

The consequences of remote teaching

A review of how remote teaching during the Covid-19 pandemic has affected students' chances of reaching set goals as well as their health



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Preface

The Covid-19 pandemic and the transition to remote teaching have meant considerable challenges for the Swedish school system. A large majority of students in upper secondary school and in adult education, as well as many students in the final years of compulsory education, have been affected, even if to a varying degree. With little prior warning, affected education sectors altered their core activities, often without the aid of previous similar experience. The situation has been very demanding for both staff and students, who have made great efforts to ensure that teaching and schoolwork continued to function. The operations of the Swedish Schools Inspectorate have been reorganised in order to monitor the situation of the students during this challenging period and ensure that students receive the education to which they are entitled.

At the request of the Government, the Schools Inspectorate has reviewed the impact of remote teaching on the students' chances of reaching set goals and on their health. This report sets out the response of the authority. The Schools Inspectorate hopes to be able to contribute valuable knowledge about the impact of remote teaching on school students in Sweden, as well as lessons learnt for future efforts to modify the negative effects experienced. Katarina Nyström was project leader for the Government assignment, while Marie Göranson, Cecilia von Otter and Lovisa Wiklund contributed to the production of the final report. Anna Sellin, Head of Department, Department for Analysis and Statistics, had overall responsibility for the project.

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Remote teaching during the Covid-19 pandemic, March 2020 to June 2021

During the Covid-19 pandemic, a starting point for the Swedish school system was that schools and preschools should remain open and as far as possible offer their students teaching in the school. Younger and particularly vulnerable students have largely been exempted from remote teaching. However, it has been possible for the organiser *under certain circumstances to keep the school completely or partially closed* to classroom teaching and instead provide remote teaching. Even when schools have been kept open, there has been the possibility of remote teaching for the upper secondary school and years 7 to 9 of the compulsory school.

March 2020 to June 2020

In mid-March 2020, the Public Health Agency of Sweden recommended that *all* teaching in *upper secondary schools* and within *municipal adult education* should be carried out remotely, and a new ordinance was issued which among other things made it possible to deliver teaching remotely when schools were closed. From the beginning of April it was also possible to make use of remote teaching when a school was *partially* closed. This meant that it became possible to bring in small groups of students for teaching within the school, while the rest of the teaching was delivered remotely.

August 2020 to October 2020

Return to teaching within the school for students in the upper secondary school. The recommendation was for teaching within municipal adult education to continue to be delivered remotely.

November 2020 to June 2021

Towards the end of November 2020 it was decided to expand the possibilities of *combining* classroom teaching with remote teaching. In December the Public Health Agency also published a new recommendation about remote teaching in the *upper secondary school*, extending to the beginning of January 2021. However, there were a number of exemptions to the recommendation, which meant that certain elements of the teaching as well as exams could take place in the school and that certain student groups were exempted from remote teaching.

In January 2021 there was an expansion of the ability of schools that were kept open to carry out remote teaching in *years 7 to 9 of the compulsory school*. During the first half of 2021 it was common to see a combination of simultaneous and not simultaneous remote teaching and classroom teaching for years 7 to 9 of the compulsory school, in the upper secondary school, and within municipal adult education.

¹ SFS 2020:115 Förordningen om utbildning på skolområdet och annan pedagogisk verksamhet vid spridning av viss smitta [Ordinance concerning education within schools and other educational institutions during the spreading of certain infections].

Summary

The Covid-19 pandemic has meant great challenges for the entire school system and in particular for those students in years 7 to 9 of the compulsory school, the upper secondary school, and adult education who have received parts of their education remotely. The uncertain situation has been very demanding for both staff and students, who have made great efforts to ensure that teaching and schoolwork continued to function. The Schools Inspectorate was tasked by the Government to review the impact of the remote teaching brought about by the Covid-19 pandemic on the students' chances of reaching set goals and on their health. This report provides an account of the findings of the authority.

Within the framework of the Government assignment the Schools Inspectorate has reviewed remote teaching carried out during the spring semester of 2021 in years 7 to 9 of the compulsory school, the upper secondary school and municipal adult education, as a result of the Covid-19 pandemic. Based on the recommendations of the Public Health Agency of Sweden, teaching was wholly or partly carried out remotely within these education sectors. Students in the early years of the compulsory school (F–6), or in compulsory school or upper secondary school for pupils with learning disabilities, have rarely been affected by remote education. For the upper secondary school and years 7 to 9 of the compulsory school, the ambition has been to offer teaching on site to the greatest possible extent, depending on the local level of infection. In addition, particularly vulnerable student groups were exempted from remote teaching during this time.

The findings provide many important insights concerning the consequences of remote teaching but do not present a comprehensive, nationally representative picture of the situation. The extent of the described consequences is largely dependent on the amount of remote teaching that students have been receiving. Likewise there are other factors, in addition to remote teaching, that must be taken into account if the total effect, at national level, of the Covid-19 pandemic on students' learning and health is to be captured. Examples are increased student absenteeism and an increase in the use of supply staff within the compulsory school. During autumn 2021, SCB Statistics Sweden is carrying out a survey of the volume of remote teaching during the Covid-19 pandemic. This will contribute important insights into the extent of the consequences described in this report.

The report is based on findings from eight remote inspections carried out within the framework of the Government assignment during February to September 2021. The majority of these have been reported by the authority in already published memoranda. The remote inspections have taken the form of learning and forward-looking inspections and are in several respects different from the authority's normal inspections. All told, the conclusions drawn by the Schools Inspectorate are based on observations at 426 reviewed institutions. The material has been collected via telephone or digital interviews, surveys, and digital lesson observations.

Findings in brief

In respect of those institutions that have been affected by remote teaching in connection with the Covid-19 pandemic, the Schools Inspectorate is able to note that large parts of the education mission has worked well in spite of the transition to remote teaching. Both students and staff have in many cases approached the challenges posed by the situation with great flexibility and a high level of commitment. Digitalisation has seen a major acceleration and enhancement. However, in spite of these efforts it has rarely been possible for remote teaching to offer the same opportunities for learning as teaching on site in the school. It therefore appears that the possibility of switching between remote teaching and teaching in the school has been crucial for successful management of the situation. Likewise, that younger students and particularly vulnerable student groups have almost entirely been exempted from remote teaching and learning. It is likely that this has significantly alleviated the negative consequences for the students' learning and health.

One important finding, applicable irrespective of education sector, is that the consequences of remote teaching are dependent on:

- the volume of remote teaching,
- the institutions' starting point for the transition to remote teaching,
- the quality of the implementation of remote teaching, and
- the extent to which it has been possible by and by to *compensate* the students.

Students who have only experienced small numbers of short periods of remote teaching appear to have been less affected than students who were almost exclusively taught remotely. Neither is the impact as tangible in those cases where teachers and students already had access to functioning technology and the ability to use it for good teaching and learning, with the teachers managing to make the students participate actively in the teaching situation in spite of the physical distance. Finally, it has been possible to alleviate the negative impact in schools that work continuously at compensating the students for omitted curriculum items or for teaching that could not be carried out to a good standard.

Students' chances of reaching set goals made poorer by remote teaching

For the majority of those students who received a significant volume of remote teaching, the situation has meant worse conditions for learning and knowledge development. The Schools Inspectorate has further observed that the students' personal circumstances, in the shape of encouragement and support at home or through their social network, extensively influenced their opportunities for learning and knowledge development during periods of remote teaching.

Curriculum items and courses have usually been completed but students feel that they are learning less

Irrespective of education sector, the overall findings of the remote inspections show that students did in the end receive the guaranteed amount of teaching time, according to the principals, and that they usually have been able to cover all curriculum items. In many cases the principals state that the amount of teaching time has been safeguarded through the school, as far as possible, following its original planning and the students' normal timetables in real time. There are many examples of creative approaches making it possible, in spite of the situation, to give the students opportunities for both practical work and workplace-based learning. However, the Schools Inspectorate must note that many institutions have found it difficult to offer the students a remote teaching experience that is fully commensurate with the classroom teaching they would otherwise have received. It is clear that principals, teachers and students all feel that the students do not learn as much when the lessons are remote. Only eight percent of surveyed teachers in the compulsory school and six percent of surveyed teachers in the upper secondary school state that a lesson given remotely is completely equivalent to a classroom lesson. Two out of five teachers feel that the students only to a certain extent or not at all learn as much during lessons delivered remotely. The students share this view. For instance, almost seven out of ten upper secondary school students state, irrespective of type of course, that they usually learn more during on site teaching in the school. Almost three out of ten teachers also feel that their students in the compulsory or upper secondary school only to a certain extent or not at all carry with them the same knowledge as had been normal by the end of term/completion of the course.

Poorer quality teaching in remote education giving poorer opportunities for learning

Irrespective of the conditions of the institution and irrespective of student group or subject area, providing education remotely has been a challenge. Although for some students the situation has meant greater flexibility and better conditions for learning and attendance, for the majority of students remote teaching has often meant:

Less activity and participation in lessons: Student participation and activity have been relatively low when teaching has been done remotely. It has been difficult to generate the type of interaction that normally occurs in a classroom and the overall picture is that students are asking fewer questions, that it is difficult to get discussions going, and that there is more solitary work which results in students feeling that they are learning less. Having complete awareness of the students' activities during lessons is also seen as a challenge.

Less availability of support and encouragement: Remote teaching makes it more difficult for schools to discover and satisfy students' need for support as well as encouragement. Many students relate that they find it harder to

get the teacher's attention or to understand explanations that are provided, and that they get stuck and are unable to get further within an assignment. Carrying out assignments with sufficient depth and complexity when working remotely has also often been seen as a challenge.

Less motivation to study and poorer focus on studying: The physical study environment at home, the types of remote teaching and the reduced opportunities to meet up with teachers and classmates have often led to poorer focus and less motivation to study when teaching is delivered remotely.

Less skills training and fewer opportunities for practice in real-life situations: Remote teaching has often focused more on theory than on practice. This has had an impact on many subjects where normally practical and theoretical elements alternate. It has for instance been a challenge to carry out laboratory exercises and various exercises within physical education and health. It has also been difficult to carry out practical work and workplace-based learning of good quality. Opportunities for reinforcing students' knowledge through overlearning and practice in real-life situations have therefore been poorer.

Students' home situation affects their ability to benefit from remote teaching

Principals and teachers see a close link between the students' home situation and their ability to benefit from remote teaching. More than half of surveyed principals and teachers in the compulsory school and upper secondary school agree completely or to a large extent with this. In many interviews it becomes clear that teachers as well as principals notice that there are students whose ability to benefit from remote teaching is poorer, for example because of inadequate provision for quiet study, poor access to technical equipment or absence of support from an adult or family member. In a few cases there are also descriptions of home situations that are frankly unsuitable for studying, for instance when there is substance abuse, domestic violence, mental ill health, or honour-related oppression.

Several schools lack a clear picture of students' support needs and the impact of the teaching

According to the principals, students who have had difficulty benefitting from remote teaching have often been allowed to come to the school and receive their teaching on site. This is true irrespective of education sector although more pronounced in the surveyed compulsory schools and upper secondary schools. The identification of such students has been generous and flexible. Both compulsory schools and upper secondary schools testify that this has been of decisive importance for the protection of their studies for vulnerable student groups. Students in the final year of compulsory school (year 9) and the final year of upper secondary school (year 3) have often been prioritised for school-based teaching in order to be able to complete their education.

At the same time it is clear that the school's picture of the students' need for support does not capture the needs of all students. Not many principals describe systematic efforts to survey, analyse and when appropriate strategically compensate students for teaching of inadequate quality. A quarter of surveyed principals of compulsory schools and upper secondary schools have only to a certain extent informed themselves about how the students' knowledge development has been affected by the situation. Too often the school's image of students' need for support is dependent on individual teachers' ability to capture and interpret signals from the students, alternatively that the students themselves clearly signal their need and ask for help. Therefore, there is a risk that students are overlooked by the school and do not receive the support they need. Those students whose need for support is greatest are not always able or willing to ask for help. Almost a third of surveyed compulsory school teachers and almost a quarter of upper secondary school teachers also feel that the possibilities of helping students to catch up on knowledge they have not assimilated due to remote teaching are only to a certain extent adequate. There is therefore a risk that students who might need compensatory measures do not receive them.

Difficult to work remotely on issues related to fundamental values

It is clear from teachers' descriptions that it has been difficult to carry out the fundamental values mission in the same way as previously. Sometimes teachers avoid having more difficult or more sensitive discussions remotely, since it might be difficult to see how the message is interpreted and received by the students. The Schools Inspectorate is aware that schools have sometimes consciously cancelled planned activities to do with fundamental values because the knowledge mission has received priority, but also because it has felt difficult to carry out joint exercises to do with fundamental values remotely. Likewise, ordinary and more spontaneous conversations concerning fundamental values have become fewer as teachers are of the opinion that situations forming the basis for such conversations do not occur as frequently in the digital classroom. Giving lower priority to activities related to fundamental values might have long term consequences both for students' education and for the school's overall efforts to support democracy, solidarity and equality.

Awarding grades has been a challenge for teachers

Remote teaching has often made it harder for teachers to provide students with good opportunities to demonstrate in various ways what they know and to find assessment situations that provide reliable data for assessment. Almost half of the surveyed principals and teachers in compulsory school and upper secondary school state that preconditions for awarding grades have become more difficult or have deteriorated due to remote teaching. Many teachers describe feeling uncertain when confronted with exercises that students have carried out remotely, not knowing whether the students have really done the work themselves and not used unauthorized means of assistance. Four out of ten surveyed upper secondary teachers

and three out of ten teachers in the compulsory school state that the incidence of cheating has increased during this time. A large part of the time students have spent on site for classroom teaching has therefore been devoted to tests and other assessment opportunities. This in turn has been at the expense of the quality of the classroom teaching and meant a heavy workload for the students.

Students' health has deteriorated due to the remote education situation

Remote teaching has had a negative impact on both mental and physical health for many students. This applies to all education sectors. The extent and seriousness of the consequences vary a great deal between individuals and is often connected to the length of time teaching has been delivered remotely, but also to the students' home situation, for instance the possibility of quiet studying, support at home, or access to a social network. There are also certain gender differences: among students in the upper secondary school, girls more often than boys state that their physical and mental health, as well as their social situation, has deteriorated. The overall assessment of the Schools Inspectorate is that the schools have carried out measures in support of the health and wellbeing of individual students when teaching has been remote, but that these measures have to a large extent been dependent on the student asking for help or obviously seen as feeling bad. Preventive and health promoting work has been deprioritised and not many schools have adopted an overall approach to the conditions for learning and health in the digital education environments. There is a danger that this leads to support being offered too late or that students do not receive the support they need to feel well physically and mentally.

Stress, loneliness and poorer lifestyles common when teaching is remote

Many students have experienced increased stress and anxiety related to learning and performance and the heavier burden of responsibility for their studies when teaching is remote. They describe feeling frustrated at not learning as much and at being given insufficient opportunities to demonstrate their knowledge. This has impacted on students' wellbeing and motivation to study. For some students, remote teaching has above all meant that school has "become more boring", while for others it has meant stress, anxiety and in some cases a sense of dejection in relation to their studies.

It is also clear that no longer having access to the school environment has been a great loss for students. The school is an important social arena for many, and it also provides daily life with a clear structure. Many students have experienced increased loneliness and some students have tended to shift their daily rhythm, their eating habits have deteriorated, they have

become more sedentary and found it difficult to maintain previous routines for schoolwork and physical activity. This has contributed to reduced wellbeing and also poorer ability to resist the effects of stress and anxiety.

Student health activities have principally been reactive and focused on interventions benefitting individual students

Teachers and other adults in the school have often demonstrated great care for the students during remote teaching, for instance by asking how they are and by being accessible. Nevertheless, much of the responsibility for asking for help and maintaining motivation and social contacts, as well as work routines and a good lifestyle, has fallen on the students themselves. Measures to assist students in managing stress, worry, and loss of motivation related to remote teaching, or to reduce their feeling of isolation, have been unusual. Often planned preventive and health promoting activities have been cancelled without being replaced by other activities.

Many schools also lack an overall picture of the situation of students and their opportunities for learning and good health during periods with remote teaching. This means that they lack the necessary data for an analysis of students' needs and measures that will be needed later on. Not many schools can describe a coherent effort to meet the challenges of the digital learning environments in terms of counteracting ill health and preventing problems arising. Not many schools have made systematic efforts to strengthen students' ability to manage the stresses and to promote their health.

Lessons learnt could make the Swedish school system better equipped for the future

Large parts of the mission of the school system have worked well in the circumstances in spite of an entirely new mode of working with remote teaching and short lead times for the transformation. School managers and school staff have demonstrated significant care for and commitment to their students and their mission, and teachers have accepted great responsibility for making the situation work. The school system has, in order to cope with the new technology and the new form of teaching, demonstrated creativity, strength and cooperation, in a skills enhancement process of a collegiate nature. At the same time, the transition to remote teaching has meant that weaknesses in the school system that were already known have taken on increased significance and impact, something that has had an effect on the conditions for students' learning and wellbeing during the period. This touches on a lack of equality, which has meant that students differ in their preparedness for remote learning and also that increased responsibility for students' own learning has had an impact on the compensatory mission of the school system. Limited use of the perspective of students has also in many cases affected the development of

good digital learning environments. In addition, the fact that support efforts were often reactive has reduced the possibility of fully compensating students for the poorer conditions for learning and health that remote teaching often involved. The sharing of good examples between schools and organisers has often been limited even though new successful work methods have been developed. Therefore the Schools Inspectorate wishes to emphasise the importance of learning from the consequences that these systemic weaknesses have had for students' knowledge development and health during the period when teaching was remote. By absorbing these new insights schools, organisers and decision makers can create better preconditions for successful transformations within the Swedish school system and making the Swedish school system better equipped to meet challenges related to knowledge development and health.

