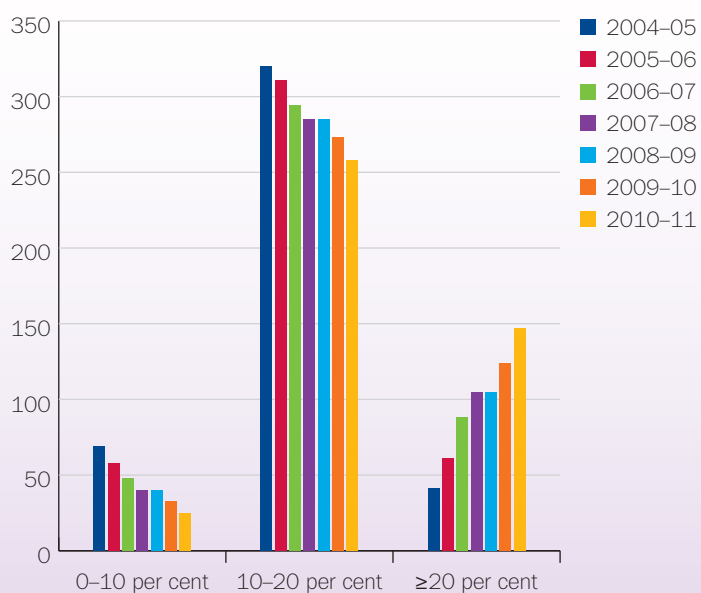
One of the clearest trends in the primary and lower secondary school sector is the rapid increase in the percentage of pupils in special needs education (SNE). In Chapter 1, Table 1.1 shows that this percentage has risen from 5.9 in 2006-2007 to 8.2 in 2010-2011. We see a corresponding trend in resources spent, where the percentage of hours devoted to SNE increases accordingly. It has increased steadily from 13.5 per cent in 2004-2005 to 17 per cent in 2010-2011.

As with the increase in the percentage of pupils receiving SNE, the percentage of teaching hours devoted to SNE also increases throughout the course of education and training. For the 2010-2011 school year, the percentage in Years 1-4 was 12.6, whereas for Years 5-7 and 8-10 it was 18.5 and 20.4 per cent respectively. Over the past six years, the percentage of teaching hours devoted to SNE increased most for Years 8-10 and least for Years 1-4. This trend is not consistent with the objective that a greater extent of the teaching effort should be made early in the educational pathway (Ministry of Education and Research 2006).

More and more municipalities are spending a large amount of resources on SNE

Figure 2.12 shows how the increase in SNE is reflected in a steadily increasing percentage of municipalities that spend a large percentage of their resources on SNE. The number of municipalities that spend more than 20 per cent of their teaching hours on this task has tripled in the last six years. This currently amounts to 150 municipalities.

FIGURE 2.12 Trends in the extent of use of teaching hours for SNE. 2004-2005 to 2010-2011. Number of municipalities.



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

When we examine how this increase is distributed among various municipalities, the trend is evident for different sizes of municipalities. Over time, we see that the variation in the percentage of resources spent on SNE between large and small municipalities is increasing. As we can see in Figure 2.13, the twelve largest municipalities have not had an equivalently large increase in the percentage of teaching hours devoted to SNE as the small and medium-sized municipalities. The extent of SNE decreases as the size of the municipality increases. Exceptions are the smallest municipalities, which spend less resources for this purpose than the municipalities in the range of 2,500 to 10,000 inhabitants.

More boys than girls receive SNE

About three times as many boys as girls (cf. Chapter 1) have an individual decision on SNE. This is in accordance with the tendency of boys to have poorer academic achievement on the average than girls (cf. Chapter 3). In addition, the use of individual decisions increased much more for boys than for girls over the past six years. There is little reason to believe that the composition of pupils has changed in different ways for boys and girls. The big difference in the use of SNE may therefore indicate that the reasons why boys receive this kind of offer to a greater extent may not be purely academic.

Figure 2.14 shows that the percentage of boys and girls with individual decisions varies inversely with the size of the municipality. The percentage has increased regardless of the size of the municipality, but on average it has increased more in small and medium-sized municipalities than in large ones, and much more for boys than for girls. In particular, the trend has resulted in greater differences among municipalities of different sizes with regard to the percentage of boys awarded individual decisions.

More pupils receive SNE, but the average number of hours taught has decreased

Figure 2.15 shows that half of the pupils with decisions on SNE with a teacher are awarded between 2 and 2.4 hours per week (76-190 hours per year). Another 24 per cent of the pupils with individual decisions receive more than seven hours per week (more than 271 hours per year). Only a small percentage receive less than two hours per week (1-75 hours per year). The distribution of pupils by the number of hours is

FIGURE 2.13 Percentage of teaching hours for SNE, by size of municipality. 2004-2005 to 2010-2011. Per cent.

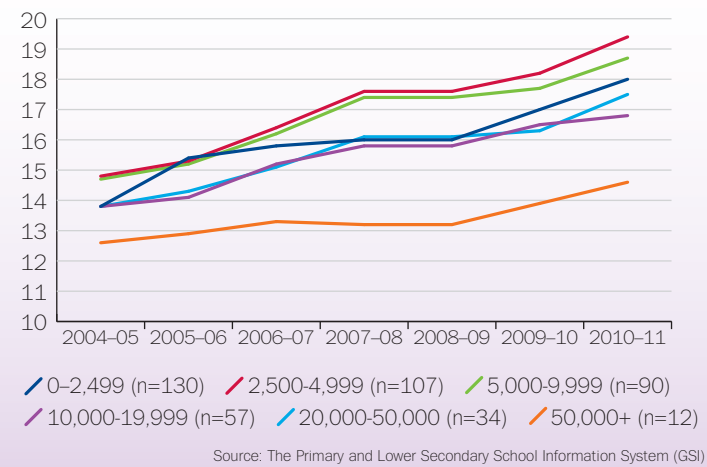


FIGURE 2.14 Percentage of boys and girls with individual decisions on SNE, by size of municipality. 2004-2005 to 2010-2011. Per cent.

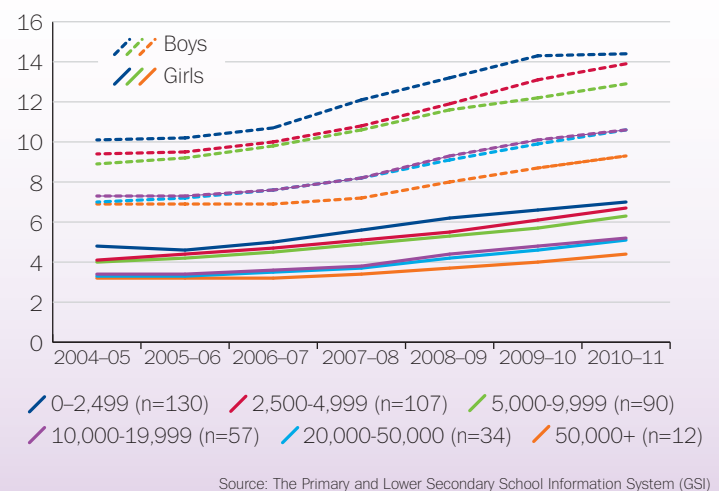
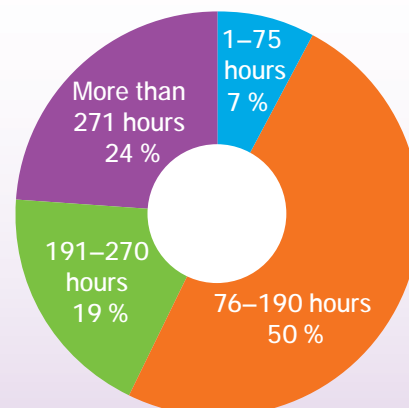


FIGURE 2.15 Distribution of individual decisions on SNE with teacher, broken down by number of hours. 2010-2011. Per cent.



approximately equal for boys and girls.

In the last three years, there has been a decline of 2.7 percentage points in the percentage of pupils with more than 271 hours and an increase in the percentage who receive 76-190 hours of 2.3 percentage points.

The smallest and largest municipalities provide fewer hours of SNE per pupil

The largest and smallest municipalities give a smaller percentage of pupils 271 or more hours of SNE with a teacher than the other municipalities (Figure 2.16). At the same time, they give between 1 and 190 hours of SNE per pupil to a greater extent than the other municipalities. This explains why the smallest municipalities do not

have the highest percentage of teaching hours for SNE even though they have the highest percentage of pupils with individual decisions.

More assistants in SNE

Figure 2.17 shows the trend in the percentage of individual decisions on SNE that includes hours with an assistant for girls and boys. The trends are the same as the percentage of pupils with individual decisions on hours with a teacher (Figure 2.14). We saw previously in Section 2.3 that about half of the assistants said that they assist teachers by taking pupils who need extra academic assistance in smaller groups. Thus, it appears that the increases in the extent of SNE and in assistants in primary and secondary education and training are part of the same picture.

Different explanations of the trend in the use of SNE

There are several possible explanations of the rapid increase in SNE and the widening gender gap in the awarding of individual decisions. Some will point 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.

FIGURE 2.16 Percentage of pupils with more than 271 hours per year, broken down by size of municipality. 2008-2009 to 2010-2011. Per cent.

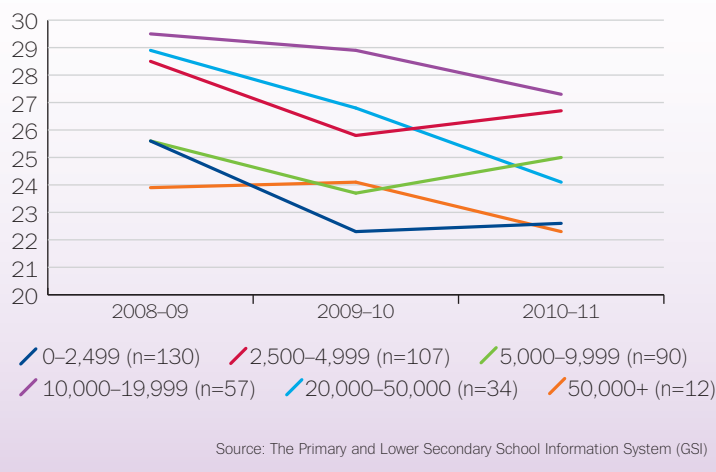
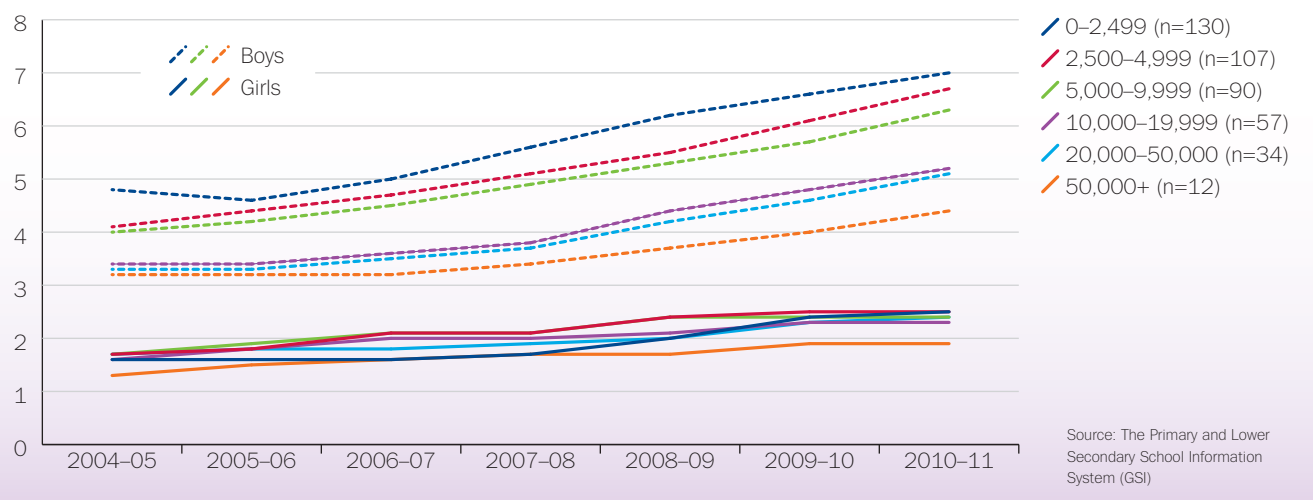


FIGURE 2.17 Percentage of decisions on hours with an assistant, by size of municipality. 2004-2005 to 2010-2011. Per cent.



We see that the use of SNE is somewhat lower in larger municipalities. According to Section 8-2 of the Education Act, pupils shall not normally be grouped according to their level of ability. The reason for this prohibition is to ensure that the education and training is a meeting place for all pupils regardless of their background and qualifications. This kind of grouping of the pupils must be reserved for special and limited parts of the education and training and be justified on the basis of educational considerations and the needs of the relevant groups of pupils (NOU 2010:7). Data from a report by Vibe (2010) confirm that it is the largest schools that have the greatest amount of differentiation by level of ability (71 per cent of the primary schools and 78 per cent of the lower secondary schools). This mainly occurs in Mathematics, Norwegian and English.

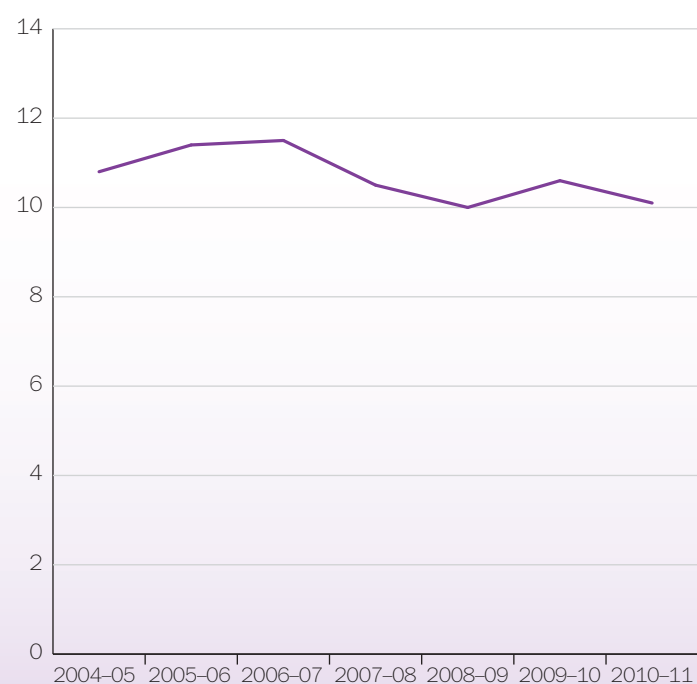
Bonesrønning et al (2010) call attention to the relationship between the high percentage of boys with SNE and the rapid increase in ADHD diagnoses. Nordahl and Hausstätter (2009) found in their study that test results and clearly established medical diagnoses seem to be the most important reasons for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

2.5 WHAT AMOUNT OF RESOURCES IS SPENT ON PRIMARY AND LOWER SECONDARY EDUCATION FOR ADULTS?

Through the Competence Reform, adults were given the right to primary and secondary education and training (NOU 1997: 25, The Ministry of Education, Research and Church Affairs 1998). The requirement for a diploma is final assessment in the subjects Norwegian, English and Mathematics and two of the subjects: Mathematics oral, Science, Social Studies, and Christianity with Comparative Religion and Ethics (RLE).

There has been a relatively large increase in the number of adult participants who received mainstream primary and lower secondary school instruction in the past year, while there has

FIGURE 2.18 Number of participants per FTE of the teaching staff. 2004-2005 to 2010-2011.

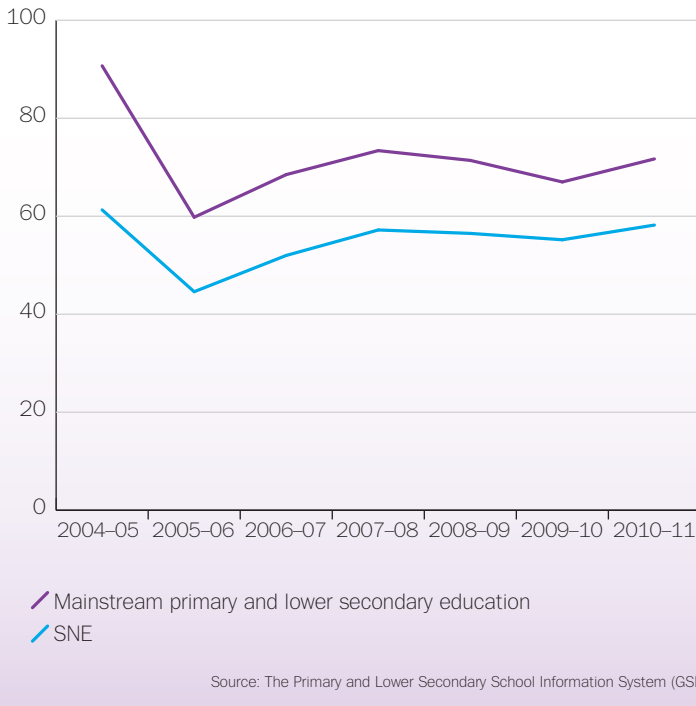


Source: The Primary and Lower Secondary School Information System (GSI)

been a decline in the number of adults who receive SNE (cf. Chapter 1). A proportionally larger increase in teacher FTEs relative to the increase in participants means that the number of participants per FTE will decrease this year (Figure 2.18). This may be related to a change in the composition of the adult participants. The percentage of adults who are from language minorities increased steadily from 2004-2005 up to 2010-2011, while the percentage of adults with SNE decreased (cf. Chapter 1).

The number of hours per year per participant underwent a corresponding increase last year for both hours per year of primary and lower secondary education and for SNE (Figure 2.19). For SNE, the increase is mainly attributed to a decrease in the number of participants, whereas for mainstream primary and lower secondary school instruction the increase is attributed to an increase in hours per year. The large decline in 2005-2006 must be viewed in the context of the amendments to the Norwegian Introduction Act in the autumn of 2005. Adult immigrants with a residence permit that gives grounds for a settlement permit granted after 1 September 2005 are entitled and/or obligated to take 300 hours of education and training in Norwegian and Civic

FIGURE 2.19 Number of hours per year of primary and lower secondary education and SNE per participant, 2004-2005 to 2010-2011.



Life. The transition scheme whereby also those who immigrated before 1 September 2005 could receive equivalent education and training was discontinued in 2010.

The percentage of teacher FTEs with an approved degree in adult education is similar to the percentage in mainstream primary and lower secondary education, 96 per cent.

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

Norway spends a lot of money on primary and secondary education and training compared with other countries (Figure 2.20). Ranked by expenses per pupil, Norway is no. 3 in Years 1-7, in Years 8-10 and in upper secondary education and training. If only government funding is taken into consideration, only Luxembourg spends more money than Norway on primary and secondary education and training.

Payroll expenditures affect the expenses the most

Teacher salaries are the largest expense item in education. Payroll expenditures per pupil are slightly higher in Norway than the OECD average. Decisive factors for payroll expenditures per pupil are the teachers' salary level, the number of teaching hours, the number of pupils per teacher and the pupils' hours of instruction. Compared with other OECD countries, the pay level in Norway and the pupils' hours of instruction are the factors that reduce payroll expenditures per pupil, while low group size and low teaching load tend to increase it. Overall, it is the low group size that is most responsible for the higher payroll expenditures in Years 1-10, while it is the low teaching load that is most responsible for the higher payroll expenditures per pupil in upper secondary education and training.

FIGURE 2.20 Expenses per pupil in the OECD countries for 2007. Figures adjusted for purchasing power and presented in USD.

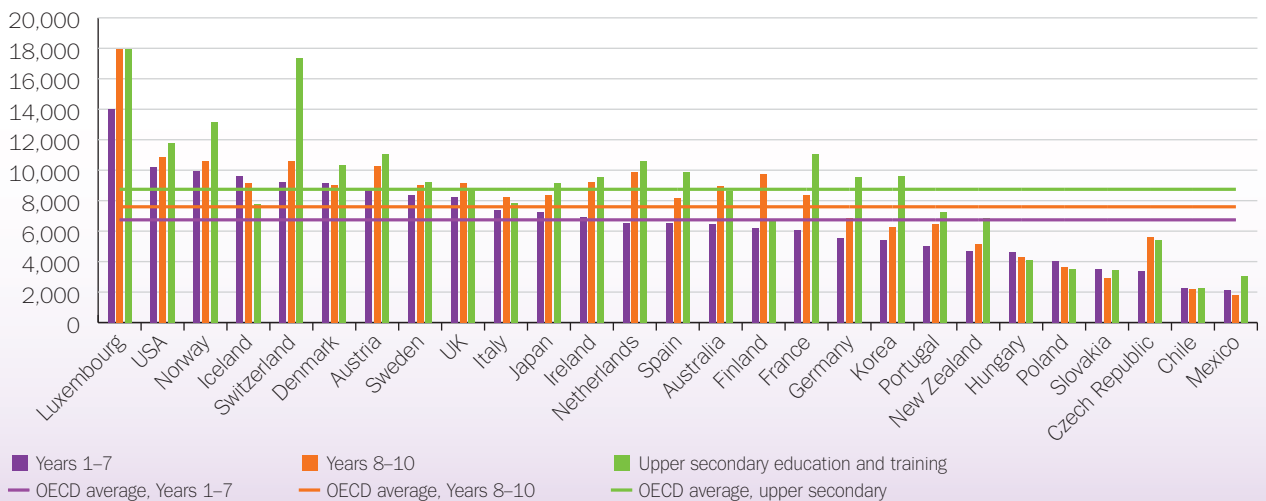


FIGURE 2.21 Teacher salary after 15 years of experience relative to average pay for persons with an equivalent level of education for 2008.

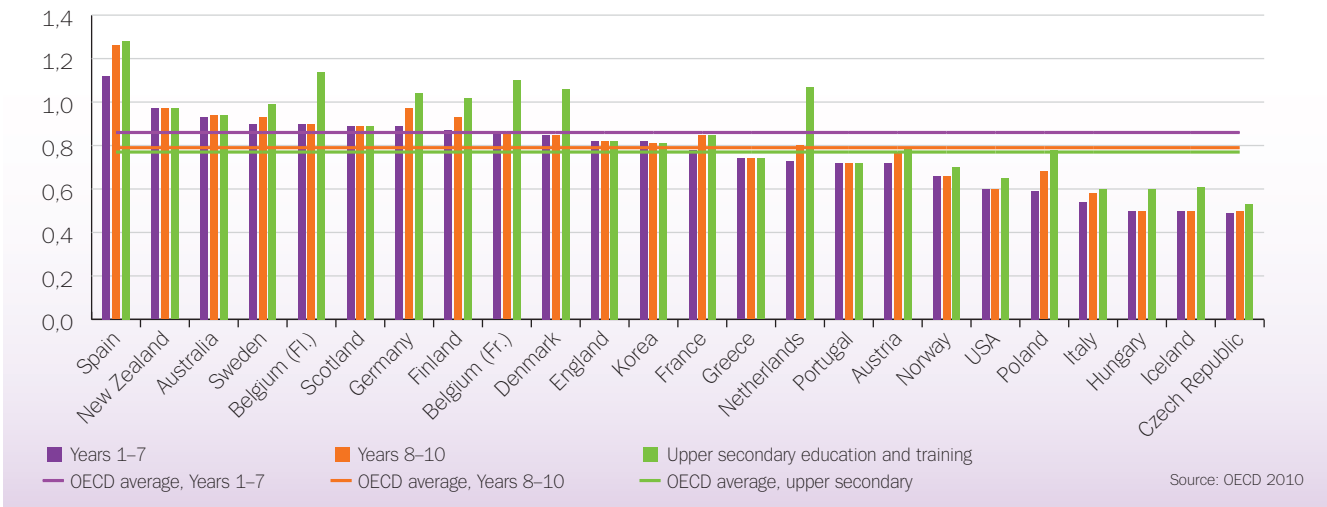


FIGURE 2.22 Teaching hours (teaching load) for 2008, measured in hours per year.

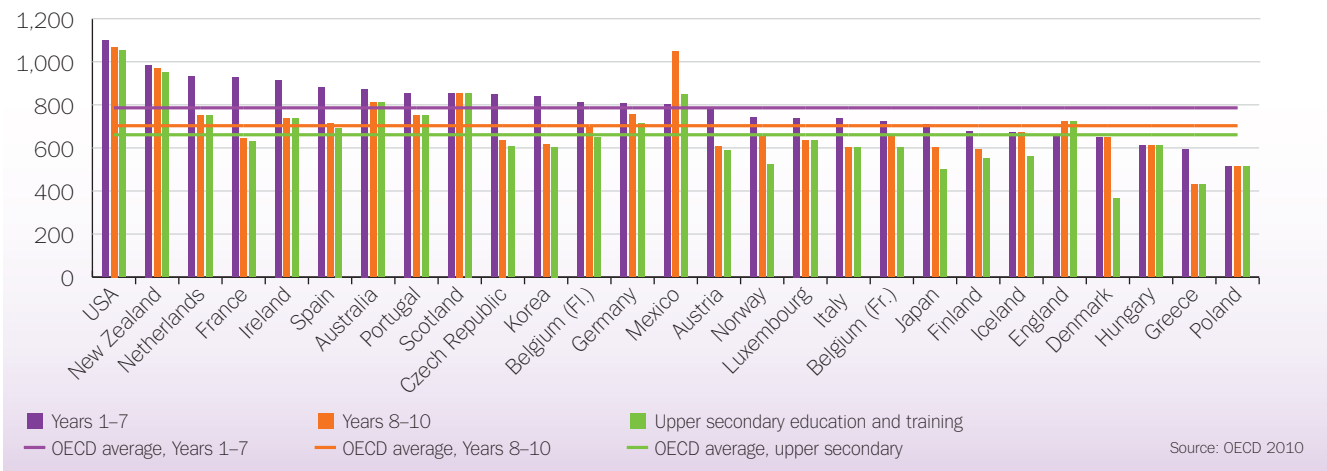
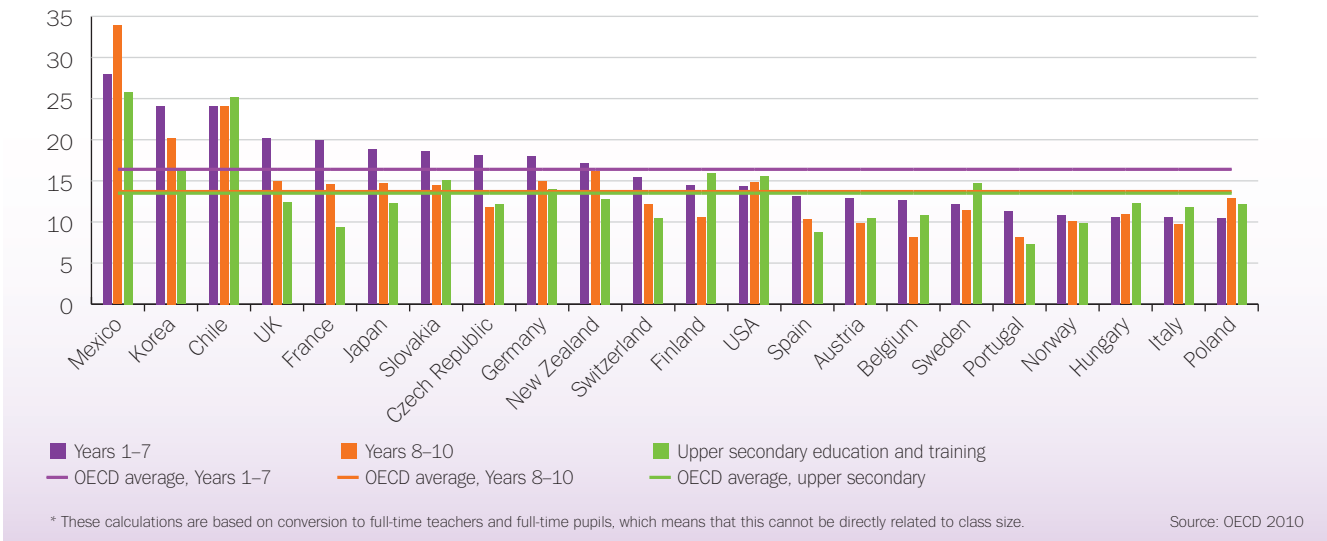


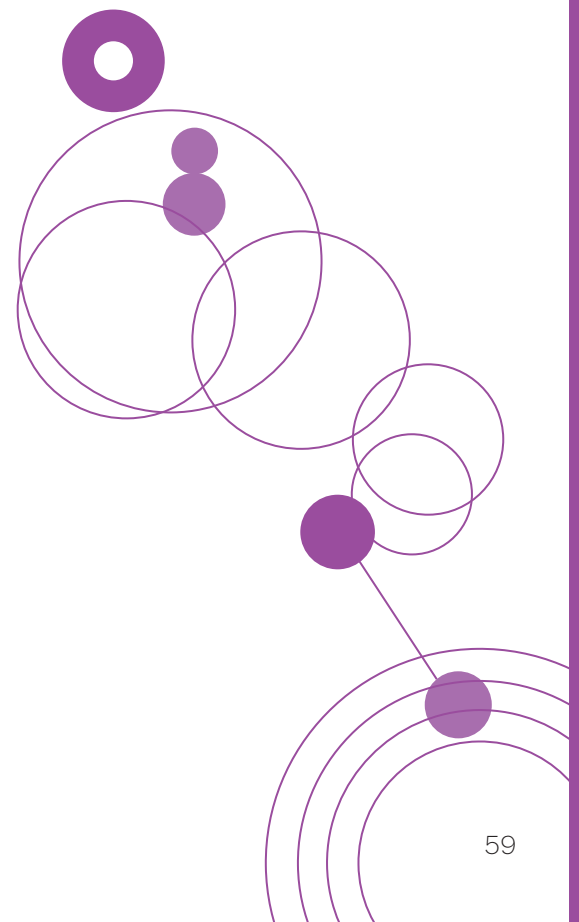
FIGURE 2.23 Number of pupils per teacher* for 2008.



In addition to the working environment, good pay is an important means of recruiting and retaining teachers with sufficient qualifications. Figure 2.21 shows how well teachers in the various OECD countries are paid compared with other employed persons with a similar level of education. This kind of comparison gives an idea of how attractive it is to be a teacher in the various countries. In Norway, the pay of primary and lower secondary school teachers with 15 years experience amounts to 66 per cent of the average pay to other occupational groups requiring an equivalent level of education (regardless of their experience). For upper secondary education and training, the ratio is 70 per cent. This is far lower than the OECD average, which is 77, 79 and 86 per cent respectively for Years 1-7, Years 8-10 and upper secondary education and training. In addition, Norwegian teachers' salaries are characterised by a flat payroll structure, where the maximum pay is only 23-25 per cent higher than the starting pay

Teachers in Norway have fewer teaching hours (Figure 2.22), but more hours of work altogether than the OECD average. If we calculate pay per teaching hour, Norway is at the OECD average for Years 1-7, but still somewhat below the average for Years 8-10. For upper secondary, on the other hand, Norwegian teachers are paid somewhat better per teaching hour than the OECD average.

Norway has a notably high teacher density at all levels of primary and secondary education and training. In Norway, there is an average of 11 pupils per teacher in Years 1-7 and 10 pupils per teacher in Years 8-10 and in upper secondary education and training (Figure 2.23). This is far below the OECD average of 16 for Years 1-7 and 14 for Years 8-13. The settlement in Norway is more scattered than in other countries, and this has an impact on 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 are estimated to be 20 per cent above the OECD average. In other words, only a little over 1/3 of the difference can be attributed to pattern of settlement in Norway.

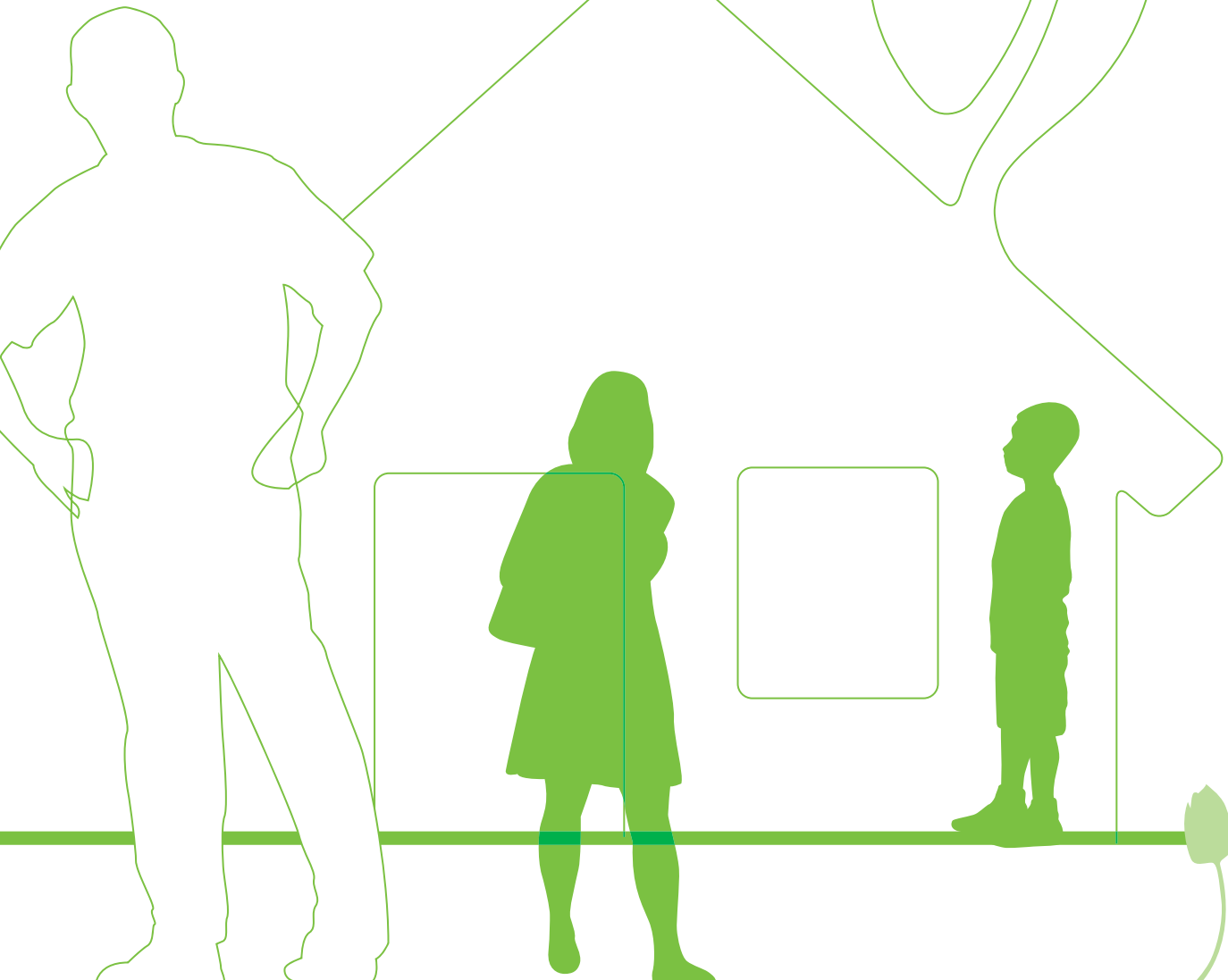




3

Learning outcomes

To what extent do pupils and apprentices achieve the learning goals as defined in the Knowledge Promotion Reform? In this chapter, we look at the achievement of Norwegian pupils, both nationally and in comparison with pupils from other countries. We also show how this has evolved with time. The outcomes are analysed on the basis of the pupils' place of residence, gender, social background and immigrant background. Finally, we look at how the learning outcomes develop throughout the course of the pupils' education and at disparities in outcomes among schools.



3.1 | HOW DO NORWEGIAN PUPILS ACHIEVE RELATIVE TO PUPILS FROM OTHER COUNTRIES?

In the autumn of 2010, the results from the PISA 2009 study were released. Norwegian pupils showed improvement in all three of the subject areas *Reading, Mathematics* and *Science* compared with their results in 2006, and the results are now at about the same level as in 2000. After declining in 2006, the results for 2009 were interpreted as a sign that Norwegian schools are now “on the right track”. The fact that the average for the OECD countries decreased in the same period reinforces the impression that things are now going better in Norwegian schools. In 2010, the results from the International Civic and Citizenship Education Study, ICCS 2009 were also released. They showed that Norwegian pupils’ competence with regard to democracy and citizenship is at about the same level as in 1999 and just above the international average.

In order to measure the trend in the pupils’ learning outcomes over a period of time, we compare the outcomes relative to a point of departure at a specific time. Measurements of this sort require a selection of pupils that is comparable from time to time, and they also require that a reasonably large number of identical tasks (anchor tasks) be tested under the same conditions each time. To ensure that these conditions are the same each time, it is common to keep these tasks secret. The most important trend studies in which Norway participates are the international studies TIMSS, PIRLS and PISA.

Norwegian schools on the right track in Reading, Mathematics and Science

Since 2000, PISA (Programme for International Student Assessment) has been conducted in three year intervals. An important objective of PISA is to measure changes over time. For more information about the PISA study, see <http://www.pisa.no/>.

The first PISA results attracted considerable attention in the media in 2001. Norway’s scores were average in an OECD context, which was far worse than what we had expected. Many countries that thought they had a good school system experienced much the same “PISA shock” as Norway. Uncertainty about the quality of Norwegian schools was further heightened in response to the results of the subsequent PISA studies in 2003 and 2006.

Sources of information about learning outcomes

NATIONAL TESTS

National tests in *Reading, Mathematics* and *English* are conducted in Years 5 and 8. Starting in the 2010 - 2011 school year, pupils in Year 9 will take the same tests in *Reading* and *Mathematics* as pupils in Year 8. The tests will determine the extent to which pupils’ skills are in accordance with curriculum objectives and shall provide information to pupils, teachers, parents and guardians, school owners, school administrators, the regional authorities and the national authorities as a basis for improvement and development. The outcomes from the national tests are divided into three mastering levels in Year 5 and five mastering levels in Years 8 and 9.

OVERALL ACHIEVEMENT MARKS AND EXAMINATION MARKS

The pupils receive overall achievement marks in all subjects at the end of lower secondary school and upon the completion of each subject in upper secondary education and training. They are selected for examination in a small number of subjects. The basis for assessment in subjects 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.

CRAFT AND JOURNEYMAN’S EXAMINATIONS

Vocational education and training is upper secondary education and training in schools and businesses that results in a craft certificate, a journeyman’s certificate or other vocational qualifications. The craft or journeyman’s examination is a test where the candidate plans the work, chooses methods, carries out, controls and documents the work and substantiates the choices that are made. In most subjects, the examination is taken over a period of several days. The assessment is carried out by an examination board with members who have no connection with the training establishment. The basis for assessment is the candidate’s competence as it is documented in the various parts of the examination. The examination can be assessed as passed with distinction, passed or failed.

INTERNATIONAL STUDIES

International studies provide information about the school systems in different countries, and they measure the pupils’ knowledge and skills in various subject areas for a selection of pupils. For Norway, it is important to take part in international studies because we get an assessment of Norwegian pupils’ competence in comparison with other countries, and especially because they measure trends over a period of time, both nationally and internationally. This provides important information for administrative decisions.

Since 2004, Norway has made efforts to implement and further develop a national quality-assessment system (NKVS). Read more about this in Chapter 6 Quality Improvement.

Figure 3.1 shows that there was a decline in Norwegian *Reading*, *Science* and *Mathematics* skills from 2000 to 2006. In 2006 for the first time, Norwegian pupils achieved significantly below the OECD average in all three subject areas (scaled OECD average based on results in 2010). From 2006 to 2009, this trend was reversed, and Norway is back at the level where it was in 2000. Other international studies, such as TIMSS, also show a positive trend for the Norwegian pupils from 2003 to 2007 (Grønmo and Onstad 2009).

The spread in the pupils' results in PISA decreased from 2006 to 2009 in all three subject areas: *Reading*, *Science* and *Mathematics*. The percentage of pupils at the lowest levels has decreased. At the same time, the percentage of pupils at the highest levels in *Reading* and *Mathematics* is also lower.

Norwegian pupils achieve above the OECD average in Reading

Reading was the main area for the PISA study in 2009. Figure 3.2 shows the percentage of Norwegian pupils in each of the five levels in *Reading* in the period from 2000 to 2009. The percentage of pupils below level 2 in *Reading* is less in 2009 than in any of the previous PISA studies, even though we have not had any significant change in the point scores from 2000

to 2009. The OECD has indicated to the participating countries that it is especially important to be aware of the percentage of pupils below level 2 and to make efforts to reduce this number. Although the majority of these pupils can read in a technical sense, their reading skills may prove

WHAT IS PISA?

PISA (Programme for International Student Assessment) is an international comparative study under the direction of the OECD. The study includes a test that measures 15-year-olds' knowledge and skills in *Reading*, *Mathematics* and *Science*. PISA is carried out every three years with the main emphasis on one of these three subject areas. At the same time, each subject area is covered each time so that it shall be possible to follow trends over time.

Overview of the main areas in the completed PISA-studies:

- PISA 2000 - *Reading literacy*
- PISA 2003 - *Mathematics literacy*
- PISA 2006 - *Scientific literacy*
- PISA 2009 - *Reading literacy*

READING IN PISA

The paper-based reading test in PISA spans most genres such as fiction, factual articles from different fields, letters to the editor and guide-books.