In order to minimise the negative consequences of the period of remote teaching and counteract long-term effects on students' knowledge development and health it is now of decisive importance that schools follow up how the situation has impacted on students. The remote inspections carried out by the Schools Inspectorate show that there are certain student groups with a particularly clear risk of a negative impact of remote teaching and who might therefore need particular attention as part of the follow-up activities of the school system:

- Students who have received large parts of their education remotely.
- Students who have suffered loss of overlearning and training in practical elements.
- Students who have felt bad due to remote teaching.
- Students who have experienced poorer motivation due to remote teaching.
- Students in the early stages of their language studies.
- Possible gender-based differences.

Introduction

There is no precedent for the transition to remote teaching carried out in order to manage the Covid-19 pandemic in the latter years of the compulsory school (years 7 to 9), the upper secondary school and municipal adult education. With little prior warning schools have transformed their core activities, often with no previous experiences that might provide support. The uncertain situation has been very demanding for both staff and students, who have also made great efforts to ensure that teaching and schoolwork continued to function. At the request of the Government the Schools Inspectorate has reviewed the remote education that has been provided because of the Covid-19 pandemic. The purpose of the review has been to investigate the impact of remote teaching on the students' chances of reaching set goals and on their health. Particular attention has been given to students who have difficulty benefitting from remote teaching. The assignment has been carried out in consultation with the Swedish National Agency for Education.¹ The Schools Inspectorate has focused its review on remote teaching carried out in the final years of the compulsory school, the upper secondary school and municipal adult education because of the Covid-19 pandemic. These education sectors were recommended by the Public Health Agency to carry out teaching remotely during the spring semester of 2021. The education and health situation within preschool, preschool class, special school, Sami school, upper secondary school for individuals with learning disabilities, and other educational activities were not included in the recommendations about remote teaching and have therefore not been reviewed within the framework of the assignment.

Documentary basis for the report

Within the framework of the assignment the Schools Inspectorate has carried out eight remote inspections during February to September 2021, see Figure 1. The findings of seven of these have already been published as separate memoranda. The findings of the eighth remote inspection² are only available as part of this report. The remote inspections mainly cover the situation during the spring semester of 2021. The remote inspections have taken the form of learning and forward-looking inspections and are in several respects different from the authority's normal inspections; see further Annex 1. Conclusions presented by the Schools Inspectorate in this report are based on a comprehensive picture of the findings of the remote inspections and the observations that have been made at the reviewed institutions, a total of 426. Both public and independent institutions have been included. The documentation is based on wide-ranging empirical material including interviews with 426 principals, about 470 teachers, about 100 members of staff within student health services and about 1,100 stu-

¹ Ministry of Education and Research (2020-12-17). Regleringsbrev för budgetåret 2021 avseende Statens skolinspektion, p. 3, Covid-19-pandemins konsekvenser för elevers förutsättningar att nå målen samt för elevers hälsa.

² Schools Inspectorate (2021h). Fjärr- och distansundervisningens konsekvenser för elever i grund- och gymnasieskolan.

dents within the compulsory school, upper secondary school and institutions within municipal adult education. About 1,700 participants have also answered various survey questions. In addition the Schools Inspectorate has carried out 55 digital lesson observations. Methods and findings of the remote inspections are described in greater detail in Annex 1 as well as in individual memoranda.

Since the Government assignment focused on the impact of remote teaching, the selection of objects for the remote inspections have mainly been compulsory schools, upper secondary schools, and municipal adult education that was to some extent carried out remotely during the time period in question. However, this does not apply to the remote inspection of the summer holiday school that was carried out, since the holiday school was almost totally located on site in the school. For further information about the selection process, see Annex 1.

Remote teaching within municipal adult education

Remote teaching in the compulsory school

Remote teaching in the upper secondary school spring 2021

The quality of remote teaching

PM

The consequences
of remote
teaching within introductory Swedish

The work of Student Health Services when teaching is delivered remotely

Summer holiday school after three semesters of the Covid-19 pandemic

The consequences of remote teaching for students in the compulsory

Figure 1: Remote inspections carried out within the assignment

The Schools Inspectorate's past experiences contribute to the overall picture

school and the upper secondary school

At an early stage of the Covid-19 pandemic the Schools Inspectorate reorganised its activities so as to be able to monitor the situation of students during this challenging time. In addition to the above mentioned 2021 remote inspections, six reviews were carried out during 2020, mainly focusing on the situation in upper secondary schools and the final three years of

the compulsory school. Interviews were carried out with just over 210 organisers, just under 1,200 principals and almost 2,150 students.³ These early experiences provided vital understanding of the challenges of remote teaching. It has been possible to enhance and follow up the challenges and insights then observed during the remote inspections within the Government assignment during 2021.

The totality of the reviews by the Schools Inspectorate helps build an understanding of how the remote teaching has worked and developed over time from the spring of 2020 until the autumn of 2021. The reviews during 2020 largely identify the same challenges as those described in this report. It is possible to discern some improvement over time in terms of technological maturity, teaching methods and support work, while at the same time certain negative consequences have been further entrenched by the fact of remote education now having lasted for a long period of time. An important change between 2020 and 2021 was the gradually developing opportunities permitting students to be present in the school. Initially this was to enable small groups to carry out exams or practical curriculum items, but subsequently increasing opportunities were provided for alternating remote teaching and teaching in the school. Later on the recommendations were further changed so that particularly vulnerable student groups were completely exempted from the recommendation of partial remote education. These changes were partly the result of the Schools Inspectorate's experience of the 2020 reviews.4

Scope and concepts

In line with the focus of the Government assignment the remote inspections have been limited to those consequences for the students' chances of reaching set goals, and for their health, that can be linked to the remote teaching, not to the pandemic overall. The Schools Inspectorate has only carried out remote inspections within those education sectors where the Public Health Agency recommended that teaching should fully or partly be carried out remotely. This means that preschool, preschool class, school for children with learning disabilities, Sami school, upper secondary school for individuals with learning disabilities, and other educational activities have not been reviewed within the framework of the assignment, since recommendations concerning remote teaching were not applicable there.

³ Schools Inspectorate (2020a). *Gymnasieskolors distansundervisning under covid-19-pandemin: En första delredovisning utifrån intervjuer med 45 rektorer*, Schools Inspectorate (2020b). *Gymnasieskolors distansundervisning under covid-19-pandemin: Skolinspektionens centrala iakttagelser efter intervjuer med rektorer*; Schools Inspectorate (2020c). *Skolhuvudmäns utmaningar och möjligheter under Corona-pandemin*; Schools Inspectorate (2020d). *Gymnasieskolors utmaningar inför hösten 2020*; Schools Inspectorate (2020e). *Kartläggning av ett antal huvudmäns arbete med lovskola och tillhörande prövning*; Schools Inspectorate (2020f). *Utbildning under påverkan av coronapandemin: Sammanställning av centrala iakttagelser från en förenklad granskning av 260 grundskolor och grundsärskolor*.

⁴ Public Health Agency (2020). Folkhälsomyndigheten rekommenderar att gymnasieskolorna övergår till distansundervisning. https://www.folkhalsomyndigheten.se/nyheter-och-press/nyhetsarkiv/2020/decem-ber/folkhalsomyndigheten-rekommenderar-att-gymnasieskolorna-overgar-till-distansundervisning/ (Downloaded 2021-10-20).

The remote inspections cover remote teaching carried out in accordance with Ordinance (2020:115) on education in certain sectors of the school system during the spreading of certain infections. It is therefore not a question of normal distance education where to some extent other requirements apply.⁵ Nor have the remote inspections specifically reviewed teaching that was carried out on site in the school during the same period, for the reason that the Government assignment was focused on the consequences of remote teaching.

The remote inspections cover all forms of teaching carried out remotely because of the Covid-19 pandemic. It has principally been a case of teaching with teacher and students separated in space but not in time ("remote teaching") but also teaching where teacher and students are separated in both space and time ("distance teaching"). In the report the terms remote teaching and teaching delivered remotely are used for teaching with elements of separation of either type. The survey respondents have rarely made a distinction between remote teaching and distance teaching. The report uses classroom teaching for teaching on site in the school.

Remote teaching during spring 2021

During the spring semester 2021, organisers were able to carry out remote teaching for upper secondary school students⁶ and for students in the final three years of the compulsory school ⁷. In the case of municipal adult education the general recommendations concerning remote teaching were applied on the basis that adult education is regarded as a workplace.⁸ The proportion of the teaching carried out remotely varies greatly both within schools, between schools and between different organisers. The Schools Inspectorate's remote inspections show that during the spring semester 2021 it was common for students in the reviewed compulsory schools (years 7 to 9) and upper secondary schools to receive a combination of simultaneous and not simultaneous remote teaching and classroom teaching.⁹ Many compulsory schools or upper secondary schools applied a formula of classroom teaching every second or third week, alternating with remote teaching, while others instead alternated every two or three days.

⁵ Education Act (2010:800), Ch. 1, section 3; Ch. 21 and 22.

⁶ Public Health Agency (2021a). *Gradvis återgång till närundervisning på gymnasiet*. https://www.folkhalso-myndigheten.se/nyheter-och-press/nyhetsarkiv/2021/januari/gradvis-atergang-till-narundervisning-pagymnasiet/ (Downloaded 2021-10-20).

⁷ Ministry of Education and Research (2021). *Högstadieskolor får möjlighet till fjärr- eller distansundervisning för att undvika trängsel och minska smittspridningen*. https://www.regeringen.se/pressmedde-landen/2021/01/hogstadieskolor-far-mojlighet-till-fjarr--eller-distansundervisning-for-att-undvika-trangsel-och-minska-smittspridningen/ (Downloaded 2021-10-20); Sections 11 b and 11c, Ordinance (2020:115) on education in certain sectors of the school system during the spreading of certain infections. Wording as before 10 August 2021.

⁸ Public Health Agency (2021b). *Information om covid-19 till anordnare av utbildning för vuxna*. https://www.folkhalsomyndigheten.se/smittskydd-beredskap/utbrott/aktuella-utbrott/covid-19/verksam-heter/larosaten-och-annan-hogre-utbildning/ (Downloaded 2021-10-20).

⁹ Schools Inspectorate (2021b), p. 11, see Diagram 1; Schools Inspectorate (2021d), p. 14, see Table 1.

Particularly vulnerable student groups have often been exempted from remote teaching, in line with the recommendation of the Public Health Agency. 10 Students within municipal adult education received a comparatively large part of their education in the form of remote teaching. It was also relatively common for adult education students to receive a combination of simultaneous and not simultaneous remote teaching and classroom teaching and in many cases those who indicated, or were assessed as having, a need for it were offered the option of coming to the school. 11

Comments on the interpretation of the findings

Similar challenges irrespective of school sector

The Schools Inspectorate's remote inspections show that the challenges surrounding remote teaching are in many respects the same irrespective of which school sector was reviewed. Therefore, the Schools Inspectorate describes the overall picture that has emerged. In cases where one school sector has faced particular challenges because of remote teaching this is made clear in the text.

Within the generality of municipal adult education several organisers of-fered a combination of teaching formats already before the Covid-19 pandemic, with both simultaneous and not simultaneous remote teaching being common. These institutions could therefore be expected to have a certain advantage during the transition to remote teaching. At the same time, students in adult education constitute a very heterogeneous target group. A considerable proportion of the students have relatively limited experience of studying and limited knowledge of the Swedish language and for such students both language difficulties and an inadequate study environment at home make remote teaching a challenge. For the remote inspection of municipal adult education many of the reviewed institutions were selected because they offer courses in Swedish for immigrants or education at basic level. Therefore the findings throw particular light on the situation of these student groups.

Not a nationally representative picture but it can contribute important knowledge

The Schools Inspectorate's conclusions are based on an analysis of observations made via remote interviews, remote observations and surveys of the reviewed institutions. The sampling was not random, which means that the Schools Inspectorate is unable to provide a nationally valid picture of

¹⁰ Public Health Agency (2020). *Folkhälsomyndigheten rekommenderar att gymnasieskolorna övergår till distansundervisning*. https://www.folkhalsomyndigheten.se/nyheter-och-press/nyhetsarkiv/2020/decem-ber/folkhalsomyndigheten-rekommenderar-att-gymnasieskolorna-overgar-till-distansundervisning/ (Downloaded 2021-10-20).

¹¹ Schools Inspectorate (2021a). *Fjärr- och distansundervisning vid kommunal vuxenutbildning*, p. 12, see Table 1.

the situation. This report's extensive documentary basis can nevertheless provide important knowledge about the impact of remote teaching on students' learning and health. For a deeper understanding of how the teaching has worked in subjects that have been shown to be particularly challenging to teach remotely, interviews with teachers have primarily been focused on teachers in such subjects. The accounts of the teachers should be regarded in the light of this. See further the description in Annex 1.

Consequences depend to a large extent on the volume of remote teaching

In interpreting the findings it is important to consider that the impact of remote teaching on students' knowledge development and health is to a large extent linked to the *volume* of remote teaching, the institutions' *starting point* at the time of the transition to remote teaching, and the *quality* of the implementation of remote teaching. This means that the effect of the consequences described in this final report is to a large extent dependent on the amount of remote teaching delivered to the students. With differences within and between schools in terms of the volume of remote teaching, and how well the schools have been able by and by to compensate the students, the effects will therefore vary.

Does not capture the total impact of the pandemic

The Covid-19 pandemic has had a fundamental impact on Sweden's school students. In addition to the consequences of the remote teaching, other factors should also be considered if the whole effect of the Covid-19 pandemic on students' learning and health is to be captured at a national level. This applies for instance to increased absenteeism among students as well as increased use of supply teachers in the compulsory school. Only later will it become possible to arrive at a comprehensive picture of the consequences of the Covid-19 pandemic on students' chances of reaching set goals and on their health, as well as its potential long-term effects.

Outline

This report provides an account of the findings of the Schools Inspectorate's reviews. Initially the documentary basis for the report has been described. This is followed by an account of the findings, which first describes the impact on the students' chances of reaching set goals, and then the impact on the health of the students. The report ends with a discussion in which the Schools Inspectorate brings out lessons learnt for the school system to incorporate in its work going forward.

¹² Teachers of mathematics, English, modern languages, practical subjects, vocational subjects (upper secondary school) and science subjects. In addition the schools themselves were asked to select teachers of subjects that were felt to have been challenging to teach remotely.

¹³ National Agency for Education (2021). *Covid-19-pandemins påverkan på skolväsendet*. Report on Government assignment, interim report 3.

Reduced conditions for reaching set goals with remote teaching

The Schools Inspectorate's overall assessment of the consequences of remote teaching for students' chances of reaching set goals

For the majority of students receiving a *large volume* of teaching remotely, the situation has meant reduced opportunities for learning and knowledge development.

The remote inspections show that efforts have been made to compensate students by and by and to alleviate the negative consequences of remote teaching. However, the Schools Inspectorate considers that these efforts have not been carried out sufficiently systematically to guarantee that students receive full compensation.

The Schools Inspectorate further considers that the students' own resources in the form of motivation, home environment, and support for their studies at home or in their social network have to a large extent affected their opportunities for learning and knowledge development during periods of remote teaching.

Remote teaching due to the Covid-19 pandemic has been a challenge for students' chances of reaching set goals, particularly for students who have received extensive volumes of remote teaching. The rapid transition to remote teaching, and the mobilisation of schools to make it work, demonstrates flexibility, care for the students and a highly committed teaching profession.

This section is about the impact of remote teaching on the preconditions for study and what the consequences of this could be for the chances of the students to reach the goals set for their education. Firstly there is an account of the overall picture of the impact on the students' learning and knowledge development. This is followed by a more detailed description of how remote teaching risks affecting the quality of the teaching and the work on issues related to fundamental values. Finally, there is a description of how the schools strive to compensate students for teaching of inadequate quality and how the situation has impacted on the preconditions for grading. Unless otherwise stated, the conclusions that are put forward apply to all reviewed education sectors: compulsory school (years 7 to 9), upper secondary school, and municipal adult education.

Curriculum items and courses have usually been completed but students feel that they are learning less

In terms of the amount of teaching, and the opportunity to participate in all curriculum items, the findings of the remote inspections provide an overall relatively positive picture. Irrespective of school sector, students have – according to the principals – over time received the guaranteed amount of teaching, and have usually been able to participate in all curriculum items. The Schools Inspectorate has noted that it has been common, in all education sectors, to plan in such a way that elements seen as too difficult or problematic to carry out remotely have been postponed to the next occasion for classroom teaching. 14 There are also many examples of creative approaches, making it possible in spite of the situation to give the students opportunities for both practical work and workplace-based learning.¹⁵ In many cases the principals indicate that teaching hours have been assured by the school, as far as possible, following the original plan and the students' normal timetables in real time. 16 In some cases it has nevertheless been impossible to facilitate certain practical curriculum items, for instance swimming, since swimming baths were periodically closed. 17

Surveyed teachers in the compulsory school and the upper secondary school provide a somewhat more negative picture of the situation than the principals do, but it is clear also from the responses of the teachers that it has been unusual for curriculum items to disappear entirely during the period of remote teaching. On the other hand, teachers describe how the depth of presentations, as well as the opportunity for students to demonstrate their skills, have been affected. Many teachers say that they feel that their teaching is more constrained when carried out remotely. Exercises assigned are for instance not always at the same level of complexity, since group work and thematic work are often replaced by individual tasks. Teachers also state that while students learn about everything, this is perhaps not at the standard that the teacher is aiming for. It has sometimes been necessary to reduce the breadth of assigned tasks and teachers have not brought in subject content that exceeds the central content of the curriculum to the same extent as during classroom teaching. 18 In terms of students' chances of participating in all curriculum items, the attitude of

¹⁴ Schools Inspectorate (2021b). *Fjärr- och distansundervisning i grundskolan*, p. 14, and Schools Inspectorate (2021d). *Fjärr- och distansundervisning på gymnasieskolor våren 2021*, p. 16–20.

¹⁵ Schools Inspectorate (2021a), p. 30; Schools Inspectorate (2021b), p. 13–14; Schools Inspectorate (2021d), p. 18–19

¹⁶ Schools Inspectorate (2021a), p. 15; Schools Inspectorate (2021b), p. 12; Schools Inspectorate (2021d), p. 17.

¹⁷ Schools Inspectorate (2021b), p. 12; Schools Inspectorate (2021d), p. 16, 20.

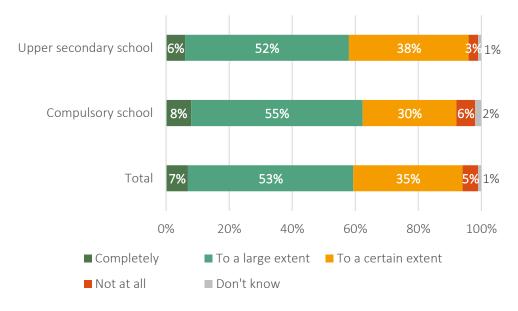
¹⁸ Schools Inspectorate (2021h). *Fjärr- och distansundervisningens konsekvenser för elever i grund- och gymnasieskolan* (dnr: 2021:2032).

teachers in the compulsory school is somewhat more negative than that of teachers in the upper secondary school.¹⁹

The feeling is that students learn less from remote teaching

Many institutions have found it difficult to offer students remote teaching that fully corresponds to the classroom teaching that they would otherwise have received, almost irrespective of the resources of the organiser, or the student group, subject, or education sector in question. It is clear that principals, teachers, and students all feel that students learn more when lessons take place in the school. Fewer than one in ten of compulsory school and upper secondary school teachers responding to the Schools Inspectorate's survey feel that a lesson given remotely fully corresponds to a classroom lesson. Two out of five teachers feel that students only to a certain extent or not at all learn as much when lessons are given remotely. Compulsory school and upper secondary school principals are more positive in their responses to the same question, but even here there is only a minority who are completely convinced that students learn as much during remote lessons as when lessons take place in the school.²⁰

Diagram 1. Teachers' replies to the question: *To what extent do you feel that your students have learnt as much during your lessons delivered remotely as when the lessons have taken place in the school?* (n compulsory school: 128, n upper secondary school: 162).²¹



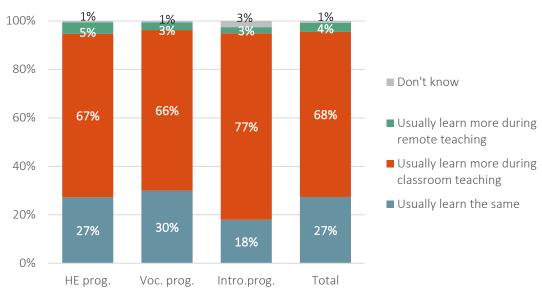
¹⁹ Question: *To what extent have your students received all curriculum items that they would normally have received in your main teaching subject?* Proportion of compulsory school teachers answering Completely or To a large extent: 75%. Proportion of upper secondary school teachers answering Completely or To a large extent: 90%.

²⁰ Schools Inspectorate (2021h). Question to principal: *To what extent do you feel that the students learn as much during remote lessons as when the lessons took place within the school premises?* Compulsory school principal (n=21): Completely: 5%, To a large extent: 76%. Upper secondary school principal (n=26): Completely: 4%, To a large extent: 73%.

 $^{^{21}}$ The question was put to the teachers within the framework of Schools Inspectorate (2021h). The percentages do not add up to 100 due to rounding.

The students share this view. About seven out of ten upper secondary school students, irrespective of programme, state that they usually learn more when teaching takes place in the school. Among students enrolled in an introductory programme the proportion feeling that they usually learn more during classroom teaching is even greater.

Diagram 2: Students' replies to the question: *Do you think you learn as much during lessons given remotely as when the lessons were given in the school?* (n higher education preparatory programmes: 169, n vocational programmes: 187, n introductory programmes: 39).²²



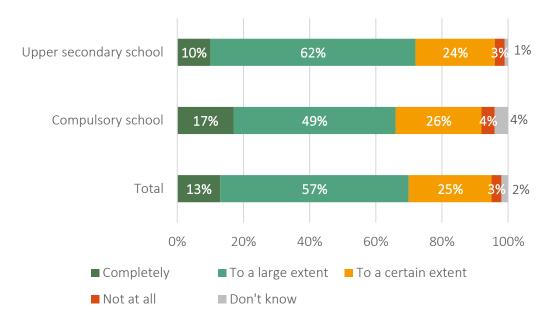
However, almost three out of ten upper secondary school students state that the teaching format is of no importance: the students usually learn *as much* during lessons irrespective of format. A relatively large proportion of students in municipal adult education see both advantages and drawbacks in remote teaching. Women are somewhat more positive than men: one third of women, compared to just under a quarter of men, are completely positive to remote teaching. In many cases those students who see advantages in remote teaching give as the reason for their answer that it makes it possible to utilise their time effectively. For instance, they reduce travel time and can always participate in lessons even if they are ill or are looking after a sick child. For these students the reason for their positive attitude is often that remote teaching facilitates greater flexibility and increases the possibility of combining work, studies, and family life.²³

Many compulsory school and upper secondary school teachers also have the impression that their students do not carry with them the same knowledge and skills as would be normal at the end of term or after completion of the course. Almost three out of ten surveyed teachers state that their students in the compulsory school and upper secondary school only to a certain extent or not at all carry with them the same knowledge as was normally the case.

²² Schools Inspectorate (2021d), p. 21. Students who had not had any lessons on school premises during their time in the upper secondary school were asked to compare with what it was like in the compulsory school. The percentages do not add up to 100 due to rounding.

²³ Schools Inspectorate (2021a), p. 14 and p. 27–28.

Diagram 3. Teachers' replies to the question: *To what extent do you feel that your students carry with them the same knowledge and skills as would normally be the case at the end of term/after completion of the course?* (n compulsory school: 128, n upper secondary school: 162).²⁴



Principals and teachers see a strong link between students' home circumstances and their ability to benefit from remote teaching

There is unanimity that students' home circumstances affect their ability to benefit from remote teaching. More than half of surveyed principals and teachers in compulsory and upper secondary schools agree completely or to a large extent with this.²⁵ Many interviews show that both teachers and principals within different education sectors are aware that there are students whose ability to benefit from remote teaching is poorer because of for instance lack of a quiet environment for studying, poor access to technological equipment²⁶ or absence of support from an adult or a family member It is often clear that schools take a generous approach to deciding which students should be offered teaching in the school. See further about this in the section *Classroom teaching has been used to alleviate negative consequences for students who have been found to be vulnerable or particularly badly affected*.

²⁴ The question was put to teachers in Schools Inspectorate (2021h).

²⁵ The question was put to teachers and principals in Schools Inspectorate (2021h). *To what extent do you feel that students' home environment (e.g. possibility of quiet study and help with their studies at home) have influenced their ability to benefit from remote teaching?* Distribution of answers, principals: Completely: 18%, To a large extent: 46%, To a certain extent: 32%, Not at all: 4%. Distribution of answers, teachers: Completely: 2%, To a large extent: 56%, To a certain extent: 42%, Not at all: 0%.

²⁶ Schools Inspectorate (2021a), p. 21; Schools Inspectorate (2021f). *Undervisning på distans på språkintro-duktion*, p. 21.

Survey input from teachers and principals shows that they usually do not feel that there is a difference in how boys' knowledge development, compared with that of girls, has been affected by teaching being delivered remotely. However, a relatively large proportion has replied that they do not know if such a difference exists, which indicates that the guestion has not been investigated or analysed.²⁷ Teacher interviews show that many teachers feel that students who are able to take responsibility for themselves, who manage to preserve the structure of the school day, who have their own "engine" and a good strategy for studying and are used to studying, have good results also when teaching is delivered remotely. These abilities are often seen as belonging to girls rather than boys. In terms of who claims or is given most space in the digital classroom, and therefore draws advantage from the situation, opinions differ. Some say that students who are normally more withdrawn, often girls, get more space for interventions²⁸ while others indicate that boys are bolder and sometimes "rescue a lesson" by asking questions²⁹.

Poorer quality teaching in remote education giving less opportunity for learning

For many schools creating a learning environment in the digital classroom that is as supportive and stimulating as in the physical one has been a great challenge. The Schools Inspectorate's remote inspections show that this is often connected to such complicating characteristics of the learning environment as those described below. A central and often repeated observation is that there is a need for approaches that are different from those used by teachers in the physical classroom if you are to create similar dynamics and interaction in the digital teaching environment.

Students grow silent in the digital classroom and interaction becomes weaker

High level of attendance but poorer focus, activity and participation

The remote inspections show that levels of student attendance have usually been high during periods of remote teaching. Likewise there appears to be a systematic approach to follow-up by the schools, and in those cases when students are absent they and/or their guardians are contacted. Some teachers feel that attendance control has worked better when teaching has been remote: student coaches or similar roles have been tasked with

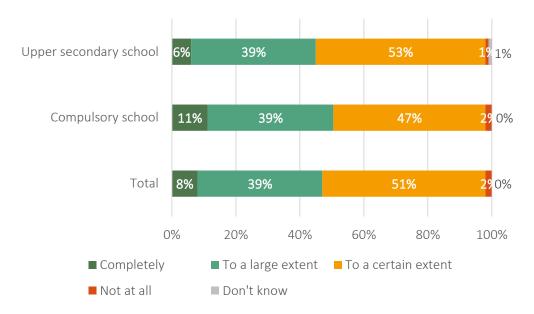
²⁷ The question was put to teachers and principals in Schools Inspectorate (2021h). *Do you feel that there is a difference in how the overall knowledge development in boys and girls, respectively, has been influenced by the teaching being delivered remotely?* 57% of teachers and 63% of principals answered "No" to the question, while 28% of teachers and 21% of principals answered "Don't know".

²⁸ See e.g. Schools Inspectorate (2021a), p. 28.

²⁹ Schools Inspectorate (2021h).

contacting students when the teacher registers that they are absent.³⁰ In other cases the teacher has personally contacted students by phone or text if they have not logged in to the meeting.³¹ A high level of attendance does not always mean *active* participation on the part of the students.³² Irrespective of education sector, age of students and the type of studies, it is clear that classrooms are quieter during remote lessons. Survey input from compulsory school and upper secondary school teachers clearly shows that it has been very challenging for teachers to make the students active and participating when teaching is carried out remotely. Only one out of ten teachers state that they have been completely successful in this respect.

Diagram 4. Teachers' replies to the question: *To what extent do you feel that you have been able to make your students active and participating when teaching has been carried out remotely?* (n compulsory school: 127, n upper secondary school: 163).³³



In remote teaching it is necessary to work consciously to create a digital teaching environment that invites students to activity and participation. In the digital classroom there are usually fewer questions asked and it is harder for the teacher to generate discussions. Interactions between students are also fewer and students say that they miss the possibility of talking to their neighbour, for instance when they have an urgent need for help or ideas for how to progress a task. 34 Several teacher interviews indicate that the relations between students and teacher that had already been established *before* the transition to remote teaching have been of

³⁰ Schools Inspectorate (2021b), p. 16.

³¹ Schools Inspectorate (2021c). Kvalitet i undervisning på distans, p. 21.

³² Schools Inspectorate (2021b), p. 16–17; Schools Inspectorate (2021d), p. 28–29.

³³The question was put to teachers in Schools Inspectorate (2021h). When the percentages do not add up to 100, this is due to rounding.

³⁴ Schools Inspectorate (2021b), p. 19; Schools Inspectorate (2021d), p. 27–28.

great importance for the success of the teaching. Some teachers feel that this was a prerequisite for the remote teaching to work.³⁵

Survey input from upper secondary school students shows that there is some difference between boys' and girls' experience of the situation. Almost three out of ten boys, compared with two out of ten girls, believe that their teachers always endeavour to make them feel included³⁶ when teaching is delivered remotely and that they can always participate actively³⁷ during these lessons.

Both compulsory school and upper secondary school students reveal that they often spend time on something other than schoolwork when they log out from the lesson in order to carry out individual tasks. They also indicate that they can easily lose focus during remote lessons. Even if teachers have various methods for detecting if the students are active and engage with the teaching, for instance by monitoring their digital work documents, it is easier for students to devote their time to other matters during remote lessons than during classroom teaching. Students who do not participate actively in the lessons miss out on an opportunity to learn. This situation therefore in many cases means less opportunity for knowledge development

A high threshold for participating in discussions and asking questions

It is clear that during remote teaching the feeling is that the threshold for participation in discussions, for asking questions and for seeking help in the course of the lesson is high. Sometimes this is because students do not want the whole class to hear their questions and in other cases because they do not want to disturb their classmates or the lesson.³⁹ On occasion the teacher has organised the lesson in a way that makes it hard — technically or logistically — for students to ask questions.⁴⁰ In some cases it appears that students feel uncomfortable having a discussion remotely since they do not know who is listening. In a small number of compulsory schools it appears that students have avoided asking for help for fear of being filmed and published on social media.⁴¹ All told, the situation contributes to the students feeling that they are learning less.

Interviews in all education sectors indicate among other things that it is difficult to generate an enhancing dialogue with the students when teaching is remote. The teachers also state that remote teaching affects the possibility of having sufficient variety in the design of lessons, which can be det-

³⁵ Information from teacher interviews in Schools Inspectorate (2021h).

³⁶ Do you feel that your teachers are making an effort to make you join in during lessons when the teaching is delivered remotely? The question was asked in Schools Inspectorate (2021d), p. 29–30.

³⁷ Do you feel you can participate actively during lessons when the teaching is/was delivered remotely? The question was asked in Schools Inspectorate (2021d), p. 29–30.

³⁸ Schools Inspectorate (2021c), p. 5.

³⁹ Schools Inspectorate (2021a), p. 24; Schools Inspectorate (2021b), p. 19; Schools Inspectorate (2021d), p.

⁴⁰ Schools Inspectorate (2021d), p. 22.

⁴¹ Schools Inspectorate (2021b), p. 19.

rimental to the students' motivation and thus to their learning. Lesson observations by the Schools Inspectorate confirm this and in several cases demonstrate how important it is to generate interaction between teacher and students, and also between the students, in remote teaching in order to create an environment that is conducive to learning. Only a small proportion of observed digital lessons in the compulsory school and the upper secondary school included student cooperation in small groups or pairs, something that can mean that students lose out on those possibilities for reflection and in-depth learning that arise during discussions with other students and the teacher.⁴²

The consequences of the lack of interaction become particularly obvious in the case of students learning a new language. For instance, students enrolled in Swedish for immigrants describe how classroom teaching enables them to learn a great deal from each other, while they have to struggle more on their own and do not get any knowledge "for free" during remote teaching. They consider that remote lessons do not provide the same opportunities to play around with ideas, to work in a group, or to learn from the teacher's answers to questions asked by other students. 43 Upper secondary school students enrolled in the introductory Swedish programme have similar experiences. For such students, remote teaching has involved a great deal of solitary work, often with little interaction with teachers and other students. For students enrolled in introductory Swedish or Swedish for immigrants it is above all in the oral part of language development, speaking in Swedish, that the schools have had difficulty finding suitable formats. In this way the students have missed out on a large part of the important interplay that takes place among them. Language development is a continuous process and not being present in an environment – such as school – where the students are all the time surrounded by the spoken language has therefore had a negative impact on their language development.44

In remote teaching is it hard for teachers to respond to what students need, which restricts their knowledge development

Students state that teacher support is less fruitful in remote teaching

The Schools Inspectorate's remote inspections show that students feel that the teacher support that is available during remote teaching is not as good as that offered during classroom teaching. This might for instance be because it is difficult to get hold of the teacher, that the teacher's response is delayed, and that communication becomes difficult when it is not face-to-face. Students also feel that the replies to their questions are not as good.

 $^{^{\}rm 42}$ Schools Inspectorate (2021c), p. 18.