Many of the texts are complex and may include maps, graphs, tables and diagrams. The texts can be narrative, argumentative, explanatory, descriptive and instructive.

The format of the test questions consists of:

- multiple-choice questions, 50 per cent
- open tasks that require short answers, 15 per cent
- open tasks that require long answers, 35 per cent

The results are reported in three sub-scales of prominent aspects of the different types of questions:

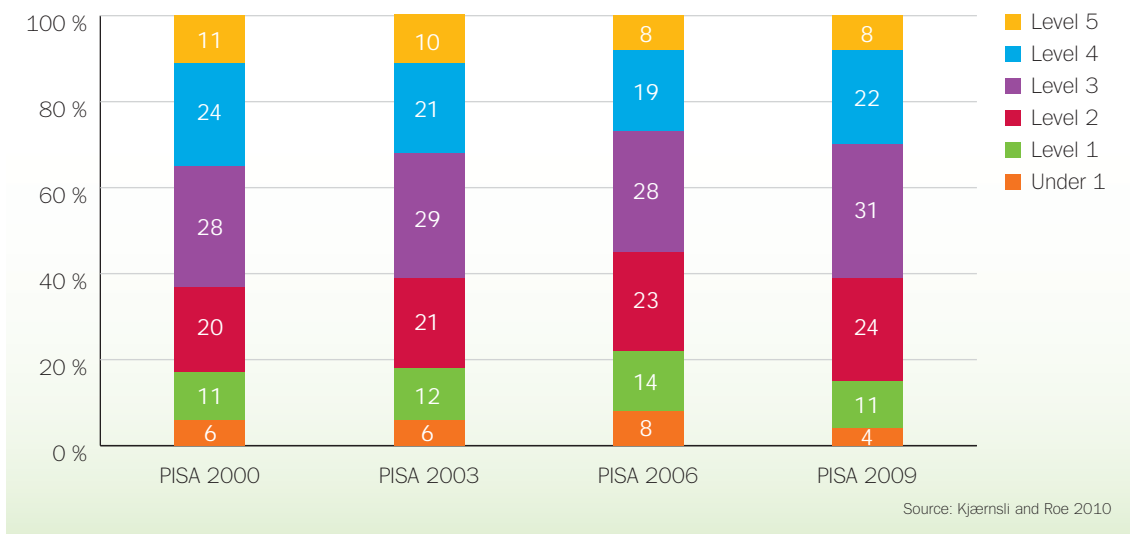
- find and retrieve information in the text
- interpret and compare information
- reflect on and evaluate the text

FIGURE 3.1 Norwegian pupils' results in PISA in 2000, 2003, 2006 and 2009. Avg. score.



Source: Kjærnsli and Roe 2010

FIGURE 3.2 Breakdown of Norwegian pupils into levels in *Reading* in PISA 2000, 2003, 2006 and 2009.



to be so poor that it will limit their options with regard to further education, employment and various other situations they may encounter in life.

It is a cause for concern that many pupils do not acquire adequate reading skills. It is also worth noting that boys are strongly overrepresented in the group with poor reading skills. PISA 2009 shows that the positive trend we saw in boys' interest in *Reading* from 2003 to 2006, has taken a negative turn in 2009 (Kjærnsli and Roe 2010). We shall comment further on this below.

Figure 3.3 shows the results in *Reading* in PISA 2009 for all of the OECD countries. The average for the OECD countries was 493 points in 2009. Norway scored significantly better than the OECD average with 503 points. Among the Nordic countries, only Finland scored higher than Norway.

The figure shows that the Korean pupils achieved the highest average score in *Reading*, but Finnish pupils scored only three points lower, and that difference is not statistically significant. The difference in results in *Reading* between the Korean and Norwegian pupils amounts to about one school year.

Figure 3.3 also shows the breakdown in results in *Reading* by mastering level. In general, the Nordic countries have fewer pupils in the lowest levels than the OECD average. Even though Norway had few pupils in the lowest mastering levels, we scored lower on the whole than some other OECD countries because we also had fewer pupils at the highest mastering levels.

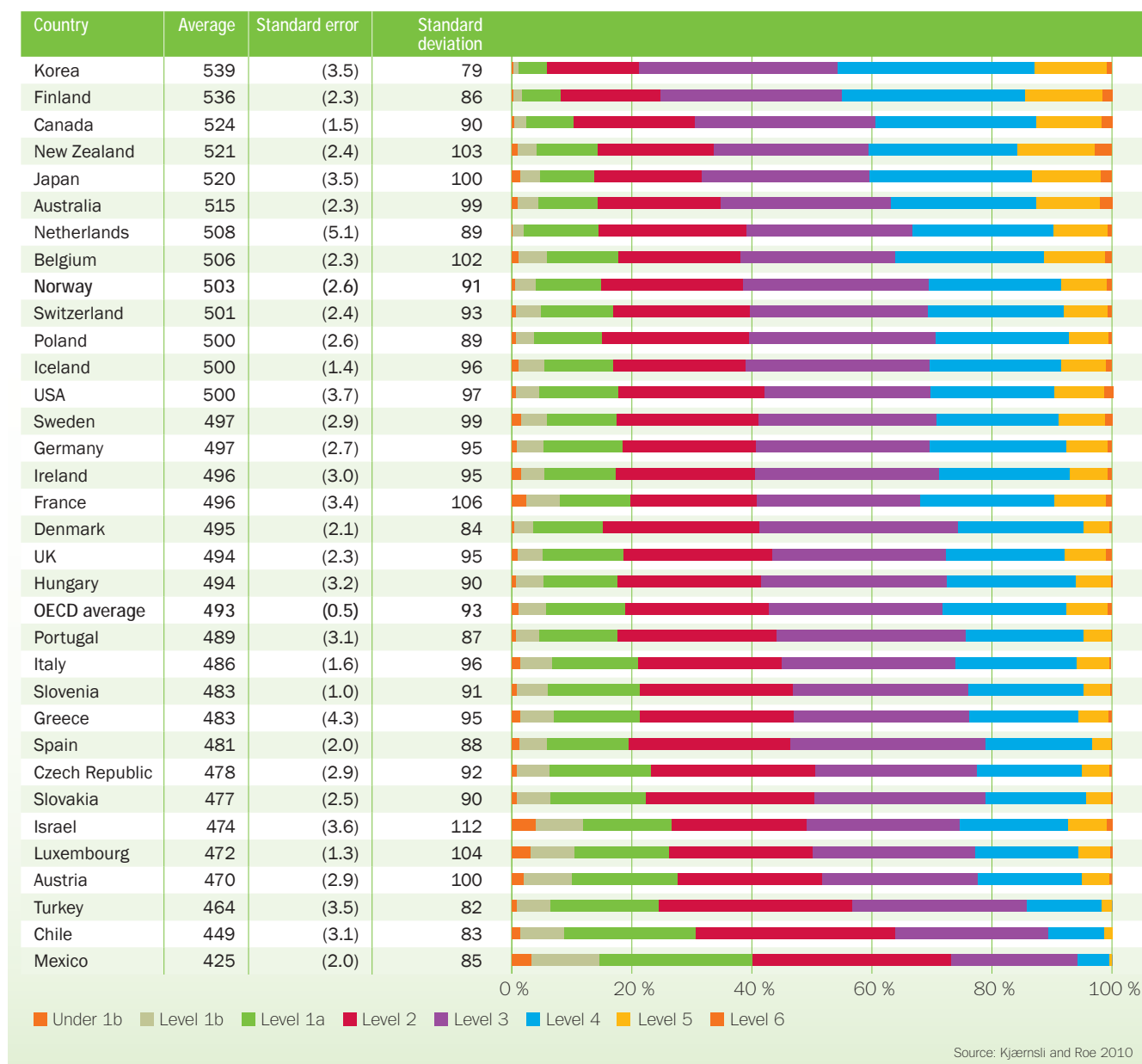
Pupils from different countries achieve dif-

ferently on different questions. Norwegian pupils score above the OECD average when they are asked about the main message or the main intention of texts. They achieve well when it is easy to find the answer and when the answer to the question is explicitly expressed in the text at a designated location. They also do well when the text appeals to their age group. On the other hand, the Norwegian pupils scored slightly worse on more "adult" texts, and they scored worse than the OECD average on questions that required considerable effort, e.g. questions about "boring" text and text that must be read carefully. They also did worse when the questions required them to find "hidden" or complex information. One explanation for this could be that Norwegian pupils answer many of these questions too quickly. The Finnish pupils have the opposite profile here and perform best in a relative sense on the "adult" and "boring" texts.

Norwegian pupils achieve just above the international average in their knowledge of democracy

ICCS 2009 (International Civic and Citizenship Education Study) is a study of school pupils' knowledge of and opinions about democracy and citizenship under the auspices of the IEA (International Association for the Evaluation of Educational Achievement). Pupils from 38 countries took part in the study in 2009, e.g. by answering questions about their knowledge and attitudes. The pupils also answered questions about their own background and about their per-

FIGURE 3.3 Average score in Reading outcomes for 15-year-olds and the percentages in the various levels in PISA 2009.



ceptions of the school's learning environment. You can read more about this in Chapter 4 Learning Environment.

The main group selected in the study is pupils in Year 8. Because they start school a year earlier, the Norwegian pupils in Year 8 are one year younger than, say, the pupils in the study from the other Nordic countries. In order to assess the trend from a similar study in 1999, CivEd, and to make relevant comparisons with the other Nordic countries, Norway has also conducted the study on pupils in Year 9.

The results of ICCS 2009 show that Norwegian pupils have good knowledge about

and skills in democracy and citizenship relative to pupils in other countries (Fjeldstad et al 2010). Only a few Norwegian pupils score poorly. The main selection, the pupils in Year 8, averaged 515 points, which is significantly above the international average of 500. The pupils in Year 9 scored an average of 541 points on the test of knowledge and skills, and thus came in fifth place in the international ranking of the 38 countries in the study. When we look at pupils from the same age level, the Norwegian pupils had a knowledge score slightly below Finland and Denmark and a little above Sweden.

The Norwegian pupils' scores on the knowledge test are correlated relatively strongly with their marks in Social Studies and Mathematics. The pupils expressed strong support for women's rights and also had considerable confidence in democratic institutions.

The breakdown among levels of skill shows that 32 per cent of the Norwegian pupils in Year 8 scored at the highest level, whereas fully 44 per cent of the pupils in Year 9 did likewise (cf. Figure 3.4). This is well above the international average of 28 per cent. When it comes to knowledge and skills in reasoning, about ten per cent of the Norwegian pupils scored below what is defined as level 1 in both Years 8 and 9. Finland and Denmark have a significantly higher percentage of pupils at the highest level and a significantly lower percentage at the level below 395 points.

Some of the questions that were asked in CivEd in 1999 were repeated in many countries in ICCS 2009 so that it would be possible to determine whether there had been any changes during these 10 years. The results show that the Norwegian pupils in Year 9 scored somewhat worse on the 15 comparable questions in 2009 than they did in 1999. However, the researchers do not interpret this as a sign of weakening of their preparedness to participate in a democracy.

3.2 HOW DO THE LEARNING OUTCOMES VARY AMONG COUNTIES AND MUNICIPALITIES IN NORWAY?

By looking at national tests, marks and craft and journeyman's examinations, we can examine how the learning outcomes of Norwegian pupils vary among counties and between small and large municipalities. Oslo and Akershus have the best outcomes on national tests, whereas Oslo is among the poorest on the craft and journeyman's examinations. Large municipalities have a higher average achievement than the small ones.

Oslo and Akershus have the best outcomes on national tests

National tests in *Reading*, *Mathematics* and *English* were conducted in the autumn of 2010 for all pupils in Years 5 and 8. For the first time, the tests in *Reading* and *Mathematics* were also conducted in Year 9. The tests in Year 9 were identical with the tests in Year 8, making it

HOW ARE KNOWLEDGE AND SKILLS PERTAINING TO DEMOCRACY MEASURED IN ICCS 2009?

The pupils are surveyed by means of a test that consists of 79 questions. Six questions are open tasks with one or two acceptable answers, while the other 73 questions are multiple choice questions with four alternative answers, where only one is correct.

Knowledge in the study is divided into four content domains:

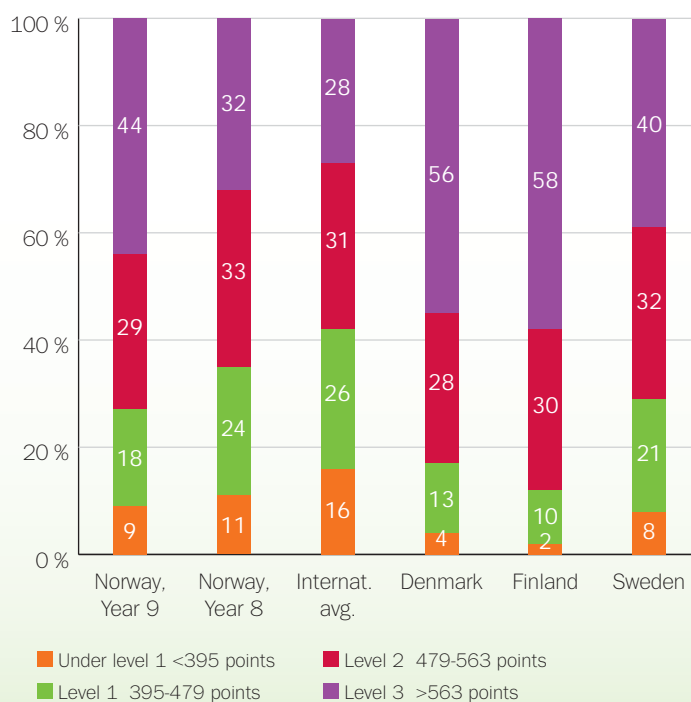
- *civic principles* relating to equity, freedom and social cohesion
- *civic society and systems* with an emphasis on citizens' rights and on state and civil institutions
- *civic participation* such as decision-making, influencing and community participation
- *civic identity* with an emphasis on the role of the individual acting alone and connected with others in democratic societies

Skills emphasise *analysis and reasoning*. Important catchwords are interpretation of information, ability to compare and put in context, giving reasons, generalising, evaluating, solving problems and understanding motives for democratic change.

An aggregate variable that measures knowledge and skills (cognitive factors) has an international average of 500 with a standard deviation of 100.

Source: Fjeldstad et al 2010

FIGURE 3.4 Breakdown of levels of competence in ICCS 2009. Years 9 and 8 in Norway, the international average and the Nordic countries.



Source: Fjeldstad et al 2010

possible for the schools to compare the pupils' outcomes in Years 8 and 9 in the same year. Even though the order varies somewhat from year to year, it is generally the same counties that distinguish themselves with the best outcomes on the national tests for all three Years, whether it be in *Reading*, *Mathematics* or *English*. The same is true in the outcomes for 2010. Oslo and Akershus usually have the highest average mastering level. These counties also have the highest percentage of pupils in the highest mastering levels and the lowest percentage of pupils in the lowest mastering levels (The Directorate for Education and Training 2010a, 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.

The national tests are new tests each year, and even though they have approximately the same degree of difficulty, they consist of different types of questions and texts and different numbers of questions contributing to the score. The Institute for Studies of Research and Education (NIFU) has made calculations that make the outcomes from different tests and years more comparable (so-called standardisation). They have done this by setting the average

outcome from each of the national tests at 50 and the standard deviation at 10. NIFU has then compared the outcomes on the tests in Year 5 in 2007 with the outcomes for the same pupils in Year 8 in 2010 (Opheim et al 2011). The two counties with the poorest outcomes in Year 5, Finnmark and Aust-Agder, stood out with clearly better outcomes in Year 8 three years later (cf. Figure 3.5). Note that in counties with few pupils a change in the outcomes for individual schools could have a relatively large effect on the average for the county. The percentage of pupils with exemptions from the tests may also play a more significant role.

Many are exempted from national tests

When we analyse changes in the outcomes on national tests over time, however, we must keep in mind that the percentage of pupils who are exempted from national tests differs from county to county, and the number who are exempted has increased over time. There was an increase in the percentage of pupils who were exempted from national tests in Year 5 from 2007 to 2010. The percentage of pupils who were exempted in Year 8 was smaller on the whole, but there has been an increase there as well.

FIGURE 3.5 Average for national tests in *Reading*, *Mathematics* and *English* (combined) in Year 5 in 2007 and Year 8 in 2010. Counties. Standardised score with an average of 50.

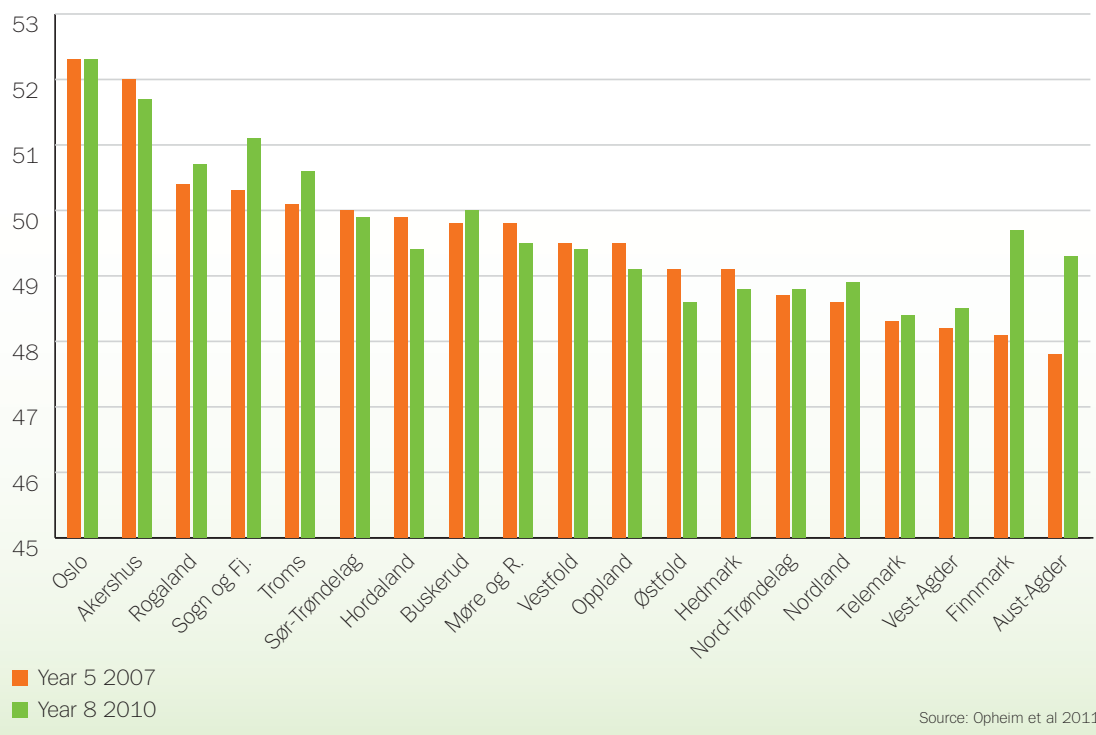
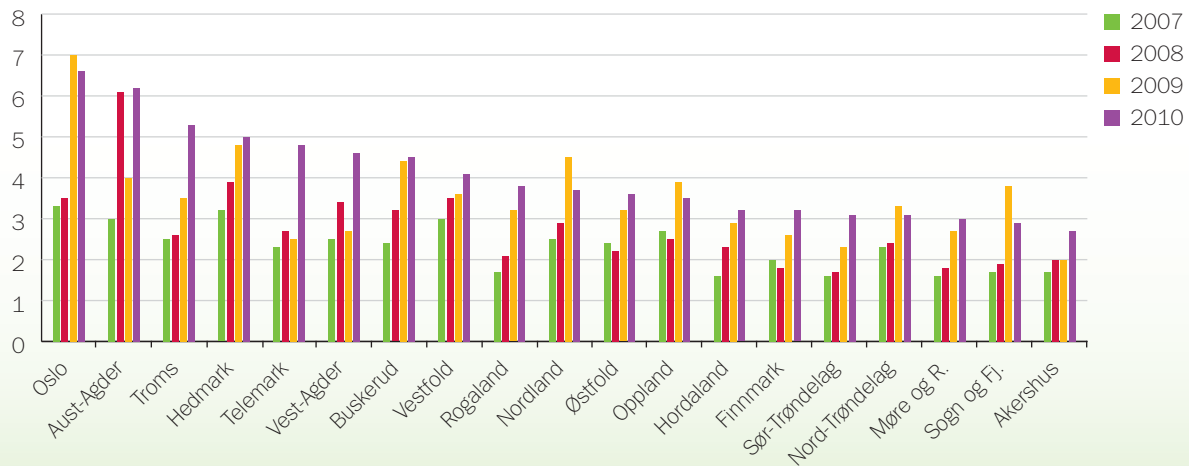
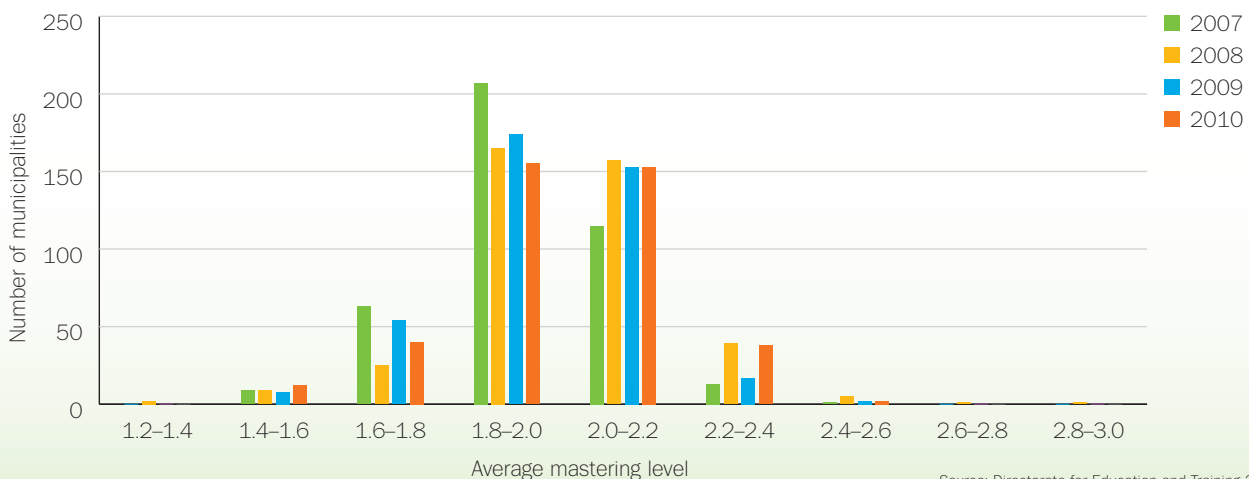


FIGURE 3.6 Percentage of pupils exempted from national tests in *Reading* in Year 5. 2007 to 2010. Per cent.



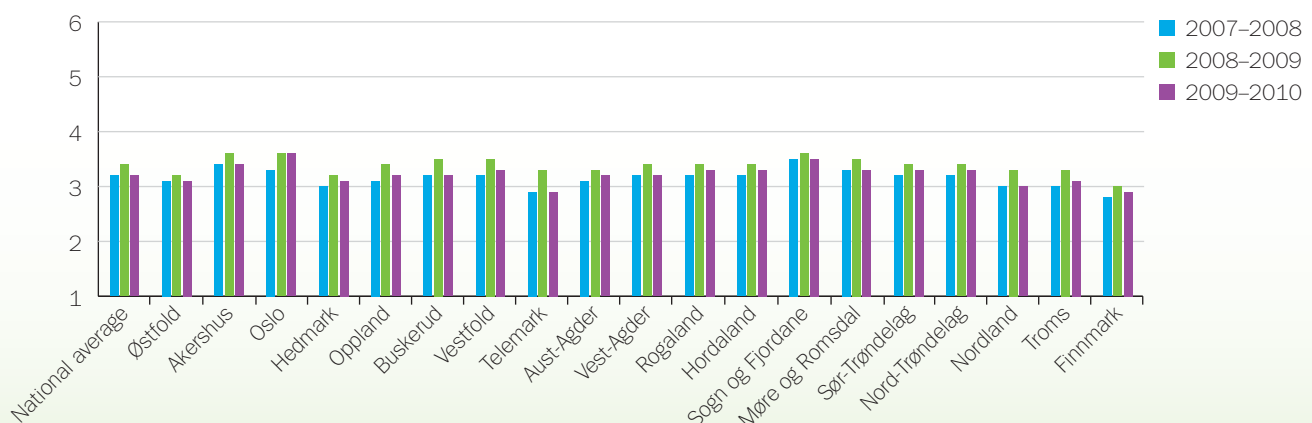
Source: Directorate for Education and Training 2010b

FIGURE 3.7 Municipalities broken down by mastering level for national tests in *Reading* in Year 5. 2007 to 2010. Number.



Source: Directorate for Education and Training 2010b

FIGURE 3.8 Written examination marks in Mathematics in Year 10, 2007-2008 to 2009-2010.



Source: Directorate for Education and Training 2010d

Figure 3.6 shows that all counties have had an increase in the percentage of pupils exempted from national tests in *Reading* in Year 5 from 2007 to 2010 (Directorate for Education and Training 2010b). This is correlated with an equivalent annual increase in the percentage of pupils with individual decisions on special needs education (SNE) or adapted education in Norwegian, who are essentially the pupils who can be exempted (cf. text box).

Much indicates that the big changes from year to year for individual counties in the percentage of pupils with exemptions from national tests do not reflect a change in the size of the group of pupils who can be exempted, but that they depend on the ways in which the municipalities practice the exemption rules. For Oslo, the percentage with *adapted education in Norwegian for language minority pupils* amounted to 25 per cent in Year 5 in 2010, whereas this group of pupils amounted to five per cent on average for the other counties. Given the high percentage of pupils with immigrant backgrounds, it would seem as if Oslo is relatively restrictive in granting the pupils an exemption from the national tests in *Reading*.

More large municipalities among those with good outcomes

Also at the municipal level, we see disparities in the outcomes on national tests. In *Reading* in Year 5, 80 per cent of the municipalities scored at an average mastering level between 1.8 and 2.2 (cf. Figure 3.7), whereas in Year 8, 61 per cent of the municipalities scored between 3.0 and 3.5. A common characteristic of the municipalities that have an average mastering level lower than this is that they have a low number of pupils (Directorate for Education and Training, 2010b).

Although small municipalities are more likely to have poor outcomes on national tests, this is not purely a result of the size of the municipality. Previous analyses showed that the correlation between the size of the municipality and outcomes on national tests can be partly explained by differences in the composition of pupils, e.g. as measured by the parents' level of education (Bonesrønning et al 2008, Bonesrønning and Iversen 2010).

Sogn og Fjordane has the highest lower secondary school points

As a rule, the overall achievement and examination marks in primary and lower secondary

WHICH PUPILS CAN BE EXEMPTED FROM THE NATIONAL TESTS?

The general rule is that the tests are mandatory for all pupils, and that the right to exemption is limited. Exemptions may be granted:

- to pupils who are entitled to SNE (individual decision) or education and training pursuant to Section 2-8 (adapted language education for pupils from language minorities), and
- when it is clear that the tests will have little influence on the education and training (the pupil is following a teaching arrangement in the subject that is so different from what the pupil will be tested on that the test results will not be of much use in the design of the education and training).

Both of the conditions in the regulations must be met in order for the school to be able to make a decision on exemptions.

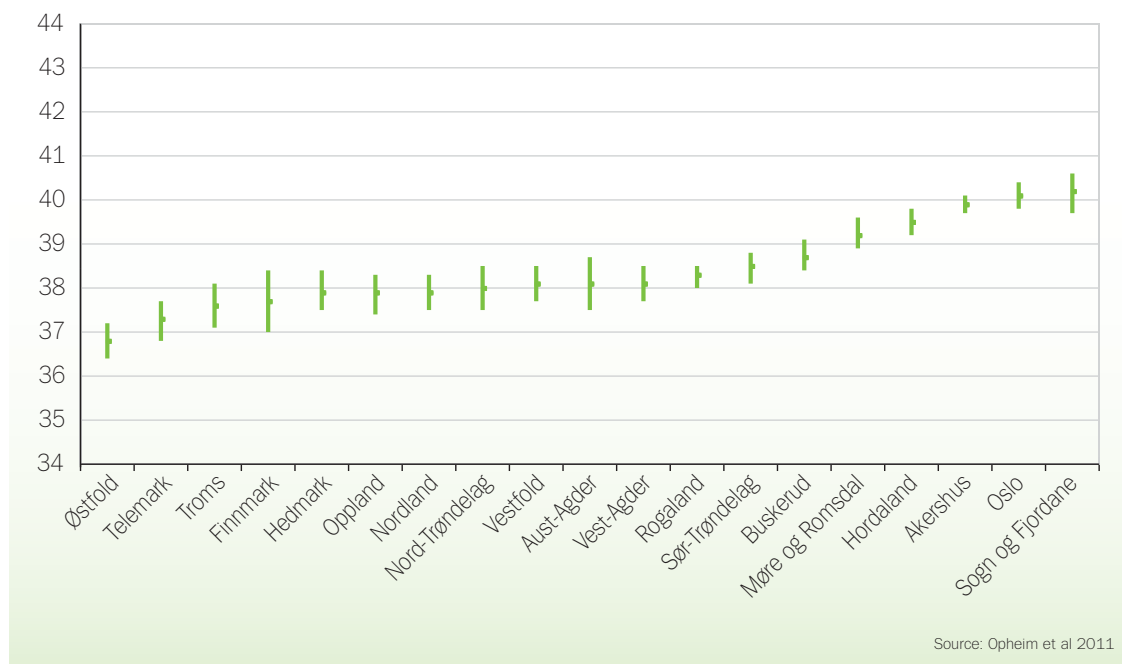
Source: www.udir.no/oss_om_np

school vary little at the national level and the county level from year to year. The exception is subjects taken by only a small number of pupils, such as *foreign languages* and *In-depth Study in Norwegian and English*, where the average mark for the oral examination for individual counties can vary by up to 0.7 points. The average mark in large counties (with a high number of pupils) remains more stable than in smaller counties.

If we look at the examination marks in *written Norwegian, first-choice form, Mathematics* and *English* in Year 10, the greatest variation among the counties in the 2009-2010 school year was in *Mathematics* (cf. Figure 3.8). The difference between the counties with the highest and lowest average marks was 0.7 in *Mathematics*, 0.6 in *English*, and 0.3 in *Norwegian*. There was a slightly larger variation among the counties in marks on oral examinations. Oral examinations are conducted and assessed locally.

Figure 3.9 shows the average lower secondary school points in the counties. The length of the line shows how certain the outcomes are (confidence interval). The national average was 38.6 points. As in previous years, the pupils who finished lower secondary school in Sogn og Fjordane County in 2010 had the highest lower secondary school points of all counties in Norway.

FIGURE 3.9 Lower secondary school points with a 95 per cent confidence interval, by county, 2009-2010.



In particular, pupils with poorly educated parents had higher average marks in Sogn og Fjordane than pupils from similar backgrounds elsewhere in the country (Statistics Norway 2010b).

Significant variation in the ways in which primary and lower secondary schools determine overall achievement marks

One trend we have noted over the years is that overall achievement marks, which are determined by the pupil's teacher, are higher on the average than marks on written examinations that are the same throughout the country, which are assessed by two external examiners (Directorate for Education and Training 2010d). As a rule, the highest marks are given on oral examinations (cf. Figure 3.10).

Statistics Norway has analysed the relationship between overall achievement and examination marks in Year 10 in the period from 2001-2002 to 2007-2008 (Galloway et al 2011). The report examines whether there are systematic disparities among schools in the ways in which they determine overall achievement marks for their pupils. They do this by considering whether there are systematic disparities between overall achievement and examination marks at the level of individual schools. In this context, it is important to remember that overall achievement and examination marks are based on different

assessment situations and have different bases for assessment. Whereas the overall achievement mark is supposed to cover all of the competence goals in the subject, an oral examination of say 20-30 minutes will never be able to test competence as broadly.

The analysis suggests that there is considerable variation in the ways in which lower secondary schools determine overall achievement marks. Some schools, especially the small ones, seem to overestimate the level of achievement of their pupils, whereas others, especially large schools, seem to underestimate that level. Schools with low average examination marks tend to overestimate their pupils' level when determining overall achievement marks, whereas schools with higher than average examination marks tend to underestimate the level of achievement of their pupils.

Statistics Norway's analysis shows that there is a high correlation in the determination of grades regardless of subject area; i.e. that schools that are "magnanimous" in the marking of Mathematics, are often "magnanimous" in the marking of *Norwegian* and *English* as well. This may indicate that there are certain underlying characteristics of the schools, not just the individual teachers' marking habits, that give rise to the deviation between overall achievement and examination marks.

Greater variation among the counties in common core subjects in vocational as opposed to general studies education programmes

In upper secondary education and training, we took a closer look at examinations in three major common core subjects in the general studies and vocational education programmes: *Norwegian, first-choice form, practically oriented Mathematics* and *English*.

For the three subjects in the general studies education programmes, the greatest variation among the counties was in the average examination marks in *practically oriented Mathematics*. They ranged from 2.5 in Oslo to 3.3 in Sogn og Fjordane. In *English* the marks varied somewhat

less, from 3.1 in Sogn og Fjordane to 3.6 in Sør-Trøndelag. For the examination in *Norwegian, first-choice form* there was very little variation among the counties (2.9 to 3.2).

There was greater variation among the counties in the common core subjects in vocational education programmes (Figure 3.11). In *Norwegian*, where the variation was the smallest, the average marks ranged from 2.8 in Aust-Agder to 3.6 in Troms. The year before, Troms had scored lowest with 2.8. For *practically oriented Mathematics*, the difference between the highest and lowest marks this year was fully 1.6 points. We find the lowest average mark in Finnmark (2.1) and the highest in Nord-Trøndelag (3.7). In *English*, the marks varied from 2.3 in Østfold to 3.3 in Sør-Trøndelag.

FIGURE 3.10 Overall achievement marks and examination marks in subjects that have an oral and/or written examination for pupils in Year 10 in the 2009-2010 school year. Average.

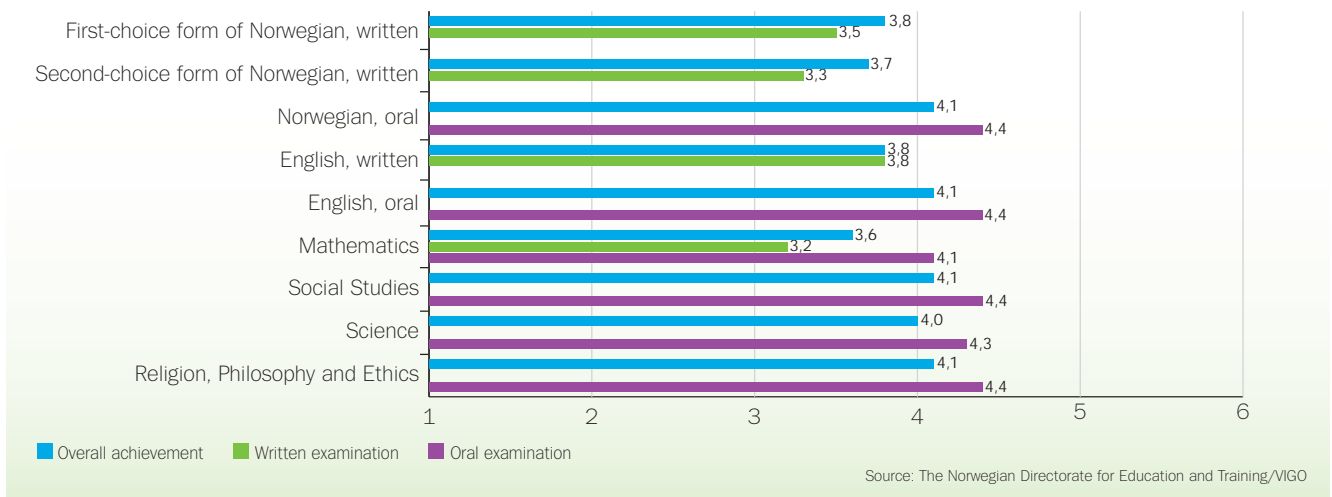
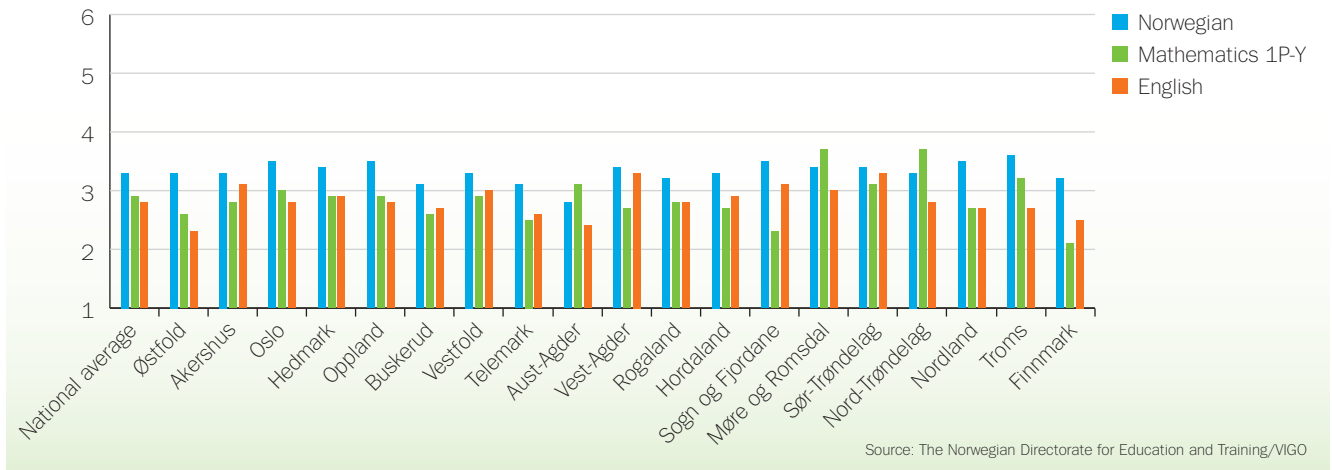


FIGURE 3.11 Examination marks in selected common core subjects in vocational education programmes, broken down by county, 2009-2010.



Nordland County has the highest percentage of passed with distinction marks on craft and journeyman's examinations

About 23,000 persons took craft and journeyman's examinations in 2010. That was 500 more than in 2009. About 15,500 of those who took the examination were apprentices, 7,100 were candidates for experience-based trade certification and 400 were pupils.

Twenty-two per cent of the candidates who took the examination in 2010 achieved the mark of passed with distinction. The corresponding number for 2009 was 21 per cent. The percentage of failed marks was slightly higher in 2010 than the year before.

About half of the candidates who took the craft and journeyman's examinations had completed their education and training in an education programme associated with the Knowledge Promotion Reform. Ninety-one per cent of them passed the craft and journeyman's examination. The corresponding figure for persons who took the examination after Reform 94 was 90 per cent. Thus, the difference was very slight.

Figure 3.12 shows the percentage of failed, passed and passed with distinction marks in all of Norway's counties. Both in 2009 and 2010, Nordland County had the highest percentage of candidates who passed with distinction, 36 per

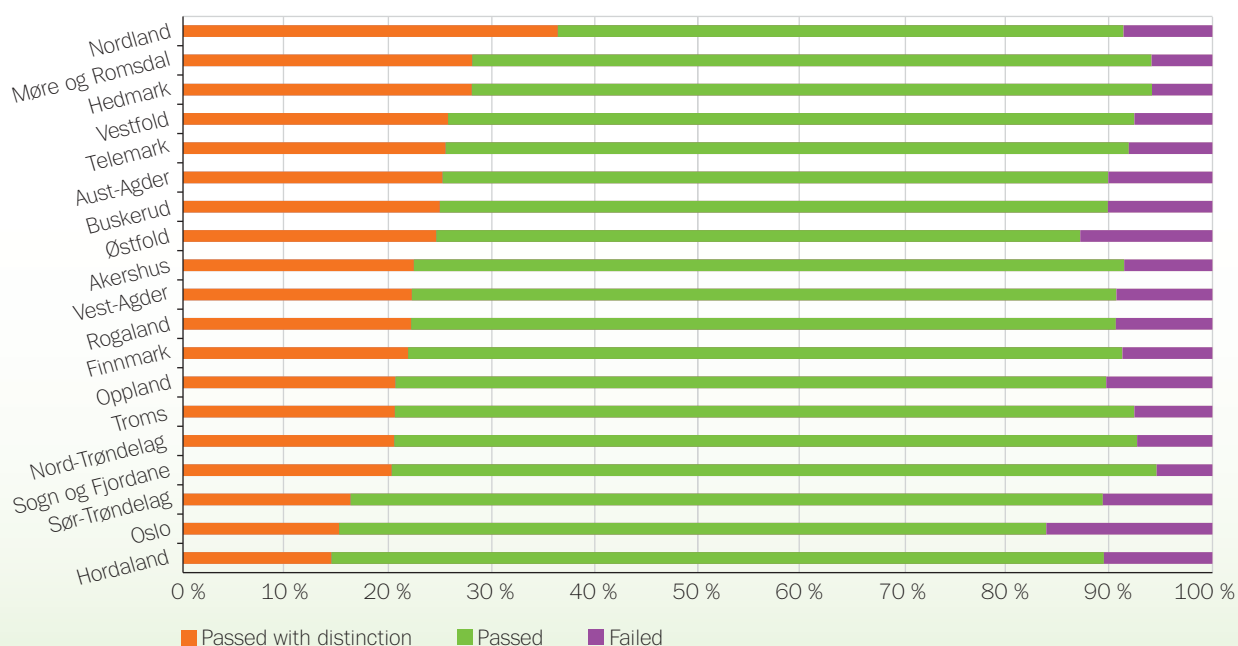
cent. In both 2009 and 2010, Hordaland County had the lowest percentage who passed with distinction, around 14 per cent in both years.