⁴³ Schools Inspectorate (2021a), p. 24.

⁴⁴ Schools Inspectorate (2021a), p. 24; Schools Inspectorate (2021f), p. 31–32.

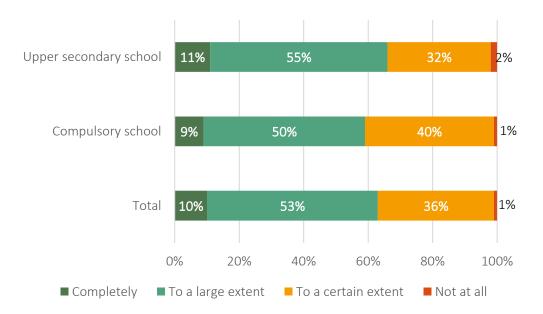
This can have the effect of students getting stuck or losing focus. 45 Students also feel that the demands on them are greater when teaching is remote. For instance, they must more often take the initiative themselves and ask for help from the teacher. 46

The students' picture of the situation often gets confirmed by compulsory school and upper secondary school teachers. It is obvious that it has been a challenge to meet the students at the right level during remote teaching. Teachers' responses to the survey show that only six out of ten teachers believe that they are able completely or to a large extent to satisfy the students' need for support during remote teaching. Upper secondary school teachers are somewhat more positive than teachers in the compulsory school.

⁴⁵ See Schools Inspectorate (2021a), p. 23; Schools Inspectorate (2021b), p. 18–19; Schools Inspectorate (2021d), p. 21; Schools Inspectorate (2021f), p. 37.

⁴⁶ Schools Inspectorate (2021a), p. 25–26; Schools Inspectorate (2021b), p. 20; Schools Inspectorate (2021d), p. 22; Schools Inspectorate (2021f), p. 37.

Diagram 5. Teachers' replies to the question: *To what extent do you feel that you have been able to satisfy the students' need for support during remote teaching* (n compulsory school: 127, n upper secondary school: 161).⁴⁷



Poorer opportunities for teacher support are often connected to the fact that the "three-dimensional" aspect of communication – gestures, facial expressions, etc. – disappear when teachers and students are unable to meet in the flesh.⁴⁸ Many students describe the increased difficulty both of catching the attention of the teacher and of understanding the teacher's explanation during remote teaching. From the perspective of the teacher it is a challenge during remote teaching to monitor that all students are on board. Gradually, teachers have developed strategies to ensure that messages, instructions, etc. have reached their target. However, it is difficult to be aware of everything, not least when the students have had less inclination than normally to ask questions and make it known when they do not understand. 49 Teachers describe how in the physical classroom they are far more able to sense if the students are tired or if they have not understood. This makes it possible to catch the right moment to encourage the students or interrupt the lesson, for instance for a joint explanatory session on the board. Teachers also describe that their ability to react to and give feedback on matters where the students are not *explicitly* asking questions is poorer during remote teaching. In the physical classroom, the teacher can walk about and listen to the students' reasoning, for instance when they are discussing in "beehives", and to provide an immediate response to the students' reflections.⁵⁰

Often the students' impressions are very similar to those of the teachers. For instance, they report that – unlike in the classroom – the teacher does not "see" that they need help. In classroom teaching the teacher walks

⁴⁷ The question was put to teachers in Schools Inspectorate (2021h).

⁴⁸ Schools Inspectorate (2021a), p. 24; Schools Inspectorate (2021d), p. 22–23.

⁴⁹ Schools Inspectorate (2021b), p. 19; Schools Inspectorate (2021d), p. 27.

⁵⁰ Schools Inspectorate (2021h).

about among the students while they work. This enables the teacher to note — via facial expressions or body language — if the students have got bogged down in a task and need help to progress. When the teacher "checks them out" in this way it becomes easier for the students to realise which questions they need to ask, and they don't have to get bogged down in the tasks. During remote teaching the students have more of a feeling that they must accept responsibility for framing concrete questions and for actively seeking support from the teacher. The situation has been particularly challenging for students who do not have Swedish as their native language, for instance in Swedish for immigrants or introductory Swedish. It is usually possible, when meeting in the flesh, to clarify linguistic confusion, but during remote teaching this is harder, since the students are unable to resort to body language and facial expressions. 52

Survey input from upper secondary school students shows that there is some difference between boys' and girls' experience of the situation. Boys more often than girls feel that the teacher sees when they need help during remote teaching. Just under a third of boys, compared to just over a fifth of girls, state that teachers always take notice of their needs.⁵³

Teachers find it hard to discover and satisfy students' need for support when teaching of mathematics is delivered remotely

It is clear that mathematics has been a particularly difficult subject during periods of remote teaching, for both compulsory school and upper secondary school students irrespective of programme. For instance, students indicate that they are more dependent on teacher help in mathematics than in other subjects, since it is difficult to solve problems on their own and it is not as easy as in other subjects independently to find answers or guidance. At the same time students feel that it is difficult to ask for help as well as to understand the teacher's explanations when mathematics teaching is delivered remotely. Although many students are aware that the teachers do their best for them to be able to follow the teaching, and encourage them to ask questions if they don't understand, the students are not always immediately aware of which questions they need to ask, or even have the vocabulary to ask them. During remote mathematics teaching, the fact that it is difficult for the teacher to see if a student has got stuck becomes an aggravating circumstance causing the teaching not always to reach its target.54

Sometimes support is prioritised over providing the students with more challenges

In many of the surveyed compulsory schools and upper secondary schools it can be observed that both principals and teachers have felt obliged, during the period of remote teaching, to identify priorities. This has among other things had the effect that students' need for support has more or less explicitly been given priority over their need for stimulation. In some

⁵¹ Schools Inspectorate (2021d), p. 22-23.

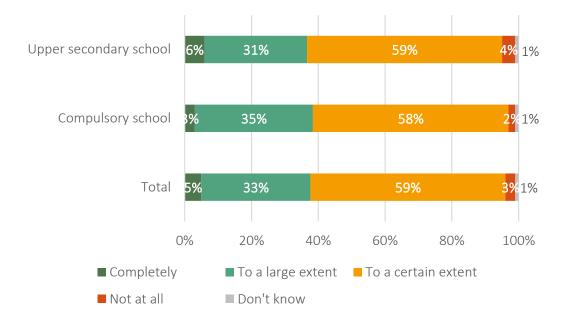
⁵² Schools Inspectorate (2021a), p. 24.

⁵³ "Do you feel that your teachers notice when you need help when the teaching is/was delivered remotely?" The question was asked within the framework of Schools Inspectorate (2021d), p. 24.

⁵⁴ Schools Inspectorate (2021b), p. 20; Schools Inspectorate (2021d), p. 19–20.

cases it seems, for instance, that support to enable students to achieve a pass grade has been given priority. The Schools Inspectorate has repeatedly seen indications that students who are well advanced in their knowledge development have not always received the challenges they need, which means that they might not achieve as much as they would otherwise have done. ⁵⁵ Only four out of ten teachers state that they are completely or to a large extent able to satisfy the students' need for stimulation during remote teaching.

Diagram 6. Teachers' replies to the question: *To what extent do you feel that you have been able to satisfy the students' need for stimulation during remote teaching* (n compulsory school: 127, n upper secondary school: 161).⁵⁶



Students who are well advanced in their knowledge development also consider that remote teaching has a negative impact on them, since it does not provide them with sufficient challenges. Students describe, for instance, that they are given exercises that, while they might be many, are at a low level of complexity. It is also reported that students do not always get a chance to demonstrate their knowledge when it is at a high level. The experience of not being given the opportunity to reach personal goals, or to gather the knowledge required for better grades, is stress-inducing for some students.⁵⁷

Teachers describe, among other things, the difficulty of giving the students "a little extra" added value as part of the teaching when it is delivered remotely, and it can be difficult to create interest in the subject and make learning a pleasure. Teachers also report that the effort teachers normally put in to encourage students to aim higher has been harder to bring about

⁵⁵ Schools Inspectorate (2021d), p. 23.

⁵⁶ The question was put to teachers in Schools Inspectorate (2021h). When percentages do not add up to 100 this is due to rounding.

⁵⁷ Schools Inspectorate (2021a), p. 37; Schools Inspectorate (2021b), p. 25; Schools Inspectorate (2021d), p. 33

during remote teaching, for instance giving the students "an extra push" to make them raise their performance a little bit further. They feel that it has been difficult to motivate students who are capable of achieving higher grades actually to go for it. They also say that it has often worked well for students who "are willing" and "have the drive", while students who "learn without really trying" during classroom teaching lose the beneficial classroom effect when teaching is delivered remotely.⁵⁸

The Schools Inspectorate wishes to emphasise that many students, both in the compulsory school and the upper secondary school and in municipal adult education, have expressed their appreciation of their teachers' great efforts to make it easier for them in the extraordinary situation created by remote teaching. It is often said that the teachers have been sensitive, gone the extra mile to make themselves accessible and to find flexible solutions to giving appropriate support.

Students' focus and motivation affected negatively during remote teaching

At school the task takes centre stage but home has other attractions

The remote inspections show that the school as a physical location is important to the students' focus and motivation. Being in a context where the tasks take centre stage means that students get more work done. The school is felt to be a workplace where students are *expected* to work. It is noticeable from the students' descriptions that the presence of teachers as well as classmates helps motivate, push, and inspire greater effort. At home there are instead many distractions, and it is easy to do something else rather than focusing on the task. In some cases the students' homes are frankly unsuitable as environments for study, for instance due to overcrowding, substance abuse or mental ill health.

Insufficient motivation for studying stands out as one of the clearest consequences of remote teaching and many students feel that they have learnt less due to the situation.⁵⁹ Even though the Schools Inspectorate has seen indications that older students have been better at managing remote education, compared to younger ones,⁶⁰ a consistent finding is that students generally have found it harder to retain their interest and focus during remote teaching.

However, for some students remote teaching has worked well. This is often the case for students who find social interaction difficult. For such students remote teaching might create better conditions for attendance, participation and learning.⁶¹ Likewise, periods of remote teaching have sometimes

⁵⁸ Schools Inspectorate (2021h).

⁵⁹ Schools Inspectorate (2021a), p. 24, 37; Schools Inspectorate (2021b), p. 20; Schools Inspectorate (2021d), p. 30, 50; Schools Inspectorate (2021f), p. 42–43.

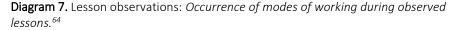
⁶⁰ One third of students in year 3 of the upper secondary school usually feel that they learn as much during remote lessons, compared to one fifth of students in year 1, Schools Inspectorate (2021d), p. 21.

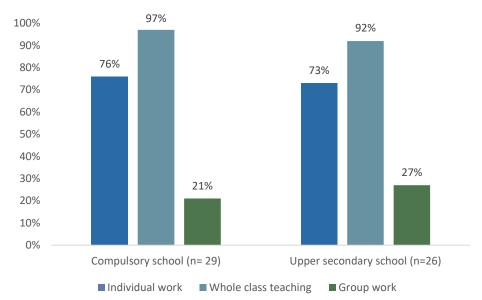
⁶¹ Schools Inspectorate (2021d), p. 25; Schools Inspectorate (2021h).

offered students with good study skills and good facilities for study in their own homes, better conditions for focusing and concentration.⁶²

Remote lessons often contain little variety and are sometimes seen by the students as monotonous and meagre

Remote lessons often contain relatively little variety in terms of teaching approach, and lessons often consist of simple and individual tasks. Lesson observations by the Schools Inspectorate show that the majority of digital lessons follow a set pattern: introduction to the lesson, presentation of the subject content by the teacher, instructions for an individual task, after which the students work independently with the assigned task, and finally a reassembly of the whole class. The execution of other types of tasks, group discussions, and more complex content is often left for occasions of classroom teaching. While having a common structure for lessons is generally advantageous because it creates clarity and predictability for the students, this must not mean that lessons are all the same. The teaching also needs to contain variety and alternation between different types of tasks and between different modes of working, to improve the chances of satisfying students' needs and retaining their interest.





The occurrence of different modes of working during lessons shows a similar pattern for the compulsory school as for the upper secondary school. Almost all observed lessons included whole class teaching and just over 70 percent included individual work. Group work was somewhat more common in observed lessons in the upper secondary school, but was present in less than 30 percent of lessons.

⁶² Schools Inspectorate (2021b), p. 21; Schools Inspectorate (2021h).

⁶³ Schools Inspectorate (2021c), p. 15.

⁶⁴ Ibid, p. 15.

Lessons delivered remotely principally consist of theory, while practical aspects are dealt with when the students are on site in the school. Sometimes this is because it is not possible, for practical reasons, to act differently and sometimes because it is seen as too difficult. When students are deprived of the opportunity of alternating theory and practice it can be harder for them to understand and their learning can be held back. Sometimes students feel that the theoretical parts that they study at home are not *joined up* with the teaching that takes place in the school. ⁶⁵ This division also means that students sometimes feel that the remote lessons are monotonous and a bit meagre, something that could in turn reduce the students' concentration and motivation. ⁶⁶

Variable availability of a good digital teaching environment and good tools for remote teaching

The remote inspections show that the digital teaching environment sometimes makes learning more difficult. It is not entirely unusual for "technical hassle" to affect students' possibility of accessing the teaching. More than one in ten of students in the upper secondary school state that they are rarely or never able to participate in remote teaching without technical hassle.⁶⁷ The remote inspections show that technical problems can be a time thief – stealing teaching time, complicating communication, and making it harder for students to do their schoolwork.⁶⁸ Replies do not differ worth mentioning between different types of programme. These are also problems experienced by students in the compulsory school during periods of remote teaching.⁶⁹

There are also differences in terms of the students' basic resources for participation in remote education. There are students who lack adequate technical equipment and sufficient knowledge to use it. This is particularly prevalent among students enrolled in Swedish for immigrants, municipal adult education at basic level⁷⁰ or introductory Swedish⁷¹. Among students living in rural areas there might also be inadequate facilities for remote teaching because of a poor connection.⁷²

⁶⁵ Schools Inspectorate (2021b), p. 15; Schools Inspectorate (2021d), p. 19.

⁶⁶ Schools Inspectorate (2021b), p. 15.

 $^{^{67}}$ Schools Inspectorate (2021d), p. 47.The question was: Do you feel you can follow remote teaching without experiencing technical problems? (n = 399).

⁶⁸ Ibid, p. 47.

⁶⁹ Schools Inspectorate (2021b), p. 21.

⁷⁰ Question to students: *To what extent would you estimate that you have access to technical solutions enabling you to participate when teaching is delivered remotely?* Almost one sixth state that they do not at all or to a fairly or very limited extent have access to technical solutions enabling them to participate in the teaching. Schools Inspectorate (2021a), p. 20–21.

⁷¹ Schools Inspectorate (2021f), p. 21.

⁷² Schools Inspectorate (2021h).

Access to technology and skills varies among schools and affects the quality of the teaching

The situation caused by the Covid-19 pandemic has involved a continuing education journey for those teachers and schools who have had to transition to remote teaching. Even if there is still a long way to go before its quality can be said to equal that of classroom teaching, many teachers have gradually developed their ability to handle digital tools and carried out adaptations for the digital teaching environment. Tachers' replies show that the technical side – getting the technology to work, finding various digital tools and channels, and becoming more digital in their teaching – has been a great challenge and more so for compulsory school teachers than for upper secondary school teachers. The latter have had more time to overcome the technical threshold and to practise.

However, teachers' access to adequate technological solutions and the skills needed to use them varies greatly both between and within schools. For the students this means a risk of unequal access to good teaching. The remote inspections clearly show that those schools that are at the forefront of technology use are also more successful in their implementation of remote teaching.

Access to functioning technical aids is a precondition for remote teaching, but it is not in itself the solution. Teachers in both the compulsory school and the upper secondary school state that one of the very greatest challenges of remote teaching is about *adapting* the teaching to the new teaching environment. Among other things teachers describe the challenges of finding ways to vary the teaching, to adapt materials to "screenbased teaching", to find effective pedagogical tools, and to create an interesting learning situation that activates the students.⁷⁵ The physical distance has altered the possibilities of interaction and many teachers feel that this has made it harder to convey knowledge and to catch and act on signals from the students.

The remote inspections show that diligent and strategic use of digital tools benefits several aspects of the teaching: lessons become more absorbing, the students more active, and interaction between students, as well as between teacher and students, becomes possible.

A common way of facilitating interaction — collaborative work and social association — is to make use of digital group rooms. In the group rooms students can among other things practise dialogues, work on group assignments, or carry out peer reviews. ⁷⁶ Digital solutions also make it possible to provide students with materials and plans and to create a unified platform for their work. Interviews carried out early in the spring showed that too many schools were still only just beginning their development journey in

⁷³ Schools Inspectorate (2021c), p. 25; Schools Inspectorate (2021d), p. 48.

 $^{^{74}}$ Question to compulsory school and upper secondary school teachers: Which have been the three biggest challenges for you as a teacher when teaching has been delivered remotely? in Schools Inspectorate (2021h).

⁷⁵ Ibid.

⁷⁶ Schools Inspectorate (2021c), p. 30.

terms of the use of digital tools.⁷⁷ According to some teachers, the availability of suitable digital teaching materials has been a limiting factor during remote teaching. The teachers say that both the quantity and the quality of materials vary according to subject.

The students have also been given opportunities to develop their digital knowledge. This is to some extent evident from the in-depth review of introductory Swedish⁷⁸, but perhaps most clearly from the review of remote teaching within municipal adult education. In several interviews, students in municipal adult education stress that the situation has made them develop their technical skills, how to handle a computer – connecting and presenting and writing at greater speed.⁷⁹ Both students and principals within municipal adult education also see positive consequences of remote teaching. Among other things they stress the increased possibility of individually tailor-made education programmes and of giving students a more flexible pace of study. For students enrolled in a vocational programme the situation has meant more opportunities to combine studying and working.⁸⁰

Less skills training and fewer opportunities to practise in real-life situations lead to poorer learning

Reduced opportunity to alternate theory and practice makes for poorer teaching and learning

For obvious reasons remote teaching has focused more on theory than on practice. This has had an impact on many subjects, not just the purely practical ones, but also subjects containing both practical and theoretical elements. It has for instance been a challenge to carry out laboratory exercises in science subjects, some exercises within physical education and health, and cookery within home and consumer studies. The situation has made it difficult for the teacher to alternate in a natural manner between the practical and the theoretical. Often the solution has been to cover theoretical aspects remotely and save laboratory exercises and practical training for the next occasion of classroom teaching. This approach has affected both the teachers' ability to teach and the students' ability to learn. While the challenge has perhaps been most pronounced within the vocational programmes of the upper secondary school, the same problems occur also in theoretical subjects. Being able to try to do something yourself, for instance during laboratory exercises, makes it easier to understand how things are connected. In the same way activities like study visits make it possible to see "what it looks like in reality" and can make it easier to learn theoretical explanations and difficult concepts.⁸¹ Interviews with teachers within aesthetic programmes show that remote teaching does not work at

⁷⁷ Schools Inspectorate (2021a), p. 20–21; Schools Inspectorate (2021c), p. 30; Schools Inspectorate (2021d), p. 47–48.

⁷⁸ Schools Inspectorate (2021f), p. 44.

⁷⁹ Schools Inspectorate (2021a), p. 28.

⁸⁰ Ibid, p. 14-15.

⁸¹ Schools Inspectorate (2021b), p. 15; Schools Inspectorate (2021d), p. 19.

all for courses where students are meant to interact and practise audience contact.

Practising in real-life situations leads to more progress for students

In many cases schools have had to make great efforts for any success in carrying out practical working life experience and workplace-based learning. However, principals in both compulsory schools and upper secondary schools and municipal adult education are often able to describe how they, by using creativity and planning, have found solutions that have made the situation manageable, even though sometimes courses have to be postponed until a later date. Principals are aware that there have been major differences between industries in terms of their ability to accept students depending on the infection situation. It has also happened that workplace-based learning periods have had to be moved because the students are part of a group at risk or because students are concerned about infection.⁸²

Letting students do their workplace-based learning in the school is a solution that crops up in several interviews with principals of upper secondary schools. The principals describe this as an alternative method of giving the students an opportunity to learn the practical course elements that they would otherwise have learnt in a workplace. An example is that students training to become bus drivers have practised customer interaction and how to present a tour to their passengers through role-play in the school. A recurring method of handling practical elements is also for the school to send out materials to the students' homes, for instance a bag of food or hairdressing or make-up dolls, so that they are able to practise at home. Although the schools' ability to handle the situation in most cases is a positive thing, the quality of the implementation has often been affected negatively. Certain skills need to be honed through overlearning as well as support and continuous feedback.

Poorer opportunities for language development during remote teaching since the situation often affords little practice in speaking the new language

Language learning has also become considerably more difficult during remote teaching – in particular for students who are learning an entirely new language. Language learning is continuous and spending time in environments providing ample opportunity to speak and hear the new language is of central importance. In the physical school environment such opportunities occur both during lessons and in the breaks between them. Such natural opportunities to practise do not arise spontaneously during remote teaching. However, there are good examples of institutions working actively to provide their students with better opportunities for practice, for instance by

⁸² Schools Inspectorate (2021a), p. 30; Schools Inspectorate (2021b), p. 13; Schools Inspectorate (2021d), p.

⁸³ Schools Inspectorate (2021d), p. 18.

⁸⁴ Schools Inspectorate (2021a), p. 30.

⁸⁵ Schools Inspectorate (2021a), p. 28; Schools Inspectorate (2021b), p. 13; Schools Inspectorate (2021d), p. 18–19.

introducing digital language cafes or creating virtual study rooms.⁸⁶ However, both the review of municipal adult education and of introductory Swedish show that the students' oral language development (speaking Swedish) has suffered from the situation.⁸⁷

The reduced emphasis on language development risks having consequences for the students' further studies and their ability to get established in the labour market. Rrustration and stress linked to this situation have found expression for instance during interviews with students in municipal adult education programmes. The students are worried that they are not going to be able to absorb all the knowledge that is required if they are eventually to find jobs. Page 19.

Work on issues related to fundamental values toned down

Difficult to work remotely on issues related to fundamental values

The remote inspections show that teachers and principals often feel that remote teaching has made it more challenging to work on issues related to fundamental values and the global curriculum goals: to promote democracy, solidarity, and equality. What seems to have worked best is activities that teachers integrate in their courses or subjects, as well as aspects linked to mentoring. Due to the risk of spreading infection it has been harder to carry out school-wide projects and major planned thematic days or activities involving several year-groups (like sponsoring activities or student councils). It has often been necessary to cancel planned study visits and it has also become more difficult to invite external visitors. It is also clear that many teachers feel that informal promotion of fundamental values has become more difficult. Teachers say that such conversations do not arise as easily during remote teaching and are also harder to manage remotely. Many teachers also feel that it has, during periods of remote teaching, been harder to notice if students are not treating each other with respect or if relations between individual students or between groups of students are not working well.

Almost half of compulsory school and upper secondary school teachers indicate that the students have to a certain extent or not at all been able to engage as much as normal with the fundamental values mission during remote teaching.

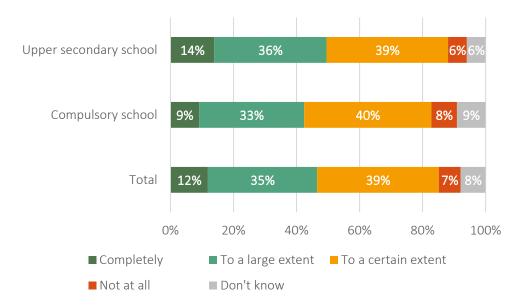
⁸⁶ Schools Inspectorate (2021a), p. 16.

⁸⁷ Schools Inspectorate (2021a), p. 39; Schools Inspectorate (2021f), p. 31–32.

⁸⁸ Schools Inspectorate (2021f), p. 54.

⁸⁹ Schools Inspectorate (2021a), p. 37.

Diagram 8. Teachers' replies to the question: *To what extent have the students* been able to engage as much as normal with the fundamental values mission during remote teaching? (n compulsory school: 129, n upper secondary school: 163).⁹⁰



The digital discussion climate as such appears to have made it more difficult to engage in work on issues to do with fundamental values. Many teachers attest that it has been difficult to engage students in active conversations remotely. Lessons delivered remotely do not create the same feeling, rather it becomes a kind of "talking round" according to one teacher, who also suggests that conversations carried out remotely do not provide the same level of practice in sharing thoughts and sharing the space for speaking. Teachers also indicate that it can be difficult to "read" the students digitally and to sense the impact of the discussion. They feel that it is harder to know if the students are absorbing the discussion when they are sitting behind a screen. 91 Several compulsory school principals also say the work around fundamental values has also, during this period, suffered from teachers becoming more cautious in their choice of discussion topics. 92

Online abuse has become somewhat more visible with teachers and students encountering each other more often in the digital environment

The Schools Inspectorate has previously noticed that it can be difficult to discover and investigate abuse carried out online, an arena where students spend time "out of reach" of direct observation by their teachers.⁹³ The school has a responsibility to work to prevent online abuse when such

 $^{^{90}}$ The question was put to teachers in Schools Inspectorate (2021h). When percentages do not add up to 100, this is due to rounding.

⁹¹ Schools Inspectorate (2021b), p. 13; Schools Inspectorate (2021h).

⁹² Schools Inspectorate (2021b), p. 13.

⁹³ Schools Inspectorate (2016). *Skolors arbete mot trakasserier och kränkande behandling på nätet.* Review report. Dnr. 2015:6584.

abuse is connected to school activities. This also includes creating a safe environment during digital lessons.

Students at a small number of compulsory schools and upper secondary schools indicate that vicious comments or a risk of abusive treatment do occur during remote teaching. Among other things, students do not feel convinced that what is said in the digital classroom stays there but worry that other students might film them and publish this in social media. Sometimes this makes students refrain from asking questions or asking for help. In some schools, the teachers also indicate that it has been a challenge to get the students to turn the camera on and to help the group to feel safe around this.⁹⁴

However, both teachers and principals attest that generally the number of reports and physical conflicts have gone down rather than up during this time, which is often seen as being due to students and teachers not encountering each other in the ordinary way. However, it can also be seen that many believe that conflicts might have moved online where they are not as visible. In the digital environment there are many interfaces that the school system needs to be prepared to handle.

Those discussions about fundamental values that have taken place during the period have to a greater extent than previously been related to events online and online ethics. This applies to planned as well as spontaneously arising discussions, for instance when inappropriate comments are written in the chat field, when students have taken a screen shot of the digital classroom and shared online, or have had a background image that can be seen as abusive. There are also examples of schools having invested in themes that might be of particular interest when teachers and students are primarily meeting digitally. One school, for instance, invited a speaker to talk about online abuse and legal issues. At another school the student health services devoted a week to the theme of online hatred.⁹⁵

Important to resume paused or toned-down work on fundamental values

The Schools Inspectorate has observed that schools have sometimes consciously paused planned activities around the fundamental values mission. This has partly been because it has been felt to be complicated for instance to carry out theme days and joint activities that break the normal schedule, partly because the knowledge mission has received priority. Several teachers and principals indicate that discussions around fundamental values have been "saved" for when the students are on site in the school for classroom teaching. The remote inspections also show that relations between teachers and students and the students' relations to each other are vulnerable and suffer when teaching is carried out remotely. The longer the time span when the students do not meet in classroom lessons, the more their interaction is affected, which can be regressive and make them

⁹⁴ Schools Inspectorate (2021b), p. 6; Schools Inspectorate (2021h).

⁹⁵ Schools Inspectorate (2021h).

⁹⁶ Schools Inspectorate (2021h).

insecure in relation to each other.⁹⁷ At some schools the teachers indicate that they are going to have to concentrate more on group psychology and group dynamics when the students have received much remote teaching, among other things because not all students have yet established their roles in the social context of the school.⁹⁸

Giving lower priority to activities concerning fundamental values might have long-term consequences both for students' education and for the school's overall efforts to support democracy, solidarity, and equality. An open and accepting classroom atmosphere is in itself a prerequisite for the students' learning and development.

Difficult to compensate for the consequences of remote teaching

Remote teaching has in many cases meant poorer conditions for student knowledge development. Teachers and principals are aware of this and are worried. They have tried to alleviate or compensate for the drawbacks to remote teaching that have often been experienced during this period. Methods used by schools to manage the negative consequences include a strategic use of classroom teaching and various support efforts for students who have been found to be lagging behind in their learning. The Schools Inspectorate has seen many teachers assuming a high degree of responsibility to ensure that they, alone or within task or subject related teams, monitor students' learning and further develop their own remote teaching skills. It has been more unusual for follow-up and development to take place across the whole school under shared leadership.⁹⁹

Classroom teaching has been used to alleviate negative consequences for students who have been found to be vulnerable or particularly badly affected

The option to allow students to come to the school for classroom teaching has often been used by schools. This measure has been applied in order to improve the situation of particularly vulnerable student groups, in line with the recommendations of the Public Health Agency. ¹⁰⁰

Many compulsory school and upper secondary school principals stress that the possibility of offering classroom teaching to students in need of this has been key to enabling the students to reach set goals. Students on the introductory programme within the upper secondary school have often been entirely exempted from remote teaching. ¹⁰¹ However, here as well

⁹⁷ Schools Inspectorate (2021c), p. 19.

⁹⁸ Schools Inspectorate (2021h).

⁹⁹ Schools Inspectorate (2021a), p. 39; Schools Inspectorate (2021b), p. 36–37; Schools Inspectorate (2021d), p. 6–7, 30–31, 52; Schools Inspectorate (2021f), p. 55.

¹⁰⁰ Public Health Agency (2020).

¹⁰¹ Schools Inspectorate (2021d), p. 14; Schools Inspectorate (2021f), p. 59.

there have been occasions when students have been given remote teaching, for instance because of local eruptions of infection, teachers in at-risk groups, or the characteristics of the school premises. Principals and teachers within introductory Swedish programmes where remote teaching has taken place believe that this will have a negative effect on the students' achievements. 102

Principals in all education sectors indicate that schools have adopted a generous view when identifying students who might be particularly vulnerable when teaching is delivered remotely. Students whose study situation at home is less than ideal, for instance due to overcrowding or inadequate technical resources, as well as students whose schoolwork is lagging behind, have often been allowed to come to the school for classroom teaching. 103 There are also examples of students with high levels of absenteeism and low motivation being invited to come to the school to meet their teachers as a way of motivating them to return to the institution. ¹⁰⁴ Many institutions within municipal adult education have also offered the possibility of coming to the school premises to those students who have indicated or been assessed as having a need for a great deal of support, even though municipal adult education has not been included in the Public Health Agency's recommendations concerning particularly vulnerable student groups. This has often meant that students with little experience of studying and poor command of Swedish have received their teaching at the institution's premises. Students enrolled in vocational courses within municipal adult education have also been given space within the premises to a greater extent than students on other courses. 105

Teachers and principals indicate that the study situation has become easier for those students who have been able to receive classroom teaching rather than remote teaching. However, it cannot be compared to an "ordinary" school day. Sometimes the classroom teaching has included support on site from teachers, but sometimes it has consisted in students being given access to a classroom where they are able to go online and take part in the lessons.

In some cases students in their final term in the compulsory school or the upper secondary school were completely or partly exempted from remote teaching for parts of the spring semester. The reason was that the school wanted to ensure that these students would be able to complete all curriculum items in a satisfactory manner ahead of receiving their final compulsory school or upper secondary school grades. ¹⁰⁶ However, this has often meant that other students have received greater volumes of remote teaching and the Schools Inspectorate wishes to emphasise the importance of planning for future measures to compensate students who have been disadvantaged. In particular, this applies to students in years 1 and 2 of the

¹⁰² Schools Inspectorate (2021f), p. 26–28.

¹⁰³ Schools Inspectorate (2021b), p. 22ff; Schools Inspectorate (2021d), p. 13; Schools Inspectorate (2021f), p. 4.

¹⁰⁴ Schools Inspectorate (2021b), p. 23.

 $^{^{\}rm 105}$ Schools Inspectorate (2021a), p. 12, see Table 1.

 $^{^{106}}$ Schools Inspectorate (2021b), p. 11–12; Schools Inspectorate (2021d), p. 14; Schools Inspectorate (2021h).

upper secondary school during the period of remote teaching, as knowledge and grades achieved by the students during years 1 and 2 have an impact on their further studies and future professional life.¹⁰⁷

Alternation between classroom teaching and remote teaching has been used for all students to compensate for negative consequences

Apart from using classroom teaching for particularly vulnerable student groups, many schools have made use of the possibility of strategic alternation of remote teaching and classroom teaching for all students. During the spring semester of 2021 it was common for students in the compulsory school and the upper secondary school to receive a combination of simultaneous and not simultaneous remote teaching and classroom teaching. Reviewed institutions within municipal adult education also alternated the modes of teaching relatively frequently. Many principals and teachers mention that the strongest negative consequences of remote teaching occur when the students have been away from the school for long periods at a time.

The Schools Inspectorate's review has not included the quality of class-room teaching, but certain important observations have nevertheless been made. Classroom teaching has often been designed to make it possible to carry out all curriculum items and knowledge assessments¹⁰⁹ and to give the students an opportunity to meet and interact with teachers and other students.¹¹⁰ Thus the possibility of alternating between classroom teaching and remote teaching for all students has often been used as a strategy for managing restrictions. There have also been negative aspects to the alternation approach. Many items get postponed until the students are present in the school and therefore these periods often become crowded – there is much to find time for, and these periods also tend to become replete with exams. Therefore, classroom teaching occasions have often not been used in the manner most favourable to students' learning and knowledge development.¹¹¹

Compensation has been given by and by as students have been offered more support and more time

Many teachers have made great efforts to support their students and compensate for the drawbacks often associated with remote teaching. They have assumed heavy responsibilities and for instance made themselves available to the students and their questions via various channels, also outside normal working hours. At the level of the whole school student compensation has been organised in various ways, both continuously in termtime, through holiday schools, and by extending some courses beyond

¹⁰⁷ Schools Inspectorate (2021d), p. 14.

¹⁰⁸ Schools Inspectorate (2021b), p. 11; Schools Inspectorate (2021d), p. 13.