Both in 2009 and 2010, Oslo had the highest percentage of failed marks. Sixteen per cent of those who took the examination in 2010 in that county did not pass. Østfold County had the second highest percentage of failed marks in 2010, 13 per cent.

3.3 HOW DO THE OUTCOMES VARY WITH THE PUPILS' GENDER AND FAMILY BACKGROUND?

A number of studies have shown that the pupils' learning outcomes are strongly correlated with the parents' level of education, with whether the pupils have an immigrant background and with the pupils' gender (Kjærnsli et al 2004; Grøgaard et al 2008, Bonesrønning and Iversen 2010, Bakken 2010). The general rule is that girls, the majority pupils and pupils who have parents with higher education have better outcomes than boys, minority pupils and pupils who have parents with low education. Of course there are exceptions, and new studies steadily contribute to a more nuanced picture and give us a greater understanding of the contexts.

FIGURE 3.12 Passed craft and journeyman's examinations, by county. 2010. Preliminary figures. Per cent.



Source: Statistics Norway

FIGURE 3.13 Average overall achievement marks in primary and lower secondary school in the 2009-2010 school year, broken down by subject and gender.



The girls are better than the boys in Reading and knowledge of democracy

In PISA 2009, there are significant gender disparities in favour of girls in *Reading* in all countries, both within and outside of the OECD. There is a slight tendency for the gender gap to increase between 2000 and 2009, in both the Nordic countries and the OECD as a whole.

Finland had the largest average gender gap in *Reading* in 2009, but Norway, Sweden and Iceland all had significant gender gaps. Among the Nordic countries, only Denmark had a gender gap that was smaller than the OECD average.

There are also large gender gaps in the percentage of pupils in the different levels in PISA. Among the Norwegian girls, only eight per cent scored below level 2, whereas the corresponding figure for the boys was 21 per cent. Readers at level 4 and above can be described as good readers, and in Norway 22 per cent of the boys and 39 per cent of the girls scored at these levels in 2009.

The gender gaps in *Mathematics* are small and insignificant in the Nordic countries. In addition to the small gender gaps in *Mathematics* in Norway, the range of achievement for boys and girls are approximately equal. The gender gaps in *Science* are also relatively slight in most countries. In Norway there is a very slight gender gap in favour of girls. There are relatively small gender gaps in the breakdown by mastering level, but

there are a few more boys at level 2 and below, and a few more boys at levels 5 and 6.

Also in the International Civic and Citizenship Education Study, ICCS 2009, girls score higher than boys in all countries. Norwegian girls in Years 8 and 9 had average scores of 527 and 554 points respectively, 23 and 24 points higher than the boys.

The gender gaps increase throughout the course of the pupils' education

NIFU has analysed the gender gaps in the outcomes on national tests, on the basis of standardised scores (Opheim et al 2011). They found no significant gender gaps in *English* in Year 5, but there was a tendency for girls to score slightly higher than boys in the Year 8. In *Reading*, girls scored slightly higher than boys, and the disparities were somewhat larger in Year 8 than in Year 5. In *Mathematics*, boys scored slightly higher than girls in both Years. The gender gaps remained fairly stable in the period from 2007 to 2010.

An analysis conducted by Norwegian Social Research (NOVA) shows that the disparities in achievement between boys and girls increase throughout lower secondary school (Bakken 2010). Girls improve their achievement more than boys in most subjects except *Mathematics*, where the boys show more improvement. There are big disparities among the schools, but there are no schools in the sample where the boys had greater overall improvement than the girls.

Girls get higher marks than boys in most subjects at the completion of lower secondary school, in both overall achievement marks (cf. Figure 3.13) and examination marks. The difference at the national level varies from only 0.1 points in *Mathematics* to 0.8 points in *In-depth Study in Norwegian*. The exception is *Physical Education*, where the boys' average overall achievement marks are 0.2 points higher than the girls'. The gender gap is also evident when we take a look at the average lower secondary school points, where the girls on average had 41.9 points, while the boys on average had 37.9 points in 2009-2010. Analyses show that the disparities between boys and girls remain even when the social background related to the parents' level of education varies (Statistics Norway 2010b).

Girls achieve higher marks than boys in most subjects in upper secondary education and training

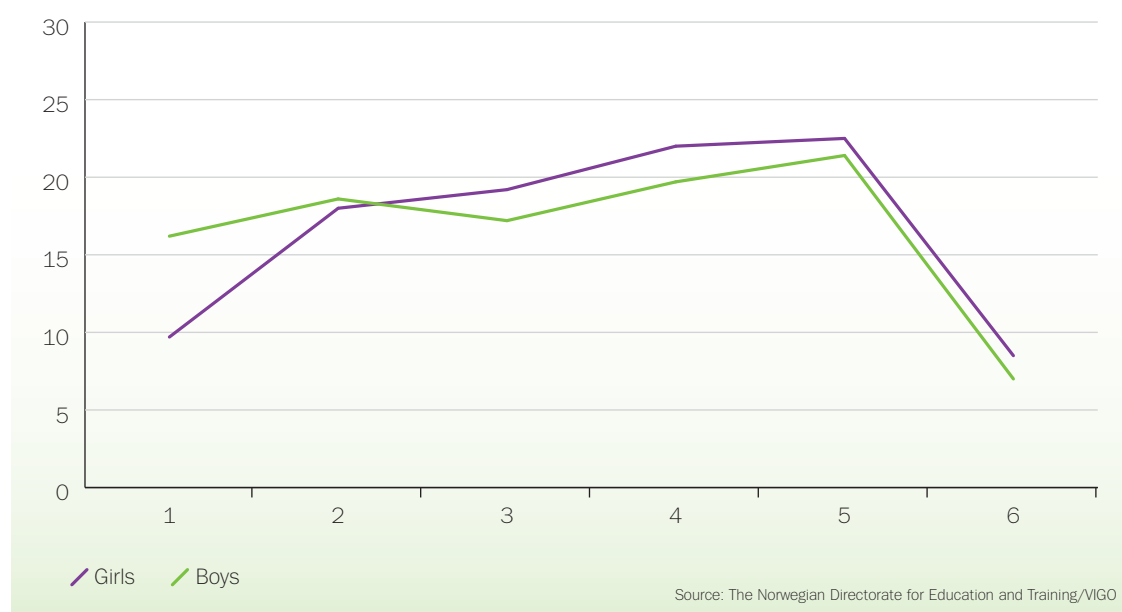
Girls get higher average marks than boys in most common core subjects in upper secondary education and training (Directorate for Education and Training 2010f). The only exception is the common core subject *Mathematics*, where boys have higher marks in several variants of this subject. Girls also get higher average marks than boys in most subjects in the programme subjects in general studies education programmes. In examinations, the boys have higher marks than the girls

in *Chemistry 2*, whereas the outcomes are equal in *Physics 2*, *Political Science and Human Rights*, and *English in Social Studies*.

An analysis of girls and science conducted by Statistics Norway shows that there is considerable variation among the counties in the percentage of girls who choose science subjects in upper secondary education and training (Bjørkeng 2011). In Akershus County, 35.7 per cent of the girls choose full In-depth Study in *Mathematics in Natural Science* as did 36.8 per cent in Oslo. In Sogn og Fjordane County, 45.8 per cent of the girls choose In-depth Study as did 45 per cent in Sør-Trøndelag County. Although there has been a decline in the percentage of pupils who choose In-depth Study in the Natural Sciences and Mathematics after the introduction of the Knowledge Promotion Reform, the percentage of girls in Science remained relatively stable during the same period (2006-2009).

In the Natural Sciences and Mathematics at the Vg2 and Vg3 levels in the period 2006-2008, girls for the most part had better marks than boys for both overall achievement and examination marks. In the examinations, the biggest gender gaps are in *Mathematics in Natural Science* at the Vg3 level, where girls achieved almost half a mark higher than boys on average. The failure rate among boys is very high in this subject, especially on the examination (cf. Figure 3.14).

FIGURE 3.14 Breakdown of marks for boys and girls in examinations in *Mathematics in Natural Science 2*. 2009-2010. Per cent.



Bigger gender gaps in the percentage who have passed craft and journeyman's examinations among pupils than among apprentices

In the group of apprentices who took a craft or journeyman's examination in 2010, there were only small disparities between boys and girls in the percentage who passed. Ninety per cent of the boys and 91 per cent of the girls passed. The gap was somewhat bigger between girls and boys who took an examination as candidates for experience-based trade certification, where more than 93 per cent of the girls passed and almost 95 per cent of the boys did likewise.

Some of those who take craft or journeyman's examinations have completed Vg3 in upper secondary school instead of apprenticeship in a business. These persons are referred to as "pupils" in the statistics. The percentage of pupils who passed a craft or journeyman's examination was far lower than the percentage of apprentices and candidates for experience-based trade certification who passed. Among the pupils, there were some large gender gaps with regard to the percentage who passed. Seventy-four per cent of the girls who completed Vg3 in school passed the a craft or journeyman's examination in 2010. The corresponding figure for boys was 62 per cent. The number of pupils who took a craft or journeyman's examination, however, was significantly lower than the number of apprentices and candidates for experience-based trade certification who did likewise. Therefore, random variations will be more pronounced in this group.

Weaker correlation between learning outcomes and family background in the Nordic countries than in the rest of the OECD

By surveying family background, we have an opportunity to examine how the resources the pupils bring with them into the education and training affect the learning outcomes. There is a strong and persistent correlation between pupils' learning outcomes and so-called socio-economic background. PISA 2009 measures the pupils' socio-economic background through indices that are compiled on the basis of a questionnaire that the pupils answer. These indices are family type (whom the pupil lives with), the parents' professional status, the parents' level of education, the financial situation at home, educational resources at home, cultural objects at home (classical

literature, poetry collections, works of art) and the number of books at home. In addition, an aggregate measurement of economic, social and cultural status has been developed.

In general, the correlation between family background and reading achievement is relatively weak in the Nordic countries relative to the average in the OECD (Kjærnsli and Roe 2010). The weak correlation between the financial situation at home and reading achievement is one of the most characteristic traits of the Nordic countries. However, there is a strong correlation between cultural capital (measured by the cultural objects at home) and reading achievement, which is on a level with the OECD average.

In the International Civic and Citizenship Education Study, ICCS 2009, we see, not surprisingly, that an upbringing with parents who are interested in politics and social issues, and particularly in cases where the pupils have discussions with their parents about such issues, is of great importance for the pupils' general interest in politics and the society. There is a moderate correlation between the pupils' knowledge and skills pertaining to democracy and the number of books at home, the parent's education and the parent's occupation.

The importance of the parents' level of education increases throughout the course of the pupils' education

Often, we use only the parents' level of education as a measure of family background. Analyses show that the parents' level of education explains many of the disparities in achievement among pupils. The higher the parents' education, the better the children's learning outcomes.

An analysis of this year's national tests confirms this finding (Statistics Norway 2011). As in previous years, there is a clear, positive correlation between test scores and the parents' level of education. Children of parents with higher education score in the highest mastering levels on all tests to a greater extent than the other pupils. If the pupils' parents have higher education, there is also a greater chance that the test results will improve from Year 5 to Year 8, or that the pupils will maintain a high mastering level.

Figure 3.15 shows how average scores on national tests increase the higher the parents' education. The importance of the parents' level of education increases slightly from Year 5 to Year 8 (Opheim et al 2011).

An analysis of primary and lower secondary school marks also reveals the correlation between pupils' outcomes and the parents' level of education (Statistics Norway 2010b). Average lower secondary school points vary by almost 12 points, from 34.1 points for pupils with the least educated parents to 45.8 points for children of parents with a long higher education. The parents' level of education has the greatest effect in subjects such as *Mathematics*, *Science* and *Social Studies*, whereas for *Food and Health*, *Arts and Crafts* and *Physical Education* it has less effect.

A comparison of the outcomes on national

tests in Year 7 in the 2004-2005 school year with the marks in Year 10 in 2007-2008, shows that the importance of the parents' level of education becomes more pronounced throughout lower secondary school (Bakken 2010). Even if primary school had managed to even out all of the disparities in basic skills based on the parents' level of education, this would still only have reduced half of the differences in marks in Year 10. The study shows disparities among the schools, but none of them manage to reduce these social disparities in achievement throughout lower secondary school.

FIGURE 3.15 Average score for all national tests in Years 5 and 8, broken down by the parents' level of education. 2010. Standardised scores with an average of 50.

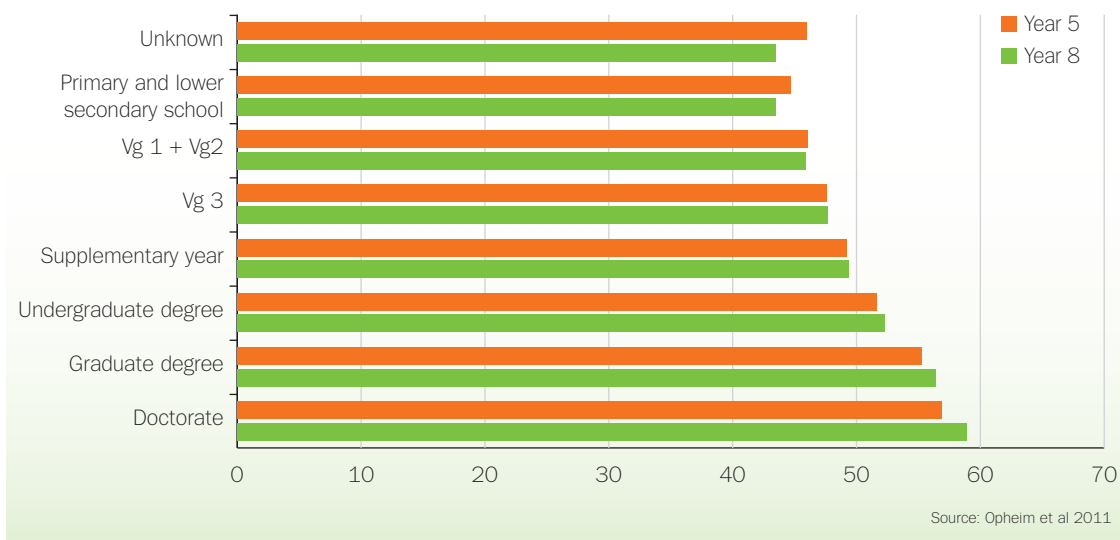
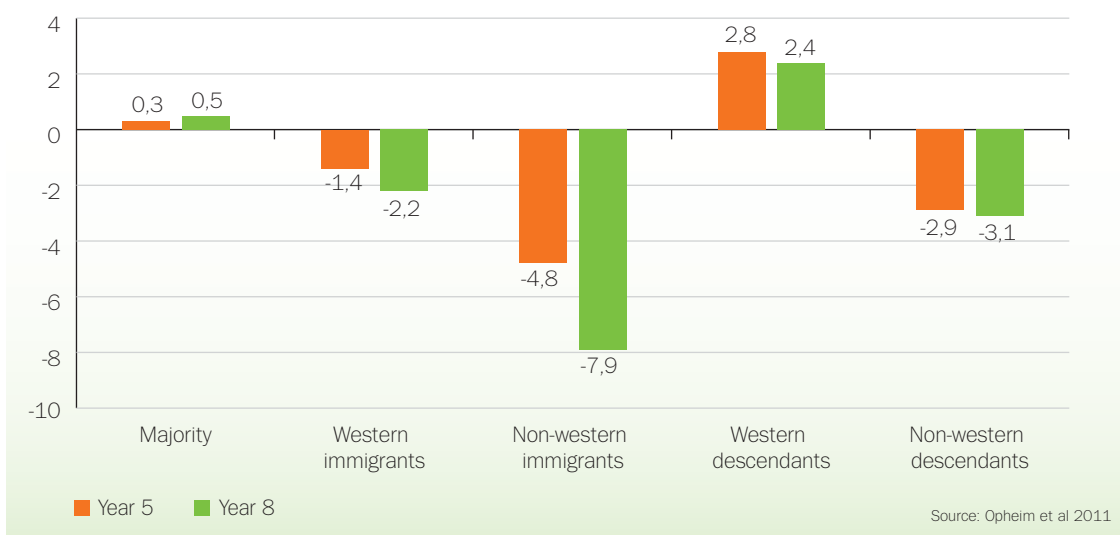


FIGURE 3.16 Average score for all national tests in Years 5 and 8, by immigration status. 2010. Standardised scores with the average set at 0.



Pupils with a non-western immigrant background have poorer outcomes than majority pupils

Analyses of the outcomes on national tests have shown that pupils with a non-western immigrant background have poorer achievements than pupils with a majority background (Opheim et al 2010). The disparity is especially great in *Reading*. Much of this gap in outcomes can be explained by the fact that, on average, pupils with a non-Western immigrant background have parents with a lower level of education and lower income. They have parents who are more frequently unemployed, and they have more siblings than pupils with a majority background.

Figure 3.16 shows how the outcomes for the majority pupils and various minority groups depart from the average on national tests, which is set here at 0. The figure shows that descendants from Western countries score best of all of the pupils both in Year 5 and Year 8, whereas immigrants from non-western countries have the definitively poorest outcomes (Opheim et al 2011).

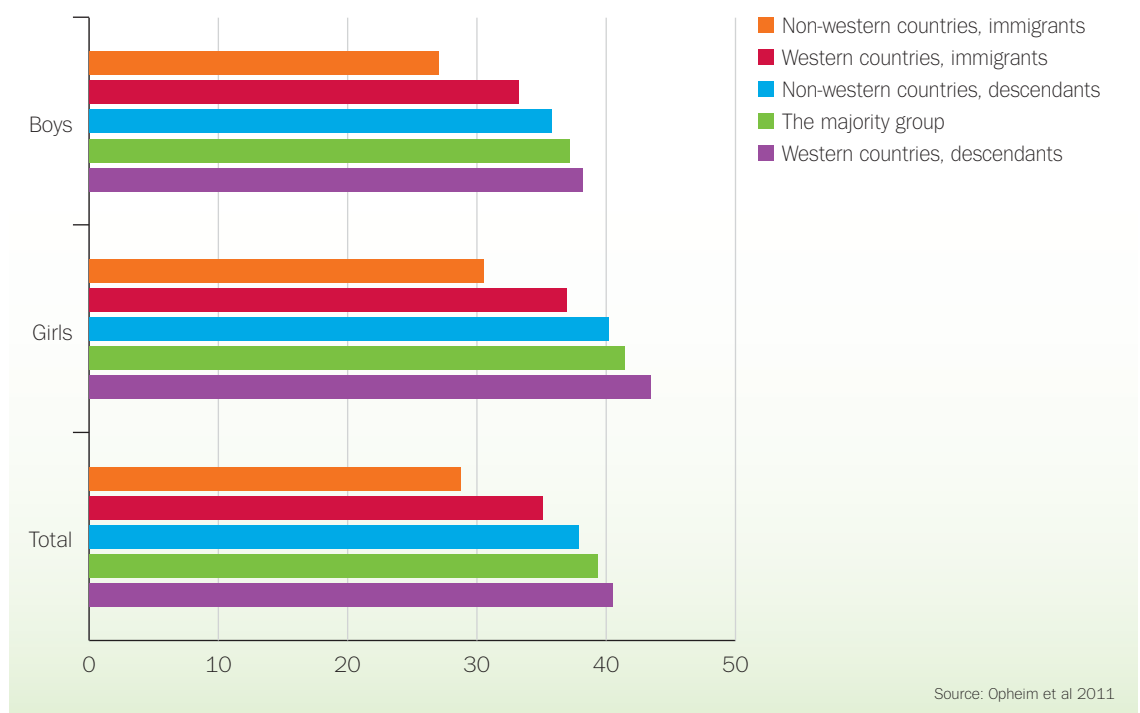
The disparities in achievement on national tests between pupils with non-western immigrant backgrounds and pupils with a majority background appear to be greater in schools in

Oslo and Akershus County than in other counties (Opheim et al 2010). Pupils with a majority background have higher achievement in Oslo and Akershus than in other counties, whereas pupils with a non-western immigrant background achieve about the same as pupils with similar backgrounds in other counties.

A detailed analysis of the outcomes on national tests for the major Norwegian cities of Oslo, Kristiansand, Stavanger, Bergen, Trondheim and Tromsø in comparison with the rest of the country give added nuance to this picture (Næss 2010b). With some exceptions, the general trend in both Years 5 and 8 is that pupils in the major cities score higher than pupils at other schools. This applies first and foremost to the majority pupils, but also pupils with a non-western immigrant background in the cities do better on the national tests than in the rest of the country. One exception is Kristiansand, where pupils with a non-western immigrant background do worse than the pupils in the rest of the country.

Figure 3.17 shows how average lower secondary school points vary with immigrant background and gender. Just as for the national tests, descendants from western countries have the highest outcomes, and immigrants from non-western countries have the lowest.

FIGURE 3.17 Average lower secondary school points broken down by immigrant background and gender. Pupils in Year 10 in the 2009-2010 school year.



Average lower secondary school points increase with increasing length of residence in Norway, but the only significant disparities in achievement are between those with the shortest and longest length of residence (Opheim et al 2011). Pupils with a non-western background who came to Norway before beginning school (at age 6), have better school achievement than those who have recently immigrated.

The disparity in average lower secondary school points between immigrant pupils and the rest of the population varies among the major cities (Statistics Norway 2010c). The disparity is greatest in Oslo with 9.6 points and least in Stavanger with only 2.7 points. Among other things, this may be correlated with the family background of the immigrant pupils in the various municipalities. Stavanger has a higher percentage of immigrant pupils with highly educated parents, whereas Oslo has a relatively high percentage of immigrant pupils who have parents with only a primary and lower secondary education or with an incomplete education.

NOVA has compared the outcomes on national tests in Year 7 in 2004-2005 with marks in Year 10 in 2007-2008 for pupils with a minority background who have had all or most of their primary and lower secondary education and training in Norway (Bakken 2010). The analysis shows that the achievement gap between minority pupils and majority pupils does not increase during lower secondary school, but there is considerable variation among schools. In some schools, the minority pupils' achievement improves relative to the majority pupils whereas for other schools there is a greater improvement for the majority pupils.

The schools with the least disparities in achievement on national tests between minority and majority pupils in Year 5 tend to distinguish themselves with a positive learning environment. This seems to have an especially positive impact on the outcomes among immigrant pupils with a non-western background (Næss 2010a). However, the effect of having a positive learning environment can only explain a small part of the disparities in achievement between minority and majority pupils. A high percentage of the schools with both the greatest and the least disparities in achievement between majority pupils and pupils with a non-western immigrant background are located in Oslo and Akershus County.

3.4 HOW DO THE PUPILS' LEARNING OUTCOMES DEVELOP THROUGHOUT THE COURSE OF THEIR EDUCATION?

Several studies have shown that the pupils' past achievement can predict future outcomes.

Statistics Norway has examined the correlation between the pupils' outcomes on national tests in Year 5 in 2007 with the outcomes in Year 8 three years later (Statistics Norway 2011). The figures show a clear correlation: a great many pupils who scored at the lowest mastering level in Year 5 continue to score at a low level in Year 8. Figure 3.18 shows this correlation for the national tests in *Mathematics*, where the trend is most evident. We see that fully 67 per cent of those who were at level 1 on the test in Year 5 in 2007, are at level 1 or 2 on the test in Year 8 in 2010.

In 2010, the tests in *Reading* and *Mathematics* were also conducted for the first time in Year 9. The tests in Year 9 were identical to the tests in Year 8, making it possible to compare the pupils' outcomes in Years 8 and

HOW DO WE FIND THE SCHOOL'S CONTRIBUTION TO THE PUPILS' LEARNING OUTCOMES?

If the pupils have good outcomes in Year 5, it is likely that they will also have them in Year 8, in Year 10 and in upper secondary education and training. But what is the school's contribution?

To answer this question, we can make use of so-called *value-added indicators*. These are more accurate than other performance measures as indicators of the school's quality or its contribution to the pupils' learning because they correct for important disparities among schools (such as the number of pupils) that are beyond their control. Using outcomes from two different points in time, these indicators can measure how much the pupils' learning outcomes have increased between the two dates, and by checking for known factors that we know are correlated to learning outcomes, we can get a measurement of the school's contribution.

In 2009, the Directorate for Education and Training commissioned Statistics Norway to develop value-added indicators so as to determine whether these can be implemented in the national quality-assessment system (NKVS). Statistics Norway's first report from the project is expected in the autumn of 2011.

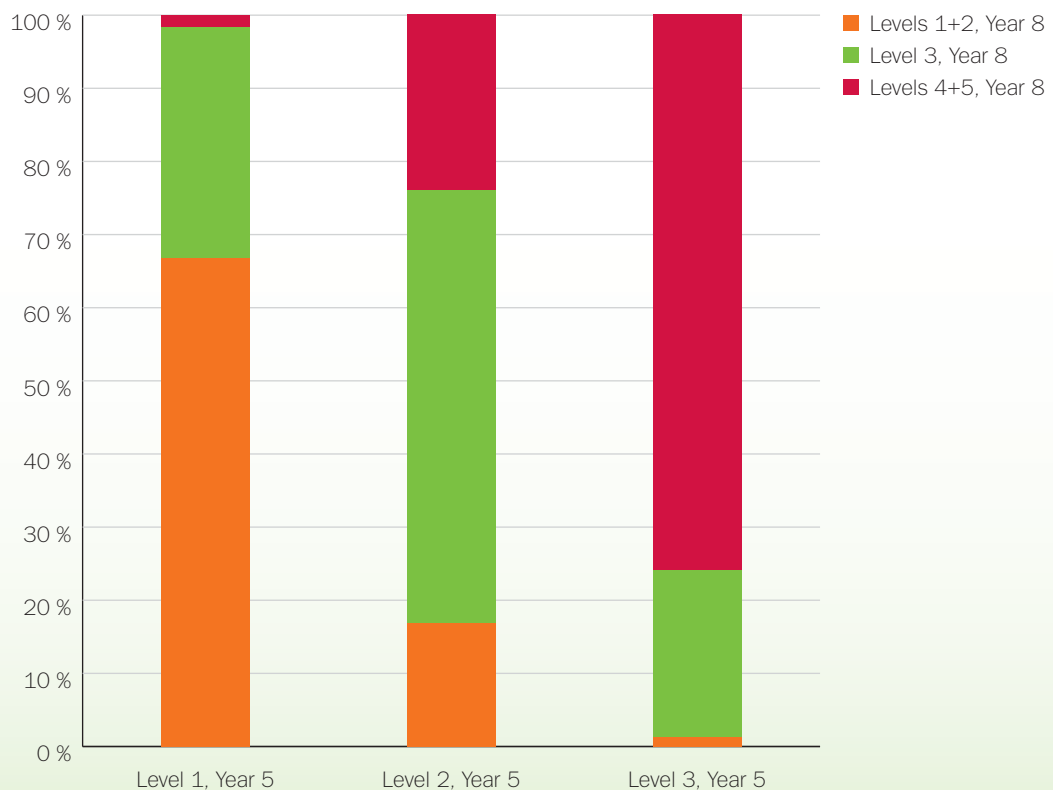
9 in the same year by looking at the average mastering level and the percentage distribution of mastering levels. As expected, the pupils in Year 9 score higher on national tests in both *Reading* and *Mathematics*. The outcomes in *Mathematics* for the two age cohorts show that the biggest change is in the percentage of pupils who achieve the highest mastering level, while there is relatively little change in the percentage of pupils who achieve the lowest mastering level (Directorate for Education and Training 2010c). This may indicate that it is the high-achieving pupils who improve their achievement the most from Year 8 to Year 9 and that the disparities between those with the lowest and the highest achievements in *Mathematics* increase from Year 8 to Year 9. Similar trends were observed for *Reading*.

A comparison of pupils' outcomes on national tests in Year 8 in 2007 and their overall achievement marks from Year 10 three years later shows a clear correlation between national tests and marks, but that this varies with different subjects (Statistics Norway 2011). Note that national tests and marks in subjects

should basically measure different things (basic interdisciplinary *Reading* and *Mathematics* skills and achievement of goals in the subjects *Norwegian* and *Mathematics* respectively). Of the pupils who were at the lowest mastering level in *Mathematics* in Year 8, nearly 80 per cent received overall achievement marks of 1 or 2 in *Mathematics*. On the other hand, only about 40 per cent of the pupils who were at the lowest mastering level in *Reading* in Year 8 received an overall achievement mark of 1 or 2 in *Norwegian, first-choice form*. Of the pupils who were at the lowest mastering level in *English* in Year 8, fifty per cent achieved the overall achievement mark of 3 or better in *English, written*.

In another study of the ways in which the disparities in learning outcomes develop during lower secondary school, the outcomes on national tests in Year 7 in 2004-2005 are compared with marks in Year 10 in 2007-2008. The outcomes show that the pupils' relative position in the hierarchy of school achievement is for the most part at the same level on the two dates. If you divide the pupils into four groups according

FIGURE 3.18 Distribution of mastering levels on national tests in *Mathematics* in Year 8 in 2010, broken down by the pupils' mastering level in *Mathematics* in Year 5 in 2007.



Source: Statistics Norway

to their outcomes on national tests, half of them also end up in the same group three years later. It is especially the pupils in the mid-most groups who change position between the two dates (Bakken 2010).

A previous analysis showed that there is a strong correlation between marks in subjects from Year 10, and the marks in corresponding subjects in upper secondary education and training. Both the level of marks and disparities among the groups of pupils show considerable stability from year to year (Hægeland and Kirkebøen 2007).

3.5 HOW LARGE ARE THE DISPARITIES IN LEARNING OUTCOMES WITHIN AND AMONG SCHOOLS?

The results from PISA 2009 show that there are relatively small disparities in achievement among schools in Norway compared with other countries. However, the disparities among pupils within the individual schools are relatively large. The same is also true for the most part in the other Nordic countries. Sweden is the Nordic country with the greatest inequality among schools.

Figure 3.19 shows how the disparities among pupils in *Reading* are broken down among schools and within schools. The width of each country's column indicates the total variation in the results. The narrower the column, the smaller the disparities. The red column on the left of the figure shows disparities among schools, whereas the

blue column shows disparities within schools. Figure 3.19 also shows how much of the disparity in achievement can be explained by the pupils' socio-economic background (dark red and dark blue).

Countries that have big disparities among schools generally have more segregated school systems than countries where there are internal disparities among pupils in each school. The figure shows that the Nordic countries have small disparities among schools. At the opposite end of the figure, we see several central European countries that stand out with big disparities among the schools.

The results from PISA 2009 show that countries with small disparities among schools, such as the Nordic countries, also have smaller disparities in achievement among pupils. The results suggest that there is no benefit from early segregation, but rather quite the contrary. Countries with little segregation seem to be more successful.

In connection with PISA 2009, the OECD notes the following characteristics of education systems that succeed in creating a good learning environment and good results:

- equal opportunities for schooling and school programmes for all pupils
- high degree of autonomy in the school with regard to the content and assessment of the subjects
- focus on highly qualified teachers

Chapter 4 presents key factors that distinguish a good learning environment.

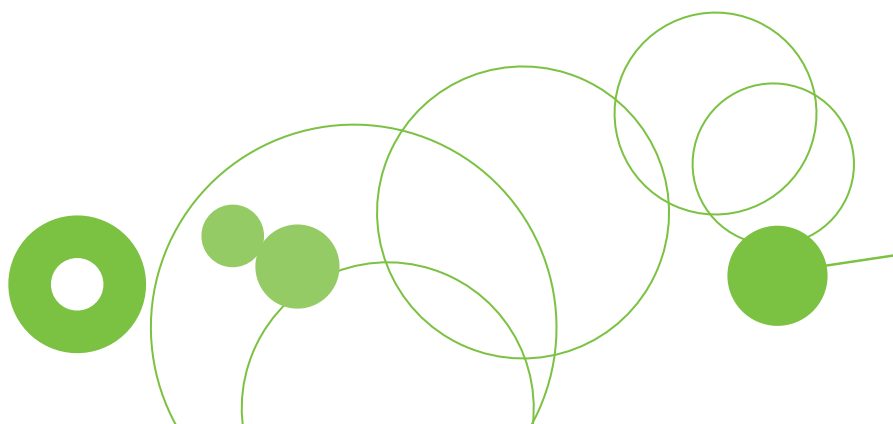
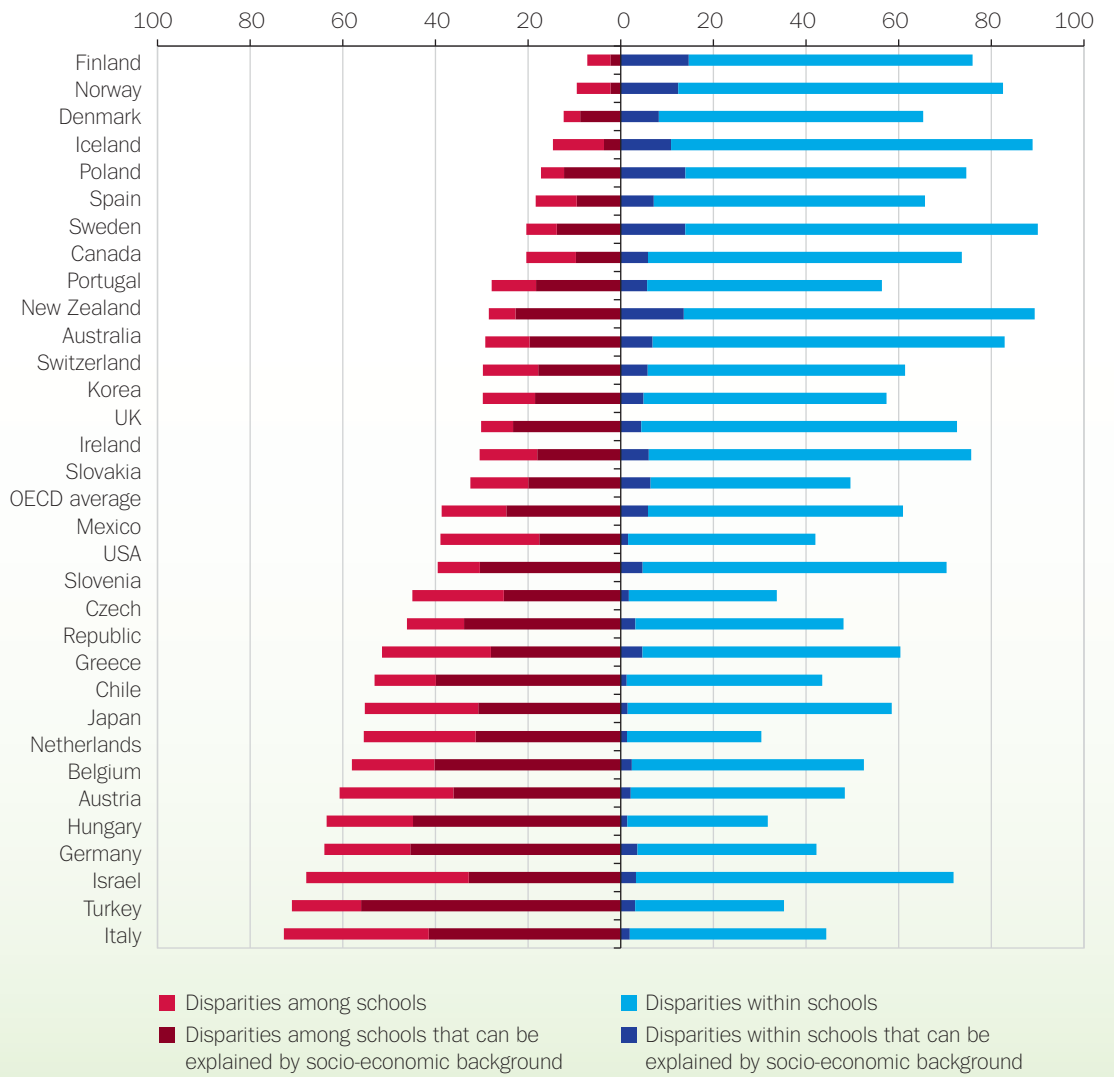
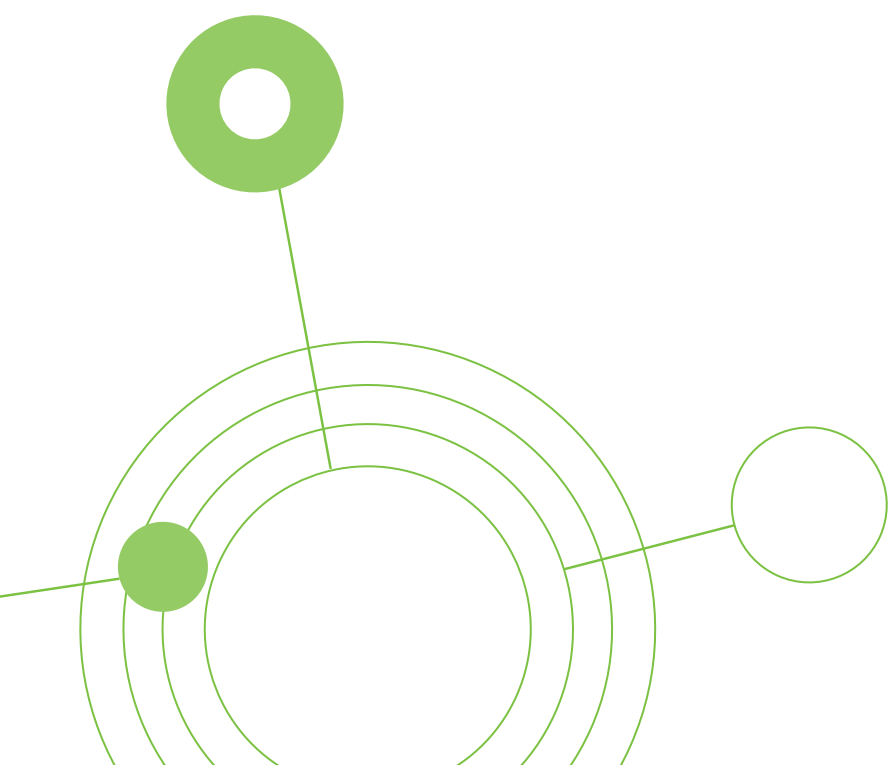


FIGURE 3.19 Disparities in outcomes in Reading among and within schools in PISA 2009. The difference is calculated relative to the average variance in the OECD countries (100).



Source: Kjærnsli and Roe 2010



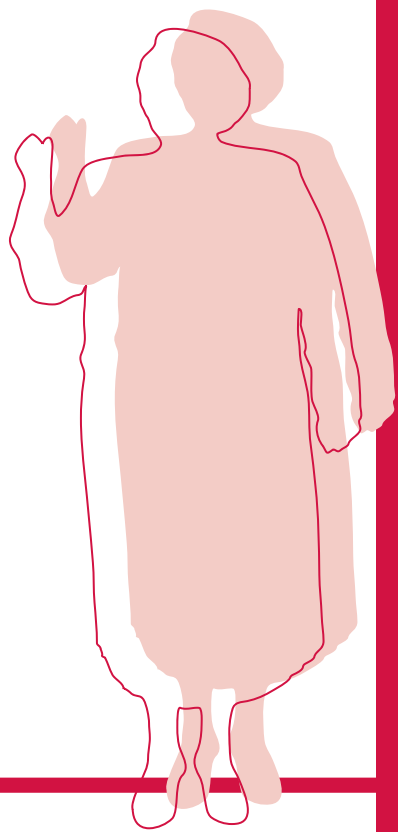


4

Learning environment

How do Norwegian pupils experience their learning environment? What distinguishes a good learning environment? What prevents bullying and which factors in the learning environment seem to promote learning?

In this chapter, we present five factors that are essential to a good learning environment, and we also highlight current research that indicates the factors in the learning environment that seem to especially promote learning.



4.1 HOW DO NORWEGIAN PUPILS EXPERIENCE THEIR LEARNING ENVIRONMENT?

We define learning environment as the aggregate cultural, relational and physical factors in the school that affect the pupils' learning, health and well-being.

Definition from the national initiative *Bedre læringsmiljø* (Better learning environment), cf. www.udir.no

Ensuring that pupils have a good learning environment is an important goal in itself. In addition, research shows that a good learning environment helps promote improved learning outcomes, better completion of school and more social cohesion. The learning environment in a school may be perceived differently because the pupils differ as individuals and because the pupils belong to different basic groups, classes and ages. The learning environment is not static either. The schools have to work continuously to develop and maintain a good learning environment. This chapter aims to provide knowledge about the things that are important to emphasise in this work.

The youngest pupils are thriving best

According to the analysis of the Pupil Survey 2010 (Topland et al 2010), there is little doubt that structure, overview, professional guidance and a positive relationship with the teachers are very important factors that promote the pupils' motivation and effort and that these factors are therefore relevant to the pupils' learning outcomes.

The pupils' motivation decreases after Year 5, but undergoes a slight increase in Vg1 before it levels off again. If we include all of the groups of pupils in the survey, we find that the pupils in Year 5 are the ones who most often feel that they are not given enough challenges in their school routine. However, the pupils in Year 5 are also the ones who are least likely to give up if the school work is too difficult. The pupils in Vg1 are the ones who most often feel that the school work gives them sufficient challenges, but they give up more easily than the pupils in earlier years of schooling.

To the question of whether the pupils enjoy being with their teachers, we find the most positive results among the pupils in earlier years of

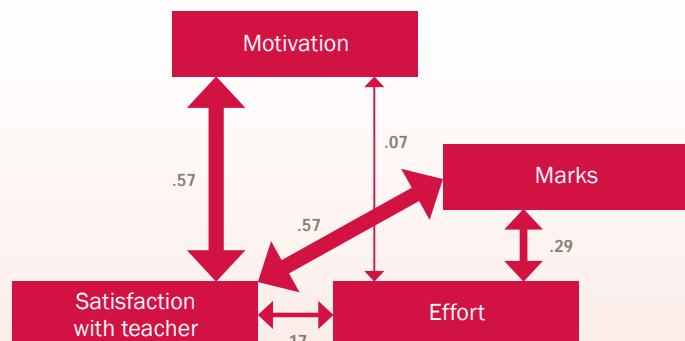
THE PUPIL SURVEY

The Pupil Survey is an Internet-based questionnaire in which the pupils have an opportunity to express their opinion about factors that are important to learning and well-being in the school. The Pupil Survey can be taken in both the autumn and spring semesters. It is mandatory to conduct the Pupil Survey in Year 7, Year 10 and Vg1 each spring, but it is conducted at many schools in other Years as well. In the spring of 2011, over 370,000 pupils took the Pupil Survey. There are small variations in the results at the national level from one year to another, but there is considerable variation among schools and within individual schools from year to year.

schooling. If we consider the entire sample in the survey, Year 5 is the group of pupils that thrives best, whereas Year 10 is the group of pupils that have the highest percentage of pupils who responded that in very few subjects or no subjects did they get along with their teachers.

The pupils in lower secondary school and in upper secondary education and training feel that they have the least co-determination when it comes to formulating work plans, i.e. the topics on which they shall be working and the learning goals they shall pursue, while they feel they have the most co-determination in the ways in which they can work with the subjects. Among the pupils in lower secondary school and in upper secondary education and training, it is the pupils in Years 9 and 10 who think they have the least co-determination.

FIGURE 4.1 Correlations among satisfaction with the teacher, motivation, effort and marks. The Pupil Survey 2010.



The strongest correlation is between satisfaction with the teacher and motivation, but the analysis does not indicate whether it is satisfaction with the teacher that imparts motivation, or whether being motivated results in satisfaction with the teacher. The analysis is based on responses from pupils in lower secondary school.

Source: Topland et al 2010

There are no significant changes in the pupils' answers during the period 2007-2010. When it comes to unruliness, we see a slight but significant change between 2007 and 2010, which may indicate fewer disturbances in class. It is the pupils in Year 8 who feel that the teachers have to take the longest time to establish order in the class, whereas pupils in Vg1 feel that the teachers have to take the shortest time.

4.2 WHAT DO INTERNATIONAL STUDIES TELL US ABOUT THE LEARNING ENVIRONMENT IN THE NORWEGIAN SCHOOL SYSTEM?

The pupils who participated in PISA 2009 were born in 1993, and most of the Norwegian pupils in the survey attended Year 10 of schooling. (Cf. Chapter 3 on Learning Outcomes.) In connection with the survey, certain factors associated with the learning environment were also surveyed.

The pupils were asked how they assess the learning outcome of their schooling, their relationship to the teacher, the working environment in the class, the access to and use of the library, and how they assess the benefits of their schooling.

When we interpret the responses to international surveys, it is important to be aware that there may be consistent differences among countries in the ways the pupils respond to graded questionnaires. In PISA 2003, this was specifically examined, and that study revealed, for example, that the pupils in the USA were more likely to respond positively than pupils in Japan and Korea. In the Nordic countries, there were small differences among the countries, but Norwegian pupils were the least likely to respond

positively, while Danish pupils were most likely to give positive responses.

Cultural differences in the ways in which the pupils respond to the questionnaires make it difficult to directly compare different countries' outcomes.

Norwegian pupils report a worse working environment than the average in the OECD

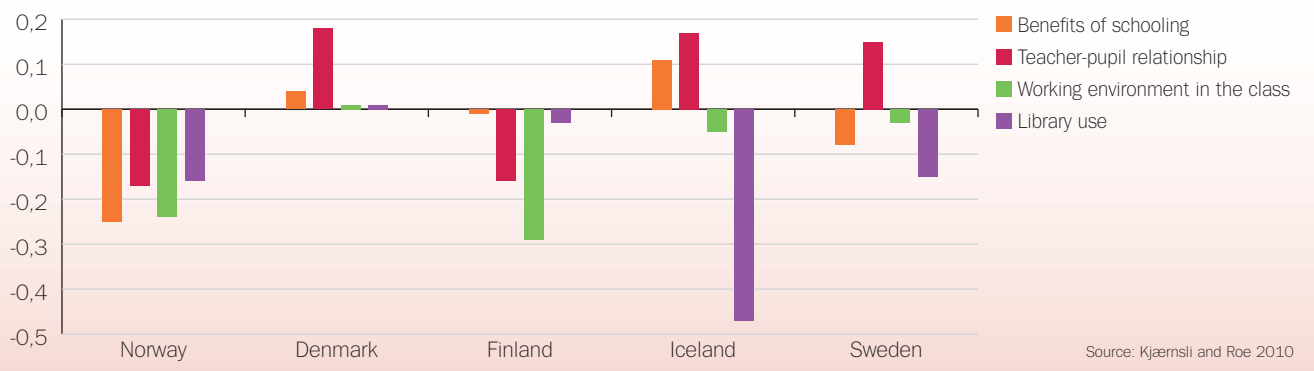
The Norwegian response profile, shown in Figure 4.2, has a significantly lower score than the OECD average on all four questions. The Norwegian outcomes must be interpreted keeping in mind that Norwegian pupils seem to have higher expectations, or what the researchers call personal standards, than pupils in many other countries. The average on questions about the working environment is especially low (absence of trouble and disturbance in the class) and the benefits of the schooling (the experience of having learned something in school that may be useful in a job). The percentage of Norwegian pupils in Year 9 who experience trouble and disturbance has remained constant since 2000.

There is a positive correlation between Norwegian pupils' academic achievements in PISA and the benefits of the schooling they experience. The same applies to the teacher-pupil relationship and the working environment in the class. The strongest positive correlation for Norwegian pupils was the correlation between a positive teacher-pupil relationship and reading score.

Norwegian pupils report good relationships to their teachers

Pupils from 38 countries took part in the ICCS study (International Civic and Citizenship Education Study) in 2009. The study examines school pupils' knowledge and attitudes to

FIGURE 4.2 How Nordic pupils assess their learning environment.



democracy and citizenship. They were also asked questions about how they regarded the school's learning environment. A total of 6,000 Norwegian pupils in Years 8 and 9 and 700 Norwegian teachers of Year 8 took part in the study.

Norwegian youth feel that the teachers encourage them to form their own opinions and to express those opinions. The pupils are allowed to speak freely and disagree with the teachers. A high percentage of pupils feel that they are taken into account when the rules in the class and activities outside of school hours are determined. A smaller percentage feel they have influence on what is taught, on the curriculum and on the teaching aids that are used. A very high percentage feel that their teachers are fair, interested and attentive.

Research shows that openness (the opportunity to express their own opinions, listen to or disagree with the opinions of others) is important in order to promote good democratic skills and cultures (Tourney-Purta et al. 2001). The ICCS study does not explain the relationship between the pupils' perception of the climate in the classroom and the academic learning outcomes, but the researchers find a correlation. The data from ICCS shows that, according to the pupils, openness is practised in somewhat different ways in Norwegian classrooms.

In the study, the pupils are also asked to express their views about whether the pupils' opinions are taken into account in choosing the content of the instruction, the working methods and the teaching aids and in the formulation of rules in the class. The breakdown of responses indicates that for the most part the pupils feel that they have influence on the formation of rules in the class.

When the researchers summarise the negative responses to the questions about being taken into account in the ICCS material, they get an average of about 40 per cent who feel that they are only taken into account to a slight extent or not at all. That is 15 percentage points more than the percentage of pupils in Year 9 in the Pupil Survey who do not feel that the school listens to pupils' suggestions. The difference between the two surveys may be attributed to the fact that the ICCS asks whether the pupils "are taken into account," a question that encompasses more than the question in the Pupil Survey about whether the "school listens to pupils."

The study shows that Norwegian pupils feel that they have good relationships with their teachers, but that there is a big difference between the ten per cent of the schools with the highest scores for good relations and the ten per cent of the schools where the pupils feel that they have the worst relationships with their teachers.

4.3 | WHAT DISTINGUISHES A GOOD LEARNING ENVIRONMENT?

Five basic factors create a good learning environment

In 2010, the Directorate for Education and Training developed a research-based description of factors that are essential in order for the pupils to experience a good learning environment. The teachers' class management and the ways in which staff, pupils and parents collaborate on the school's tasks and goals are important factors in a learning environment. These factors are supported by findings in the studies we presented above, and they are factors that the school can influence and improve.

The teacher's ability to lead classes

If the teacher has the ability to lead the class and to enter into a supportive relationship with each individual pupil, it will have a major impact on the pupils' learning environment and learning. We know it is important that the teacher have clearly formulated goals and expectations for all of the pupils - adapted to individual circumstances and needs. It is also important that the pupils be given constructive feedback on their academic and social development and that they play an active part in their own learning efforts.

The teacher's relational competence

A good relationship with the teacher and the structure of the instruction help the pupils to become more motivated and to do more school work. If the pupils feel that the teacher cares about them and supports them in their learning efforts, they will be more willing to work and take pains to learn. They will also ask for help and guidance more often when they need it. There is also less bullying at schools where there are good relations between teachers and pupils and where the instruction is well-structured.

Culture for learning among the pupils

The culture and set of values in the groups of pupils will also have a significant effect on the

What gives rise to a good learning environment?

Don't erase!

Five basic factors:

- Teacher – pupil 1: The teacher's ability to lead classes and manage education programmes
- Teacher – pupil 2: The teacher's ability to develop positive relations with each pupil
- Pupil – pupil: Positive relationships and a culture for learning among the pupils
- Administrator – teacher: Good leadership, organisation and a culture for learning at the school
- School – home: Good cooperation between school and home

Signs of good practices:

- Clear structure in the education programme
- Clearly formulated goals and expectations for all pupils adapted to their circumstances and needs
- Constructive feedback on academic and social development
- Pupils who are active in their own learning efforts
- Pupils who feel that the teacher cares about and supports them
- Pupils ask for help and guidance when they need it
- The pupils feel it is good to be active and engaged
- The pupils feel secure and included
- The interaction among peers contributes to the development of a good sense of identity
- Administration and staff support common values and routines
- Systematic, evidence-based efforts are made to maintain and improve a good learning environment
- Parents and/or guardians have positive expectations of the school and show support for and involvement in the children's schooling
- Teachers, parents and pupils' expectations of each other are clear, express and understood by all parties

Don't erase!

pupils' learning environment and learning. In a good learning community, the pupils will feel that it is good to be active and interested. When good outcomes are appreciated, the pupils become more motivated and achieve their learning potential so that what we call a culture for learning develops among the pupils.

Another characteristic of a good learning environment is that the pupils feel secure and included. Social interaction with their peers is important for children and young people, and the ability to master this interaction influences their motivation to learn and the development of their sense of identity.

Good leadership, organisation and a culture for learning at the school

One characteristic of schools with a good learning environment is that the administration and staff share common values and routines. Organisation and leadership are essential if the efforts to improve the learning environment are to be carried out systematically and be evidence-based. In

the efforts to improve the pupils' learning environment, it is important that the administration communicate clear goals to all of the staff. In order to develop and maintain a good learning environment, the administration focuses on collaboration and collective learning in addition to the individual learning of each individual employee. It is also important that the administration conduct regular assessments and give constructive feedback and support to the staff.

Good cooperation between school and home

Parental expectations, support and involvement in their children's schooling are important in order to create a good school. When parents and teachers convey positive expectations to the pupil, it has a positive effect on the pupil's learning capacity and learning environment. The ideal is that the teacher, the parents and the pupil have clear expectations of each other and that those expectations are express and understood by all parties, so that children and young people grasp the big picture and understand how it fits together.

4.4 | WHAT NATIONAL EFFORTS ARE AIMED AT THE LEARNING ENVIRONMENT?

Better learning environment is a national, five-year effort to improve the pupils' learning environment. A web-based guide and instruction materials have been developed that schools, municipalities and counties can utilise in their efforts to ensure the pupils' right to a good physical and psychosocial learning environment, cf. www.udir.no/laringsmiljo.

Forty school owners and 86 schools have received project funding for a comprehensive effort to improve the learning environment. In this group, there are nine municipalities that have included all of the schools in the municipality. The aim of the project funding is to strengthen the local efforts to improve the learning environment. Funding is provided for project management and the acquisition of external supervision. In 2011, local projects were also initiated to improve the cooperation between school and home among individual school owners in the three northernmost counties.

Better learning environment

The first interim report from the evaluation shows that the majority of the school owners and school administrators are familiar with the national effort, Better Learning Environment. So far, the evaluation has established that school owners have a need for support in the efforts to assume the responsibility for the quality of the pupils' learning environment. They regard the material associated with the effort as mostly useful because it is specific and realistic and is based on Chapter 9a of the Education Act. School owners and school administrators also see many benefits from being included in local development projects. Participation in the project results in increased awareness of the learning environment and the improvement of the schools and helps facilitate networking and professional support. The Uni Rokkan Centre has been given the assignment of evaluating the effort in the period 2010-2015.

Assessment for learning

In 2010, a four-year national effort on Assessment for Learning was initiated. The objective of this effort is to further develop assessment practices among teachers and instructors by increasing their skills in and understanding of

assessment as a tool for learning. The Directorate for Education and Training has formulated four principles for good interim assessment that are also found in the regulations associated with the Education Act.

These principles are based on international research, which shows that the conditions that promote learning can be enhanced if the pupils:

- 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

The participants in the effort are supposed to work with the four principles for good interim evaluation and make them an integral part of the education and training. This effort uses information from the assessment to adjust the education and training so that pupils learn more and better. The teacher must continuously assess whether the education and training results in the best possible learning for the pupils. The pupils in turn should have knowledge of their own competence and their own learning needs so that they can be co-responsible in preparing for their further education and training. Thus, it is the pupils' learning that should govern the planning, implementation and assessment of the education and training. In the course of a four-year period, school owners from all of the counties will be involved. Each group of school owners will participate in the effort for 14-16 months. Group 1 consists of 50 municipalities and commenced in the autumn of 2010. Group 2 consists of all of the county authorities and commenced in the spring of 2011. Private school owners of primary and lower secondary schools will be given an opportunity to apply for participation in groups 3 and 4.

4.5 | WHICH MEASURES SEEM TO WORK IN THE EFFORTS TO PREVENT BULLYING?

The results from the Pupil Survey show that about 8.5 per cent of the pupils respond that they have been bullied two to three times a month or more in recent months.

Action plans, good classroom management, early intervention and relationship building among pupils result in less bullying

In the report *“Hvis noen forteller om mobbing...”* (If someone complains about bullying ...), the researchers use a broad definition of bullying (Lødding and Vibe 2010). In addition to the question of whether the pupil has been bullied in recent months, the researchers also include the pupils' responses as to who may be doing the bullying. The analysis indicates that unfair treatment and discrimination are associated far more often with teachers' behaviour than bullying. To the extent that the phenomena are not the same, the teachers' negative behaviour comes in addition to and as something other than bullying.

The report is based on data from the Pupil Survey and covers pupils in Years 7 and 10. In addition, there are interviews with teachers and school administrators and analyses of things pupils have written about bullying, unfair treatment and discrimination. It is the first time that the national, quantitative analysis of the Pupil Survey is followed up with an in-depth, qualitative study. Six schools were selected for the study. These schools were selected on the basis of quantitative analyses of the extent of bullying and discrimination reported by pupils in the schools over time. Three schools with very low numbers and three schools with very high numbers of such reported incidents are included.

In addition to the things pupils have written about bullying, interviews with school administrators and teachers was an important part of this in-depth study of results from the Pupil Survey. School administrators and teachers in schools with little bullying over time gave examples of the use of written action plans, good class management, early intervention and relationship building among pupils in schools. Similarly, the interviews with school administrators and teachers in schools with a relatively large amount of bullying over time served as examples of the importance of the community and parental involvement in the school.

Measures to prevent bullying help in certain circumstances

In Sweden, a major study of measures to prevent bullying was conducted in 2007-2010 (Skolverket 2010). In that study, data was gathered on three occasions from pupils in Years

4-9 in 39 schools. The pupils who took part in the survey were asked about the occurrence and their perception of specific events, such as blows or ostracism. The pupils' experiences were assessed in relation to measures to prevent bullying in the schools. None of the schools followed only one programme. All of the schools had either contact with or followed certain parts of several programmes.

Summarised briefly, the researchers could draw the following conclusions about which measures work in the efforts to prevent bullying:

- Pupils participate actively in efforts to prevent bullying.
- The school conducts regular surveys of the pupils' situation with regard to bullying, and the school uses the results to develop and adjust the measures that are implemented.
- The school establishes an anti-bullying team of teachers and staff with special expertise (school nurse, special-needs teacher).

The study shows that the measures have different effects on the behaviour of girls and boys. A system of guardians in places where bullying occurs has a preventive effect on girls. Measures to improve relationships among pupils, routine documentation of cases of bullying, codes of conduct and disciplinary strategies seem to work better on boys.

The schools in the study had difficulty working according to pre-determined concepts or finished manuals. The pre-determined programmes were sometimes perceived as expensive and inflexible. To the extent that the schools worked in accordance with anti-bullying programmes, they selected the elements that they considered most relevant for their school. The report emphasises that the efforts to prevent bullying must be based on the circumstances in each individual school. There are no ready-made models that will apply everywhere.

Less bullying with long-term and purposeful efforts to improve the learning environment

The Norwegian researchers (Lødding and Vibe 2010) find that the quality of the learning environment has the greatest impact on amount of bullying. Factors associated with little bullying include:

- a good relationship between teachers and pupils

- the pupils feel that they get academic help and support from teachers, peers and parents
- the pupils make positive contributions to the class environment and are motivated to learn
- the instruction is based on a mutually committed relationship between teacher and pupil

The message of the in-depth study is that the efforts to promote a school without any bullying primarily require systematic efforts over time. It is an effort that the school in its capacity as an organisation will never be finished with, but that it must regard as a key part of the effort to achieve the school's mandate.

The researchers found few incidences of the bullying data in the schools that are using or that had used the programmes for preventing problem behaviour. The researchers offer several possible explanations for this lack of a correlation, but the most important one is probably that the researchers do not have data on how the work with the programmes is actually followed up in the schools. Nevertheless, they think they can document that just implementing a programme will not be sufficient in the efforts to prevent bullying.

National supervisory body shall help ensure a good school environment

The theme on which the joint national supervisory body is focusing in 2010 and 2011 is the school's efforts to improve the pupils' psychosocial environment pursuant to Chapter 9a of the Education Act.

In 2010, the first of three periods of supervision of this theme was carried out. In this supervision, the County Governor determines to what extent schools are complying with the statutory requirements.

In a preliminary report from the joint national supervisory body in 2010 (The Directorate for Education and Training 2011b), it is noted, for example, that most of the schools have written plans or procedures for preventive work and for obtaining information about the school environment. Nevertheless, virtually all schools and municipalities have things they could do better in the efforts to improve the school environment. The supervisory body points out that the head teacher and staff at the schools must become better in the active, systematic preventive work. All employees in the school must also become better at intervening and dealing with offensive behaviour in everyday situations at school. In

Chapter 9a of the Education Act: THE PUPILS' SCHOOL ENVIRONMENT

Chapter 9a of the Education Act specifies that no pupil shall be subjected to offensive language or acts such as bullying and discrimination. All school employees have a duty to react if they learn or suspect that pupils are being subjected to such language or acts (duty to investigate and notify, Section 9a-3, paragraph 2). The school administration has a duty to develop plans to prevent such offences and to see that the school makes systematic, long-term efforts to improve the school environment of the pupils.

order to ensure pupils a good environment, it is necessary that the school have clear criteria for what constitutes offensive behaviour and how head teachers and staff shall put a stop to such behaviour when it occurs in everyday situations at school. At most of the schools, the staff are aware of their duty to intervene and put a stop to offensive behaviour, and they have given some thought to what threshold will require them to intervene. However, there are still some schools that do not have procedures outlining how staff shall put a stop to offensive behaviour. The efforts to develop a good school environment require a broad mobilisation, and it is important that the head teacher, staff, pupils and parents get involved in this work.

The vast majority of the schools have established a school environment committee, a pupils' council and a parents' council. These councils and committees are generally legally constituted. In some places, the person at the school who shall inform the councils and committees has not been designated, nor has it been clarified whether the councils and committees will actually be given information about important aspects of the school environment. That is a serious matter and may prevent parents and pupils from getting involved in the efforts to improve the school environment (The Directorate for Education and Training 2011b). The supervision in the autumn of 2010 was the first of three periods of supervision focusing on the theme of the pupils' school environment. The remaining two periods will occur in 2011. Only after this can we draw a final conclusion from the supervision.

4.6 | WHAT ASPECTS OF THE LEARNING ENVIRONMENT SEEM PARTICULARLY ADEPT AT PROMOTING LEARNING?

Ensuring that pupils have a good learning environment is a goal in itself. The research shows that there are factors in a good learning environment that also promote learning. Compilations of research emphasise the importance of clear goals, of cooperation among the pupils to achieve these goals, and of the teacher providing clear leadership of the learning community.

There are only small differences in pupils' achievements among Norwegian schools. In Norway, pupils with different socioeconomic backgrounds attend the same school, and this may be a part of the explanation. We currently have no good Norwegian data that tells us anything about the effect that the class or the teacher has on pupil's achievements, but nevertheless we have some research that gives indications of the distinguishing factors of a learning environment that promotes learning.

Characteristics of a learning environment that promotes learning

The OECD report *Nature of Learning* (Dumont et al 2010) has the aim of inspiring good practices. The report identifies the following characteristics of learning environments that promote learning:

- The school and the teachers recognise that the pupils are the key players in the learning situation, encourage them to active involvement and develop their understanding of their own learning.
- The school and the teachers plan structured teaching arrangements where the pupils collaborate based on information indicating that this promotes learning.
- The school and the teachers are aware of the importance of the pupils' motivation and emotions for ensuring that they are able to achieve as well as possible, and they plan the instruction accordingly.
- The school and the teachers are aware of and take into account differences in the pupils' previous education.
- The school and the teachers have great aspirations for all of the pupils and give all of the pupils challenges but also opportunities to master them.

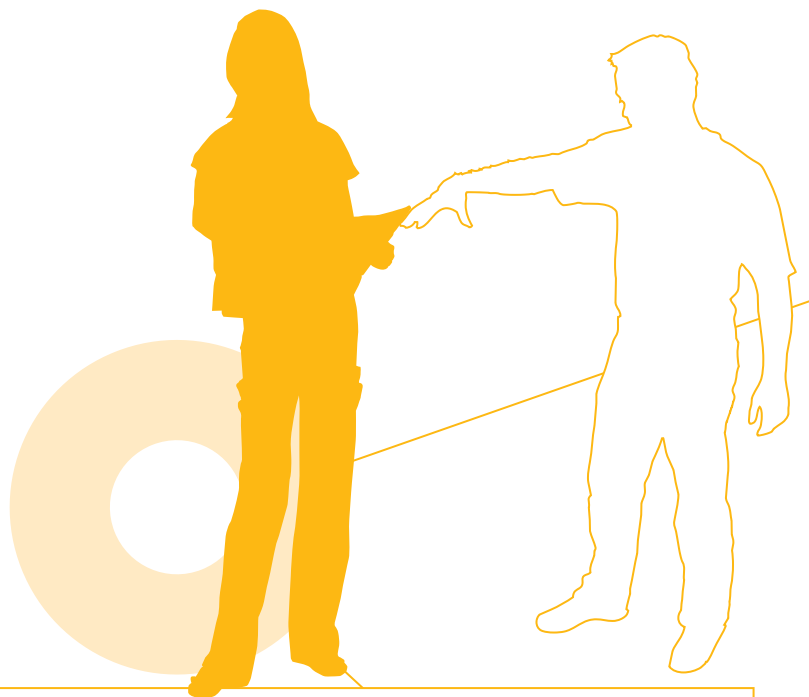
- The school and the teachers have clear expectations of the pupils' achievements and assess the pupils on the basis of these expectations. The main emphasis of the feedback to the pupils is on learning and on how the pupils can improve.
- The school and the teachers attach importance in the instruction to the ways in which different subjects and areas of knowledge are interrelated and to the ways in which that knowledge is used in everyday life and in the society outside the school.

Learning that is visible

The most important factor for the pupils' learning is the teaching practices. According to a major scientific work in which more than 50 000 studies of learning outcomes are compared (Hattie 2009), it is crucial that the learning be visible to the pupils. Among other things, "visible learning" entails that the learning objectives are clear to the pupils, that the teachers are explicit and clear in their expectations, that they value progress, and that the pupils be given feedback that can help them achieve ambitious goals. It is important that the expectations of the pupils be high. A well-arranged learning environment without disturbances and a good administration of the schools are also important factors. It is likewise important that the pupils participate in the learning community. Learning through collaboration has a stronger positive effect than individualised schemes.

Learning that is managed

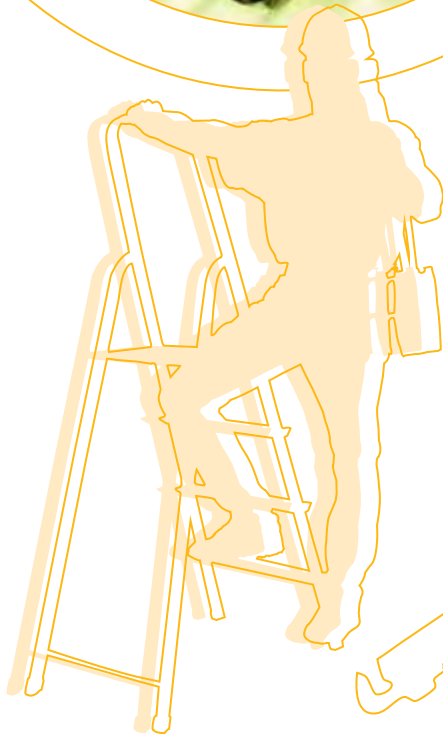
If the teacher withdraws and leaves it up to the pupils themselves to find out how they shall learn, the need for evaluation of the activities will be greater, and the learning environment appears to suffer. This is one of the preliminary findings of the report, "*De gamle er eldst?*" (The oldest are wisest?) (Opheim et al 2010). On the other hand, when the teachers and pupils create a positive, inclusive, well-organised and academically supportive learning environment, the pupil's achievements tend to improve. When the teachers apply pressure with too many evaluations, whether in the form of portfolios, presentations or various tests, it appears that the pupils' learning is somewhat reduced. The researchers find that the pupils' achievement in Years 5, 8 and 10 is better in schools where the pupils experience clear class management.



5

Attendance in and completion of upper secondary education and training

In this chapter we present the various paths leading to competence at the upper secondary level and the ways in which pupils and apprentices are distributed among programmes. Many pupils and apprentices take a long time to complete upper secondary education and training or drop out before they have completed their education. It is a political priority to increase the completion of schooling. In this chapter, we take a closer look at the areas where the challenges related to transitions and dropping out are especially large.



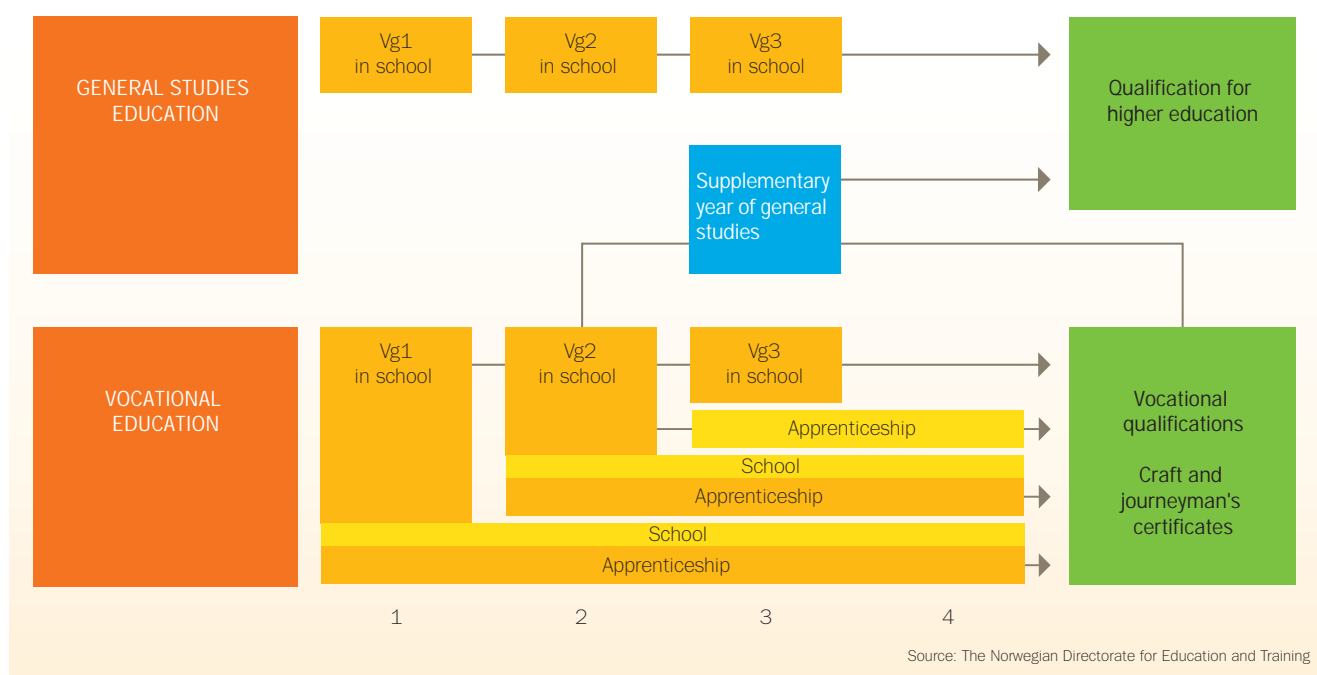
5.1 WHICH PATHS RESULT IN COMPETENCE AT THE UPPER SECONDARY LEVEL?

Upper secondary education and training leads to qualification for higher education, vocational qualifications or basic competence. Figure 5.1 shows the main paths to full upper secondary competence - qualification for higher education and vocational qualifications - within the structure of the Knowledge Promotion Reform. General qualification for higher education qualifies the pupil for admission to universities and university colleges, and it is mainly achieved in the three general studies education programmes, *Specialisation in General Studies, Music, Dance and Drama*, and *Sports and Physical Education*. Pupils who take vocational education programmes can achieve general qualification for higher education by completing and passing the Vg3 supplementary year qualifying for higher education after having completed and passed Vg1 and Vg2 in a vocational education program. General qualification for higher education can also be achieved after Vg3 in general studies programme areas in *Agriculture, Fishing and Forestry* and *Media and Communication*.

Vocational qualifications are achieved in the nine vocational education programmes, *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 are achieved through either vocational education and training or three years in school. The main model for vocational education and training is two years of education and training in school and one year of education and training spread out over two years of apprenticeship in a business with a subsequent craft or journeyman's examination. However, some educational pathways deviate from the main model. In *Electricity and Electronics*, for example, the subject of automation and computer electronics requires three years in school prior to one and a half years of apprenticeship. There are also models that deviate from the main model in *Technical and Industrial Production*. In *Building and Construction, Design, Arts and Crafts* and *Technical and Industrial Production* there are so-called special paths with one year in school prior to three years of apprenticeship. In the education programmes *Design, Arts and Crafts, Health and Social Care, Media and Communication, Electricity and Electronics* and *Agriculture, Fishing and Forestry*, the pupils obtain vocational qualifications after Vg3 without apprenticeship in some educational pathways.

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



In addition to qualification for higher education and vocational qualifications, it is also possible to achieve basic competence. That is an educational pathway that does not give full upper secondary competence, but rather a certificate of competence. For example, trainees may take a competence test that gives basic competence in the subject. A trainee signs a training contract with the aim of taking a less extensive examination than a craft or journeyman's examination (cf. Section 4-1 of the Education Act)

5.2 HOW ARE PUPILS, APPRENTICES AND TRAINEES DIVIDED AMONG VARIOUS DISCIPLINES IN UPPER SECONDARY EDUCATION AND TRAINING

The data on pupils and apprentices are gathered on 1 October. By this date, admissions and the awarding of apprenticeship contracts have mostly been completed, although some contracts are also awarded after this date. The data on pupils and apprentices are preliminary and include only pupils and apprentices who are being educated according to the structure of the Knowledge Promotion Reform. Thus, the data may deviate

from the final numbers published by Statistics Norway. The data for pupils in Vg2 and Vg3 are presented in supplementary tables.

Most pupils begin in vocational education programmes

Table 5.1 shows the number of pupils in Vg1 in the 2010-2011 school year. A total of 76,028 pupils were registered in Vg1 in the autumn of 2010, which was 2,605 more than in 2009. 46.5 per cent of the pupils are enrolled in one of the three general studies education programmes and 53.5 per cent are enrolled in vocational education programmes. Pupils in educational pathways that give basic competence are not distinguished from pupils in pathways that result in full competence. The distribution of pupils between general studies and vocational education programmes has been stable in recent years.

Because of the Knowledge Promotion Reform, new recognised trades and education programmes were introduced in the autumn of 2008, making it difficult to compare this year's figures with previous years. Under one per cent of the new apprenticeship contracts were entered into under the R94 structure, so apprentices and trainees with a contract under the R94 structure are not distributed among education programmes

TABLE 5.1 Pupils in Vg1 as per 1 October 2010, by education programme. Number, percentage and percentage with the youth right. Non-revised figures.

	Number	Percentage	Change in percentage	Percentage with the youth right
All education programmes	76,028	100.0		95.8
General studies	35,322	46.5	0.8	-
Specialisation in General Studies	28,922	38.0	2.1	96.6
Sports and Physical Education	4,036	5.3	-0.1	98.0
Music, Dance and Drama	2,364	3.1	-0.1	99.0
Vocational studies	40,706	53.5	-0.8	-
Health and Social Care	8,810	11.6	0.6	92.6
Technical and Industrial Production	7,056	9.3	0.1	95.5
Building and Construction	5,027	6.6	-0.1	95.7
Electricity and Electronics	4,846	6.4	-0.2	96.1
Media and Communication	3,814	5.0	0.1	98.8
Service and Transport	3,404	4.5	0.1	94.6
Design, Arts and Crafts	3,327	4.4	-0.2	95.0
Restaurant and Food Processing	2,543	3.3	-0.1	92.4
Agriculture, Fishing and Forestry	1,879	2.5	0.2	92.8

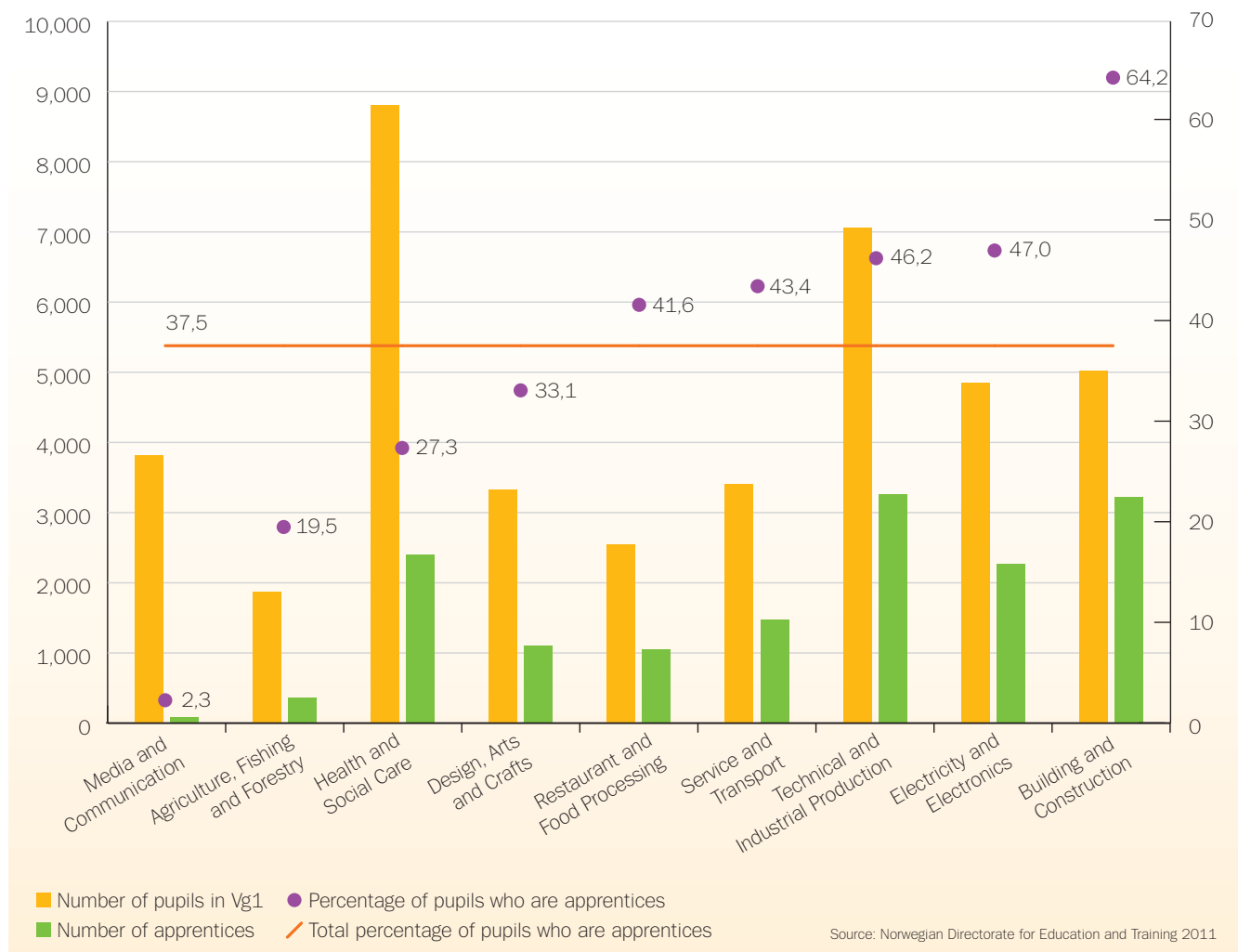
Source: Norwegian Directorate for Education and Training 2011

TABLE 5.2 Current and new apprenticeship and traineeship contracts as per 1 October 2010, by education programme. Number. Non-revised figures.

	Current apprenticeship contracts	New apprenticeship contracts	Current traineeship contracts	New traineeship contracts
Total	33,828	15,380	1,222	553
The total Knowledge Promotion Reform	31,974	15,256	1,137	548
Building and Construction	6,776	3,225	216	77
Technical and Industrial Production	6,447	3,260	216	98
Electricity and Electronics	6,102	2,276	8	1
Health and Social Care	4,773	2,408	277	150
Service and Transport	2,886	1,478	170	91
Design, Arts and Crafts	2,143	1,100	44	25
Restaurant and Food Processing	1,955	1,057	130	65
Agriculture, Fishing and Forestry	719	366	71	40
Media and Communication	173	86	5	1

Source: Norwegian Directorate for Education and Training 2011

FIGURE 5.2 The correlation between pupils in Vg1 vocational education and training and new apprentices. Number and percentage.



in the table. Many who are not awarded an apprenticeship, taking the educational part of the recognised trades in school - vocational education and training in school. These programmes often start after 1 October, so these pupils are not included in table 5.1. The counties reported that a total of 384 of these places were created in the autumn 2009 (Vibe and Sandberg 2010).

Most apprentices in Building and Construction

Table 5.2 shows the number of apprentices (apprenticeship contract) and trainees (traineeship contract) as per 1 October 2010, and new apprentices and trainees from 1 October 2009 to 1 October 2010, broken down by education programme. Altogether, there are nearly 34,000 apprentices, and just under half of these are new apprentices. The greatest number of apprentices are in *Technical and Industrial Production*, *Building and Construction* and *Electricity and Electronics*, but *Health and Social Care* has more new apprentices than *Electricity and Electronics*. The smallest number of apprentices were in *Media and Communication* and *Agriculture, Fishing and Forestry* because most pupils in these education programmes choose to continue in an educational pathway that gives general qualification for higher education. There are a total of 1,222 traineeship contracts, and 553 of these are new. The greatest number of trainees are in *Health and Social Care*, *Construction and Building* and *Technical and Industrial Production*.

NY GIV

Ny GIV (Completion of upper secondary education and training) is the Norwegian government's new initiative to encourage more pupils to complete upper secondary education and training. *Ny GIV* (New possibilities) is a three-year project that aims to establish a lasting collaboration between the central government, the counties and the municipalities in order to improve the pupils' prospects of completing and passing upper secondary education and training. The main themes of this collaboration are a common statistical basis for assessing achievement of goals, the monitoring of pupils with poor academic achievement and improvement of the follow-up service in the county administrations.