¹⁰⁹ Schools Inspectorate (2021a), p. 15; Schools Inspectorate (2021b), p. 15; Schools Inspectorate (2021d), p. 13, 32.

¹¹⁰ Schools Inspectorate (2021b), p. 23; Schools Inspectorate (2021d), p. 13.

¹¹¹ Schools Inspectorate (2021b), p. 15; Schools Inspectorate (2021d), p. 34.

¹¹² Schools Inspectorate (2021a), p. 17; Schools Inspectorate (2021b), p. 34; Schools Inspectorate (2021d), p. 43–44; Schools Inspectorate (2021h).

the end of term.¹¹³ It is primarily a case of giving the students more teaching time and offering additional teacher support. Sometimes students have been invited to come to the school for evening, weekend or study day supplementary teaching. Some schools have had supplementation days, when the normal schedule is put aside so that the students can receive additional teaching, such as oral exercises as part of selected courses. Concerning upper secondary school students, some principals mention that the school will offer the opportunity of repeating courses and assessments to a greater number of students than had been normal.¹¹⁴

Several upper secondary schools have paid particular attention to the challenges of remote mathematics teaching and endeavoured to compensate the students in various ways. In addition to adapting the schedule in such a way that mathematics lessons have been timed for days when the students are receiving classroom teaching, the schools have also produced pre-recorded presentations enabling students who so wish to look at them several times. There are also examples of students being offered additional support and time for mathematics teaching. 115

Many organisers have also offered holiday school, both during winter sports or Easter holidays and directly following on the end of the spring semester. Students have appreciated the holiday school, but it has been difficult to secure participation by all students who might particularly need it. 116

There are also cases of principals indicating that they have had to employ additional staff to handle the deficiencies in students' knowledge, for instance by increasing the number of teaching assistants. ¹¹⁷ The remote inspection of municipal adult education also indicates that institutions have devoted more resources to for instance language mentors and study coaches who can help with homework and study skills. ¹¹⁸

Often schools lack a comprehensive picture of how remote teaching has affected students' knowledge development

As already mentioned, students as well as teachers and principals often feel that classroom teaching is more effective than remote teaching. If the school is to know how much knowledge students lose when teaching is remote, which teaching needs to be strengthened and which compensatory efforts should be given priority, the school needs to have a comprehensive picture of its students' knowledge development during the period. However, survey replies by compulsory school and upper secondary school principals show a quarter stating that the school has only to a certain extent investigated the impact of the situation on students' knowledge development.

¹¹³ Schools Inspectorate (2021b), p. 16; Schools Inspectorate (2021d), p. 30–31; Schools Inspectorate (2021b)

¹¹⁴ Schools Inspectorate (2021h).

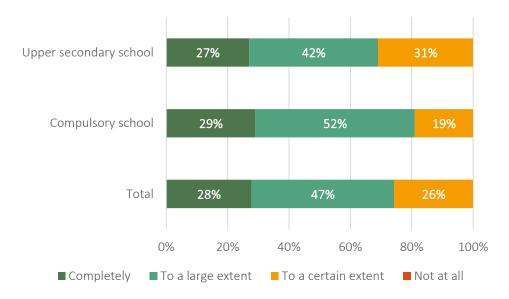
¹¹⁵ Schools Inspectorate (2021d), p. 19–20.

¹¹⁶ Schools Inspectorate (2021g). Sommarlovskolor efter tre terminer med covid-19-pandemin, p. 12.

¹¹⁷ Schools Inspectorate (2021h).

¹¹⁸ Schools Inspectorate (2021a), p. 16–17.

Diagram 9. Principals' replies to the question: *To what extent has the school investigated the impact on the students' knowledge development of the fact that teaching has been delivered remotely?* (n compulsory school: 21, n upper secondary school: 26). ¹¹⁹



During remote teaching, individual teachers have had a decisive role in attempts to monitor students' learning and to pay attention to a potential need for support. 120 Principals as well as teachers state in interviews that they feel somewhat concerned that students might not have been given the attention and support they need, as well as uncertain around which students should be the target of future compensatory efforts and support. There is no comprehensive picture of what is needed in the school. The remote inspections also provide examples of principals and organisers who have given clear priority to creating an idea of the students' experience of remote teaching and who have maintained continuous observation of the consequences of remote teaching for the students' knowledge development. In addition to giving the teachers time for monitoring the students' knowledge, for instance through more frequent assessment notes or mentoring conversations focusing on learning and health, the school managements have continually followed up and provided feedback on the work of the teachers. 121

Teachers are not certain that there are adequate resources and general conditions in place to help students catch up on knowledge

Many teachers and principals are not certain that adequate resources are available for the compensatory efforts needed for students to catch up on knowledge they missed out on when teaching was delivered remotely. Some teachers mention the lack of time for reflection on how to progress work with students who have performed less well or who have received

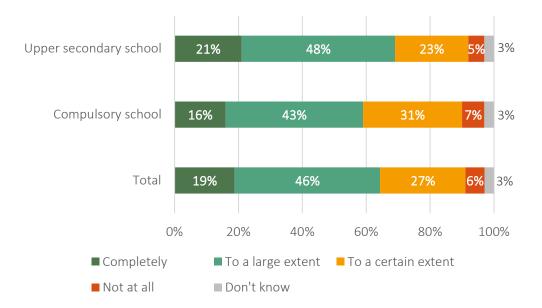
¹¹⁹ The question was put to principals within the framework of the remote inspection in Schools Inspectorate (2021h). The percentages do not add up to 100 due to rounding.

¹²⁰ Schools Inspectorate (2021a); Schools Inspectorate (2021b); Schools Inspectorate (2021d)

¹²¹ Schools Inspectorate (2021h).

teaching remotely during a very long period. Sometimes there is mention of practical difficulties satisfying the needs of all those students who might require extensions to their time of study in the upper secondary school, such as availability of premises. Almost four out of ten compulsory school teachers and almost three out of ten upper secondary school teachers feel that only to a certain extent or not at all are adequate resources available to compensate students for knowledge they have failed to acquire during remote teaching. Again, the replies given by principals are more positive, but less than half state that their own school is completely equipped with such resources. 122

Diagram 10. Teachers' replies to the question: Do you feel that there are adequate conditions/resources in the school for you the teachers to be able to help students catch up on knowledge they have failed to acquire during remote teaching? (n compulsory school: 106, n upper secondary school: 145). 123



Teaching has improved by and by but there is often a lack of comprehensive effort at the level of the school

Principals and teachers, as well as students, indicate that the quality of remote teaching has gradually improved. Evaluation and development of remote teaching has sometimes been seen as the responsibility of individual teachers or various task or subject related teams. It is common for interviewed teachers to describe how they have tried to evaluate their teaching and adapt lesson design and tasks to the digital teaching format. Experi-

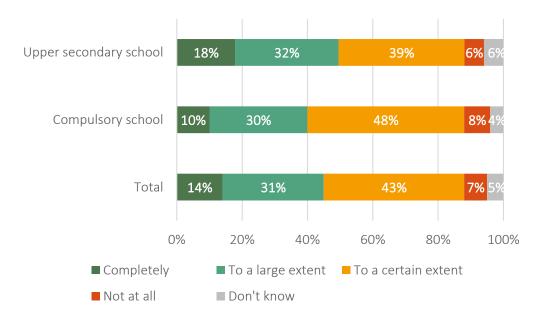
¹²² Question to principals: *To what extent are there adequate conditions/resources at the school to enable teachers to help students catch up on knowledge they have not acquired when teaching was delivered remotely?* Replies from compulsory school principals (n=21): Completely 35%, To a large extent: 41%. Replies from upper secondary school principals (n=26): Completely 42%, To a large extent: 46%.

¹²³ The question was answered by those who had replied "To a large extent"/"To a certain extent"/"not at all" to the question: *To what extent do you feel that your students carry with them the same knowledge and skills as would normally be the case at the end of term/after completion of the course?* In Schools Inspectorate (2021h). See Diagram 3.

ences and lessons learnt have more or less systematically been shared during impromptu discussion with colleagues or within subject or task related teams. ¹²⁴ Efforts made by teachers to adapt their teaching to the digital learning environments seem to have helped reduce the negative consequences of remote teaching for many students, but at the same time there is a risk that the quality of the teaching has become even more dependent on the individual teacher during the period of remote teaching.

Not all schools have carried out systematic and comprehensive work at the level of the school in order to evaluate the remote teaching. As an example, nearly half of upper secondary school teachers and just over half of teachers in the compulsory school feel that the school has only to a certain extent, or not at all, systematically evaluated the teaching that has been delivered remotely.

Diagram 11. Teachers' replies to the question: *To what extent do you feel that the school has systematically evaluated the teaching that has been delivered remotely?* (n compulsory school: 128, n upper secondary school: 163).¹²⁵



There are schools that have made the development of remote teaching into a joint effort at the level of the school, which benefits all teaching and by extension all students. Starting from student experiences, different teacher or subject teams have made adjustments, such as more frequent individual check-ups aimed at early identification of needs, increased use of digital group rooms to facilitate interaction, and devoting more of teachers' time to spoken and written feedback on students' work. Working methods and strategies are shared at the level of the school, for instance by the principal conducting weekly meetings where teachers and other important resources are represented. Such a systematic and shared effort re-

¹²⁴ Schools Inspectorate (2021b), p. 25–26; Schools Inspectorate (2021d), p. 42 ff., 52; Schools Inspectorate (2021f), p. 22; Schools Inspectorate (2021h);

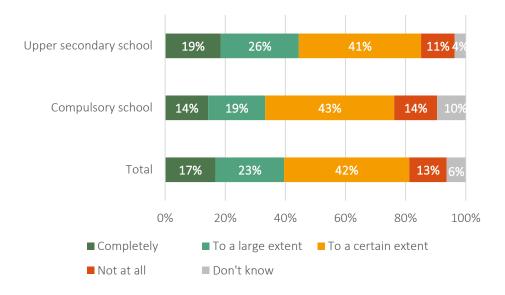
 $^{^{125}}$ The question was put to teachers in Schools Inspectorate (2021h). The percentages do not add up to 100 due to rounding.

duces the risk of the quality of teaching, and therefore the students' learning, becoming dependent on individual teachers' competence, previous experience and ability to perform remote teaching.

In addition to continuous adaptation of the remote teaching, successful schools tend also to use other means of compensating students showing signs of becoming left behind. Such compensation might for instance consist in access to more classroom teaching, additional teaching time, more teacher support or access to the school's support staff – special needs teachers and student health service staff or study and careers advisors. The organisers of these schools have often assumed an active role, for instance by initiating skills development and seminars on the transition to remote teaching. The organisers might also have assumed responsibility for carrying out investigations of the impact of the situation on students' ability to learn and teachers' ability to teach. ¹²⁶

Development work by organisers and schools also includes sharing lessons learnt between schools. Since there was basically no previous experience of remote teaching, what others are learning in the same situation is important for the rapid development of the teaching and for avoiding repetition of mistakes. The dissemination of lessons learnt has been relatively unusual during the period of remote teaching. Just over half of surveyed compulsory school and upper secondary school principals state that lessons learnt have only to a certain extent or not at all been shared between schools having the same organiser.

Diagram 12. Principals' replies to the question: *To what extent have lessons learnt concerning remote teaching been shared between schools having the same organiser?* (n compulsory school: 21, n upper secondary school: 27).¹²⁷



¹²⁶ Schools Inspectorate (2021d), p. 45; Schools Inspectorate (2021h).

¹²⁷ The question was put to principals in Schools Inspectorate (2021h). When the percentages do not add up to 100, this is due to rounding.

The situation has made awarding grades a challenge

Irrespective of the extent of remote teaching, the teachers must as always collect broad and varied evidence to enable them to award grades commensurate with the students' level of knowledge. In the reviewed schools it has often been the case that a relatively large part of the teaching has been delivered remotely and the Schools Inspectorate is aware that a task that was already complex has become even more challenging. The periods of remote teaching have made it harder for teachers to provide students with good opportunities to demonstrate, in various ways, what they know and what they can do, and to find situations that provide reliable data for assessment.¹²⁸

Many teachers experience more difficult conditions for awarding grades in connection with remote teaching

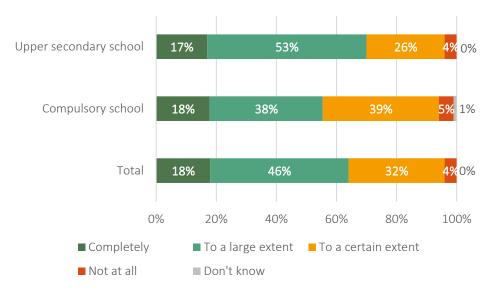
The remote inspections, of the compulsory school and the upper secondary school as well as municipal adult education, indicate that principals have a relatively positive impression of teachers' ability to collect a broad and varied range of data for assessment and to vary the assessment situations. The replies of the teachers indicate somewhat greater uncertainty in both the compulsory school and the upper secondary school. Even though a majority state that they have been completely or to a large extent successful in capturing a wide and varied collection of data as the basis for grading, there are also many who feel that they have only to a certain extent succeeded in this respect. Compulsory school teachers were somewhat more negative in their replies than upper secondary school teachers.

¹²⁸ Schools Inspectorate (2021a), p. 30–32. Schools Inspectorate (2021b), p. 23–24; Schools Inspectorate (2021d), p. 31–33.

¹²⁹ Schools Inspectorate (2021a), p. 31–32; Schools Inspectorate (2021b), p. 24–25. Schools Inspectorate (2021d), p. 32; Schools Inspectorate (2021h).

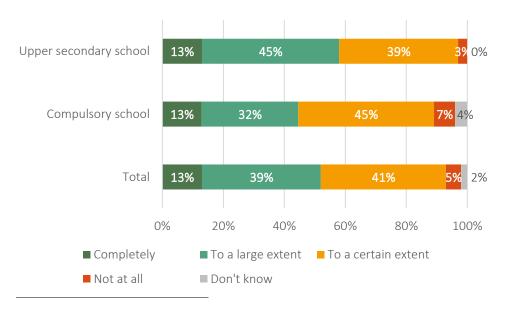
¹³⁰ Teachers in municipal adult education were not interviewed.

Diagram 13. Teachers' replies to the question: *To what extent have you been able to capture a wide and varied collection of data as the basis for grading, when teaching was delivered remotely?* (n compulsory school: 127, n upper secondary school: 162). ¹³¹



Creating varied assessment situations or exams seems to be an even greater challenge. Here, as well, compulsory school teachers are somewhat more negative than upper secondary school teachers. A large proportion of teachers state that they have only succeeded to a certain extent or not at all: this is said by half of compulsory school teachers and four out of ten upper secondary school teachers.

Diagram 14. Teachers' replies to the question: *To what extent have you been able to create varied assessment situations/exams when teaching has been delivered remotely?* (n compulsory school: 127, n upper secondary school: 161). ¹³²

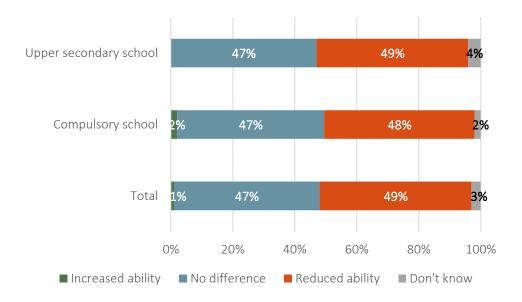


 $^{^{131}}$ The question was put to teachers in Schools Inspectorate (2021h). When the percentages do not add up to 100, this is due to rounding.

 $^{^{132}}$ The question was put to teachers in Schools Inspectorate (2021h). When the percentages do not add up to 100, this is due to rounding.

When asked directly if teachers' ability to award grades has been affected by teaching being delivered remotely¹³³ compulsory school and upper secondary school teachers as well as principals provide the same picture. In all the groups nearly half indicate that the ability to award grades has been reduced.

Diagram 15. Teachers' replies to the question: *Has your ability to award grades been affected by the teaching being delivered remotely?* (n compulsory school: 127, n upper secondary school: 162). ¹³⁴



Increased concern about cheating one reason for preferring to test the students' knowledge within school premises

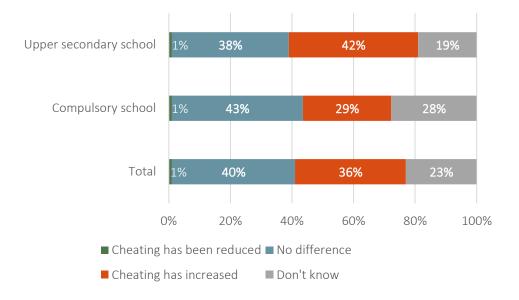
As already mentioned, teachers have often made use of classroom teaching occasions in order to test the students' knowledge and give them an opportunity to demonstrate what they know and what they can do. Many students relate that a large part of the time when they have been on site for classroom teaching has had to be devoted to tests and checks.¹³⁵ The frequent use of physical teaching occasions in this way could be due to an unease experienced by many teachers around tasks that students have worked on remotely and whether the students have actually done the work themselves. Four out of ten upper secondary school teachers and three out of ten compulsory school teachers feel that cheating has become more common during the period.

¹³³ Question for teachers: Has your ability to award grades been affected by teaching being delivered remotely? Question for principals: Has teachers' ability to award grades been affected by teaching being delivered remotely?