Many change their education pathway underway

As shown in Table 5.1, a majority of the pupils take a vocational education programme in the first year of upper secondary education and training. The 54 per cent who took a vocational programme in Vg1 in 2010 amounted to over 40,000 pupils. The apprenticeship figures in Table 5.2 show that in excess of 15,000 new apprenticeship contracts are signed each year. In other words, there are far fewer pupils who sign an apprenticeship contract than those who begin a vocational programme in Vg1. In Figure 5.2, this data is combined in the same figure.

All in all, the number who annually sign an apprenticeship contract constitutes a little over a third of the number who starting out in a vocational education program in Vg1. The percentage of pupils in Vg1 who sign an apprenticeship contract varies considerably among programmes, and the variation can probably be partly explained by the fact that some education programmes have several educational pathways that give vocational competence without an apprenticeship or educational pathways that give general qualification for higher education. For example, these include the education programmes *Media and Communication* and *Agriculture, Fishing and Forestry*. The education programmes *Building and Construction*, *Technical and Industrial Production*, *Service and Transport* and *Restaurant and Food Processing* only have educational pathways that lead to an apprenticeship contract, so it is expected that these programmes will have a higher percentage of contracts relative to pupils in Vg1.

All in all, however, it looks as if the decline from 40,000 pupils in vocational programmes in Vg1 to 15,000 new contracts two years later suggests that many people leave the vocational education programmes during upper secondary education and training. What they are leaving vocational programmes for will be discussed in Chapter 5.4.

5.3 HOW MANY PUPILS COMPLETE UPPER SECONDARY EDUCATION AND TRAINING?

For the central government authorities, the main goal is that "all pupils and apprentices who are able to do so shall complete upper secondary education and training with a certificate of

competence that is approved for further studies or employment” (Ministry of Education and Research 2008).

In general, the percentage who complete upper secondary education and training is relatively stable over time. Since the introduction of Reform 94, the percentage who have completed and passed upper secondary education and training within five years after they began has been around 70 per cent.

There are many ways to measure the completion of upper secondary education and training. In Ny GIV, the central government authorities and the county authorities have come up with a set of indicators to measure completion during and after the project period. The set of indicators consists of the indicators, completion, transitions and drop-outs. For some of the indicators national goals for improvement have also been set. The indicators are considered in detail in *Gjennomføringsbarometeret* (the Norwegian Report on Upper Secondary Completion) (*Gjennomføringsbarometeret 2011:1*).

Big difference in completion between general studies and vocational education programmes

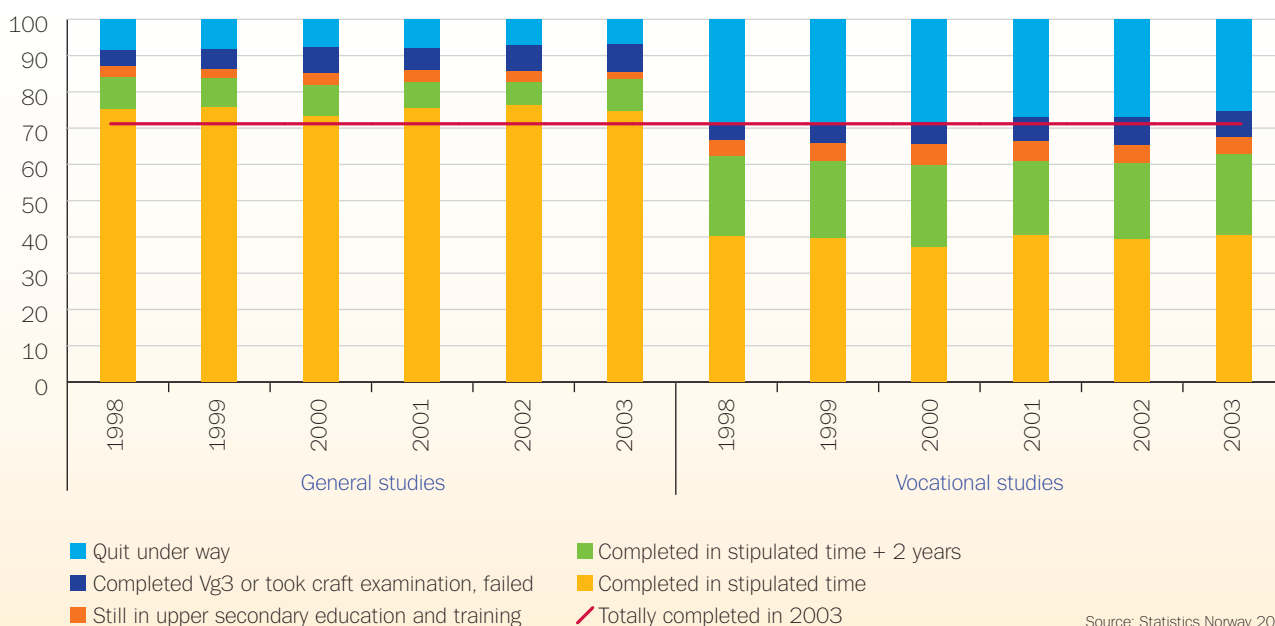
The completion indicators provide information about whether a group of pupils have completed and passed upper secondary education and training within a desired period of time. In Ny GIV,

the desired period of time is set at the stipulated time plus two years. This period reflects the youth right, which the pupils must utilise within five years after they commence upper secondary education and training. Young people who take all or some parts of the education and training in a training establishment have six years to complete the education and training.

For the education authorities at the national level, the indicator provides information about the effectiveness of the educational system - i.e. how high a percentage of an age cohort achieves competence during the measurement period. A national goal has been set to increase the percentage of pupils who have completed and passed upper secondary education and training to 75 per cent in 2015.

Figure 5.3 shows the completion in the age cohorts from 1998 to 2003. For general studies, completion was measured five years after study commenced, whereas for the vocational studies it was measured six years later. All in all, 71 per cent of the pupils who began upper secondary education and training for the first time in 2003 achieved competence at the upper secondary level within two years after the stipulated time. For both general studies and vocational education programmes, there were small differences in completion between the 2003 age cohort and previous cohorts.

FIGURE 5.3 Completion after the stipulated time + two years for the 1998-2003 age cohorts, by education programme. Percentage.



Source: Statistics Norway 2011

The figure shows big differences between general studies and vocational education programmes. The pupils who began in vocational studies completed upper secondary education and training less frequently than the pupils who began in general studies. For general studies, 75 per cent completed within the stipulated time and another 9 per cent completed within the next two years. In vocational studies, 40 per cent completed in the stipulated time, while another 22 per cent completed within the next two years. In other words, with a longer time horizon, the difference in completion rates between general studies and vocational studies decreases.

Big differences in completion among counties

Figure 5.4 shows the completion for the 2003 age cohort within two years after the stipulated time, both overall and broken down by county. There are relatively large differences among the counties, from 76 per cent who completed and passed in Sogn og Fjordane to 55 per cent in Finnmark. Only two counties have a completion that lies above the goal for 2015, and in order to achieve the goal of a completion percentage of 75 per cent nationally, all of the counties must substantially increase their completion.

As in the previous figure, the general picture is that the completion is higher in general studies than in vocational studies. However, the difference between the two also varies considerably among the counties. In Akershus County, the

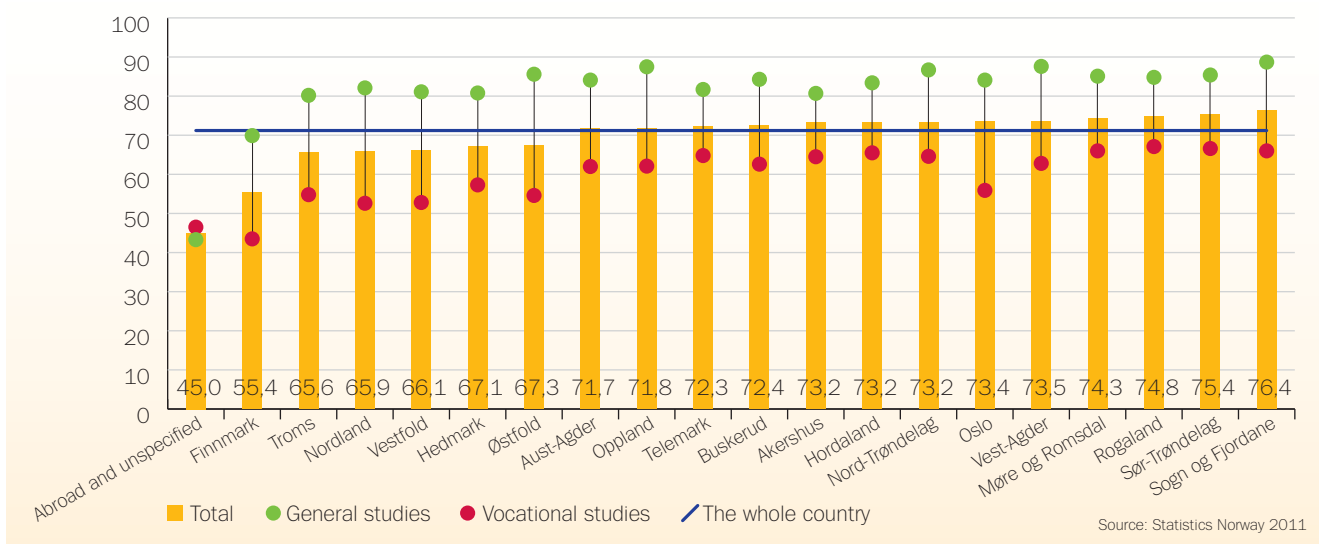
completion for pupils who began in the general studies areas of study was 16 percentage points higher than for pupils beginning in the vocational areas of study. In Østfold County, there was a difference of 31 percentage points.

Many achieve basic competence

Figures 5.3 and 5.4 showed that 29 per cent of the pupils in the 2003 age cohort did not complete upper secondary education and training within two years beyond the stipulated time. Figure 5.5 below shows how far these pupils had come in their educational pathway. Eleven per cent got as far as the third year, which 7 per cent completed without passing. Eight per cent got to the second year, which 6.5 per cent either passed or completed without passing. Six per cent got no further than the first year, but four per cent either passed or completed without passing.

Also here there were notable differences between the general studies and the vocational education programmes. For general studies, the biggest group is those who complete Vg3 without passing, which may indicate that the main problem is that the pupils fail in one or more subjects. For vocational studies, there are several equally large groups. There are just as many pupils who quit in Vg3 and/or apprenticeship before the final examination as there are pupils who complete without passing. There are also many pupils who complete Vg2 without passing, or pass Vg2 without continuing the educational pathway.

FIGURE 5.4 Completed and passed within two years beyond the stipulated time for the 2003 age cohort, by county and education programme. Percentage.



In short, Figure 5.5 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. One third of those who have not completed and passed have gotten as far as the last year, and the majority have completed the last year. Among these are the pupils who fail in one or more subjects and apprentices who do not complete their apprenticeship. However, it is possible for these pupils and/or apprentices to take a new examination or take a craft and journeyman's examination as a candidate for experience-based trade certification at a later date.

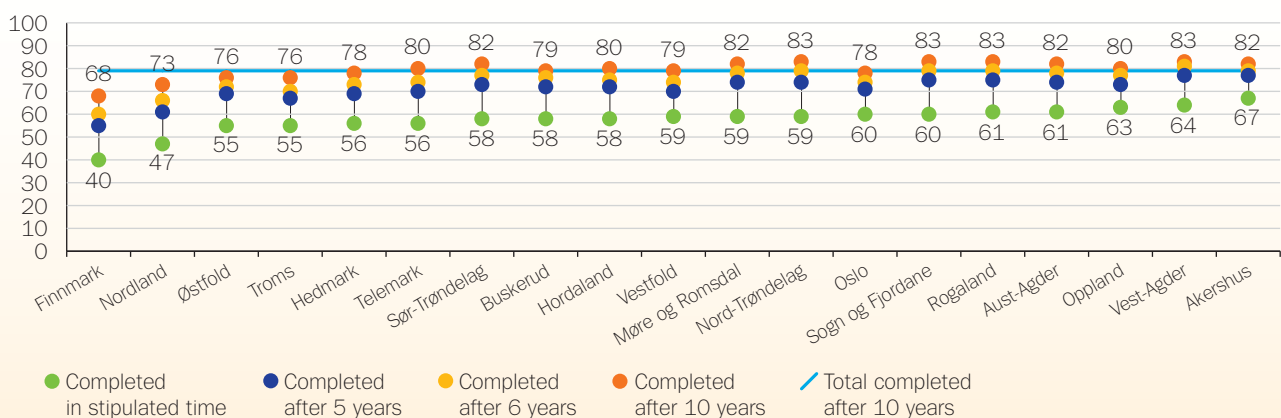
Increased completion after ten years

Although they have chosen to focus in Ny GIV on completion after the stipulated time plus two additional years, it is also interesting to look at completion beyond this time period because of all those who achieve basic competence. Figures 5.6 and 5.7 show the completion ten years after the first Year was begun for one age cohort, the 1998 cohort. After ten years, the total completion was at 79 per cent, 8 percentage points higher than at the end of the stipulated time plus two additional years. The increase is roughly equivalent to the percentage who complete Vg3 without passing (see Figure 5.5). A completion percent-

FIGURE 5.5 Competence achievement among the pupils in the 2003 age cohort who do not complete and pass. Percentage.



FIGURE 5.6 Completed and passed for the 1998 age cohort by county and number of years since commencement of study. Percentage.



age of 79 per cent after 10 years shows that the national goal of increasing the completion to 75 per cent can be achieved by helping those who complete and pass to do so in less time.

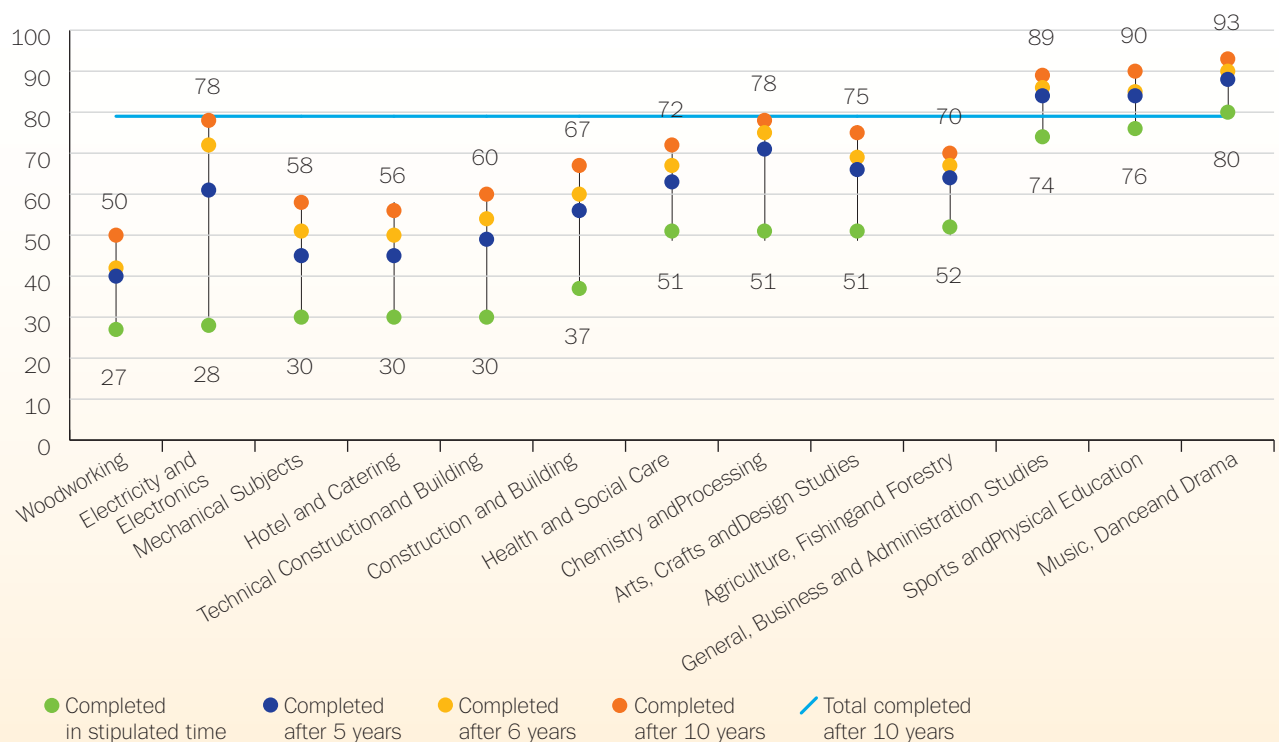
Figure 5.6 shows that there are large differences among the counties in the percentage who completed and passed within the stipulated time, from 40 per cent in Finnmark to 67 per cent in Akershus. Although Akershus is the county with the highest percentage who have completed and passed within the stipulated time, there are four counties (Nord-Trøndelag, Sogn og Fjordane, Rogaland and Vest-Agder) that exceed Akershus with a higher completion after 10 years. This is because the lag in completion varies among the counties. Akershus has the shortest lag (15 per cent), whereas Finnmark has the longest (28 per cent). This also means that there was less variation among the counties after 10 years (15 percentage points) than at the end of the stipulated time (27 percentage points).

Figure 5.7 shows the completion for the 1998 age cohort after 10 years, broken down by the area of study. The 1998 age cohort was part of Reform 94, so the names of the areas of study may differ from the education programmes available today. The same pattern is found here as in

the previous figures. The general studies areas of study had a significantly higher percentage than the vocational. Some of the vocational areas of study had a low completion rate - less than 30 per cent of the pupils had completed and passed in the stipulated time. All of the areas of study had a substantial lag of pupils who completed and passed. The lag varied from 13 percentage points in *Music, Dance and Drama* to 50 percentage points in *Electricity and Electronics*. This also means that there was less variation among the areas of study after 10 years (43 percentage points) than at the end of the stipulated time (53 percentage points).

Electricity and Electronics is in a unique position when it comes to lag. The main reason for the lag is probably that the stipulated time is set equal for all vocational areas of study. *Electricity and Electronics* has many educational pathways that take longer than the main model for recognised trades (2 +2), so that a measurement after the stipulated time is not the stipulated time for many of the electrical trades. Among the vocational areas of study, *Electricity and Electronics* - together with *Chemistry and Processing* - have the highest percentage of pupils who have completed and passed after 10 years.

FIGURE 5.7 Completed and passed for the 1998 age cohort by education programme and number of years since commencement of study. Percentage.



Source: Statistics Norway 2011

A completion rate of 79.5 per cent after 10 years is in accordance with Statistics Norway's statistics for the level of education, which shows that 78.3 per cent of the 27-year-olds in 2009 had competence at least at the upper secondary level. The 34-year-olds are the age group where the highest percentage have achieved competence at least at the upper secondary level (85 per cent). This shows that the percentage who complete and pass also continues to increase beyond 10 years after the commencement of upper secondary education. By looking at competence achievement in a longer term perspective, we can thus get a somewhat different picture of how the educational system functions. Many pupils take a long time to complete and pass, and in a longer term perspective the differences among counties and areas of study diminish.

Most pupils have a direct transition from lower secondary to upper secondary education and training

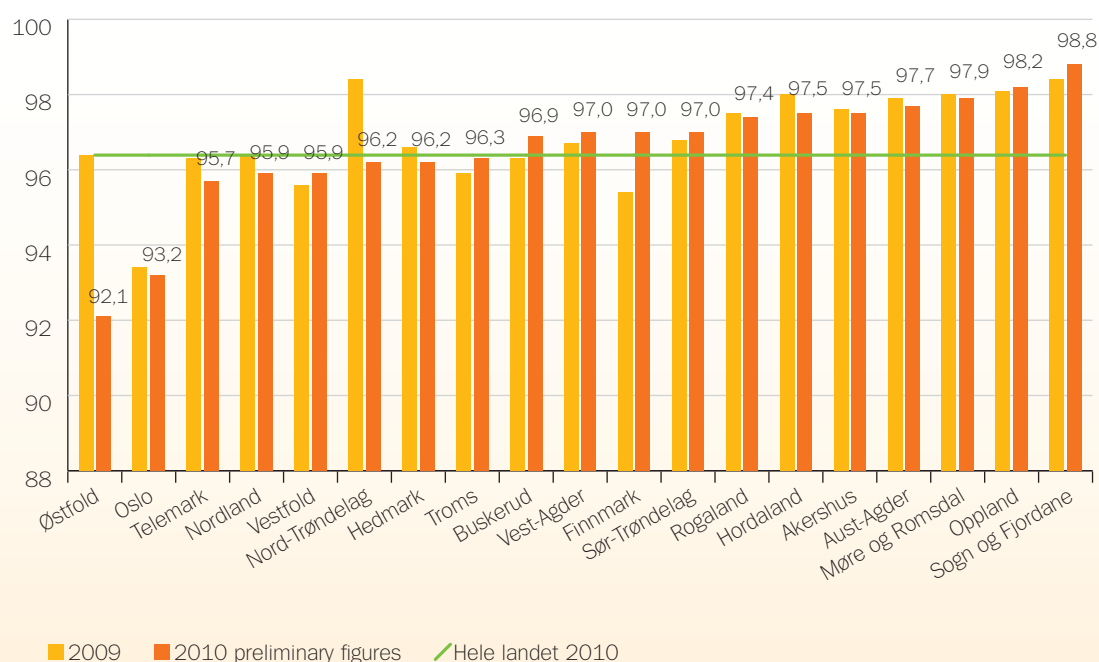
In connection with Ny GIV, a set of transition indicators has been established that will provide information about the transition from primary and lower secondary school to upper secondary education and training and about the ongoing progression in upper secondary education and

training. The indicator for the transition from primary and lower secondary school to upper secondary education and training is based on all who complete primary and lower secondary school in a particular year and checks their educational status as per 1 October of that same year. The indicator for transitions in upper secondary education and training in Norway is based on all of those who were pupils as per 1 October in a particular year and checks the educational status as per 1 October of the following year.

The transition indicators make it possible to follow the progression in upper secondary education and training with far more recent data than that provided by the completion indicators that measure the status after five or six years. That means that the achievement of goals in the counties can be assessed in light of last year's activities.

Figure 5.8 shows the percentage of pupils with a direct transition from lower secondary to upper secondary education and training. Preliminary figures show that 96.4 per cent of the pupils who completed primary and lower secondary school in 2010 had a direct transition to upper secondary education and training. This is equivalent to the percentage in previous years, but the preliminary figures differ somewhat at the

FIGURE 5.8 Direct transition from lower secondary to upper secondary education and training, by county. Percentage.



Source: SSB KOSTRA, 2011

county level from the preliminary figures for 2009. It is not possible to determine whether the variation from last year is real or if it is just an expression of uncertainty in the preliminary figures. The data differs most in Østfold, Nord-Trøndelag and Finnmark counties. For the counties with less variation, the upper and lower limits are marked by Sogn og Fjordane with 98.8 per cent and Oslo with 93.2 per cent.

Big differences in the ordinary progression among the different Years of upper secondary education and training

Figure 5.9 shows the percentage of pupils in upper secondary education and training that have a transition from Vg1, Vg2 and Vg3, which is regarded as an ordinary progression, the percentage of pupils who take the same or a lower level of education over again, and the percentage who are not in upper secondary education and training at all. In Vg1 and Vg2, the transition to a programme at a higher level of education is regarded as an ordinary progression. In Vg3, an achieved diploma (both qualification for higher education and vocational qualifications) and the transition to an apprenticeship are both regarded as an ordinary progression. Apprentices are not included in the transition from Vg3, but work is

under way to develop this kind of indicator. At the national level, they have set a goal in Ny GIV that the ordinary progression should increase by two percentage points for each Year of schooling by 2013.

The figure mainly shows that most pupils have a normal progression through upper secondary education and training and that the transitions within the same level of education are relatively stable over a period of time. The preliminary figures for the transitions in the summer of 2010 show that 81 per cent of the pupils who were in Vg1 had a transition to an educational pathway at the Vg2 level or higher. Nine per cent of the pupils were not in upper secondary education and training the following year, and ten per cent took Vg1 over again.

Among the pupils in Vg2, 77.9 per cent had a transition to Vg3 or to an apprenticeship. Nearly twice as high a percentage of pupils as for Vg1 (16 per cent) were not in education and training the following year, while six per cent took either Vg1 or Vg2 over again.

For the transitions from Vg3, there are no preliminary figures for 2010, but in 2009 73.9 per cent of the pupils had an ordinary progression. 21.6 per cent of the pupils were out of upper secondary education and training, while 4.6 per cent took Vg1, Vg2 or Vg3 over again.

FIGURE 5.9 Transitions in upper secondary education and training. Percentage.

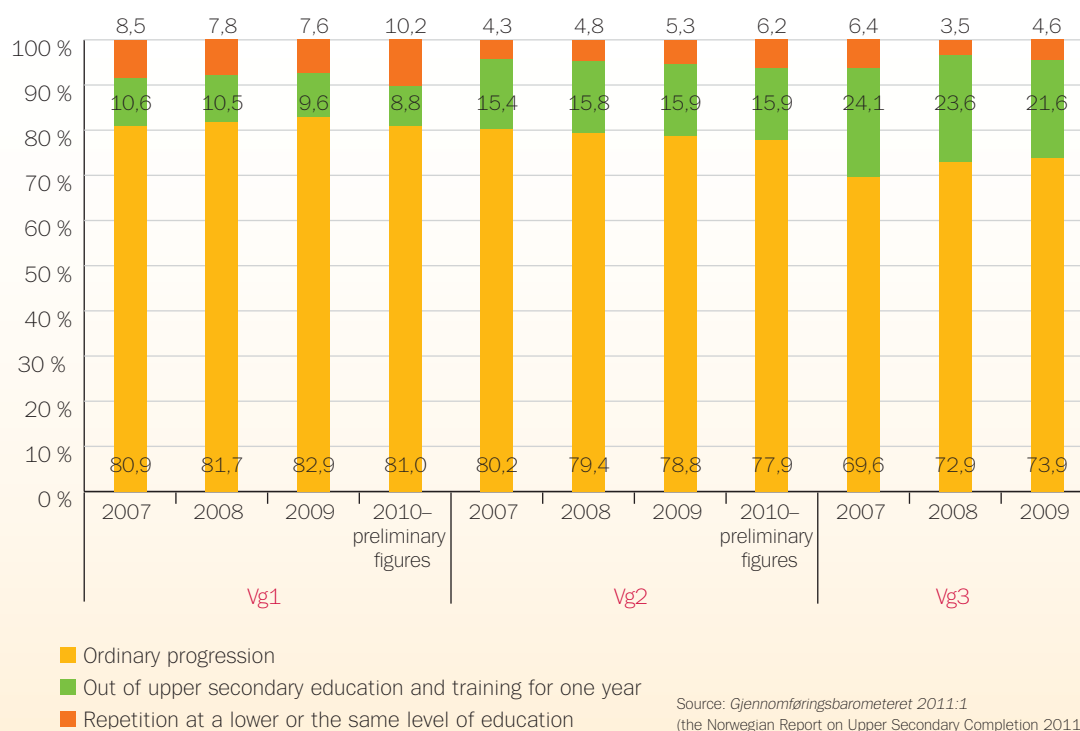
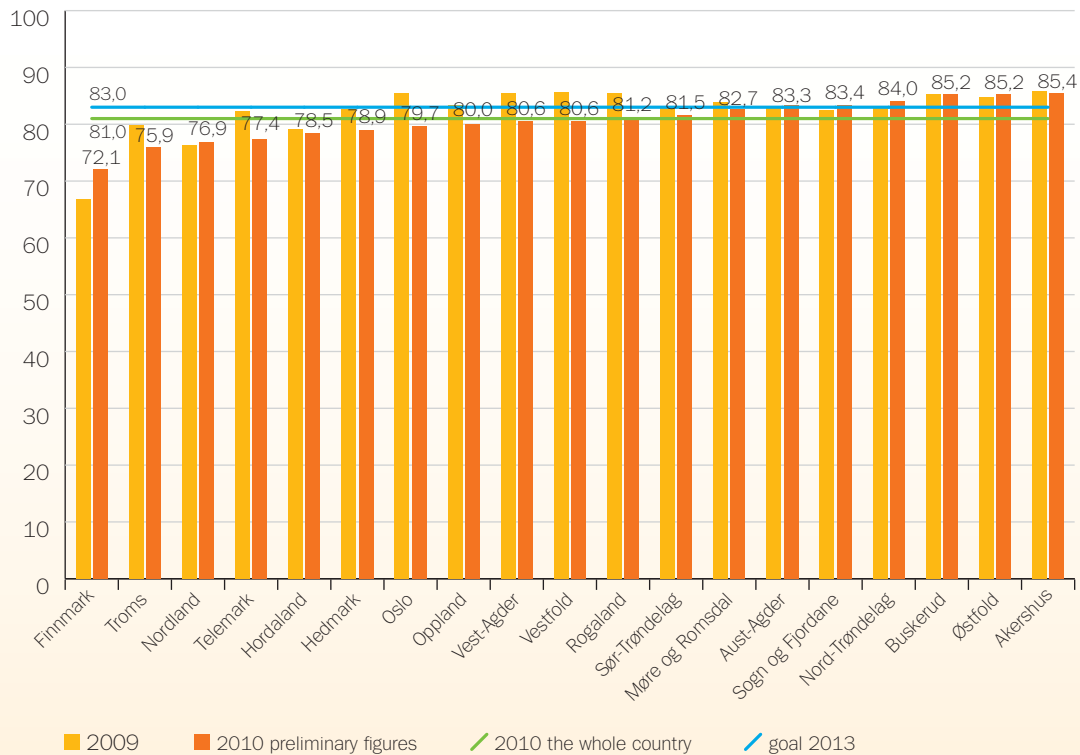
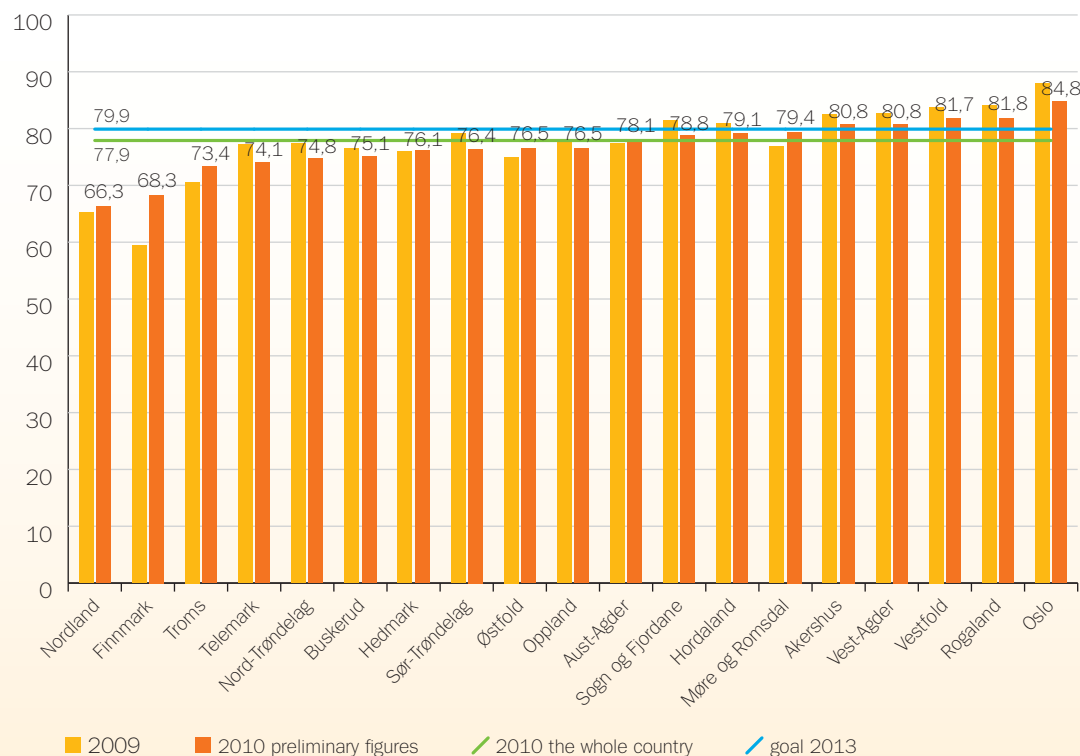


FIGURE 5.10 Pupils with an ordinary progression from Vg1 in 2009 and 2010, by county. Percentage.



Source: Gjennomføringsbarometeret 2011:1 (the Norwegian Report on Upper Secondary Completion 2011:1)

FIGURE 5.11 Pupils with an ordinary progression from Vg2 in 2009 and 2010, by county. Percentage.



Source: Gjennomføringsbarometeret 2011:1 (the Norwegian Report on Upper Secondary Completion 2011:1)

Differences in the ordinary progression among the counties

Figures 5.10 and 5.11 show the differences by county in the percentage of pupils with ordinary transitions from Vg1 and Vg2. The national average and goals for the national average in 2013 are also illustrated. The percentage of pupils with an ordinary progression from Vg3 is presented in Supplementary table 5.12.

The figures show that there are sometimes large variations by county in the percentage of pupils who have an ordinary progression from Vg1 and Vg2. The percentage of pupils with an ordinary progression from Vg1 varies from 85 per cent in Akershus County to 72 per cent in Finnmark County. The data for the transition from Vg2 vary from 85 per cent in Oslo to 66 per cent in Nordland County.

A comparison of the figures gives an interesting picture. Some of the counties with the highest percentage of pupils with an ordinary progression from Vg1 have worse results in the transition from Vg2. For example, Østfold, Buskerud and Nord-Trøndelag counties are among the four counties with the highest percentage of pupils with an ordinary progression from Vg1. In the transition from Vg2, however, all of these counties were among the half that had the lowest ordinary progression.

For Oslo, it is the opposite. The county is among the half with the lowest percentage of pupils who had a normal progression from Vg1,

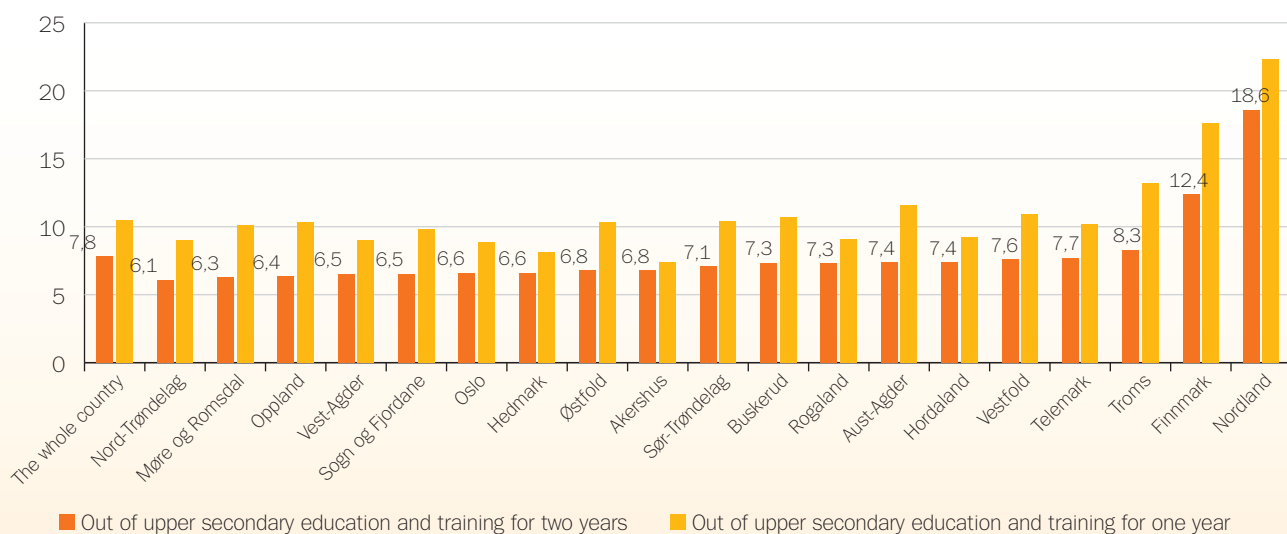
whereas it has the highest progression from Vg2. A similar pattern also applies to some extent to Vest-Agder and Hordaland counties.

One in ten are at risk of dropping out of the education system

In NY GIV, a drop-out indicator has been established that is supposed to give an indication of the size of the group of pupils who are at risk of dropping out of the education system on a relatively permanent basis. There can be many reasons why some choose to drop out of the educational pathway for relatively short periods of time (lack of motivation, travel, study abroad, pregnancy, illness), but there are often more serious factors behind a longer pause - "many people take a one-year break from school without any risk of serious consequences such as marginalisation and social exclusion, but for those who do not return after one year, the likelihood that they will return to education and training is low" (Raaum et al 2009). Thus, an absence of two consecutive years or more is categorised as dropping out, and it suggests that there may be more serious reasons behind such a drop-out from the educational pathway. The drop-out indicator provides information about the percentage of the group of pupils who may later belong to a particularly vulnerable group, both socially and economically.

There are no data that go far enough back in time to tell us anything about trends in dropping out, but Figures 5.12 and 5.13 show differences

FIGURE 5.12 Pupils in Vg1 in 2007 who are out of education and training for one or two years, by county. Percentage.



Source: Gjennomføringsbarometeret 2011:1 (the Norwegian Report on Upper Secondary Completion 2011:1)

by county in the relationship between the percentage of pupils who drop out of upper secondary education and training for one year and the percentage who drop out for two years.

Figure 5.12 shows that just under 8 per cent of the pupils who were in Vg1 in 2007 dropped out of upper secondary education and training for two years. The differences among most counties are relatively modest, but Finnmark and Nordland counties have a significantly higher percentage than the other counties.

Figure 5.13 shows that the percentage who drop out of upper secondary education and training for two years is higher from Vg2 than from Vg1. From Vg2, slightly less than 12 per cent of the pupils drop out of upper secondary education and training for two years. There is greater variation among the counties in the drop-outs from Vg2 than from Vg1. Nordland and Finnmark counties have higher levels of drop-outs, whereas Oslo, Rogaland and Vest-Agder counties have the lowest levels of drop-outs.

The figures also show that many of those who drop out of education and training for one year return the following year. Of those who drop out from education and training for one year after Vg1 and Vg2, one out of four return to education and training the following year. Despite the fact that some pupils return to upper secondary education and training after one year's hiatus, there are still many pupils who are at risk of ending up in a position where they will have difficulties completing their upper secondary school education and training.

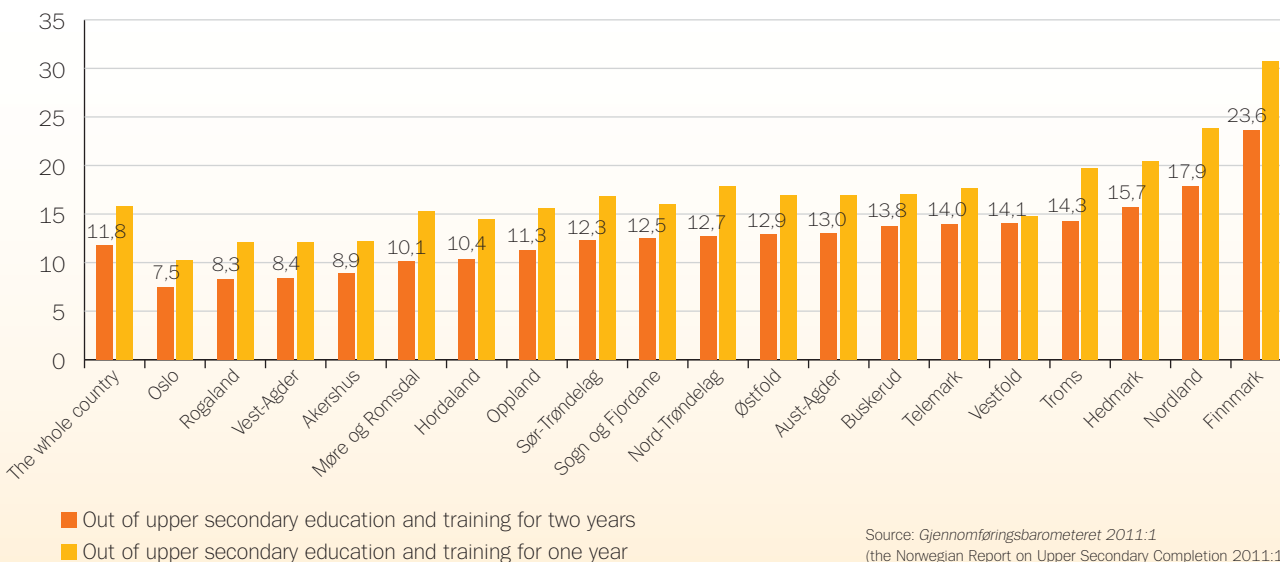
5.4 WHAT BECOMES OF THE PUPILS IN THE VOCATIONAL EDUCATION PROGRAMMES?

As shown in Figure 5.2, there are many more who begin vocational educational pathways than the number who become apprentices, which suggests that many pupils leave vocational studies. This chapter will take a closer look at the attrition from vocational studies.

In 2003, 54 per cent of the young people who commenced upper secondary education and training for the first time were registered in vocational education programmes, and 46 per cent were registered in general studies education programmes. In 2009, only 18 per cent of the young people had achieved vocational qualifications, and 50 per cent of the pupils had achieved qualification for higher education. Thirty-two per cent of the pupils had not achieved qualifications at the upper secondary level. Figure 5.14 shows the achieved competence for the pupils who began in general studies and vocational areas of study in 2003.

Of the pupils who began in vocational studies, only a third have achieved vocational qualifications. Fully 23 per cent have switched over to general studies, whereas 44 per cent have not achieved competence at the upper secondary level. Among those who began in general studies, there are not as many who have switched their type of competence (1 per cent) or have not achieved competence at the upper second-

FIGURE 5.13 Pupils in Vg2 in 2007 who are out of education and training for one or two years, by county. Percentage.



ary level (17 per cent). In other words, the figure shows that many of the pupils who begin in vocational subjects, either switch over to an educational pathway that provides qualification for higher education, or they do not achieve upper secondary competence (within six years). This gives reason to take a closer look at the attrition from the vocational subjects.

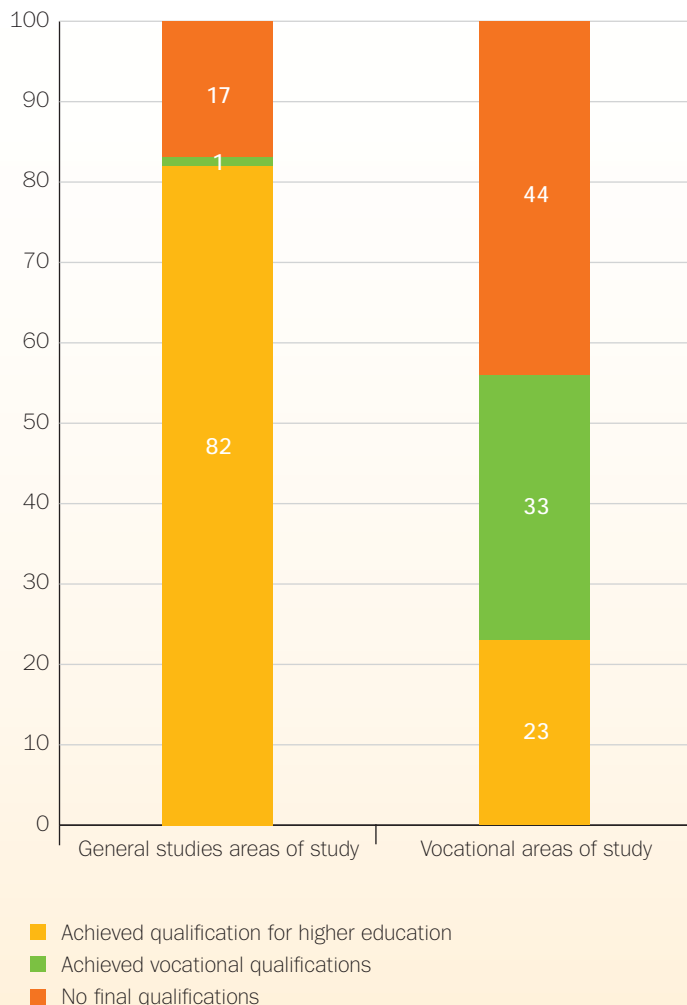
Many pupils leave vocational studies after the second year of upper secondary school

The indicator for the transition from Vg2 (Figure 5.11) can be divided into general studies and vocational education programmes. In addition, it is possible to specify what an ordinary transition entails. In Figure 5.15, the transition indicator for Vg2 vocational studies is presented. The figure

shows the educational activity as per 1 October 2009 for the pupils who took vocational Vg2 as per 1 October 2008.

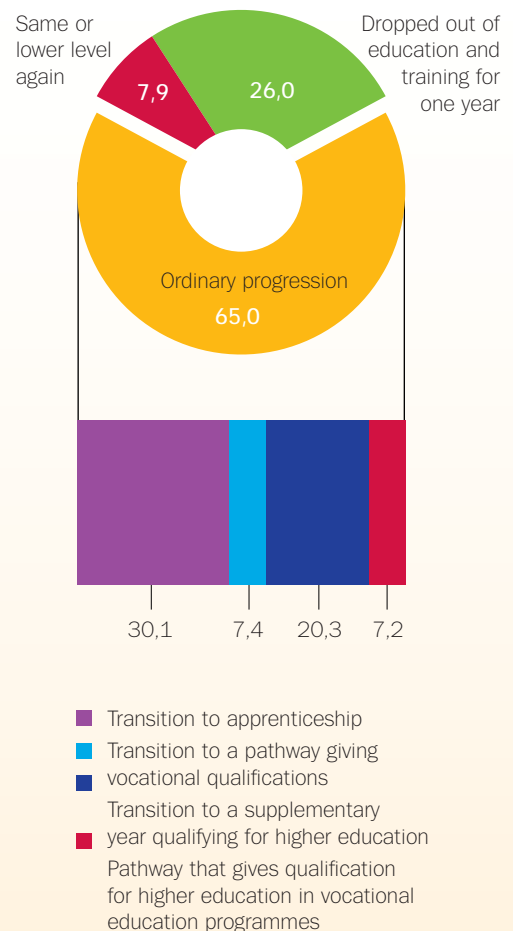
The figure shows that one out of four vocational pupils in Vg2 drops out of upper secondary education and training in the transition between Vg2 and Vg3 and/or apprenticeship, and about eight per cent continue at the same or at a lower level of education. Two out of three have what is called an ordinary progression, and half of these pupils continue in an educational pathway that gives vocational qualifications as an apprentice or as a pupil in school. The other half continue in an educational pathway that gives qualification for higher education either in a vocational education program or as a supplementary year qualifying for higher education.

FIGURE 5.14 Achieved final qualifications after the stipulated time + 2 additional years for the 2003 age cohort, by area of study. Percentage.



Source: Statistics Norway 2010 N = 56,271

FIGURE 5.15 Pupils in vocational Vg2 in 2008, broken down by activity the following year. Percentage.



Source: Gjennomføringsbarometeret 2011:1 (the Norwegian Report on Upper Secondary Completion 2011:1)

FIGURE 5.16 Pupils in vocational Vg2 by education programme and their first choice when they applied. Percentage.

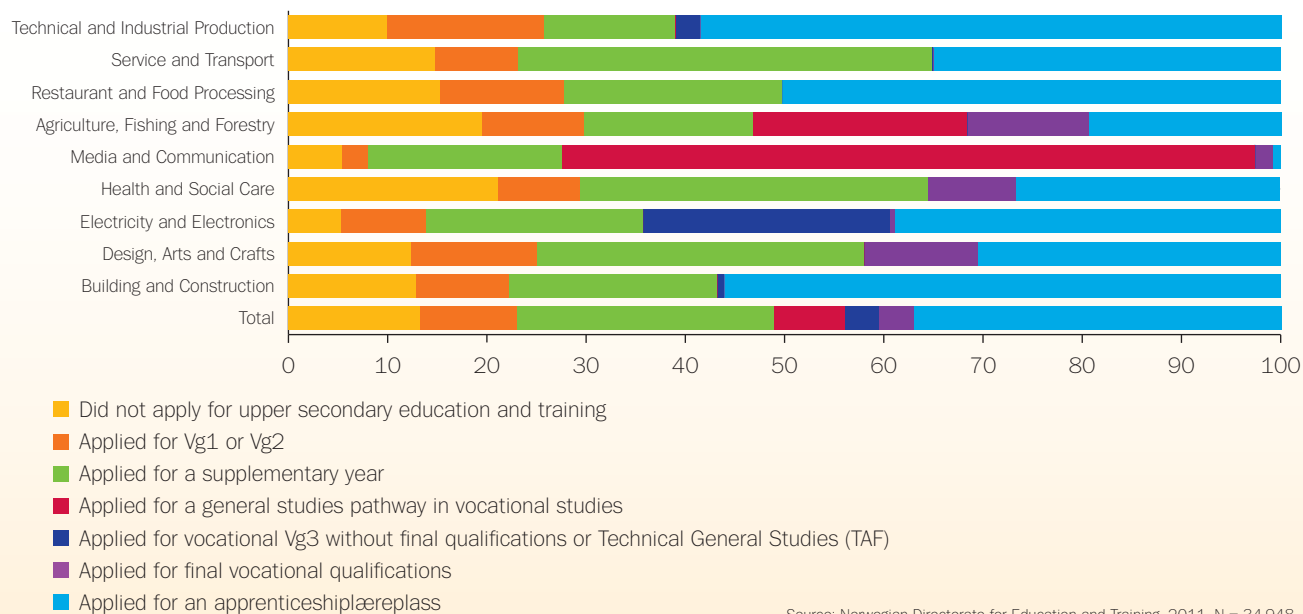


FIGURE 5.17 Pupils in vocational Vg2 in 2009-2010, broken down by their first-choice programme and whether they commenced in the programme to which they applied. Number and percentage.

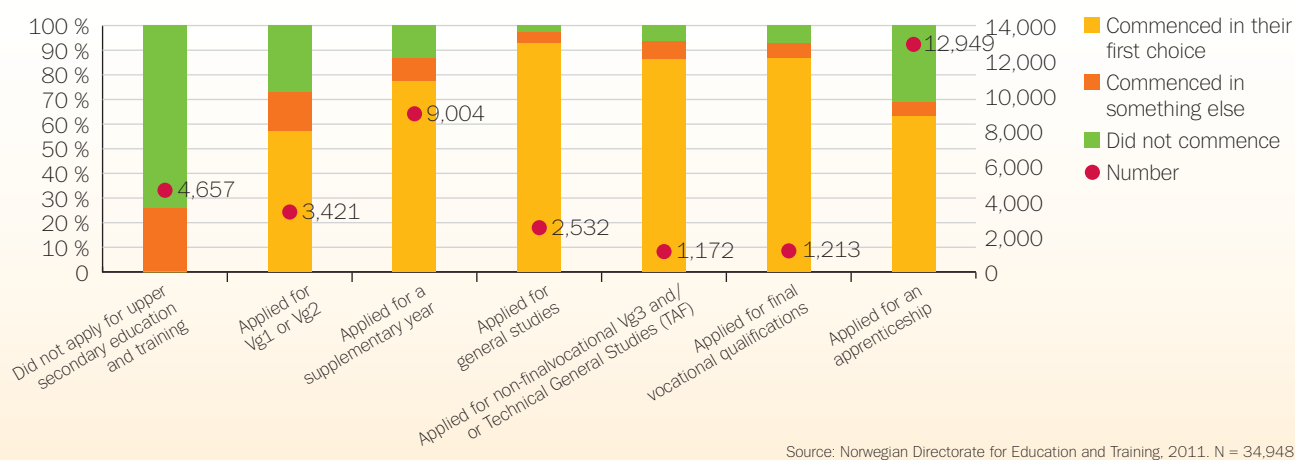
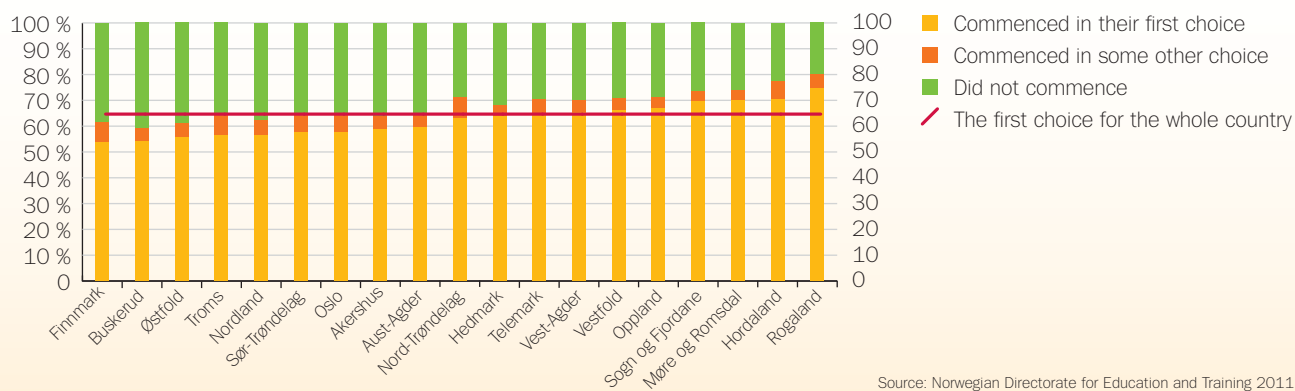


FIGURE 5.18 Pupils in vocational Vg2 in 2009-2010 with an apprenticeship as a first choice, broken down by the programme with which they commenced and by county. Percentage.



Vocational pupils are moving away from vocational studies

There is good reason to ask whether the transition from vocational Vg2 to general studies, or out of upper secondary education and training is desired by the pupils. We do not have any data on the pupils' motivation, but what they have applied for gives an indication of what the pupils want to do. Figure 5.16 shows the educational pathway to which those who were in Vg2 vocational studies as per 1 October 2009 applied for admission in the autumn of 2010. These figures were compiled on the basis of pupil data for 2009 and the status of applications at the time of the first admission in 2010.

All in all, more than half of the pupils applied to continue on the educational pathway they have followed for two years. The greatest number - 37 per cent - are applying for an apprenticeship. An additional 7 per cent are applying for either final vocational qualifications in school or a pathway that takes longer than the normal programmes. There is also a significant percentage who are applying for a general studies educational pathway in *Media and Communication* and *Agriculture, Fishing and Forestry* (7 per cent).

The other half of the pupils are not applying to continue in the educational pathway they have followed for two years. Fully 13 per cent of the pupils in Vg2 vocational studies have not applied for further upper secondary education and training. Among these pupils, there are some who obtain an apprenticeship on their own without applying through the county authorities' system. Ten per cent have applied for education and training at a lower or equivalent level, and fully 26 per cent have applied for the supplementary year qualifying for higher education.

Although the transition from vocational studies to a supplementary year is not a new scheme, there are no good time series on the trend in applications of this sort. By combining several sources, however, we can assume that these transitions have increased in scope in recent years, even though these figures are not directly comparable. In 2010, 26 per cent of the pupils in vocational Vg2 applied for a supplementary year qualifying for higher education. Figures from Helland and Støren (2004) show that from the pupils who commenced vocational studies in the 1994 age cohort, 5.6 per cent applied for the supplementary year instead. For the 1999 age cohort, the equivalent percentage had increased to ten per cent, and for the 2001 cohort it

increased to 12 per cent. A report from NIFU STEP showed that the percentage who applied for a supplementary year increased to 24 per cent for the 2005 age cohort and 26 per cent for the 2006 cohort (Frøseth et al 2010).

Only one out of four vocational studies pupils want and are granted an apprenticeship in the subject to which they apply

What the pupils apply for and what they commence, however, do not completely overlap. Therefore, it is interesting to see whether they start in the programme to which they apply. Figure 5.17 shows whether the Vg2 pupils began in their first choice, in something else, or whether they did not begin with anything at all.

In general, the majority of the applicants commence with their first choice. This is especially true for those who have applied to the general studies pathway in vocational studies, for a supplementary year and for vocational qualifications in school. In addition, some applicants are commencing in an educational pathway other than their first choice. The figure does not provide information about whether this is the same type of educational pathway as the one to which they applied. For example, it is not certain that those who applied for an apprenticeship and who are taking an educational pathway other than their first choice are in an apprenticeship. They may just as well be in a pathway that gives vocational qualifications in school, or they may be taking the supplementary year. In all of the groups, there are applicants who do not commence anything at all; e.g. this applies to 30 per cent of the applicants for an apprenticeship – about 4,000 applicants.

Considering that the main model in vocational studies is the 2+2 model – two years in school followed by two years in apprenticeship – it is interesting that when only 37 per cent of the pupils in vocational Vg2 apply for an apprenticeship, only 64 per cent of them begin in the educational pathway they had as their first choice. In other words, only 24 per cent of the vocational pupils from Vg2 both want and get an apprenticeship in the subject to which they apply.

Rogaland County has the highest percentage of applicants who are granted an apprenticeship

Figure 5.18 shows differences among the counties in the programmes that applicants for an apprenticeship are given. All in all, 64 per cent

of the applicants for an apprenticeship begin in their first choice, but there are relatively big differences among the counties. Finnmark County has the lowest percentage, and Rogaland County has the highest, with 54 and 75 per cent of applicants for an apprenticeship respectively starting in their first choice. There are minor variations among the counties in the percentage who begin in something other than their first choice.

It is also worthwhile to point out that not everyone who wants a supplementary year qualifying for higher education is granted this wish (Figure 5.19). The differences among counties are somewhat less for those who apply for a supplementary year qualifying for higher education. The reasons for the differences may be that some counties reduce the number of places in a supplementary year in order to get more people to apply for an apprenticeship, while others offer a supplementary year to those who do not get an apprenticeship.

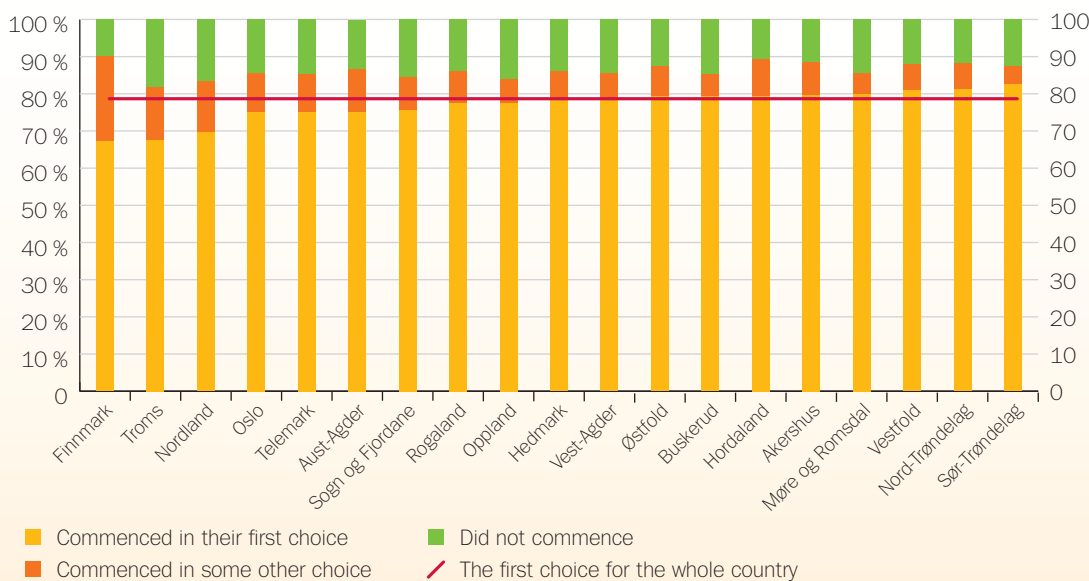
In addition to the situation for the pupils who apply for an apprenticeship and a supplementary year, it is also worth mentioning that a quarter of those who do not apply to go further than Vg2 are offered a programme, which can be explained by the fact that not everyone who becomes an apprentice applies for an apprenticeship through the county.

5.5 | WHAT ARE THE CONSEQUENCES OF DROPPING OUT OF EDUCATION?

As shown in Chapter 5.3, most young people commence upper secondary education and training directly after primary and lower secondary school (cf. Figure 5.8). Most pupils who commence (71 per cent) complete and pass upper secondary education and training within two years beyond the stipulated time. Of the 29 per cent who do not complete and pass within two years beyond the stipulated time, one third do so within ten years after they commenced upper secondary education and training. In other words, out of an age cohort that commences upper secondary education and training, 20 per cent do not complete and pass within ten years. Research shows that there are many consequences of not completing and passing upper secondary education and training.

Those who drop out of the educational system are at risk of also dropping out of or ending up in marginal positions in the labour force. However, some of them find jobs without completing upper secondary education and training, especially in periods with low unemployment (Raaum et al. 2009). Thus, a lack of formal competence does not necessarily exclude the

FIGURE 5.19 Pupils in vocational Vg2 in 2009-2010 with a supplementary year qualifying for higher education as a first choice, broken down by the programme in which they commenced and by county. Percentage.



Source: Norwegian Directorate for Education and Training 2011

person from access to the labour market, but it may give access to insecure and less attractive jobs (Larsen and Hompland 1999).

The seriousness of failing to complete school depends on whether the young people get jobs and remain in gainful employment. A report from the Ragnar Frisch Centre for Economic Research (Bratsberg et al. 2010) points out in this context that the third of the pupils who do not complete upper secondary education and training in five years are overrepresented among the unemployed and that the percentage of unemployed persons decreases with the length of education.

The same pattern repeats in a report from the Centre for Economic Research at NTNU (SØF) (Falch and Nyhus 2010). Bratsberg et al. also found that many of the pupils who quit school quickly found jobs. Many of them probably had a job or very good prospects for employment when they quit school. At the same time, the study does not find that low unemployment in the municipality in which the young person resides tends to induce pupils to leave school early.

The social consequences of low completion of upper secondary education and training are considerable. Persons without upper secondary education and training have lower income, more tentative employment, a greater probability of making use of national insurance and social protection schemes and a greater probability of crime and poor health. Calculations performed by SØF (Falch et al. 2010) show that if completion of upper secondary education and training is increased 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 each cohort. That is equivalent to about 6,000 more pupils who complete upper secondary education and training in each age cohort of pupils. Delayed completion is also a substantial expense. If everyone who completes school in an age cohort had done so in the stipulated time, that would entail a savings of about NOK two billion. In other words, from an economic perspective, large savings can be attained by increasing the efficiency of the education system.

A follow-up service for those who are not in upper secondary education and training

The central government authorities want as many people as possible to achieve competence at the upper secondary level. The county authorities are required to provide upper secondary education and training to everyone who has the *youth right*, i.e. everyone who comes under Section 3-1 of the Education Act (cf. fact box). For young people with the youth right who are not in upper secondary education and training or who are employed, the county authorities have a follow-up service (OT); cf. Section 3-6 of the Education Act. The follow-up service should make an offer of education and training, a job or some other employment to all young people who belong to the target group, cf. Sections 13-1 and 13-2 of the regulations (cf. fact box).

RIGHT TO UPPER SECONDARY EDUCATION AND TRAINING

Section 3-1 of the Education Act: Young people who have completed primary and lower secondary education or the equivalent are entitled, after applying, 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 are entitled to education and training in accordance with the period of instruction specified in the subject curriculum.

Section 3-6 of the Education Act: The county authorities should have a follow-up service for young people who are entitled to education and training under Section 3-1 and who are not in education and training or at work. The service is offered up to and including the year that they turn 21.

Section 13-1 of 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, will be offered education and training, work or some other employment. Offers that are conveyed through the follow-up service should primarily aim to result in qualification for higher education, vocational qualifications or qualifications at a lower level within upper secondary education and training. The follow-up service can also make efforts to reduce the drop-outs from upper secondary education and training through cooperation with the consulting services in primary and secondary education and training.

Section 13-2 of Regulations relating to 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 not applied for or accepted a place or an apprenticeship, or
- b) interrupted this kind of education and training, or
- c) are not employed, or
- d) have lost the right as a result of a decision about exclusion from tuition pursuant to Section 3-8 of the Education Act, or as a result of a decision concerning termination of an apprenticeship contract in accordance with Section 4-6 of the Education Act.

The county authorities keep track of all of the young people who have the youth right. Figure 5.20 shows how the young people with the youth right aged 21 or younger are registered. The vast majority - 79 per cent - are in upper secondary education and training. The rest, amounting to 35,000 young people, were not registered in upper secondary education and training as per 1 October 2010. 30,000 of these young people were registered in OT's systems as per 1 January 2011.

Not all of the young people in Figure 5.20 are in the OT's target group. As per 1 January 2011, 29,113 young people were registered in the Follow-up Service who were in OT's target group. Figure 5.21 shows reasons why these young people are reported to OT. Fifty-eight per cent of the young people are registered in OT because they have not applied for upper secondary educa-

tion and training, and 25 per cent have reported to the service because they have turned down a school place or an apprenticeship. Nine per cent have interrupted their education and training.

Figure 5.22 shows that about half of the young people in OT's target group who were registered in OT in the 2009-2010 school year were also registered in OT in the following school year (2010-2011). Since we do not have data for the whole 2010-2011 school year, we are temporarily using data as per 1 January 2011 for the 2010-2011 school year. The percentage who are registered in OT for two consecutive years has been relatively stable in recent years. There are generally small differences among the counties: Finnmark County has the lowest percentage (39 per cent) and Nordland County has the highest percentage (55 per cent) who are registered for two years.

FIGURE 5.20 Young people aged 21 or younger with the youth right, by activity. Percentage.

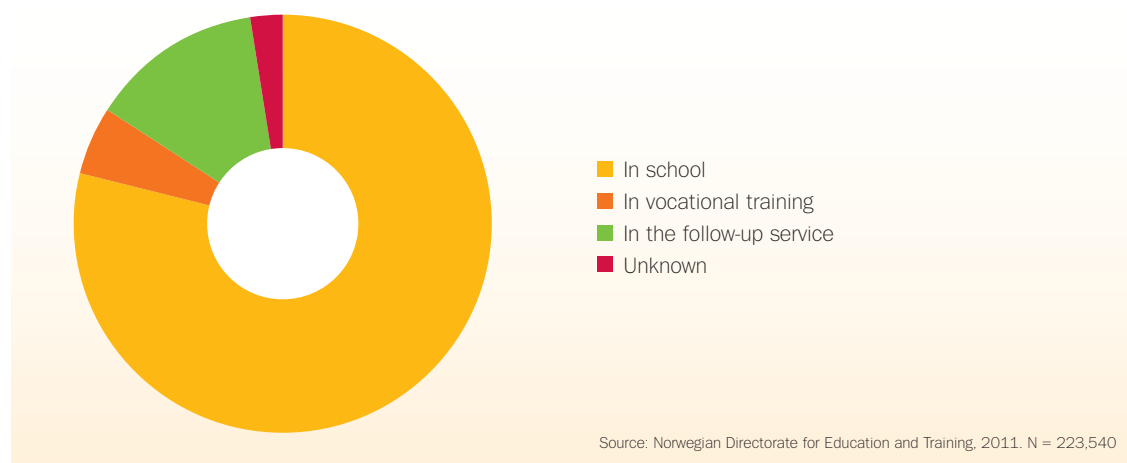


FIGURE 5.21 Reasons why young people are reported to the Follow-up Service, as per 1 January 2011. Percentage.

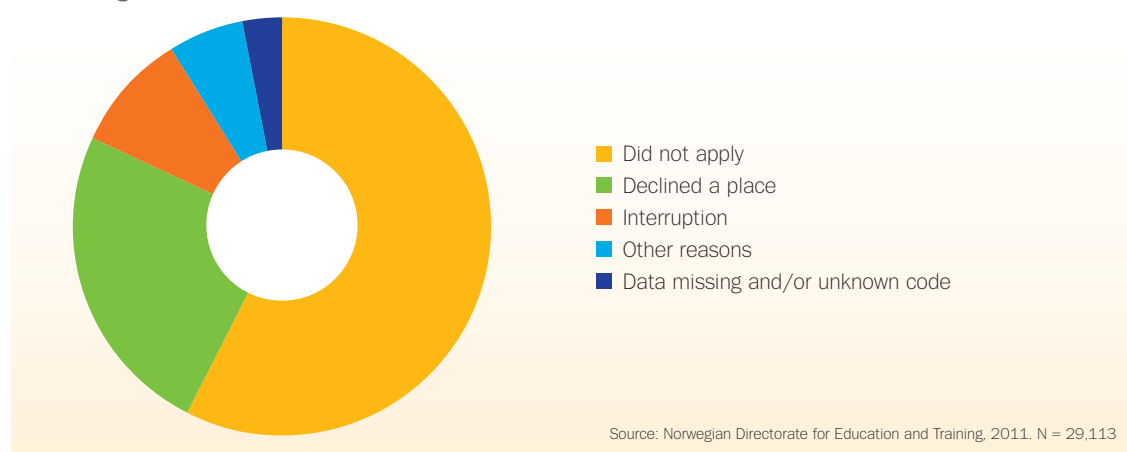
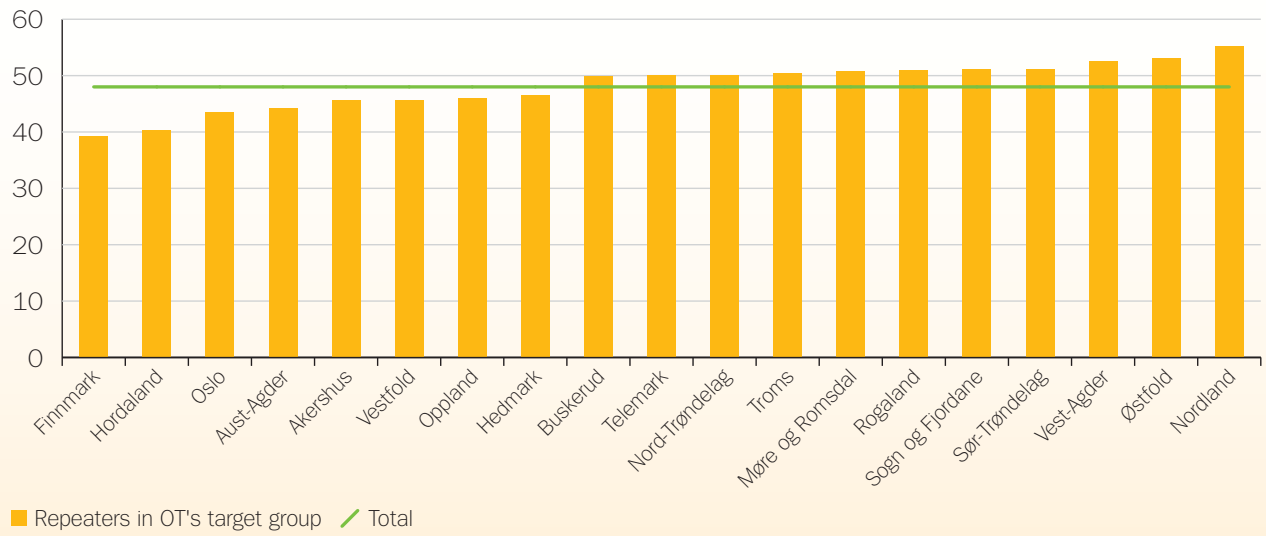


FIGURE 5.22 Young people in OT's target group who are registered in OT in the 2009-2010 and 2010-2011 school years. Percentage.



Source: The Norwegian Directorate for Education and Training





6

Quality improvement

This chapter describes important measures and tools that have been developed for use in systematic quality assessment in the school sector. You will also find a summary of the advice provided by the OECD about how we can improve the Norwegian assessment system.





6.1 | WHAT IS THE PURPOSE OF SYSTEMATIC QUALITY ASSESSMENT?

Norway lacks systematic data on the outcomes in education and training

The Storting (Norwegian Parliament) decided in 2003 to introduce a national quality assessment system for the school sector. The reason for the development of this system was a recognition that Norway lacked systematic data on the outcomes in education and training in a form that would enable schools, school owners and the government authorities to make use of them. It was also emphasised that schools and school owners lacked tools for assessing outcomes and processes in education and training. Furthermore, it was assumed that a national system for quality assessment should first and foremost make the school owners responsible for, and capable of, developing good schools.

A national quality assessment system (NKVS) was established in 2004 with national tests and the online School Portal in order to present, for example, data on resources, learning outcomes, the learning environment and completion of upper secondary education and training. The system was later expanded with user surveys on learning and well-being, and is constantly evolving.

Evaluation and assessment currently takes place at all levels of the Norwegian education system, from the level of the individual pupil to the national level. Different policy instruments for system assessment, school assessment and individual assessment have been developed over a period of time. Hence, the system is not static and final.

In 2010, the OECD launched a review of the ways in which the evaluation and assessment systems can improve quality, equality and efficiency in primary and secondary education and training in 24 countries. Thus, in January 2011, the Norwegian Directorate for Education and Training completed a national report to the OECD that shall be used in this review. Much of this chapter is based on the Norwegian national report.

A more systematic assessment may facilitate communication among the different levels of education and training

The central education administration must be aware of the kind of challenges that distinguish the Norwegian school system, in order to be able

to introduce the correct measures. The municipalities and county administrations must have good knowledge about their schools in order to know where they should focus resources and improvement measures. The school administration must have a knowledge of the quality of the teaching in order to be able to support the teachers and pupils in their learning efforts. The challenge is often to coordinate the work at the different levels, so that those levels can have a common basis for assessing the status. At the national level, new measures and new policy instruments have been introduced to strengthen this relationship and to assist municipalities and schools in their efforts. When the municipalities have a good system for assessing the quality of their own control area, it is easier for the schools to assess their own activities. (Roald 2010)

There are different objectives for the various elements in the system of quality assessment.

OECD REVIEW ON EVALUATION AND ASSESSMENT FRAMEWORKS FOR IMPROVING SCHOOL OUTCOMES: THE NORWEGIAN DIRECTORATE FOR EDUCATION AND TRAINING 2011

This report reviews and discusses the efforts in Norway to promote system assessment, school assessment, teacher assessment and individual assessment. The report calls attention to the challenges of developing and using information targeted at the efforts to promote organisational development and in the pedagogical efforts to improve the learning outcomes of the pupils.

The OECD has also acquired information about the efforts Norway is making in evaluation and assessment, through an expert visit during a week in December 2010. On the basis of that visit and the national report, the OECD will furnish a report to Norway this year that will contain assessments of the efforts that Norway is making in the field of evaluation and assessment, both the good aspects and the challenges on which we ought to continue working.

The OECD will conclude the project with a comparative report in 2012, which will be based on information from all of the 24 participating countries.

Link to the report:

www.udir.no/landrapport_oecd_2011

TABLE 6.1 Overview of objectives and responsibility in connection with the key elements in the national quality assessment system.

Element	Objective	Responsibility for targeted use of the information			
		The State	The School Owner	The School Administrator	Teacher
National tests:	<p>Identify the extent to which the skills of the pupils are in accordance with the objectives of the curriculum</p> <p>Provide information to pupils, teachers, parents and guardians, school owners, school administrators, the regional authorities and the national level as a basis for efforts to promote improvement and further development.</p>	<p>Use information from the tests to gain insight into, manage and improve their own activities and the activities of the underlying agencies and also to target the policy instruments aimed at municipalities with special challenges</p>	<p>Use information from the tests to gain insight into, manage and improve their own activities and the activities in the underlying agencies</p>	<p>Use information from the tests to gain insight into, manage and improve their own activities</p>	<p>Use information from the tests to help promote better education in a selection of basic skills</p>
International surveys	<p>Assess the competence of Norwegian pupils compared with those of other countries</p> <p>Basis for indicator development and policy formulation</p>	<p>Use information from the tests to gain insight into, manage and improve the efforts in the education sector within a selection of subjects and/or subject areas at selected levels and as a basis for research and analysis</p>	<p>Use the information to enhance the knowledge base</p>		
<p>User surveys</p> <p>The Pupil Survey The Apprentice Survey The Instructor Survey The Teacher Survey The Parent Survey</p>	<p>Pupils, teachers and parents and guardians should get to speak their mind about the learning and well-being in the school</p>	<p>Use data from the surveys to help analyse and improve the learning environment</p> <p>Use data from the surveys for research purposes</p>	<p>Use data from the surveys to help analyse and improve the learning environment</p> <p>Use data from the surveys for research purposes</p>	<p>Use data from the surveys to help analyse and improve the learning environment</p>	<p>Use data from the surveys to help analyse and improve the learning environment</p>
Supervision	<p>Reveal whether the school owner acts in accordance with the statutory requirements to which the supervision applies</p>	<p>Use the information from the supervision to monitor whether the school owner is in compliance with the regulations and to formulate policy</p>	<p>Use the information from the supervision to correct non-conformities and/or their own practices if necessary</p>		
The School Portal	<p>Schools, school owners, parents, pupils and other interested parties shall gain access to relevant and reliable key data pertaining to the primary and secondary education and training</p>	<p>Use data to compare information as a basis for assessment and improvement of quality in the sector</p>	<p>Use data to compare information as a basis for assessment and improvement of quality in one's own region</p>	<p>Use data to compare information as a basis for assessment and improvement of quality in one's own school</p>	

Source: Norwegian Directorate for Education and Training 2011

Table 6.1 provides an overview of the objectives and responsibility in connection with those which are regarded as the key elements in the system of quality assessment. In the discussion of responsibility, the emphasis is on who will follow up the information that the system provides and that the information should be used objectively in the efforts to promote organisational development and in the pedagogical efforts to improve the learning outcomes of the pupils.

The elements, or tools, may be used in both the national and the local administration in order to examine whether the sector, the organisation or the class and/or group is evolving in the right direction, and also pedagogically in order to improve the learning outcomes of the pupils. The objectives of the various elements vary somewhat in accordance with the administrative level that is going to utilise the information from the quality assessments.

6.2 WHY DO WE NEED QUALITY ASSESSMENT AT SEVERAL LEVELS?

All levels of primary and secondary education and training need clear information on the correct areas for conducting quality assessment and improvement. However, there are still some differences with regard to the kind of information sources that form the basis for quality assessment at the national and local level. The objective of quality assessment may also vary because

the responsibility and measures are distributed differently among the different levels.

In this section, we distinguish between the assessments that are conducted at the national level, at the municipal and county level, at the school level and at the individual level. We define system assessment at the national level as the assessment and evaluation that takes place on the initiative of the national education administration. Local system assessment is the assessment that is conducted by the school owner at the municipal and county level. This is where inspections occur, but also the self-assessments and evaluations that municipalities and county authorities perform. We define school assessment as the assessments that school owners and schools conduct on the activities in each individual school. Individual assessment includes various forms of assessment of the learning and learning outcomes of the pupils.

National system assessment provides better administration and more knowledge-based formulation of policy

At the national level, the Directorate for Education and Training furnishes management information, e.g. as a basis for more research and analytical projects. There is a growing understanding of how important it is to have a knowledge-based formulation of policy in Norway.

We obtain knowledge about the state of the education sector through data and information from research and evaluation, statistics, analyses, international studies, national tests,

TABLE 6.2 Norwegian participation in international studies

Study	2010	2011	2012	2013	2014
PISA Programme for International Student Assessment	R		I	R	
TIMSS Trends in International Mathematics and Science Study		I	R		
TIMSS Advanced Trends in International Mathematics and Science Study – Advanced	R				
PIRLS Progress in International Reading Literacy Study		I	R		
ICCS International Civic and Citizenship Education Study	R				
ICILS International Computer and Information Literacy Study				I	R
TALIS Teaching and Learning International Survey				I	R

I = Implementation, R = Report

overall achievement and exam statistics and user surveys. The communication channels are *Skoleporten* (The School Portal) and *The Education Mirror*.

Research, evaluations and international studies

The programme for the evaluation of the Knowledge Promotion Reform (EvaKI) constitutes a large part of the research portfolio of the Directorate for Education and Training. The evaluation programme will shed light on and document how well the challenges for primary and secondary education and training and the intentions of the reform are being followed up and whether the reform is yielding any practical results.

Norway is taking part in several international comparative studies. Through these studies, we get an assessment of the competence of Norwegian pupils compared with pupils in other countries. These studies give an indication of both the national and international trends over a period of time and thereby provide important administrative information.

The participation in international studies has been important for the development of Norwegian primary and secondary education and training. The studies have greatly contributed to putting basic skills on the agenda. They have also stimulated debates about the ways in which changes in the teaching, curricula and education of teachers can explain changes in the achievement of Norwegian pupils from 1995 onwards.

Education Statistics

In recent years, the Directorate for Education and Training has made a major effort to improve the quality of the national education statistics and make them more relevant. An important element in this work is the Primary and Lower Secondary School Information System (GSI), which includes about 700 pieces of information about all of the primary and lower secondary schools in Norway. Another important source is the website VIGO, which is the source of statistics for upper secondary education and training. The Directorate gathers and publishes statistics from this database.

Continuous efforts will be made to develop and improve indicators that will provide information on the state of primary and secondary education and training on the basis of available national education statistics. The Directorate

has recently proposed a number of new indicators for the implementation of upper secondary education and training, which will be published on *Skoleporten* (the School Portal). This emphasis on the development of indicators can be considered in connection with the increasing demand for a knowledge-based approach and the need that the national authorities have to set up clear goals for the quality of the primary and secondary education and training.

National tests

The national tests in *Mathematics* and *Reading* survey the basic skills of the pupils to determine whether they measure up to the objectives that have been set out in the curricula for *Mathematics* and *Reading*, as they are integrated into the competence goals for subjects in the curricula at the end of Years 4 and 7 (i.e. early in Years 5 and 8). Thus, these are not tests in the subjects of *Norwegian* and *Mathematics*, but rather in *Reading* and *Mathematics* as basic interdisciplinary skills. The test in *English* is a test in certain parts of the subject of *English*, limited to reading, vocabulary and grammar.

An important reason why we introduced national tests in Norway was that the international studies, such as PISA, TIMSS and PIRLS, showed that Norwegian pupils had poorer skills than the national authorities had expected. A key objective of the national tests was to give national authorities a means of determining how well the Norwegian school system is succeeding in developing the skills of the pupils.

By linking the outcomes from the national tests to other statistics and data about the background of the pupils, these tests become an important basis for analyses and research on factors that affect quality in the schools. Most large research and analytical projects that the national authorities initiate use data from national tests. The way these tests are currently designed, they provide information about the trend over a period of time at the national level. They indicate the disparities between the sexes, between pupils from different social backgrounds and between pupils with a majority as opposed to an immigrant background as well as regional disparities.