 $^{^{134}}$ The question was put to teachers in Schools Inspectorate (2021h). Percentages do not add up to 100 due to rounding.

¹³⁵ Schools Inspectorate (2021b), p. 14–15; Schools Inspectorate (2021d), p. 32.

Diagram 16. Teachers' replies to the question: *Do you feel that the incidence of cheating among students has changed during the period when teaching has been delivered remotely?* (n compulsory school: 129, n upper secondary school: 163). 136



The consequences for students' grades are ambiguous

The remote teaching situation has meant that many teachers have primarily made use of written tasks and tests, something that the students do not always feel does justice to their knowledge. For instance, it appears that students who are normally active during lessons might find it difficult instead to have to demonstrate their knowledge through submitted exercises. Interviews with students in the compulsory school and the upper secondary school, as well as in municipal adult education, show that the students in many cases feel that it is harder to demonstrate their knowledge during remote teaching. They also feel that they have a heavier responsibility for demonstrating their knowledge to the teacher. Is

The picture of the consequences of remote teaching for the students' grades is not unambiguous. Teachers often state that students capable of working independently have not suffered in their grades from the remote teaching. Students at risk of failing have received support from the schools, in the form of additional teaching, support hours, holiday school and classroom teaching. Teachers and principals say that many of these students have been able in this way to achieve a pass in spite of remote teaching, while on the other hand there are students who have not progressed as far as they would otherwise have done because of remote teaching. The teachers relate that it has been more difficult for students who find it harder to get things done independently or to motivate themselves to do schoolwork, or who are dependent on the "amplifying effect" of classroom

 $^{^{136}}$ The question was put to teachers in Schools Inspectorate (2021h). Percentages do not add up to 100 due to rounding.

¹³⁷ Schools Inspectorate (2021d), p. 34.

¹³⁸ Ibid, p. 34.

¹³⁹ Schools Inspectorate (2021a), p. 32; Schools Inspectorate (2021b), p. 24–25; Schools Inspectorate (2021d), p. 33.

teaching on students' learning, to achieve higher grades when teaching has been remote.

Many teachers relate that grading levels in their school have been surprisingly little affected by the teaching being delivered remotely. Interviews provide examples of various ways of reasoning around how the remote teaching situation has influenced the grades awarded by teachers. Some teachers state that they have been more cautious in their grading, made less use of the higher grading levels and sometimes postponed raising or lowering grades because the students have largely been taught remotely. Other teachers relate that they have been more generous in their assessment because the teaching format has been disadvantageous to certain students or because the teaching staff have collectively taken the view that no student should be awarded a lower grade due to the pandemic. Upper secondary school teachers sometimes point out that any excessive grades and knowledge deficiencies might damage students' chances at the next stage, if they have not had an opportunity to practise and confirm the skills and knowledge expected of them. 140

The Schools Inspectorate notes that it appears that students at risk of failing have been able to pass thanks to large-scale support, which should mean that the proportion of students who fail has not increased as a result of remote teaching. Nor does it appear that students whose study skills and resources are good have been affected to any large extent, but have been able to achieve top grades in spite of remote teaching. Judging from what teachers say, remote teaching has primarily affected students with pass grades who might, under normal circumstances, have achieved more given more stimulation and active support by their teachers. The short-term and long-term effect on grading levels as such is something that the Swedish National Agency for Education, and academic research, will be able to evaluate further as grading statistics become available.

¹⁴⁰ Schools Inspectorate (2021h).

Remote teaching affects students' health in a negative way

The Schools Inspectorate's overall assessment of the consequences of remote teaching for students' health

Remote teaching has been stressful for many students, both in terms of their mental and physical health and their social situation. How well students have managed to handle the situation is often linked to the volume of remote teaching but also to the students' home environment and access to support from a social network. The Schools Inspectorate's assessment is that efforts made to monitor students' wellbeing during remote teaching have not been sufficiently systematic to guarantee that the school becomes aware of all students whose health has been affected. This risks creating a situation where not all students receive the support they need to feel well physically and mentally.

The Schools Inspectorate further considers that the schools have made great efforts in support of individual students' health and wellbeing during remote teaching. At the same time the schools' focus on interventions on behalf of students who have themselves indicated or who have clearly demonstrated signs of ill health had the effect of making the school health services principally reactive at the level of the individual and that preventive and health promoting work has been deprioritised. Schools have rarely applied a student health perspective to the remote teaching, and there has been no overall approach to the conditions for learning and health in the digital learning environments.

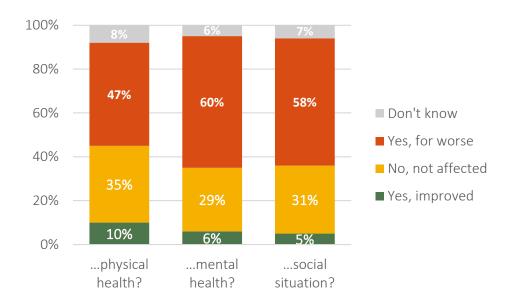
This section first presents the Schools Inspectorate's findings in terms of the effect remote teaching is seen as having had on students' health, and how this varies between students whose circumstances vary. Next follows a description of the schools' student health activities during periods of remote teaching. Unless otherwise indicated the findings refer to all reviewed education sectors: compulsory school (years 7 to 9), upper secondary school, and municipal adult education. The account of the findings of the Schools Inspectorate only covers the effect of remote teaching on students' health. The Covid-19 pandemic as such, when students have themselves been ill or have been worried that family members will fall victim to illness or unemployment, has of course also affected students' wellbeing during this period.

Stress, loneliness and worse routines common when teaching is remote

During the period of remote teaching, many students have felt isolated from the school and from each other, have found it difficult to keep to established routines, or experienced increased anxiety or stress. ¹⁴¹ Students, principals, and other members of school staff within compulsory school and upper secondary school, as well as within municipal adult education, attest that the learning environment has had a negative impact on students' wellbeing. After three semesters with remote teaching the situation is somewhat different from the initial phase of the Covid-19 pandemic. Earlier reports by the Schools Inspectorate described a number of positive effects of remote teaching, e.g. that students who had previously had high levels of absenteeism now participated more in lessons. ¹⁴² After a prolonged period of remote teaching increasing numbers of negative consequences have become apparent.

Not having the possibility of being in the school, and be guided by the framework of the school day to the usual extent, has had a negative impact both on students' wellbeing and on their resilience in the face of pressure. The lack of social intercourse and a desire to get back to school are constants in many student interviews. A large proportion of students indicate that their physical and mental health has deteriorated. This is an impression also shared by teachers, student health service staff, and principals. For example, more than half of surveyed upper secondary school students state that their mental health and social situation have suffered from the fact that teaching is delivered remotely. Almost half also replied that their physical health has suffered.

Diagram 17. Upper secondary school students' replies to the question: *Do you* think your physical health/mental health/social situation has been affected by the fact that teaching is delivered remotely? (n=404).¹⁴³



¹⁴¹ Schools Inspectorate (2021a), p. 35–37; Schools Inspectorate (2021b), p. 26–27; Schools Inspectorate (2021e), p. 18.

¹⁴² See e.g. Schools Inspectorate (2020d), p. 25.

¹⁴³ Schools Inspectorate (2021d), p. 36. When percentages do not add up to 100, this is due to rounding.

Increased stress and anxiety linked to learning and performance

In all education sectors, many students have experienced increased stress and anxiety linked to their own learning and performance as a result of teaching being delivered remotely. In connection with the transition to remote teaching, students felt that their workload increased and that this generated stress and anxiety. ¹⁴⁴ This might for instance be because teachers were asking for more written input than before or that students felt that they had to achieve more during each lesson. This increase in the workload applied also to classroom teaching as a consequence of the rest of the teaching having been delivered remotely. Tests as well as curriculum items that had not been possible to carry out remotely were often scheduled for classroom teaching days, which was felt by students to be stressful and detrimental to their desire to learn.

Students in all education sectors have experienced a strong, and in some cases heavy, sense of responsibility for their own studies when teaching is delivered remotely. Such teaching has generally demanded more of students' self-discipline and structure and many schools indicate that to some extent it has been new student groups who have shown themselves to be particularly vulnerable and who have lost their motivation and belief in themselves. 145 These are often students who are unable to get started on tasks independently, students who have difficulty finding a structure and routines for their studies, or students who suffer when interaction with teachers becomes more difficult in the digital environment. It might also be a question of highly ambitious students who are used to performing well in school. Both students and teachers indicate that it might be harder for students to limit their working hours when teaching is remote. Students relate that they have experienced increased stress due to the blurring of the border between school and leisure time, when the end of the school day is not clearly demarcated by their leaving the school premises. 146

Students have experienced anxiety about being unable to benefit from remote teaching. Compulsory school and upper secondary school students describe their anxiety and frustration both with the failure of remote teaching to give them sufficient opportunities to gather knowledge and with the lack of sufficient opportunities to demonstrate their skills. The feeling of being provided with poorer chances of achieving high marks creates frustration and anxiety. Students enrolled in Swedish for immigrants describe their worry about forgetting words and becoming less proficient in spoken Swedish, and that this will have an impact on their future chances of finding work. Some of them feel that their studies are meaningless when carried out remotely. One student, who is planning to take a

¹⁴⁴ Schools Inspectorate (2021a), p. 6, 36–37; Schools Inspectorate (2021b), p. 24–25; Schools Inspectorate (2021d), p. 33.

¹⁴⁵ Schools Inspectorate (2021d), p. 30; Schools Inspectorate (2021e), p. 17–19.

¹⁴⁶ Schools Inspectorate (2021b), p. 27–28.

¹⁴⁷ Schools Inspectorate (2021b), p. 24–25; Schools Inspectorate (2021d), p. 33–34.

break from studying and instead look for a job, says in the interview: "I really feel bad having to struggle on my own, study on my own. I am new to Sweden and find the language difficult." 148

Increased loneliness when community and social relations become harder

For many students, not having access to the school as a meeting place and social arena represents a great drawback. It feels lonely to study at home, and this has an effect on motivation. In some schools this has been particularly noticeable among students who are normally keen on their studies and have a strong social identity at school. 149

Students primarily indicate that they have felt the lack of direct contact with their classmates during remote teaching, but also, for instance, the lack of opportunities for talking with the teacher both during lessons and in the breaks. 150 Individual conversations between teacher and student constitute an important social contact for many. The student-teacher relationship is seen as particularly important for students enrolled in the introductory Swedish programme¹⁵¹ as well as for students enrolled in Swedish for immigrants and municipal adult education at basic level¹⁵², as these students often have smaller social networks outside school and are more affected by the linguistic difficulties that might arise during remote teaching. Students describe how remote teaching has made studying more boring and that it feels lonely, and some express a strong sense of dejection and depression. Some students also feel that the social situation is more exposed during remote teaching, something that is discussed in greater detail in the section entitled Work on issues related to fundamental values toned down.

Students who entered the final three years of the compulsory school or the upper secondary school during periods of remote teaching have often missed out on social and community-building activities normally arranged when new classes are established. In their interviews, students, teachers, and principals recount that the sense of community in these new classes is often felt to be less strong than when the students have had an opportunity to meet in the flesh and carry out activities intended to build friendship.

A more sedentary existence, poorer nutrition and problems sleeping

It is clear that the routines involved in an ordinary school day are very important for most students, even though adult learners are often better than other students at preserving their habits. Many students describe

¹⁴⁸ Schools Inspectorate (2021a), p. 36.

¹⁴⁹ Schools Inspectorate (2021e); Schools Inspectorate (2021h).

¹⁵⁰ Schools Inspectorate (2021b), p. 26–27.

¹⁵¹ Schools Inspectorate (2021f), p. 54.

¹⁵² Schools Inspectorate (2021a), p. 36.

how remote teaching makes them more sedentary and tired. Everyday exercise and breaks involving movement have disappeared, since the students have not travelled between home and school or moved about between lessons or in the breaks. For many students, days with remote teaching have become days without physical activity and with a lot of screen time. Many students have also been careless about eating, when there is no shared school dinner but they have to heat up or prepare food for themselves and eat it in solitude. Some students have lost their diurnal rhythm, acquired worse eating habits and lost their previous routines for schoolwork and exercise. This has by itself generated reduced wellbeing and resilience to pressures such as stress and anxiety.

Such detriment to health risks persisting long-term for some students, and this might have an impact on resource requirements for student health services in the schools. Among surveyed compulsory school and upper secondary school principals, a fifth reply that the school does not at all or only to a certain extent have adequate means and resources to deal with possible consequences of the remote teaching for the wellbeing of students. 153

Some students experience less stress and a partly positive impact on their wellbeing

On occasion, interviewed compulsory school students mention that remote teaching does not have a significant impact on their wellbeing since the teaching alternates between remote and in-school. The many students who are explicit about themselves feeling worse when teaching is remote nevertheless often also stress that the impact depends on the individual and that there are advantages as well as drawbacks. For instance, they mention that it is positive to be able to participate in lessons even when you are ill — or in the case of adult learners when caring for a sick child that it feels good not to have to spend so much time on travel to and from school. Students in adult education mention the positive aspects of remote teaching more often than other students, and principally in relation to how it makes their life outside education easier. The case of the students is a supplied to the students of the case of the case

Many interviews in the compulsory school and the upper secondary school also suggest that students who usually feel challenged by social interaction in the ordinary school have felt better when teaching has been remote, since they have been able to avoid social interactions and experienced peace and quiet, which has made it easier for them to focus on their studies.

Schools should in the future analyse the factors that have made it possible for this small group of students to experience improved wellbeing and health during periods of remote teaching. One example of such work comes from a school which has, during the pandemic, realised earlier

¹⁵³ Question for principals: *Does the school have adequate conditions/resources to deal with possible consequences for student wellbeing of teaching being delivered remotely?* 14% of compulsory school principals and 15% of upper secondary school principals reply that adequate conditions exist To a certain extent, and 5% and 4%, respectively, reply Not at all. Schools Inspectorate (2021h).

¹⁵⁴ Schools Inspectorate (2021b), p. 28.

¹⁵⁵ Schools Inspectorate (2021a), p. 27.

¹⁵⁶ Ibid, p. 27.

thoughts about using remote solutions to support certain students. They have chosen to give students on the autism spectrum the option of participating in lessons as normal in their classes, but also – when they need to – move to another part of the school where they participate in lessons digitally, using earphones and an individual screen, and with special needs teachers on hand for the students. According to the school it is felt that this solution has worked well, and the school is planning to continue using it. 157

Variable chances of preserving good health when teaching is remote

The greater the volume of remote teaching students have received, the greater the negative impact on students' health seems to be 158 – the same trend as can be observed in relation to students' learning. It also appears that there are differences between various groups of students in terms of resistance to ill health during remote teaching. The findings of the remote inspections show that students who have support at home generally appear to handle the situation better. Students with a favourable domestic situation, with opportunities for quiet study, a supportive social network and availability of a workspace, do not seem to feel as burdened by the remote teaching situation as others do. 159 In many cases this can be explained as these factors functioning as protection from mental ill health and giving students improved ability to handle pressure. Compulsory school and upper secondary school students may also have received help from their guardians both with their studies and with maintaining a healthy lifestyle. Also among adult learners it is said that those who have a more settled domestic situation experience the remote teaching situation as less stressful. 160

For students lacking these protective factors, remote teaching has involved greater difficulties. This is particularly true of students whose domestic environment makes studying difficult, for instance because of fighting, substance abuse, honour related violence and oppression, or other problems in the family. Teachers and principals recount that students in overcrowded homes, as well as students living alone, have seen deteriorated mental health in connection with remote teaching. ¹⁶¹

Boys and girls differ in how they feel that remote teaching has affected their health. In a survey of students in the upper secondary school, girls more often than boys state that their wellbeing has deteriorated. Among girls responding to the survey a little over half state that their physical health was affected negatively when teaching was delivered remotely. Two

¹⁵⁷ Schools Inspectorate (2021h).

¹⁵⁸ Ibid.

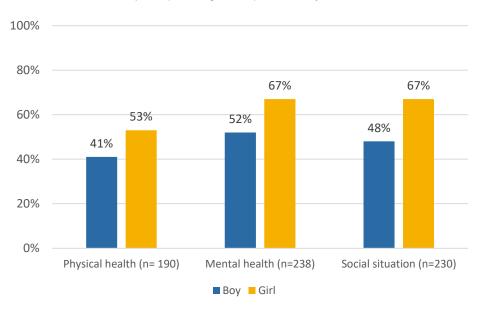
¹⁵⁹ Schools Inspectorate (2021a), p. 37. Schools Inspectorate (2021b), p. 35; Schools Inspectorate (2021d), p. 51.

¹⁶⁰ Schools Inspectorate (2021a), p. 6.

¹⁶¹ Schools Inspectorate (2021h).

thirds of girls state that their mental health and their social situation have been affected negatively. Among boys the proportion indicating that their health has deteriorated is overall smaller, but also in this group a considerable number state that their physical and mental health and social situation have been affected negatively.