Annual questionnaires for school administrators and school owners

There are many who turn to the education sector to conduct various questionnaires. To limit

the number of questionnaires in the sector, the Directorate has entered into a multi-year framework agreement with a research institution to conduct two annual joint questionnaires.

The questions should primarily meet two objectives:

1. Coordination of what are currently minor ad hoc surveys
2. Systematisation of questions linked to the needs of the Directorate to follow up important target areas

We should avoid full-scale surveys in favour of representative sample surveys. Samples have been created that are comparable so that school administrators and school owners shall not be contacted more often than once every 18 months. The exception here are the county authorities, where all 19 are included in all of the questionnaires. The upper secondary schools are divided into three samples with about a third of schools from each county in each of the samples.

Local system assessment makes it possible to become a better school owner

School owners must have a reliable system in order to ensure that the school's activities will be conducted in accordance with the requirements that are specified in the regulations. In Section 13-10, paragraph two of the Norwegian Education Act, this is referred to in such a way that the school owner shall have a reliable system in order to assess whether the requirements in the Education Act and the regulations associated with the Act will be met and to follow up the results of those assessments. The Private Education Act has an equivalent regulation in Section 5-2. The school owners are free to design the system so that it is adapted to the local conditions.

Status report

An annual status report is required by law pursuant to Section 13-10 of the Education Act and is a key element in the local system assessment. At the very least, the report should mention the learning outcomes, drop-outs in upper secondary education and training and the learning environment. In general, it is data from *Skoleporten* (the School Portal) that should be utilised as a basis for the assessment of status made by the school owner, and it is stated in Report. No. 31 (2007-

2008) to the Storting: *Quality in the Schools* that school owners and schools are encouraged to set specific goals for the things they shall achieve within the target areas that have been established. The school owner is otherwise free to broaden the content of the status report. At the beginning of this publication, *Some glimpses into The Education Mirror* presents an example of a way in which school owners can use the status report in their follow-up of the schools.

Supervision

Supervision in Norway is based on ensuring that the school owners comply with their statutory duties. The individual inspections do not check whether the school owner complies with the whole body of regulations, only selected parts of them. The Norwegian Directorate for Education and Training has the overall professional responsibility for joint national supervision (FNT) in the education sector. The Directorate itself conducts the supervision of the private schools (pursuant to the Private Education Act), whereas the County Governor's office conducts the supervision of the public schools (pursuant to the Education Act).

The joint national supervisory body in 2010 and 2011 looks at the psychosocial environment of the pupils, pursuant to Chapter 9A of the Education Act. The supervision pursuant to this chapter will be conducted by the schools, even though it is the school owners who are the responsible parties. In planning the supervision, a reference group was formed, where the School Student Union of Norway, the Norwegian Directorate of Health, the Norwegian Labour Inspection Authority, the Union of Education Norway, the Norwegian Federation of Organisations of Disabled People (FFO) and the National Parents' Committee for Primary and Secondary Education were represented. In addition, the Ombudsman for Children, the Norwegian Association of Local and Regional Authorities (KS) and four County Governor's offices have been involved in the planning (Directorate for Education and Training 2010). You can read more about the joint national supervisory body in 2010 in Chapter 4 Learning Environment.

In addition to the joint national supervisory body, the County Governor conducts inspections that they themselves have initiated. These may be based on a particular topic or on specific events. The summary of the annual reports from

the County Governor's office indicates that a total of 195 inspections of varying scope were conducted in 2009. The trend is towards more of the inspections being coordinated by the Directorate for Education and Training.

School assessment is needed in order to assess the status of the trend in education and training

In Norway, all schools are required to conduct a school assessment. School assessment entails that the school shall regularly assess the extent to which the organisation, facilitation and implementation of education and training helps achieve the objectives set out in the curricula for the Knowledge Promotion Reform. The school owner is responsible for ensuring that *school-based assessment* is implemented pursuant to Section 2-1 of the Regulations associated with the Education Act. Some municipalities have their own system with measures for quality assessment in addition to the national system, which is mandatory.

Since the 1970s, Norway has developed a tradition for school assessment. School assessment is conducted internally in the school and directly related to school improvement. Internal assessment and development can be regarded as a bottom-up process. About half of the Norwegian schools and municipalities have developed systematic forms of school assessment. It has been a challenge that the rest of the schools and municipalities have got less involved in this form of quality assessment (Roald 2010).

School assessment can be both internal and external. The internal dimension entails that the school itself has control over how to proceed in the assessment and development efforts (Nielsen and Overland 2009). There are no national guidelines for external school assessment in Norway, nor is there any external evaluation body that has a designated responsibility for school assessment. Nevertheless, school assessment may involve external parties if the school or the school owner want an external view of the school's activities. Some schools and school owners order services from the university and university college sector or from private centres of competence.

With the introduction of a national quality assessment system, the national authorities have established guidelines on the kind of tools that shall or may be used and the kind of area the school shall assess, especially the quality of

results. Beyond this, there are no national guidelines for the content of the school assessment or the kinds of methods the schools should employ when they follow up the outcomes, nor have any national reference standards been defined for school assessment. It is up to the individual school, or possibly the school owner, to define these reference standards if it is so desired.

The User Surveys

The Directorate for Education and Training has developed various online user surveys: the Pupil Survey, the Apprentice Survey, the Instructor Survey, the Teacher Survey and the Parent Survey. The objective of the user surveys is that the involved parties should be able to speak their mind about learning and well-being in the school. The results of the user surveys will be used by

THE STATUS ANALYSIS AND THE ORGANISATION ANALYSIS

One of the measures in Report No. 31 (2007-2008) to the Storting: *Quality in Schools* is that all schools should have access to good status analyses and receive guidance in how to use them when needed. Both the status analysis and the organisation analysis will be available on the homepage of the Directorate.

The status analysis is a process and reflection tool for joint assessment of the practices and performance of the school in the efforts to promote the learning and the learning environment of the pupils. This analysis will help schools by comparing examination results and data from the Pupil Survey and national tests on the one hand and the ways in which the staff assesses the practices in the school on the other. Taken together, this should give the school a basis for selecting and prioritizing certain target areas in its development efforts. The implementation of the status analysis should ensure that these processes have broad support from the staff.

The organisation analysis is a process and reflection tool that was developed to analyse the school as a knowledge workplace. The study helps to survey aspects of the organisation that affect the job situation of the employees and that affect the learning and the learning environment of the pupils. We should avoid drawing categorical conclusions from the results.

schools and school owners as an aid in analysing and developing the learning environment.

The Pupil Survey has been issued in a version for Years 5 to 7, a version for Years 8 to 10 and a version for upper secondary education and training. The Pupil Survey is mandatory in Years 7 and 10 and in Vg1. You can learn more about this survey in Chapter 4 Learning Environment.

Some of the results of the Pupil Survey will be published on *Skoleporten* (the School Portal). For the Pupil Survey, a reporting portal has also been developed, which makes it possible for school administrators to get a complete overview of the learning environment in the school. In the reporting portal, a number of other indicators are presented in addition to those that are published in the School Portal. In this way, it should be easier to conduct a thorough local analysis of the results of the Pupil Survey.

An evaluation shows that half of the school owners, head teachers and teachers think that to a great extent they have followed up the results of the Pupil Survey in a systematic way. Very few think that this has only occurred to a slight extent. Thus, in the vast majority of schools, systematic efforts or efforts that are to some extent systematic will be made in order to follow up the results. There is a pervasive view that the Pupil Survey can indicate whether there is anything “wrong” and that if so the school will try to correct this. The evaluation also shows that the usual practice is that the results of the survey will be discussed with each individual team of teachers and with the local school administration (Allerup et al. 2009).

The Teacher Survey includes questions about the learning environment of the pupils from the teachers’ point of view. The Parent Survey contains questions or sets of statements that parents or guardians shall respond to and that deal with information to and from the school, dialogue and participation, knowledge and expectations, support from guardians, discussions about pupils’ development, etc. These surveys are not mandatory, and the extent to which they will be employed at the local level varies.

Individual assessment should improve learning and learning outcomes for the individual pupil

The purpose of individual assessment is both to promote learning and to express the competence of the individual pupil during and at the

end of the education and training in the subject. The concepts of ongoing assessment and final assessment distinguish between assessment that will be conducted continuously in the course of the education and training and assessment at the conclusion of primary and lower secondary school and at the conclusion of subjects in upper secondary education and training.

Ongoing assessment

All assessment in subjects that takes place during the education and training up to the end of Year 10 and during the education and training in each Year of upper secondary education

BETTER ASSESSMENT PRACTICES AND ASSESSMENT OF LEARNING

In recent years considerable emphasis has been given to further developing the assessment skills and assessment practices in primary and secondary education and training and in teacher training.

The project, Better Assessment Practices, was conducted in the period 2007-2009. Among other things, the project included the preparation of changes in the regulations for individual assessment and a national testing of characteristics of the achievement of goals in subjects. There is considerable feedback from the participating schools that systematic efforts to improve curricula in subjects and assessment makes it easier to understand curricula and assess on the basis of competence goals. However, it is challenging to assess the competence of pupils, and it is important to increase the quality of the feedback that the pupils are given and to enhance the participation of pupils in the assessment efforts. The testing has helped ensure that teachers and teacher trainers have increased their competence and developed greater awareness of what assessment in the Knowledge Promotion Reform entails.

Among other things, the Better Assessment Practices project has been followed up with a four-year national effort to promote assessment for learning, starting in 2010. The objective of this effort is to further develop the assessment practices and assessment skills of teachers and instructors through the efforts to promote assessment as a tool for learning.

and training is defined as ongoing assessment. The purpose of the ongoing assessment is to promote learning, develop the competency of the pupil and provide a basis for adapted education and training. The pupil should be given continuous assessment underway in the form of guidance, and that assessment should include well-founded information concerning the competence of the pupil. The assessment should give feedback with the aim of promoting professional development.

The efforts to conduct assessments underway during the education and training are based on the principle that pupils learn best when they:

- 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 their achievement
- are given advice as to how they can improve
- are involved in their own learning efforts, e.g. evaluating their own work and their personal development

As support for the ongoing assessment, the Directorate for Education and Training has developed mapping tests that all schools are required to conduct in specific Years. In addition, there are mapping tests that the schools themselves can decide whether they want to conduct. The mapping tests are primarily an educational tool that the school and the teachers utilise in the follow-up of the pupils' learning.

Final assessment

The final assessment includes an assessment of overall achievement and an examination. The final assessment occurs at the conclusion of lower secondary education and at the conclusion of the education in subjects in upper secondary education and training. Overall achievement and examination marks provide a basis for admission to further education.

Feedback from the sector shows that many people are uncertain how to determine overall achievement marks. A study of teachers' practices when they determine overall achievement marks at the lower secondary level and in upper secondary education and training shows that there is considerable variation and that there is a need for a more common basis for assessment than we have at present (Prøitz and Borgen 2010).

Ongoing assessment and final assessment must be considered in context

The teacher must specify at an early stage the levels of competency that will be required in order to achieve various overall achievement marks. The teacher and the pupils should continually assess whether there is a need to adjust the education in order to achieve these goals.

Ongoing assessment involves helping to facilitate development and academic progression, whereas assessment of overall achievement provides information about how far the pupil has come. Assessment of overall achievement and the examination have the same objective. Nevertheless, there is a significant difference between assessment of overall achievement and the examination because they are based on different assessment situations and have different bases for assessment. The overall achievement mark should include all of the measurements of competence in the subject, whereas a five-hour written examination or a half hour oral examination can never test the pupil as broadly.

Since the examination is conducted with external assessment, the examination has an inherent element of external quality assurance. What's more, the teacher of a subject does not get to know the examination mark of the pupil until after the overall achievement mark has been determined, so that the examination will not tend to adjust the mark of each individual student. There are examples where the school administration regards the relationship between examination and overall achievement marks as an indication of whether they gave the right final marks at the school. From this perspective, it can be argued that the examination plays a calibrating role (Prøitz and Spord Borgen 2010).

6.3 | WHAT IS THE OECD'S ADVICE TO NORWAY?

In addition to the national report that Norway has drawn up (Directorate for Education and Training 2011a), a team of experts from the OECD visited Norway for a week in connection with the review of the Norwegian system for evaluation and assessment. The group met with authorities at the national, regional and local levels, key organisations, researchers, school administrators, teachers and pupils. In the summer of 2011, Norway will receive a report from the OECD that contains

the expert group's assessment of Norway's strengths, challenges and recommended measures for further improvement. The feedback from the OECD is based on both the national report and the expert group's experiences from their visit to Norway. The ongoing text is based on preliminary feedback from the OECD.

In its feedback to Norway, the OECD finds it positive that there is a strong political willingness to prioritise evaluation and assessment issues in the school sector. The expert group finds that there is broad consensus in the sector that these areas must be given priority in order to improve the quality of the school system and the pupils' learning. They note that there has been considerable improvement since 2004, e.g. the introduction and further development of the national quality assessment system. They point out that several tools and procedures for quality assessment have been developed, e.g. user surveys, national tests and mapping tests, as well as several projects and initiatives to promote the assessment effort in Norwegian schools, at both the pupil level and the school level. Altogether, this amounts to a variety of tools that support the decentralised school sector in the efforts to promote assessment and quality improvement, and Norway gets positive feedback for seeking to develop a balanced approach in order to meet the need for both accountability and improvement efforts.

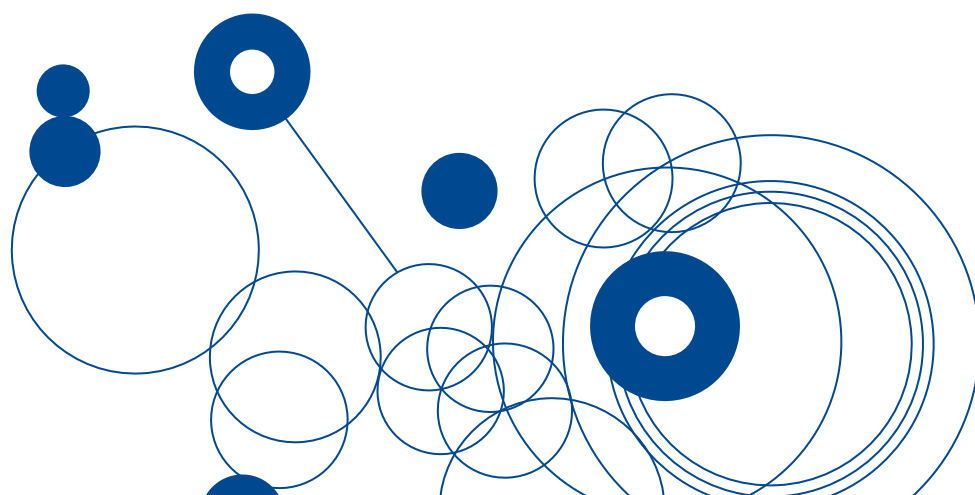
The OECD regards it as a strength that Norwegian teachers have a high degree of autonomy, that both the programme for training head teachers and the program for guidance of newly hired teachers are positive measures, and that these may help to give teachers better monitoring and feedback.

When it comes to the challenges that the OECD thinks that Norway is facing, they note that in many areas we lack clear standards and crite-

ria for defining quality in the educational system and for communicating this clearly to the sector from the national level. This applies to both setting goals and criteria for what constitutes good quality teaching and to defining expectations and criteria for the pupils' learning outcomes, standards of good teaching and quality standards in order to aid in the evaluation of the schools' core activities.

They also point out that Norway faces challenges associated with better defining objectives and the relationships among the various tools in the area of assessment from the national level. The OECD thinks that Norway needs to build up the capacity of school owners and schools so that school-based assessment is more clearly tied to what constitutes good quality in the education and training. Norway should further support and strengthen the ways in which we use available data at the local level for the purpose of increasing the quality of the schools. The OECD emphasises that it is very essential to continue to improve the competence of the school administrators. They also point out that Norway faces challenges related to the ways in which we conduct inspections of the school sector and that we should put more emphasis on the quality aspect of the inspection. The OECD points out that it is a challenge in the Norwegian school system to develop a formative assessment into an integral part of the daily education and training. National authorities should therefore continue to support the development of an assessment practice that has learning as a goal.

When the final report from the OECD is issued, the Ministry and the Directorate will assess which measures ought to be implemented as a follow-up of the recommendations from the OECD. This will be discussed extensively with relevant parties in the education sector.



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Author/publisher	Year	Title	Published
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NOU 2010: 7	2010	Mangfold og mestring: flerspråklige barn, unge og voksne i opplæringssystemet (Diversity and mastering: multilingual children, adolescents and adults in the education system)	The Ministries' Service Centre, Oslo, Norway
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Skolverket (The Swedish National Agency for Education)	2006	Lusten och m�jligheten: om l�rarens betydelse, arbetssituation och foruts�ttningar. (Intent and possibility: the teacher's importance, job situation and qualifications.) http://www.skolverket.se/content/1/c6/02/26/47/14%20Lusten%20och%20m%F6jligheten.pdf	Skolverket (The Swedish National Agency for Education), Stockholm, Sweden
Skolverket (The Swedish National Agency for Education)	2011	Utv�rdering av metoder mot mobbning (Assessment of methods to prevent bullying)	Skolverket (The Swedish National Agency for Education), Stockholm, Sweden
Statistics Norway	2010a	Befolkningsframskrivinger. Nasjonale og regionale tall, 2010–2060. (Population Projections. National and regional data, 2010–2060.) http://www.ssb.no/folkfram/	
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Supplementary tables

Supplementary table 1.1 to **FIGURE 1.1** The distribution of small, medium-sized and large mainstream primary and lower secondary schools, 2000-2001 to 2010-2011. Per cent.

	2000–2001	2001–2002	2002–2003	2003–2004	2004–2005	2005–2006	2006–2007	2007–2008	2008–2009	2009–2010	2010–2011
Less than 100 pupils	37.2	36.3	35.8	35.0	35.3	35.6	34.6	34.4	33.3	32.0	31.3
100-299 pupils	40.8	40.6	40.3	39.7	39.0	38.7	39.8	39.4	40.0	40.7	41.0
300 pupils or more	22.0	23.2	23.9	25.3	25.7	25.7	25.6	26.2	26.7	27.3	27.7

Source: GSI

Supplementary table 1.2 to **FIGURE 1.2** Foreign languages and in-depth language studies. Years 8-10. Mainstream primary and lower secondary schools, 2010-2011. Per cent.

	2008–2009	2009–2010	2010–2011
Spanish	30.9	30.9	30.8
German	25.0	24.8	24.9
In-depth English	22.0	23.0	22.3
French	14.4	13.7	14.2
In-depth Norwegian	7.1	7.2	7.3
Other	0.5	0.4	0.4

Source: GSI

Supplementary table 1.3 to **FIGURE 1.3** Pupils with individual decisions on SNE, by Year in the period 2006-2007 to 2010-2011. Mainstream primary and lower secondary schools. Per cent.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
2006–2007	3.0	3.4	3.9	4.8	5.7	6.6	7.2	8.0	8.0	8.3
2007–2008	3.3	3.7	4.4	5.2	6.1	7.0	7.6	8.2	8.7	8.9
2008–2009	3.8	4.2	4.8	6.0	7.1	7.7	8.4	9.1	9.0	9.7
2009–2010	3.9	4.5	5.4	6.6	7.8	8.7	9.1	9.6	10.1	10.1
2010–2011	4.1	4.7	5.8	7.0	8.4	9.4	9.9	10.4	10.5	11.0

Source: GSI

Supplementary table 1.4 to **FIGURE 1.4** Pupils with adapted education in Norwegian, by county, 2010-2011. Mainstream primary and lower secondary schools. Per cent.

	Percentage of pupils		Percentage of pupils
Østfold	8.1	Rogaland	5.7
Akershus	5.7	Hordaland	5.7
Oslo	24.2	Sogn og Fjordane	3.6
Hedmark	4.3	Møre og Romsdal	4.2
Oppland	4.3	Sør-Trøndelag	4.1
Buskerud	8.6	Nord-Trøndelag	2.8
Vestfold	6.0	Nordland	3.9
Telemark	6.1	Troms	3.0
Aust-Agder	5.2	Finnmark	3.6
Vest-Agder	7.2		

Source: GSI and Statistics Norway

Supplementary table 1.5 to **FIGURE 1.5** Pupils who are given mother tongue instruction and/or bilingual subject teaching, 2006-2007 to 2010-2011. Mainstream primary and lower secondary schools. Number.

	Only mother tongue instruction	Both mother tongue instruction and bilingual subject teaching	Only bilingual subject teaching	Adapted education and training, Section 2-8, paragraph 3
2006-2007	4,882	5,293	9,902	1,307
2007-2008	6,400	3,794	9,702	1,453
2008-2009	3,611	4,561	11,111	1,903
2009-2010	3,059	5,751	10,780	2,275
2010-2011	2,664	4,377	11,564	2,761

Source: GSI

Supplementary table 1.6 to **FIGURE 1.6** Applicants to general studies and vocational education programmes in Vg1 as per 1 March 2011. Per cent.

General studies education programme	46.3
Media and Communication	6.9
Vocational education programme	46.7

Source: The Norwegian Directorate for Education and Training/VIGO 2011

Supplementary table 1.7 to **FIGURE 1.8** Pupils in upper secondary education and training by level, 2006-2007 to 2010-2011. Revised figures (2010-2011 preliminary figures). Number.

	Vg1	Vg2	Vg3
2006-2007	73,544	64,233	49,882
2007-2008	73,389	63,554	51,254
2008-2009	72,180	64,048	47,292
2009-2010	71,392	65,521	50,579
2010-2011	76,214	65,263	52,354

Source: Statistics Norway

Supplementary table 1.8 to **FIGURE 1.9** Pupils in general studies education programmes by level, 2006-2007 to 2010-2011. Revised figures (2010-2011 preliminary figures). Number.

	Vg1	Vg2	Vg3
2006-2007	34,061	29,068	39,381
2007-2008	34,318	29,683	41,067
2008-2009	33,359	30,236	41,345
2009-2010	32,772	30,558	44,674
2010-2011	35,508	29,877	45,640

Source: Statistics Norway

Supplementary table 1.9 to **FIGURE 1.10** Program areas in Vg2 Specialisation in General Studies, 2010-2011. Per cent.

	Percentage of pupils
Languages, social sciences and economics studies	56.3
Natural Science and Mathematics	39.4
Arts, Crafts and Design Studies	4.4

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

Supplementary table 1.10 to **FIGURE 1.11** Pupils in vocational education programmes by level, 2006-2007 to 2010-2011. Revised figures (2010-2011 preliminary figures). Number.

	Vg1	Vg2	Vg3
2006-2007	39,483	35,165	10,501
2007-2008	39,071	33,871	10,187
2008-2009	38,821	33,812	5,947
2009-2010	38,620	34,963	5,905
2010-2011	40,706	35,386	6,714

Source: Statistics Norway

Supplementary table 1.11 to **FIGURE 1.12** Apprentices by gender. 2006-2010. Number.

	2006	2007	2008	2009	2010
Men	25,097	27,566	27,935	25,469	24,134
Women	9,342	9,656	10,233	10,542	10,114

Source: Statistics Norway, preliminary figures

Supplementary table 1.12 to FIGURE 1.13 Adults in mainstream primary and lower secondary education and SNE, 2006-2007 to 2010-2011. Number.

Year of instruction	Number of participants who receive mainstream primary and lower secondary education	Number of participants who receive SNE
2006-2007	4,268	6,352
2007-2008	4,128	5,610
2008-2009	3,879	5,479
2009-2010	4,100	5,402
2010-2011	5,472	5,031

Source: GSI

Supplementary table 1.13 to FIGURE 1.14 The population's highest level of education. Persons age 20 and older by level of education and gender, 1982 to 2009. Per cent.

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Primary and lower secondary school, education not stated or no completed education, men	41.5	40.9	40.4	39.8	39.1	38.8	38.2	37.1	36.3	35.5
Primary and lower secondary school, education not stated or no completed education, women	49.3	48.7	48.1	47.4	46.7	46.1	45.3	44.1	43.2	42.3
Upper secondary school level, men	43.8	44.0	44.2	44.5	44.8	44.9	45.2	45.5	45.7	46.0
Upper secondary school level, women	39.9	40.1	40.3	40.5	40.9	41.1	41.3	41.7	41.9	42.1
University or university college, men	14.8	15.1	15.4	15.7	16.0	16.3	16.7	17.4	18.0	18.5
University or university college, women	10.8	11.2	11.6	12.1	12.5	12.8	13.4	14.1	14.9	15.6

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Primary and lower secondary school, education not stated or no completed education, men	34.7	33.8	32.9	32.0	31.2	30.5	29.9	29.2	29.2	28.9
Primary and lower secondary school, education not stated or no completed education, women	41.4	40.4	39.4	38.4	37.6	36.8	35.9	35.0	34.6	34.0
Upper secondary school level, men	46.2	46.6	47.0	47.3	47.5	47.6	47.7	48.1	48.0	47.9
Upper secondary school level, women	42.3	42.5	42.6	42.8	42.6	42.6	42.6	43.0	43.0	42.9
University or university college, men	19.1	19.6	20.2	20.7	21.3	21.9	22.4	22.7	22.8	23.1
University or university college, women	16.4	17.1	18.0	18.8	19.7	20.7	21.5	22.0	22.5	23.1

	2002	2003	2004	2005	2006	2007	2008	2009
Primary and lower secondary school, education not stated or no completed education, men	28.8	28.6	28.4	28.3	28.4	28.2	28.8	29.0
Primary and lower secondary school, education not stated or no completed education, women	33.4	32.9	32.3	31.8	31.4	30.4	30.2	30.1
Upper secondary school level, men	47.9	47.8	47.5	47.1	46.7	46.3	45.7	45.4
Upper secondary school level, women	42.8	42.6	42.2	41.7	41.3	41.1	40.6	40.2
University or university college, men	23.3	23.7	24.2	24.6	24.9	25.4	25.5	25.6
University or university college, women	23.7	24.5	25.5	26.5	27.3	28.5	29.1	29.7

Source: Statistics Norway

Supplementary table 1.14 to FIGURE 1.15 Percentage of teacher FTEs without an approved degree for the Year they teach in primary and lower secondary school, by size of municipality, 2004-2005 to 2010-2011. Per cent.

	0-2499 (n=130)	2500-4999 (n=107)	5000-9999 (n=90)	10000-19999 (n=57)	20000-50000 (n=34)	50000+ (n=12)
2004-2005	3.0	2.2	2.4	2.1	1.8	1.7
2005-2006	3.0	1.8	1.8	1.8	1.7	1.7
2006-2007	3.2	2.3	1.9	1.7	1.8	2.0
2007-2008	4.4	2.5	2.4	2.2	2.4	2.1
2008-2009	6.0	3.5	3.3	3.6	3.0	2.5
2009-2010	6.5	4.6	4.0	3.9	2.9	3.1
2010-2011	6.5	4.4	3.8	3.8	2.9	2.9

Source: GSI

Supplementary table 1.15 to **FIGURE 1.16** Percentage of teachers in primary and lower secondary school without a formally approved degree, by educational background. Fourth quarter 2009. Per cent.

	0–2499 (n=130)	2500–4999 (n=108)	5000–9999 (n=89)	10000–19999 (n=57)	20000–50000 (n=34)	50000+ (n=12)
Upper secondary	9,0	8,1	7,6	7,2	7,3	5,0
Graduate university or university college degree without teacher training	2,9	3,4	2,7	3,2	3,3	5,1
Undergraduate university or university college degree without teacher training	4,1	4,3	4,2	4,6	4,1	4,7

Kilde: SSB

Supplementary table 1.16 to **FIGURE 1.17** The age distribution of teachers and administrators in primary and lower secondary school. Fourth quarter 2009. Number.

	Number		Number
age 23 and under	1,184	age 47	1,344
age 24	705	age 48	1,440
age 25	962	age 49	1,599
age 26	1,150	age 50	1,621
age 27	1,384	age 51	1,660
age 28	1,396	age 52	1,588
age 29	1,443	age 53	1,742
age 30	1,560	age 54	1,787
age 31	1,648	age 55	1,902
age 32	1,770	age 56	1,990
age 33	1,889	age 57	1,980
age 34	2,071	age 58	1,976
age 35	2,285	age 59	1,884
age 36	2,354	age 60	1,811
age 37	2,444	age 61	1,747
age 38	2,383	age 62	1,411
age 39	2,230	age 63	1,231
age 40	2,286	age 64	860
age 41	2,113	age 65	553
age 42	1,879	age 66	334
age 43	1,700	age 67	179
age 44	1,557	age 68	97
age 45	1,440	age 69	79
age 46	1,424	age 70 and over	107

Source: Statistics Norway

Supplementary table 1.17 to **FIGURE 1.18** The age distribution of teachers and administrators in upper secondary education and training. Fourth quarter 2009. Number.

	Number		Number
age 23 and under	77	age 47	699
age 24	69	age 48	701
age 25	121	age 49	720
age 26	172	age 50	776
age 27	219	age 51	772
age 28	296	age 52	782
age 29	316	age 53	862
age 30	372	age 54	900
age 31	424	age 55	914
age 32	394	age 56	1 062
age 33	451	age 57	1 070
age 34	487	age 58	973
age 35	597	age 59	984
age 36	643	age 60	1 005
age 37	627	age 61	999
age 38	752	age 62	832
age 39	673	age 63	731
age 40	742	age 64	591
age 41	693	age 65	379
age 42	707	age 66	240
age 43	765	age 67	154
age 44	735	age 68	91
age 45	744	age 69	57
age 46	714	age 70 and over	95

Source: Statistics Norway

Supplementary table 2.1 to **FIGURE 2.1** Expenses per pupil by payroll and operating expenses. 2010. Per cent.

	NOK	Per cent
Total	90463	100
Payroll	69998	77
Fixtures and equipment	852	1
Teaching Materials	1492	2
School Premises	16541	18
Transportation	1580	2

Source: KOSTRA, Statistics Norway

Supplementary table 2.2 to **FIGURE 2.2** Expenses per pupil by size of municipality. 2007 to 2010. NOK.

Year	0–2,499 (n=129)	2,500-4,999 (n=107)	5,000-9,999 (n=90)	10,000-19,999 (n=57)	20,000-50,000 (n=34)	50,000+ (n=12)
2007	101,710	86,698	77,562	71,726	69,766	71,358
2008	110,821	93,569	83,606	77,917	74,543	75,337
2009	119,132	100,883	89,493	83,361	79,799	80,598
2010	126,300	106,179	94,485	87,805	83,664	84,572
2010 justert	101,596	97,247	91,823	88,932	86,183	87,292

Source: KOSTRA, Statistics Norway

Supplementary table 2.3 to **FIGURE 2.3** Expenses per pupil in general studies and vocational education programmes, adjusted for price and wage inflation. 2008-2010. NOK.

Year	General studies			Vocational studies		
	Total	Payroll	Operations	Total	Payroll	Operations
2008	106,102	64,141	41,961	131,506	84,947	46,559
2009	109,957	66,581	43,376	134,293	86,275	48,018
2010	108,764	66,268	42,496	132,875	85,615	47,260

Source: KOSTRA, Statistics Norway

Supplementary table 2.4 to **FIGURE 2.4** Expenses per pupil in general studies education programmes, adjusted for price and wage inflation. 2009 to 2010. NOK.

County	2009	2010
Østfold	113,882	108,776
Akershus	106,512	107,271
Oslo	113,038	118,151
Hedmark	113,120	110,966
Oppland	107,684	106,144
Buskerud	108,805	105,778
Vestfold	105,616	100,178
Telemark	103,680	98,814
Aust-Agder	109,733	105,762
Vest-Agder	98,160	98,487
Rogaland	105,923	102,380
Hordaland	111,768	108,025
Sogn og Fjordane	128,498	127,291
Møre og Romsdal	105,132	102,749
Sør-Trøndelag	105,055	103,551
Nord-Trøndelag	124,959	115,493
Nordland	108,051	117,604
Troms	122,280	124,315
Finnmark	130,600	130,527

Source: KOSTRA, Statistics Norway

Supplementary table 2.5 to **FIGURE 2.5** Expenses per pupil in vocational education programmes, adjusted for price and wage inflation. 2009 to 2010. NOK.

County	2009	2010
Østfold	138,496	134,454
Akershus	135,248	133,515
Oslo	135,400	141,258
Hedmark	138,112	133,698
Oppland	123,494	120,980
Buskerud	134,507	128,928
Vestfold	128,391	124,655
Telemark	127,028	123,480
Aust-Agder	134,037	131,024
Vest-Agder	119,006	127,257
Rogaland	132,854	126,041
Hordaland	140,828	132,339
Sogn og Fjordane	155,628	154,691
Møre og Romsdal	125,516	124,315
Sør-Trøndelag	120,913	120,899
Nord-Trøndelag	150,091	145,063
Nordland	134,707	147,375
Troms	149,481	151,988
Finnmark	144,746	143,921

Source: KOSTRA, Statistics Norway

Supplementary table 2.6 to **FIGURE 2.6** Group size 1 for Years 1-10, by size of municipality. 2004-2005 to 2010-2011. Number.

Year	0-2,499 (n=130)	2,500-4,999 (n=108)	5,000-9,999 (n=89)	10,000-19,999 (n=57)	20,000-50,000 (n=34)	50,000+ (n=12)
2004-05	10.3	11.6	13.0	14.2	14.7	15.4
2005-06	10.4	11.8	13.3	14.3	14.9	15.6
2006-07	10.2	11.7	13.1	14.3	14.7	15.6
2007-08	10.1	11.5	12.9	14.1	14.6	15.3
2008-09	9.9	11.5	13.0	13.9	14.6	15.3
2009-10	9.7	11.3	12.9	13.8	14.5	15.3
2010-11	9.6	11.4	13.0	13.7	14.4	15.4

Source: GSI

Supplementary table 2.7 to **FIGURE 2.7** Pupils per form teacher, by size of municipality. 2004-2005 to 2010-2011. Number.

Year	0-2,499 (n=130)	2,500-4,999 (n=107)	5,000-9,999 (n=90)	10,000-19,999 (n=57)	20,000-50,000 (n=34)	50,000+ (n=12)
2004-05	11.8	13.5	14.7	15.6	16.7	17.2
2005-06	12.1	13.8	14.7	15.6	16.3	17.1
2006-07	12.1	13.8	14.5	15.5	16.4	16.9
2007-08	11.9	13.7	14.3	15.3	16.4	16.8
2008-09	12.0	13.9	14.6	15.4	16.4	17.2
2009-10	12.2	14.0	14.8	15.9	16.8	17.4
2010-11	12.2	14.0	14.9	15.9	17.1	17.4

Source: GSI

Supplementary table 2.8 to **FIGURE 2.8** Assistant FTEs per 100 FTEs for teaching staff, by size of municipality. 2004-2005 to 2010-2011. Number.

Year	0-2,499 (n=130)	2,500-4,999 (n=107)	5,000-9,999 (n=90)	10,000-19,999 (n=57)	20,000-50,000 (n=34)	50,000+ (n=12)
2004-05	5.5	5.7	6.5	6.2	6.1	4.7
2005-06	6.3	6.6	7.2	7.1	6.4	5.2
2006-07	7.2	8.2	8.7	8.1	8.0	6.4
2007-08	7.5	8.5	9.9	9.3	9.3	7.7
2008-09	8.0	9.1	10.2	9.9	10.1	7.9
2009-10	8.3	9.6	10.5	10.1	10.0	8.3
2010-11	8.6	10.7	11.5	11.4	11.1	8.9

Source: GSI

Supplementary table 2.9 to **FIGURE 2.9** Percentage of estimated FTEs* for teaching staff used for instruction, by size of municipality. 2004-2005 to 2010-2011. Per cent.

Year	0-2,499 (n=130)	2,500-4,999 (n=107)	5,000-9,999 (n=90)	10,000-19,999 (n=57)	20,000-50,000 (n=34)	50,000+ (n=12)
2004-05	90.6	91.1	91.1	90.9	89.9	89.6
2005-06	91.4	91.2	90.4	91.2	90.4	89.9
2006-07	89.8	90.0	89.1	88.7	88.1	88.0
2007-08	89.8	90.0	88.8	88.5	88.6	88.1
2008-09	89.5	89.4	89.4	88.6	88.6	88.7
2009-10	88.7	88.9	88.5	88.2	88.5	87.8
2010-11	88.6	88.8	88.5	88.4	88.4	88.1

Source: GSI

Supplementary table 2.10 to **FIGURE 2.10** Percentage of pupils with adapted education in Norwegian, by size of municipality. 2004-2005 to 2010-2011. Per cent.

Year	0-2,499 (n=130)	2,500-4,999 (n=107)	5,000-9,999 (n=90)	10,000-19,999 (n=57)	20,000-50,000 (n=34)	50,000+ (n=12)
2004-05	2.6	3.1	3.6	3.5	4.6	8.1
2005-06	2.8	3.2	3.6	3.8	4.9	8.3
2006-07	2.7	3.3	3.7	3.9	5.3	8.8
2007-08	2.4	3.1	3.6	3.9	5.5	9.0
2008-09	2.4	3.0	3.5	4.1	5.6	9.3
2009-10	2.5	3.0	3.3	4.1	5.7	9.6
2010-11	3.6	3.7	3.7	4.2	6.0	9.7

Source: GSI

Supplementary table 2.11 to **FIGURE 2.11** Percentage of teaching hours for adapted education in Norwegian, by size of municipality. 2004-2005 to 2010-2011. Per cent.

Year	0-2,499 (n=130)	2,500-4,999 (n=107)	5,000-9,999 (n=90)	10,000-19,999 (n=57)	20,000-50,000 (n=34)	50,000+ (n=12)
2004-05	2.9	3.6	3.9	3.6	3.9	5.2
2005-06	3.0	3.5	3.8	3.6	4.0	5.3
2006-07	2.8	3.4	3.4	3.9	4.0	5.3
2007-08	2.2	3.0	3.2	3.3	4.1	5.2
2008-09	2.3	2.7	2.9	3.3	3.7	5.3
2009-10	2.1	2.6	2.7	3.3	3.9	5.1
2010-11	2.4	2.9	2.8	3.2	4.1	4.8

Source: GSI

Supplementary table 2.12 to **FIGURE 2.12** Trend in the extent of use of teaching hours for SNE for municipalities. 2004-2005 to 2010-2011. Number.

	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
0-10 per cent.	69	58	48	40	40	33	25
10-20 per cent.	320	311	294	285	285	273	258
≥20 per cent	41	61	88	105	105	124	147

Source: GSI

Supplementary table 2.13 to **FIGURE 2.13** Percentage of teaching hours for SNE, by size of municipality. 2004-2005 to 2010-2011. Per cent.

Year	0-2,499 (n=130)	2,500-4,999 (n=107)	5,000-9,999 (n=90)	10,000-19,999 (n=57)	20,000-50,000 (n=34)	50,000+ (n=12)
2004-05	13.8	14.8	14.7	13.8	13.8	12.6
2005-06	15.4	15.3	15.2	14.1	14.3	12.9
2006-07	15.8	16.4	16.2	15.2	15.1	13.3
2007-08	16.0	17.6	17.4	15.8	16.1	13.2
2008-09	16.0	17.6	17.4	15.8	16.1	13.2
2009-10	17.0	18.2	17.7	16.5	16.3	13.9
2010-11	18.0	19.4	18.7	16.8	17.5	14.6

Source: GSI

Supplementary table 2.14 to **FIGURE 2.14** Percentage of boys and girls with individual decisions on SNE, by size of municipality. 2004-2005 to 2010-2011. Per cent.

År	Boys						Girls					
	0-2,499 (n=130)	2,500-4,999 (n=107)	5,000-9,999 (n=90)	10,000-19,999 (n=57)	20,000-50,000 (n=34)	50,000+ (n=12)	0-2,499 (n=130)	2,500-4,999 (n=107)	5,000-9,999 (n=90)	10,000-19,999 (n=57)	20,000-50,000 (n=34)	50,000+ (n=12)
10.1	9.4	8.9	7.3	7.0	6.9	4.8	4.1	4.0	3.4	3.3	3.2	3.2
10.2	9.5	9.2	7.3	7.2	6.9	4.6	4.4	4.2	3.4	3.3	3.2	3.2
10.7	10.0	9.8	7.6	7.6	6.9	5.0	4.7	4.5	3.6	3.5	3.2	3.2
12.1	10.8	10.6	8.2	8.2	7.2	5.6	5.1	4.9	3.8	3.7	3.4	3.4
13.2	11.9	11.6	9.3	9.1	8.0	6.2	5.5	5.3	4.4	4.2	3.7	3.7
14.3	13.1	12.2	10.1	9.9	8.7	6.6	6.1	5.7	4.8	4.6	4.0	4.0
14.4	13.9	12.9	10.6	10.6	9.3	7.0	6.7	6.3	5.2	5.1	4.4	4.4

Source: GSI

Supplementary table 2.15 to **FIGURE 2.15** Distribution of individual decisions on SNE with teacher, broken down by number of hours. 2010-2011. Per cent.

Hours per year	Percentage
1-75 hours	8
76-190 hours	50
191-270 hours	19
More than 271 hours	24

Source: GSI

Supplementary table 2.16 to **FIGURE 2.16** Percentage of pupils with more than 271 hours per year, broken down by size of municipality. 2008-2009 to 2010-2011. Per cent.

Year	0-2,499 (n=130)	2,500-4,999 (n=107)	5,000-9,999 (n=90)	10,000-19,999 (n=57)	20,000-50,000 (n=34)	50,000+ (n=12)
2008-09	25.6	28.5	25.6	29.5	28.9	23.9
2009-10	22.3	25.8	23.7	28.9	26.8	24.1
2010-11	22.6	26.7	25.0	27.3	24.1	22.3

Source: GSI

Supplementary table 2.17 to **FIGURE 2.17** Percentage of decisions on hours with an assistant, by size of municipality. 2004-2005 to 2010-2011. Per cent.

År	Girls						Boys					
	0-2,499 (n=130)	2,500-4,999 (n=107)	5,000-9,999 (n=90)	10,000-19,999 (n=57)	20,000-50,000 (n=34)	50,000+ (n=12)	0-2,499 (n=130)	2,500-4,999 (n=107)	5,000-9,999 (n=90)	10,000-19,999 (n=57)	20,000-50,000 (n=34)	50,000+ (n=12)
2004-05	1.6	1.7	1.7	1.6	1.7	1.3	4.8	4.1	4.0	3.4	3.3	3.2
2005-06	1.6	1.8	1.9	1.8	1.8	1.5	4.6	4.4	4.2	3.4	3.3	3.2
2006-07	1.6	2.1	2.1	2.0	1.8	1.6	5.0	4.7	4.5	3.6	3.5	3.2
2007-08	1.7	2.1	2.1	2.0	1.9	1.7	5.6	5.1	4.9	3.8	3.7	3.4
2008-09	2.0	2.4	2.4	2.1	2.0	1.7	6.2	5.5	5.3	4.4	4.2	3.7
2009-10	2.4	2.5	2.4	2.3	2.3	1.9	6.6	6.1	5.7	4.8	4.6	4.0
2010-11	2.5	2.5	2.4	2.3	2.4	1.9	7.0	6.7	6.3	5.2	5.1	4.4

Source: GSI

Supplementary table 2.18 to **FIGURE 2.18** Number of participants per FTE of the teaching staff. 2004-2005 to 2010-2011.

Year	Number
2004-05	10.8
2005-06	11.4
2006-07	11.5
2007-08	10.5
2008-09	10.0
2009-10	10.6
2010-11	10.1

Source: GSI

Supplementary table 2.19 to **FIGURE 2.19** Number of hours per year of primary and lower secondary education and SNE per participant. 2004-2005 to 2010-2011.

Year	Mainstream primary and lower secondary education	SNE
2004-05	61.3	90.7
2005-06	44.6	59.8
2006-07	52.0	68.5
2007-08	57.2	73.4
2008-09	56.5	71.4
2009-10	55.2	67.0
2010-11	58.2	71.7

Source: GSI

Supplementary table 2.20 to **FIGURE 2.20** Expenses per pupil in the OECD countries for 2007. Figures adjusted for purchasing power and presented in USD.

Country	Years 1-7	Years 8-10	Upper secondary education and training
Luxembourg	13,985	17,928	17,928
USA	10,229	10,862	11,788
Norway	9,922	10,603	13,132
Iceland	9,629	9,147	7,807
Switzerland	9,211	10,574	17,362
Denmark	9,176	8,998	10,342
Austria	8,664	10,249	11,068
Sweden	8,338	9,020	9,247
UK	8,222	9,166	8,714
Italy	7,383	8,222	7,864
Japan	7,247	8,346	9,159
Ireland	6,901	9,207	9,575
Netherlands	6,552	9,902	10,616
Spain	6,533	8,155	9,867
Australia	6,498	8,967	8,639
Finland	6,234	9,730	6,806
France	6,044	8,339	11,082
Germany	5,548	6,851	9,557
Korea	5,437	6,287	9,620
Portugal	5,011	6,497	7,243
New Zealand	4,675	5,146	6,828
Hungary	4,656	4,321	4,131
Poland	4,063	3,643	3,543
Slovakia	3,499	2,946	3,475
Czech Re-public	3,359	5,635	5,428
Chile	2,268	2,190	2,239
Mexico	2,111	1,814	3,070
OECD average	6,741	7,598	8,746

Source: OECD 2010

Supplementary table 2.21 to **FIGURE 2.21** Teacher salary after 15 years of experience relative to average pay for persons with an equivalent level of education for 2008.

Country	Years 1-7	Years 8-10	Upper secondary education and training
Spain	1.12	1.26	1.28
New Zealand	0.97	0.97	0.97
Australia	0.93	0.94	0.94
Sweden	0.90	0.93	0.99
Belgium (Fl.)	0.90	0.90	1.14
Scotland	0.89	0.89	0.89
Germany	0.89	0.97	1.04
Finland	0.87	0.93	1.02
Belgium (Fr.)	0.86	0.86	1.10
Denmark	0.85	0.85	1.06
England	0.82	0.82	0.82
Korea	0.82	0.81	0.81
France	0.78	0.85	0.85
Greece	0.74	0.74	0.74
Netherlands	0.73	0.80	1.07
Portugal	0.72	0.72	0.72
Austria	0.72	0.77	0.79
Norway	0.66	0.66	0.70
USA	0.60	0.60	0.65
Poland	0.59	0.68	0.78
Italy	0.54	0.58	0.60
Hungary	0.50	0.50	0.60
Iceland	0.50	0.50	0.61
Czech Republic	0.49	0.50	0.53
OECD average	0.77	0.79	0.86

Source: OECD 2010

Supplementary table 2.22 to **FIGURE 2.22** Teaching hours (teaching load) for 2008, measured in hours per year.

Country	Years 1-7	Years 8-10	Upper secondary education and training
USA	1,097	1,068	1,051
New Zealand	985	968	950
Netherlands	930	750	750
France	926	644	630
Ireland	915	735	735
Spain	880	713	693
Australia	873	812	810
Portugal	855	752	752
Scotland	855	855	855
Czech Re-public	849	637	608
Korea	840	616	604
Belgium (Fl.)	810	695	649
Germany	805	756	715
Mexico	800	1,047	848
Austria	779	607	589
Norway	741	654	523
Luxembourg	739	634	634
Italy	735	601	601
Belgium (Fr.)	724	662	603
Japan	709	603	500
Finland	677	592	550
Iceland	671	671	560
England	654	722	722
Denmark	648	648	364
Hungary	611	611	611
Greece	593	429	429
Poland	513	513	513
OECD average	786	703	661

Source: OECD 2010

Supplementary table 2.23 to **FIGURE 2.23** Number of pupils per teacher* for 2008.

Country	Years 1-7	Years 8-10	Upper secondary education and training
Mexico	28.0	33.9	25.8
Korea	24.1	20.2	16.5
Chile	24.1	24.1	25.2
UK	20.2	15.0	12.4
France	19.9	14.6	9.4
Japan	18.8	14.7	12.3
Slovakia	18.6	14.5	15.1
Czech Re-public	18.1	11.8	12.2
Germany	18.0	15.0	14.0
New Zealand	17.1	16.2	12.8
Switzerland	15.4	12.1	10.4
Finland	14.4	10.6	15.9
USA	14.3	14.8	15.6
Spain	13.1	10.3	8.7
Austria	12.9	9.9	10.5
Belgium	12.6	8.1	10.8
Sweden	12.2	11.4	14.7
Portugal	11.3	8.1	7.3
Norway	10.8	10.1	9.9
Hungary	10.6	10.9	12.3
Italy	10.6	9.7	11.8
Poland	10.5	12.9	12.2
OECD average	16.4	13.7	13.5

Source: OECD 2010

Supplementary table 3.1 to **FIGURE 3.1** Norwegian pupils' outcomes in PISA in 2000, 2003, 2006 and 2009. Avg. score.

	2000	2003	2006	2009
Reading	505	500	484	503
Mathematics	499	495	489	498
Natural Sciences	500	484	486	500

Source: Kjærnsli and Roe 2010

Supplementary table 3.2 to the diagram in **FIGURE 3.3** Percentages of in various levels in Reading in PISA 2009.

	Under 1b	Level 1b	Level 1a	Level 2	Level 3	Level 4	Level 5	Level 6
Korea	0.2	0.9	4.7	15.4	33.0	32.9	11.9	1.0
Finland	0.2	1.5	6.4	16.7	30.1	30.6	12.9	1.6
Canada	0.4	2.0	7.9	20.2	30.0	26.8	11.0	1.8
New Zealand	0.9	3.2	10.2	19.3	25.8	24.8	12.9	2.9
Japan	1.3	3.4	8.9	18.0	28.0	27.0	11.5	1.9
Australia	1.0	3.3	10.0	20.4	28.5	24.1	10.7	2.1
Netherlands	0.1	1.8	12.5	24.7	27.6	23.5	9.1	0.7
Belgium	1.1	4.7	11.9	20.3	25.8	24.9	10.1	1.1
Norway	0.5	3.4	11.0	23.6	30.9	22.1	7.6	0.8
Switzerland	0.7	4.1	12.1	22.7	29.7	22.6	7.4	0.7
Poland	0.6	3.1	11.3	24.5	31.0	22.3	6.5	0.7
Iceland	1.1	4.2	11.5	22.2	30.6	21.9	7.5	1.0
USA	0.6	4.0	13.1	24.4	27.6	20.6	8.4	1.5
Sweden	1.5	4.3	11.7	23.5	29.8	20.3	7.7	1.3
Germany	0.8	4.4	13.3	22.2	28.8	22.8	7.0	0.6
Ireland	1.5	3.9	11.8	23.3	30.6	21.9	6.3	0.7
France	2.3	5.6	11.8	21.1	27.2	22.4	8.5	1.1
Denmark	0.4	3.1	11.7	26.0	33.1	20.9	4.4	0.3
UK	1.0	4.1	13.4	24.9	28.8	19.8	7.0	1.0
Hungary	0.6	4.7	12.3	23.8	31.0	21.6	5.8	0.3
OECD average	1.1	4.6	13.1	24.0	28.9	20.7	6.8	0.8
Portugal	0.6	4.0	13.0	26.4	31.6	19.6	4.6	0.2
Italy	1.4	5.2	14.4	24.0	28.9	20.2	5.4	0.4
Slovenia	0.8	5.2	15.2	25.6	29.2	19.3	4.3	0.3
Greece	1.4	5.6	14.3	25.6	29.3	18.2	5.0	0.6
Spain	1.2	4.7	13.6	26.8	32.6	17.7	3.2	0.2
Czech Republic	0.8	5.5	16.8	27.4	27.0	17.4	4.7	0.4
Slovakia	0.8	5.6	15.9	28.1	28.5	16.7	4.2	0.3
Luxembourg	3.1	7.3	15.7	24.0	27.0	17.3	5.2	0.5
Israel	3.9	8.0	14.7	22.5	25.5	18.1	6.4	1.0
Austria	1.9	8.1	17.5	24.1	26.0	17.4	4.5	0.4
Turkey	0.8	5.6	18.1	32.2	29.1	12.4	1.8	0.0
Chile	1.3	7.4	21.9	33.2	25.6	9.3	1.3	0.0
Mexico	3.2	11.4	25.5	33.0	21.2	5.3	0.4	0.0

Source: Kjærnsli and Roe 2010

Supplementary table 3.3 to **FIGURE 3.5** Average for national tests in *Reading, Mathematics* and *English* (combined) in Year 5 in 2007 and Year 8 in 2010. Counties. Standardised score with an average of 50.

County	Year 5 in 2007	Year 8 in 2010
Oslo	52.3	52.3
Akershus	52.0	51.7
Rogaland	50.4	50.7
Sogn og Fjordane	50.3	51.1
Troms	50.1	50.6
Sør-Trøndelag	50.0	49.9
Hordaland	49.9	49.4
Buskerud	49.8	50.0
Møre og Romsdal	49.8	49.5
Vestfold	49.5	49.4
Oppland	49.5	49.1
Østfold	49.1	48.6
Hedmark	49.1	48.8
Nord-Trøndelag	48.7	48.8
Nordland	48.6	48.9
Telemark	48.3	48.4
Vest-Agder	48.2	48.5
Finnmark	48.1	49.7
Aust-Agder	47.8	49.3

Source: Opheim et al. 2011

Supplementary table 3.4 to **FIGURE 3.6** Percentage of pupils exempted from national tests in *Reading* in Year 5. 2007 to 2010. Per cent.

County	2007	2008	2009	2010
Oslo	3.3	3.5	7.0	6.6
Aust-Agder	3.0	6.1	4.0	6.2
Troms	2.5	2.6	3.5	5.3
Hedmark	3.2	3.9	4.8	5.0
Telemark	2.3	2.7	2.5	4.8
Vest-Agder	2.5	3.4	2.7	4.6
Buskerud	2.4	3.2	4.4	4.5
Vestfold	3.0	3.5	3.6	4.1
Rogaland	1.7	2.1	3.2	3.8
Nordland	2.5	2.9	4.5	3.7
Østfold	2.4	2.2	3.2	3.6
Oppland	2.7	2.5	3.9	3.5
Hordaland	1.6	2.3	2.9	3.2
Finnmark	2.0	1.8	2.6	3.2
Sør-Trøndelag	1.6	1.7	2.3	3.1
Nord-Trøndelag	2.3	2.4	3.3	3.1
Møre og Romsdal	1.6	1.8	2.7	3.0
Sogn og Fjordane	1.7	1.9	3.8	2.9
Akershus	1.7	2.0	2.0	2.7

Source: Norwegian Directorate for Education and Training 2010b

Supplementary table 3.5 to **FIGURE 3.7** Municipalities broken down by mastering level for national tests in *Reading* in Year 5. 2007 to 2010. Number.

Mastering Level	2007	2008	2009	2010
1.2 -1.4	0	2	0	0
1.4 -1.6	9	9	8	12
1.6 -1.8	63	25	54	40
1.8 -2.0	207	165	174	155
2.0 -2.2	115	157	153	153
2.2 -2.4	13	39	17	38
2.4 -2.6	1	5	2	2
2.6 -2.8	0	1	0	0
2.8 -3.0	0	1	0	0

Source: Norwegian Directorate for Education and Training 2010b

Supplementary table 3.6 to **FIGURE 3.8** Written examination marks in Mathematics in Year 10, 2007-2008 to 2009-2010.

County	2007-2008	2008-2009	2009-2010
National average	3.2	3.4	3.2
Østfold	3.1	3.2	3.1
Akershus	3.4	3.6	3.4
Oslo	3.3	3.6	3.6
Hedmark	3.0	3.2	3.1
Oppland	3.1	3.4	3.2
Buskerud	3.2	3.5	3.2
Vestfold	3.2	3.5	3.3
Telemark	2.9	3.3	2.9
Aust-Agder	3.1	3.3	3.2
Vest-Agder	3.2	3.4	3.2
Rogaland	3.2	3.4	3.3
Hordaland	3.2	3.4	3.3
Sogn og Fjordane	3.5	3.6	3.5
Møre og Romsdal	3.3	3.5	3.3
Sør-Trøndelag	3.2	3.4	3.3
Nord-Trøndelag	3.2	3.4	3.3
Nordland	3.0	3.3	3.0
Troms	3.0	3.3	3.1
Finnmark	2.8	3.0	2.9

Source: Norwegian Directorate for Education and Training 2010d

Supplementary table 3.7 to **FIGURE 3.9** Lower secondary school points with a 95 per cent confidence interval, by county, 2009-2010.

County	Average lower secondary school points	95 per cent confidence interval, upper	95 per cent confidence interval, lower
Østfold	36.8	37.2	36.4
Telemark	37.3	37.7	36.8
Troms	37.6	38.1	37.1
Finnmark	37.7	38.4	37.0
Hedmark	37.9	38.4	37.5
Oppland	37.9	38.3	37.4
Nordland	37.9	38.3	37.5
Nord-Trøndelag	38.0	38.5	37.5
Vestfold	38.1	38.5	37.7
Aust-Agder	38.1	38.7	37.5
Vest-Agder	38.1	38.5	37.7
Rogaland	38.3	38.5	38.0
Sør-Trøndelag	38.5	38.8	38.1
Buskerud	38.7	39.1	38.4
Møre og Romsdal	39.2	39.6	38.9
Hordaland	39.5	39.8	39.2
Akershus	39.9	40.1	39.7
Oslo	40.1	40.4	39.8
Sogn og Fjordane	40.2	40.6	39.7

Source: Opheim et al. 2011

Supplementary table 3.8 to **FIGURE 3.11** Examination marks in selected common core subjects in vocational education programmes, broken down by county. 2009-2010.

County	Norwegian	Mathematics 1P-Y	English
National	3.3	2.9	2.8
Østfold	3.3	2.6	2.3
Akershus	3.3	2.8	3.1
Oslo	3.5	3.0	2.8
Hedmark	3.4	2.9	2.9
Oppland	3.5	2.9	2.8
Buskerud	3.1	2.6	2.7
Vestfold	3.3	2.9	3.0
Telemark	3.1	2.5	2.6
Aust-Agder	2.8	3.1	2.4
Vest-Agder	3.4	2.7	3.3
Rogaland	3.2	2.8	2.8
Hordaland	3.3	2.7	2.9
Sogn og Fjordane	3.5	2.3	3.1
Møre og Romsdal	3.4	3.7	3.0
Sør-Trøndelag	3.4	3.1	3.3
Nord-Trøndelag	3.3	3.7	2.8
Nordland	3.5	2.7	2.7
Troms	3.6	3.2	2.7
Finnmark	3.2	2.1	2.5

Source: Norwegian Directorate for Education and Training 2010e

Supplementary table 3.9 to **FIGURE 3.12** Passed craft and journeyman's examinations, by county. 2010. Preliminary figures. Per cent.

	Passed with distinction	Passed	Failed
Hordaland	14	75	11
Oslo	15	69	16
Sør-Trøndelag	16	73	11
Sogn og Fjordane	20	74	5
Nord-Trøndelag	21	72	7
Troms	21	72	8
Oppland	21	69	10
Finnmark	22	69	9
Rogaland	22	68	9
Vest-Agder	22	68	9
Akershus	22	69	9
Østfold	25	63	13
Buskerud	25	65	10
Aust-Agder	25	65	10
Telemark	26	66	8
Vestfold	26	67	8
Hedmark	28	66	6
Møre og Romsdal	28	66	6
Nordland	36	55	9

Source: Statistics Norway

Supplementary table 3.10 to **FIGURE 3.13** Average overall achievement marks in primary and lower secondary school in the 2009-2010 school year, broken down by subject and gender.

	Boys	Girls
<i>English, written</i>	3.7	4.0
<i>English, oral</i>	3.9	4.2
<i>In-depth study in English</i>	3.5	3.9
<i>French 1</i>	3.7	4.2
<i>Spanish 1</i>	3.7	4.2
<i>German 1</i>	3.7	4.1
<i>Arts and Crafts</i>	4.0	4.6
<i>Physical Education</i>	4.5	4.3
<i>Mathematics</i>	3.5	3.7
<i>Food and Health</i>	4.1	4.7
<i>Music</i>	4.1	4.5
<i>Natural Sciences</i>	3.8	4.2
<i>In-depth study in Norwegian</i>	3.3	3.7
<i>Norwegian, first-choice form</i>	3.6	4.2
<i>Norwegian, second-choice form</i>	3.4	4.0
<i>Norwegian, oral</i>	3.9	4.4
<i>Religion, Philosophy and Ethics</i>	3.8	4.3
<i>Social Studies</i>	3.9	4.3

Source: Norwegian Directorate for Education and Training 2010d

Supplementary table 3.11 to **FIGURE 3.14** Breakdown of marks for boys and girls in examinations in Mathematics in Natural Science 2. 2009-2010. Per cent.

Marks	Boys	Girls
1	16.2	9.7
2	18.6	18.0
3	17.2	19.2
4	19.7	22.0
5	21.4	22.5
6	7.0	8.5

Source: Bjørkeng 2011

Supplementary table 3.12 to **FIGURE 3.15** Average score for all national tests in Years 5 and 8, broken down by the parents' level of education. 2010. Standardised scores with an average of 50.

	Year 5	Year 8
Unknown	46.0	43.5
Primary and lower secondary school	44.7	43.5
Vg1 + Vg2	46.1	45.9
Vg3	47.6	47.7
Supplementary year	49.2	49.4
Undergraduate degree	51.6	52.3
Graduate degree	55.3	56.4
Doctorate	56.9	58.9

Source: Opheim et al. 2011

Supplementary table 3.13 to **FIGURE 3.17** Average lower secondary school points broken down by immigrant background and gender. Pupils in Year 10 in the 2009-2010 school year.

	Boys	Girls	Total
Non-western countries, immigrants	27.0	30.5	28.7
Western countries, immigrants	33.2	36.9	35.1
Non-western countries, descendants	35.8	40.2	37.9
The majority group	37.2	41.4	39.3
Western countries, descendants	38.2	43.4	40.5

Source: Opheim et al. 2011

Supplementary table 3.14 to **FIGURE 3.18** Distribution of mastering levels on national tests in Mathematics in Year 8 in 2010, broken down by the pupils' mastering level in Mathematics in Year 5 in 2007.

	Level 1+2, Year 8	Level 3, Year 8	Level 4+5, Year 8
Level 1, Year 5	66.8	31.5	1.7
Level 2, Year 5	16.9	59.1	24.1
Level 3, Year 5	1.3	22.8	76.0

Source: Statistics Norway

Supplementary table 3.15 to **FIGURE 3.19** Disparities in outcomes in Reading among and within schools in PISA 2009. The disparity is calculated relative to the average variance in the OECD countries (100).

	Total variance in the Reading outcomes	Disparities within schools	Disparities among schools	Socio-economic disparities within schools	Socio-economic disparities among schools
Finland	83	75	9	16.9	2.2
Norway	92	82	10	14.6	2.2
Denmark	78	62	16	17.0	8.8
Iceland	104	89	14	14.5	3.6
Poland	92	73	19	26.2	12.2
Spain	84	62	22	16.6	9.5
Sweden	110	92	18	27.7	13.8
Canada	94	72	22	15.6	9.7
Portugal	84	51	33	24.0	18.3
New Zealand	118	94	24	36.3	22.7
Australia	112	86	26	26.6	19.7
Switzerland	91	59	33	23.6	17.8
Korea	87	53	34	23.4	18.5
UK	103	73	29	27.7	23.2
Ireland	106	77	29	24.1	18.0
Slovakia	82	43	40	26.4	20.0
OECD average	100	61	39	30.6	24.7
Mexico	81	33	48	19.2	17.6
USA	110	74	36	35.1	30.4
Slovenia	79	22	57	27.0	25.2
Czech Republic	94	45	49	37.0	33.8
Greece	112	66	46	32.7	28.0
Chile	97	42	55	41.2	39.9
Japan	114	65	49	32.3	30.8
Netherlands	86	21	65	32.7	31.3
Belgium	111	58	53	42.6	40.2
Austria	108	53	56	38.3	36.1
Hungary	95	29	67	46.3	44.8
Germany	106	46	60	49.0	45.4
Israel	140	91	49	36.1	32.8
Turkey	106	39	67	59.2	56.0
Italy	117	55	62	43.4	41.4

Source: Kjærnsli and Roe 2010

Supplementary table 4.1 to **FIGURE 4.1** Construct values in the Nordic countries based on the pupil questionnaire. Average in OECD countries is 0.00. Standard deviation is 1.00.

	Norway	Denmark	Finland	Iceland	Sweden
Outcome of schooling	-0.25	0.04	-0.01	0.11	-0.08
Teacher-pupil relationship	-0.17	0.18	-0.16	0.17	0.15
Working environment in the class	-0.24	0.01	-0.29	-0.05	-0.03
Library use	-0.16	0.01	-0.03	-0.47	-0.15

Source: PISA 2009

Supplementary table 5.1: Pupils in Vg2 as per 1 October 2010, by education programme. Number, percentage and percentage with the youth right. Non-revised figures.

	Number	Percentage	Change in percentage	Percentage with the youth right
All education programmes	65,263	100.0		91.5
Sports and Physical Education	3,583	5.5	0.1	97.2
Music, Dance and Drama	2,073	3.2	0.2	95.2
Specialisation in General Studies	24,221	37.1	-0.2	93.9
Building and Construction	4,132	6.3	-0.9	92.9
Design, Arts and Crafts	2,291	3.5	0.1	91.3
Electricity and Electronics	4,064	6.2	0.1	94.9
Health and Social Care	8,545	13.1	1.3	76.6
Media and Communication	3,216	4.9	0.1	97.0
Agriculture, Fishing and Forestry	1,544	2.4	0.1	82.8
Restaurant and Food Processing	1,994	3.1	-0.1	90.9
Service and Transport	3,932	6.0	0.1	93.1
Technical and Industrial Production	5,668	8.7	0.0	93.9

Source: Norwegian Directorate for Education and Training 2011

Supplementary table 5.2: Pupils in Vg3 as per 1 October 2010, by education programme. Number, percentage and percentage with the youth right. Non-revised figures.

	Number	Percentage	Change in percentage	Percentage with the youth right
All education programmes	52,351	100.0		82.3
Sports and Physical Education	3,741	7.1	-0.3	92.5
Music, Dance and Drama	1,949	3.7	-0.1	96.4
Specialisation in General Studies	26,651	50.9	-0.9	90.5
Vg3 supplementary year qualifying for higher education	13,297	25.4	2.5	63.8
Building and Construction	210	0.4	-0.3	60.0
Design, Arts and Crafts	361	0.7	-1.4	76.2
Electricity and Electronics	1,122	2.1	0.2	85.7
Health and Social Care	1,109	2.1	-2.1	53.5
Media and Communication	2,368	4.5	2.7	96.2
Agriculture, Fishing and Forestry	917	1.8	1.0	62.2
Restaurant and Food Processing	14	0.0	-0.3	42.9
Service and Transport	217	0.4	0.3	24.4
Technical and Industrial Production	395	0.8	0.4	73.7

Source: Norwegian Directorate for Education and Training 2011

Supplementary table 5.3 to **FIGURE 5.2** The correlation between pupils in Vg1 vocational education and training and new apprentices. Number and percentage.

	Number of pupils in Vg1	Number of apprentices	Percentage of pupils who are apprentices
Total vocational studies	40,706	15,256	37.5
Media and Communication	3,814	86	2.3
Agriculture, Fishing and Forestry	1,879	366	19.5
Health and Social Care	8,810	2,408	27.3
Design, Arts and Crafts	3,327	1,100	33.1
Restaurant and Food Processing	2,543	1,057	41.6
Service and Transport	3,404	1,478	43.4
Technical and Industrial Production	7,056	3,260	46.2
Electricity and Electronics	4,846	2,276	47.0
Building and Construction	5,027	3,225	64.2

Source: Norwegian Directorate for Education and Training 2011

Supplementary table 5.4 to **FIGURE 5.3** Completion after the stipulated time + two years for the 1998-2003 age cohorts, by education programme. Percentage.

		Completed in stipulated time	Completed in stipulated time + 2 years	Still in upper secondary education and training	Completed Vg3 or took craft examination, failed	Quit under way
General studies	1998	75.1	8.9	3.0	4.6	8.3
	1999	75.7	8.0	2.7	5.3	8.3
	2000	73.1	8.8	3.3	6.9	7.9
	2001	75.4	7.3	3.2	6.2	7.9
	2002	76.2	6.6	3.0	6.9	7.4
	2003	74.7	8.7	2.1	7.6	6.9
General studies	1998	40.1	22.1	4.4	4.2	29.2
	1999	39.6	21.3	4.9	5.4	28.8
	2000	37.0	22.8	5.7	6.1	28.4
	2001	40.3	20.5	5.6	6.6	27.0
	2002	39.2	21.2	4.8	7.8	27.0
	2003	40.4	22.5	4.5	7.3	25.4

Source: Statistics Norway 2011

Supplementary table 5.5 to **FIGURE 5.4** Completed and passed within two years beyond the stipulated time for the 2003 age cohort, by county and education programme. Percentage.

	General studies	Vocational studies	Total
Total	82.9	61.2	71.2
Abroad and unspecified	43.3	46.5	45.0
Finnmark	69.9	43.5	55.4
Troms	80.2	54.8	65.6
Nordland	82.1	52.6	65.9
Vestfold	81.1	52.8	66.1
Hedmark	80.8	57.3	67.1
Østfold	85.6	54.6	67.3
Aust-Agder	84.1	62.0	71.7
Oppland	87.5	62.1	71.8
Telemark	81.7	64.8	72.3
Buskerud	84.3	62.6	72.4
Akershus	80.7	64.5	73.2
Hordaland	83.4	65.5	73.2
Nord-Trøndelag	86.7	64.6	73.2
Oslo	84.1	55.9	73.4
Vest-Agder	87.6	62.8	73.5
Møre og Romsdal	85.1	66.0	74.3
Rogaland	84.8	67.1	74.8
Sør-Trøndelag	85.4	66.6	75.4
Sogn og Fjordane	88.7	66.0	76.4

Source: Statistics Norway 2011

Supplementary table 5.6 to **FIGURE 5.5** Competence achievement among the pupils who do not complete and pass. Percentage.

		Passed	Completed, failed	Commenced
Total	Still in upper secondary education and training			3.3
	Vg3 / Apprenticeship		7.3	3.8
	Vg2	3.2	3.5	1.7
	Basic course	1.3	3.0	1.7
General studies	Still in upper secondary education and training			2.1
	Vg3 / Apprenticeship		7.5	1.3
	Vg2	0.8	1.2	0.8
	Basic course	0.9	1.9	0.7
Vocational studies	Still in upper secondary education and training			4.4
	Vg3 / Apprenticeship		7.1	6.0
	Vg2	5.3	5.5	2.5
	Basic course	1.6	3.9	2.6

Source: Statistics Norway 2011

Supplementary table 5.7 to **FIGURE 5.6** Completed and passed for the 1998 age cohort by county and number of years since commencement of study. Percentage.

	Completed in stipulated time	Completed after 5 years	Completed after 6 years	Completed after 10 years
National average	58	71	75	79
Finnmark	40	55	60	68
Nordland	47	61	66	73
Østfold	55	69	72	76
Troms	55	67	70	76
Hedmark	56	69	73	78
Telemark	56	70	74	80
Sør-Trøndelag	58	73	77	82
Buskerud	58	72	76	79
Hordaland	58	72	75	80
Vestfold	59	70	74	79
Møre og Romsdal	59	74	78	82
Nord-Trøndelag	59	74	79	83
Oslo	60	71	74	78
Sogn og Fjordane	60	75	79	83
Rogaland	61	75	79	83
Aust-Agder	61	74	78	82
Oppland	63	73	77	80
Vest-Agder	64	77	81	83
Akershus	67	77	79	82

Source: Statistics Norway 2011

Supplementary table 5.8 to **FIGURE 5.7** Completed and passed for the 1998 age cohort by education programme and number of years since commencement of study. Percentage.

	Completed in stipulated time	Completed after 5 years	Completed after 6 years	Completed after 10 years
Woodworking	27	40	42	50
Electricity and Electronics	28	61	72	78
Mechanical Subjects	30	45	51	58
Hotel and Catering	30	45	50	56
Technical Construction and Building	30	49	54	60
Construction and Building	37	56	60	67
Health and Social Care	51	63	67	72
Chemistry and Processing	51	71	75	78
Arts, Crafts and Design Studies	51	66	69	75
Agriculture, Fishing and Forestry	52	64	67	70
General, Business and Administration Studies	74	84	86	89
Sports and Physical Education	76	84	85	90
Music, Dance and Drama	80	88	90	93

Source: Statistics Norway 2011

Supplementary table 5.9 to **FIGURE 5.8** Direct transition from primary and lower secondary school to upper secondary education and training, by county. Percentage.

	2009	2010 preliminary figures
Østfold	96.4	92.1
Oslo	93.4	93.2
Telemark	96.3	95.7
Nordland	96.4	95.9
Vestfold	95.6	95.9
Nord-Trøndelag	98.4	96.2
Hedmark	96.6	96.2
Troms	95.9	96.3
Buskerud	96.3	96.9
Vest-Agder	96.7	97.0
Finnmark	95.4	97.0
Sør-Trøndelag	96.8	97.0
Rogaland	97.5	97.4
Hordaland	98.0	97.5
Akershus	97.6	97.5
Aust-Agder	97.9	97.7
Møre og Romsdal	98.0	97.9
Oppland	98.1	98.2
Sogn og Fjordane	98.4	98.8
National average	96.8	96.4

Source: Statistics Norway, KOSTRA 2011

Supplementary table 5.10 to **FIGURE 5.10** Pupils in Vg1 in 2009 and 2010 with an ordinary progression, by county. Percentage.

	2009	2010 preliminary figures
National average	82.9	81.0
Finnmark	66.8	72.1
Troms	79.8	75.9
Nordland	76.3	76.9
Telemark	82.3	77.4
Hordaland	79.1	78.5
Hedmark	82.7	78.9
Oslo	85.4	79.7
Oppland	83.3	80.0
Vest-Agder	85.4	80.6
Vestfold	85.7	80.6
Rogaland	85.4	81.2
Sør-Trøndelag	82.8	81.5
Møre og Romsdal	83.8	82.7
Aust-Agder	83.0	83.3
Sogn og Fjordane	82.5	83.4
Nord-Trøndelag	83.1	84.0
Buskerud	85.3	85.2
Østfold	84.8	85.2
Akershus	85.8	85.4

Source: Gjennomføringsbarometeret 2011:1 (the Norwegian Report on Upper Secondary Completion 2011:1)

Supplementary table 5.11 to **FIGURE 5.11** Pupils in Vg2 in 2009 and 2010 with an ordinary progression, by county. Percentage.

	2009	2010 preliminary figures
National average	78.8	77.9
Nordland	65.3	66.3
Finnmark	59.4	68.3
Troms	70.6	73.4
Telemark	77.2	74.1
Nord-Trøndelag	77.3	74.8
Buskerud	76.5	75.1
Hedmark	76.0	76.1
Østfold	79.2	76.4
Sør-Trøndelag	75.0	76.5
Oppland	77.6	76.5
Aust-Agder	77.3	78.1
Sogn og Fjordane	81.4	78.8
Hordaland	80.9	79.1
Møre og Romsdal	76.9	79.4
Akershus	82.5	80.8
Vest-Agder	82.6	80.8
Vestfold	83.8	81.7
Rogaland	84.0	81.8
Oslo	87.9	84.8

Source: Gjennomføringsbarometeret 2011:1 (the Norwegian Report on Upper Secondary Completion 2011:1)

Supplementary table 5.12: Pupils in Vg3 in 2008 and 2009 with an ordinary progression, by county. Percentage.

	2008	2009
National average	72.9	73.9
Finnmark	54.9	59.4
Telemark	74.9	66.8
Nord-Trøndelag	75.0	68.3
Østfold	67.0	71.0
Troms	66.2	71.4
Vestfold	73.6	72.5
Aust-Agder	62.8	72.6
Hordaland	71.2	72.7
Sør-Trøndelag	78.0	72.7
Nordland	72.8	73.3
Buskerud	64.8	74.4
Akershus	71.3	74.7
Hedmark	71.2	75.1
Oppland	72.2	75.3
Oslo	77.4	76.0
Møre og Romsdal	84.7	76.0
Rogaland	77.3	76.8
Vest-Agder	75.9	80.2
Sogn og Fjordane	78.3	83.7

Source: Gjennomføringsbarometeret 2011:1 (the Norwegian Report on Upper Secondary Completion 2011:1)

Supplementary table 5.13 to **FIGURE 5.12** Pupils in Vg1 in 2007 who are out of education and training for one or two years, by county. Percentage.

	Out of upper secondary education and training for two years	Out of upper secondary education and training for one year
National average	7.8	10.5
Nord-Trøndelag	6.1	9
Møre og Romsdal	6.3	10.1
Oppland	6.4	10.3
Vest-Agder	6.5	9
Sogn og Fjordane	6.5	9.8
Oslo	6.6	8.9
Hedmark	6.6	8.1
Østfold	6.8	10.3
Akershus	6.8	7.4
Sør-Trøndelag	7.1	10.4
Buskerud	7.3	10.7
Rogaland	7.3	9.1
Aust-Agder	7.4	11.6
Hordaland	7.4	9.2
Vestfold	7.6	10.9
Telemark	7.7	10.2
Troms	8.3	13.2
Finnmark	12.4	17.6
Nordland	18.6	22.3

Source: Gjennomføringsbarometeret 2011:1 (the Norwegian Report on Upper Secondary Completion 2011:1)

Supplementary table 5.14 to **FIGURE 5.13** Pupils in Vg2 in 2007 who are out of education and training for one or two years, by county. Percentage.

	Out of upper secondary education and training for two years	Out of upper secondary education and training for one year
National average	11.8	15.8
Oslo	7.5	10.2
Rogaland	8.3	12.1
Vest-Agder	8.4	12.1
Akershus	8.9	12.2
Møre og Romsdal	10.1	15.3
Hordaland	10.4	14.5
Oppland	11.3	15.6
Sør-Trøndelag	12.3	16.8
Sogn og Fjordane	12.5	16
Nord-Trøndelag	12.7	17.9
Østfold	12.9	16.9
Aust-Agder	13	16.9
Buskerud	13.8	17
Telemark	14	17.7
Vestfold	14.1	14.8
Troms	14.3	19.7
Hedmark	15.7	20.4
Nordland	17.9	23.8
Finnmark	23.6	30.7

Source: Gjennomføringsbarometeret 2011:1 (the Norwegian Report on Upper Secondary Completion 2011:1)

Supplementary table 5.15 to **FIGURE 5.16** Pupils in vocational Vg2 by education programme and their first choice when they applied. Percentage.

	Total	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	Technical and Industrial Production
Did not apply for upper secondary education and training	13,3	12,9	12,4	5,3	21,2	5,4	19,5	15,3	14,8	9,9
Applied for Vg1 or Vg2	9,8	9,4	12,7	8,6	8,2	2,6	10,3	12,5	8,3	15,9
Applied for a supplementary year	25,8	20,9	32,9	21,8	35	19,5	17	21,9	41,7	13,2
Applied a general studies pathway in vocational studies	7,2	0	-	-	0	69,9	21,6	-	0,1	-
Applied for vocational Vg3 without final qualifications or TAF	3,4	0,7	-	24,9	-	-	-	-	0,1	2,5
Applied for final vocational qualifications	3,5	-	11,4	0,5	8,9	1,8	12,2	-	-	-
Applied for an apprenticeship	37,1	56,1	30,6	38,9	26,6	0,8	19,5	50,3	35	58,6

Kilde: Utdanningsdirektoratet, 2011. N=34 948

Supplementary table 5.16 to **FIGURE 5.17** Pupils in vocational Vg2 in 2009-2010, broken down by their first-choice programme and whether they commenced in the programme to which they applied. Number and percentage.

	Number	Commenced in their first choice	Commenced in something else	Did not commence
Did not apply for upper secondary education and training	4,657	0	26	74
Applied for Vg1 or Vg2	3,421	57	16	27
Applied for a supplementary year	9,004	77	9	13
Applied for general studies	2,532	93	5	3
Applied for vocational Vg3 without final qualifications or Technical General Studies (TAF)	1,172	86	7	6
Applied for final vocational qualifications	1,213	87	6	7
Applied for an apprenticeship	12,949	63	6	31
All pupils	34,948	62	10	28

Source: Norwegian Directorate for Education and Training, 2011. N = 34,948

Supplementary table 5.17 to **FIGURE 5.18** Pupils in vocational Vg2 in 2009-2010 with an apprenticeship as a first choice, broken down by the programme with which they commenced and by county. Percentage.

	Commenced in their first choice	Commenced in some other choice	Did not commence
Finnmark	53.8	7.6	38.6
Buskerud	54.0	5.3	40.8
Østfold	55.5	5.8	38.8
Troms	56.2	8.9	34.9
Nordland	56.3	6.1	37.5
Sør-Trøndelag	57.4	7.2	35.4
Oslo	57.7	6.9	35.4
Akershus	58.8	5.1	36.0
Aust-Agder	59.4	5.4	35.1
Nord-Trøndelag	62.8	8.4	28.7
Hedmark	63.7	4.3	32.0
Telemark	65.0	5.6	29.4
Vest-Agder	65.3	5.0	29.6
Vestfold	65.9	5.0	29.1
Oppland	66.9	4.3	28.8
Sogn og Fjordane	69.7	3.9	26.4
Møre og Romsdal	69.9	3.9	26.1
Hordaland	70.2	7.1	22.7
Rogaland	74.5	5.7	19.8

Source: Norwegian Directorate for Education and Training 2011

Supplementary table 5.18 to **FIGURE 5.19** Pupils in vocational Vg2 in 2009-2010 with a supplementary year qualifying for higher education as a first choice, broken down by the programme in which they commenced and by county. Percentage.

	Commenced in their first choice	Commenced in some other choice	Did not commence
Finnmark	67.2	22.8	10.0
Troms	67.6	14.0	18.4
Nordland	69.6	13.8	16.5
Oslo	75.1	10.3	14.6
Telemark	75.1	10.1	14.8
Aust-Agder	75.1	11.4	13.4
Sogn og Fjordane	75.6	8.8	15.6
Rogaland	77.5	8.5	14.0
Oppland	77.5	6.5	16.0
Hedmark	78.2	8.0	13.9
Vest-Agder	78.8	6.6	14.7
Østfold	79.2	8.3	12.5
Buskerud	79.3	6.0	14.7
Hordaland	79.4	9.8	10.8
Akershus	79.7	8.7	11.6
Møre og Romsdal	79.9	5.5	14.6
Vestfold	80.9	7.2	11.9
Nord-Trøndelag	81.2	7.1	11.7
Sør-Trøndelag	82.5	5.0	12.5

Source: Norwegian Directorate for Education and Training 2011

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