Diagram 18. Gender distributed display of the proportion of upper secondary school students whose reply to the question whether their health had been affected in various respects (see Diagram 17) was: "Yes, for worse". 162



Compulsory school and upper secondary school teachers and principals do not provide a clear idea of whether boys' or girls' health has suffered more from remote teaching. Instead the majority state that there is no difference or that they do not know. ¹⁶³ Statements from municipal adult education indicate that there has not been any significant difference between genders in terms of health. ¹⁶⁴ Some compulsory school and upper secondary school teachers discuss the possibility of such impact expressing itself differently in boys compared with girls: boys lose momentum and motivation, while girls experience stress from not being able to, or not having enough time to perform at their desired level. ¹⁶⁵ Some teachers on the upper secondary school introductory Swedish programme emphasise that the girls feel lonely and want to come to the school, possibly one of the few places where they are able to mix freely with others. The girls are also to a

¹⁶² Schools Inspectorate (2021d), p. 37.

¹⁶³ Schools Inspectorate (2021h). To the question whether there is a difference in how the overall wellbeing of boys and girls, respectively, has been influenced by the teaching being delivered remotely, 7% of teachers and 21% of principals replied Yes. 55% of teachers and 54% of principals replied No, and 39% and 25%, respectively, that they don't know.

¹⁶⁴ Schools Inspectorate (2021a), p. 36.On the other hand there is some difference dependent on the programme the student is enrolled in: students doing vocational courses at upper secondary level are said to have been less affected than other students.

¹⁶⁵ Schools Inspectorate (2021h).

greater extent obliged to assume responsibility for the home, when their teaching has been remote, and they have been at home during the day. 166

Not as much active health promotion

During this period teachers and mentors in all education sectors have carried a heavy burden of responsibility for students' wellbeing. ¹⁶⁷ Students expressing that they have not felt well have often received much care and understanding from teachers and other school staff. Students who have clearly experienced great difficulty have often been able to come to the school for on-site teaching. But only rarely has there been a comprehensive picture of the students' health situation or the opportunities for health and learning in the digital learning environments.

Capturing a comprehensive picture of students' wellbeing and social situation when teaching is delivered remotely requires a substantial effort on the part of the schools. Principals and school health staff often indicate that their picture of students' health is incomplete when teaching has been delivered remotely and that students might "fly under the radar". In all education sectors it has been teachers who have assumed main responsibility for continually informing themselves about how the students feel about the state of their health during the period of remote teaching. This applies especially to municipal adult education where there is no obligation to organise student health services. ¹⁶⁸

During periods of remote teaching, signals from the students themselves, or when applicable their guardians, have been key to making it possible for the schools to take note of health issues. Students recount that teachers and mentors ask how they are, usually with the whole class present, for instance at the start of a lesson, or during mentoring time. Some compulsory schools and upper secondary schools have also tasked teachers, school health services staff or student support staff (or corresponding functions) with using outreach more and contacting students individually. Sometimes this is due to concern about the student, sometimes as a component in efforts to create an overall picture of students' health and reduce the need for students themselves to seek help. Many compulsory schools and upper secondary schools have also carried out normal student surveys during the period of remote teaching, such as the annual safety and feel-good survey. However, not many have included additional survey

¹⁶⁶ Schools Inspectorate (2021f), p. 44.

¹⁶⁷ Schools Inspectorate (2021a), p. 34–35; Schools Inspectorate (2021b), p. 29; Schools Inspectorate (2021d), p. 42; Schools Inspectorate (2021e), p. 22, 32.

¹⁶⁸ Ch. 2, sections 25–26 of the Education Act require the provision of student health services, principally of preventive and health promoting nature in the compulsory school and the upper secondary school. In municipal adult education, the organiser may provide student health services, but there is no requirement. Therefore it is not possible to assume or demand of institutions within municipal adult education that they take steps linked to students' wellbeing, even though learning environments and teaching may, there as well, be designed in ways that are better or worse for students' health and wellbeing.

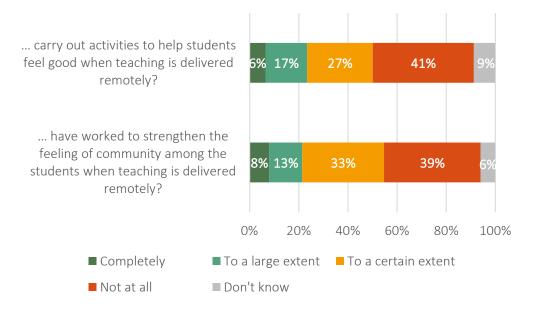
¹⁶⁹ Schools Inspectorate (2021b), p. 29; Schools Inspectorate (2021d), p. 41.

¹⁷⁰ Schools Inspectorate (2021d), p. 42.

questions or changed their survey methods better to capture the students' situation in view of the risks of remote teaching. 171

Compulsory school students indicate that they rarely get asked what they wish that the school would do for them to feel well, and that they have also not been asked about their impression of the school's health promotion activities. The compulsory school and upper secondary school students have a largely negative image of their school's health promotion activities during periods of remote teaching. The example, a large proportion of upper secondary school students reply that the school has not at all or to a small extent intervened to help students feel well or to strengthen the feeling of community when teaching has been delivered remotely.

Diagram 19. Upper secondary school students' replies to the questions: *Do you think your school, e.g. your mentor or the student health service,...* [see individual questions below]? $(n = 404)^{175}$



The remote inspections show that many schools have found it difficult to reconfigure their preventive and health promoting activities and to prevent the development of ill health among the students linked to remote teaching. Instead student health services have focused on measures to support individual students.

Preventive and health promoting activities have been deprioritised

The majority of principals state that their school has prioritised efforts to support those students the school has identified as having difficulties and

¹⁷¹ Schools Inspectorate (2021e), p. 13.

¹⁷² Schools Inspectorate (2021b), p. 7, 33.

¹⁷³ Schools Inspectorate (2021b), p. 31.

¹⁷⁴ Schools Inspectorate (2021d), p. 6, 38–39.

 $^{^{175}}$ The question was asked in Schools Inspectorate (2021d). When the percentages do not add up to 100, this is due to rounding.

feeling bad due to remote teaching. These students have often been given opportunities for individual chats if a teacher has noticed that the students have been depressed or have lost structure and routines. Health issues have also been a reason for providing a student with classroom teaching. Schools with a good supply of staff have also been able to provide the student with support from, for instance, a full-time mentor, staff with skills in special needs pedagogy, or a counsellor.¹⁷⁶

The majority of schools have sought to manage the health hazards of remote teaching by informing their students of the importance of a healthy lifestyle and the dangers associated with losing everyday routines when teaching is carried out remotely. 177 Such information has principally been provided by teachers and, in compulsory schools and upper secondary schools, sometimes also by student health services staff. On the other hand, it has been less common for schools to take steps to provide students with tools for the prevention of ill health, such as strategies for managing stress, anxiety and loss of motivation. It has often been up to students themselves to get a grip on their lifestyle during periods when teaching has been remote.

Much of the broader, preventive and health promoting work has been deprioritised during the period of remote teaching. Activities that are standard in compulsory schools and upper secondary schools, such as theme weeks on health, have been cancelled without being replaced by other activities. Principals explain this as above all having to do with the school giving priority to specific interventions within student health work, that planned activities were not suited to being carried out remotely, and that the school has prioritised subject teaching when students have been able to be on site in the school.

There are occasional examples of work and organisation of student health services having been rearranged to respond to new needs arising when teaching is carried out remotely. Staff with skills in special needs pedagogy have worked to support individual students needing help with study skills and structure when teaching is delivered remotely. They have also worked on transferring extra adaptations to the digital classrooms. Staff in student health teams, such as counsellors or study and careers advisers, have engaged in more active outreach. Sometimes the joint meeting times of the student health team have been increased or various types of forums have been created where teachers and student health services staff can discuss students' social or educational needs. ¹⁷⁸ In several cases, student health services have expanded their fixed hours for student contacts and additional digital contact routes have been established.

The Schools Inspectorate's impression is that the work of student health services has been too dependent on signals and too reactive during the period of remote teaching. While it is positive that schools have supported individual students once they have become aware that the student needs help, not many schools appear to have been able to handle the challenges

¹⁷⁶ Schools Inspectorate (2021h).

 $^{^{177}}$ Schools Inspectorate (2021a), p. 35; Schools Inspectorate (2021b), p. 32; Schools Inspectorate (2021d), p. 42

 $^{^{178}}$ Schools Inspectorate (2021d), p. 42–43.

of the digital learning environment at a more general level in order to counteract negative consequences of remote teaching and stop problems arising for students. For instance, not many schools have adjusted students' school day schedule to avoid too much solitary work or long periods of being sedentary. There has rarely been discussion about how to promote such social interaction as is not linked to schoolwork, although there are also examples of schools who have added in daily movement sessions or movement during lessons or started digital competitions or other activities to promote a sense of community.

Going forward, preventive and health promotion activities in schools need to be based on knowledge about the students' health status and the conditions for learning and health offered by the school environment — it is not enough to observe that certain groups often are stressed or lack motivation. Efforts to prevent ill health must also be based on an analysis of those phenomena that might have triggered ill health and how these can be eliminated or prevented. A description and an analysis of the situation is also needed in order to provide the organiser with a good idea of resource requirements.

Some students might remain in a state of long term increased ill health, with serious consequences. The Schools Inspectorate wishes to stress that the school cannot on its own handle more serious ill health in students. For students suffering from more serious ill health, it is important and urgent for collaboration to be established with actors outside of the school, such as child psychiatric services, social services or health centres.

Going forward – lessons learnt could make the Swedish school system better equipped for the future

The extraordinary situation created by the Covid-19 pandemic and the transition to remote teaching have thrown new light on strengths and weaknesses in the Swedish school system. An early impression, which has become clearer over time, is of the adaptability and resilience of the schools. Large parts of the mission of the school system have worked well, given the circumstances, in spite of short lead times for the transition and an often entirely new mode of working, with remote teaching. School managers and school staff have demonstrated significant care for and commitment to their students and their mission, and teachers have accepted great responsibility for making the situation work. The school system has, in order to cope with the new technology and the new form of teaching, demonstrated creativity, strength and cooperation, in a skills enhancement process of a collegiate nature. The Schools Inspectorate wishes to point to precisely this adaptation ability as a strength of the Swedish school system. It has been of decisive importance for the ability to implement remote teaching.

The transition to remote teaching also brought out the importance of the role of the school in the life of students. The remote inspections clearly show that the school means far more to its students than just the teaching. The structure of the school day provides a framework for life and many students and teachers appreciate its social interactions. School, at its best, is a key factor for health in students' lives: this is where they meet up with their contemporaries and develop positive and supportive relations with adults outside the family.

At the same time, the transition to remote education has meant that weaknesses in the school system that were already known have taken on increased significance and impact, something that has had an effect on the conditions for students' learning and wellbeing during the period. This is about inequality, poor ability to compensate for students' varying conditions and needs, a limited student perspective, reactive support efforts, and limited transmission of knowledge between different education sectors and organisers. This had an impact on the schools' transition efforts and their ability to respond to the challenges they faced during the pandemic. The Schools Inspectorate therefore wishes to stress the importance of learning from the consequences of these systemic weaknesses for students' knowledge development and health during the period of remote teaching. By absorbing these new insights schools, organisers, and decision makers can create better preconditions for successful transformations

within the Swedish school system and make the Swedish school system better equipped to meet challenges related to knowledge development and health.

Students are given unequal resources for remote learning

It has been obvious to the Schools Inspectorate that the availability of digital tools for the implementation of remote teaching, as well as teachers' skills and abilities in terms of handling such tools, varies greatly between different schools. In some cases the differences are great even within the same school, depending on the subject or the teacher. The Schools Inspectorate has also noticed differences between schools in terms of sharing experiences and disseminating good examples in support of the re-evaluation and development of remote teaching. Taken together this has an effect on the quality of the remote teaching received by students. The Schools Inspectorate takes a serious view of these significant differences in quality, which provide students with unequal preconditions for learning, something that has been accentuated during the period of remote teaching. The Schools Inspectorate wishes to underline the importance of organisers and authorities providing increased support for schools in terms of technological resources, skills development, and internal development work. Here it is essential that the exchange of experiences between schools and organisers, and between education sectors, is developed so as to provide better opportunities for learning from each other. Overcoming insufficient equality is an important step in enabling the Swedish school system better to meet future challenges and to give every student an opportunity for a good education in a safe environment.

Increased responsibility for students' own learning challenges the school system's compensatory mission

The observations by the Schools Inspectorate show that the limitations that have become apparent in terms of the quality of remote teaching risks leading to students having to assume greater responsibility for their own education. Among other things it is about increased responsibility for creating a structure for their studies when these are carried out remotely and to maintain concentration and study motivation when the student participates in lessons from home. It could also mean that students need to take more personal responsibility for contacting their teacher when they have questions or if they get stuck, and it will also be up to the students themselves to report reduced wellbeing or other support needs. The degree of success in handling this increased responsibility is partly a function of the students' home environment. Among other things, students describe how they have been forced to strive harder, devote more time to their studies,

and get more support from their closest connections, when teaching has been delivered remotely. With the greater importance of students' chances of receiving support at home, for instance in the form of the ability of guardians or siblings to support the students, there is a challenge to the school's mission to compensate for differences in the students' chances of benefitting from their education. It is therefore essential that the school equips itself with a clear idea of which students have had poorer resources during the period of remote teaching and that students are the subject of interventions that are sufficient to enable them to develop as far as possible.

Limited use of a student perspective affected the development efforts

There has been an absence of an overall approach to the preconditions for learning when teaching has been delivered remotely. In several cases, the Schools Inspectorate has noticed that a low level of student influence has caused the school to lack a student perspective on the school day. In several cases, this appears to have delayed the transformation effort during the period of remote teaching. This is, for instance, about the school being slow to see how the students' workload and stress was affected by the fact that a number of teachers simultaneously changed to setting an increased number of written tasks, or how monotonous and lonely the students' school days were when the digital lessons all had the same design, with little interaction, much solitary work, and long periods of being sedentary. The absence of student influence also becomes clear in terms of health promotion activities during remote teaching. Students often feel that the school has not informed itself about how they are feeling, has not made any efforts for them to feel good, and that students have not been allowed to be involved in the design of such interventions as the school has carried out during this period. The Schools Inspectorate therefore wishes to stress the importance of the school to a greater extent applying a student perspective on its activities, from individual school days to the entire education programme, so that the preconditions for learning and health are clearer and the school's interventions are better tailored to the different needs of students.

Reactive support efforts makes it harder to compensate students

The Schools Inspectorate has repeatedly pointed out that many schools lack adequate means to create a comprehensive picture of all students' knowledge development and wellbeing during remote teaching. The remote teaching situation has complicated the more informal systems for signalling a need that were previously often in place. It has also become apparent from the Schools Inspectorate's remote inspections that schools often wish to create a more systematic overview but that they, in spite of

this ambition, seem to have difficulty finding methods or time to achieve this. This has the effect of schools in many cases having only a fragmentary picture of how the remote teaching situation has affected students' learning and health. Efforts to compensate students then become dependent on signals and reactive, which in turn leads to a focus within the schools' interventions on the individual and the problem. Schools have therefore found it difficult to work in a preventive and promotional manner during the period of remote teaching, as well as fully apply adequate measures based on the needs of the students. In the absence of a comprehensive picture it also becomes harder to deploy the school's resources effectively and likewise harder for the organiser to add resources according to need. This means that the school system is less well prepared for providing students with compensation for possible consequences of the period of remote teaching.

Limited sharing of knowledge of working methods that are successful in remote teaching

In many schools the pedagogical challenges of remote teaching have contributed to a more open collegiate discussion about the teaching, and new and successful working methods have been developed. At the same time, the Schools Inspectorate has noticed that the diffusion of good examples between schools and organisers has in many cases been limited. Among other things, this meant that many compulsory schools who transitioned to remote teaching in 2021 had to grapple with the new challenges without being able to benefit from knowledge accumulated by the upper secondary schools during a lengthy period. Likewise there has been a failure to disseminate successful working methods used by some schools during remote teaching, and which could have benefitted many students. This is work that needs to take place at the level of organisers.

Within the framework of the remote inspections that have been carried out, the Schools Inspectorate has seen many examples of new working methods that the schools claim have worked well in promoting students' learning and wellbeing during remote teaching. These are often highlighted as important lessons learnt for the schools to carry forward. A prominent example is the work invested by many schools in creating increased clarity and structure for the students. Teachers indicate that, in order to help the students find a reasonable level of effort and reduce their feeling of stress, they have been clearer about how much time each task is intended to take and how extensive the tasks are, as well as adapting the design and instructions to the tasks to be submitted, thus providing the students with an idea of what is expected of them. Many schools also state that students have appreciated the possibility of recording lessons and making them available through the school's learning platform and thus giving the students opportunities to repeat or catch up with lessons. For certain students, such as those on the autism spectrum, many schools indicate the benefits of the increased clarity and of the ability, when needed, to access the teaching

online through new and flexible solutions. Many schools also stress the advantages of students working in digital documents, which has made it easier for teachers to monitor the work of the students and provide ongoing support and feedback within the documents. In several cases, the new working methods are highlighted as an important supplement to the ordinary classroom teaching and something that the schools will continue with, going forward. More good examples can be found in the memoranda already published by the Schools Inspectorate within the framework of the Government assignment.¹⁷⁹ The Schools Inspectorate here wishes to emphasise the great development leap taken by many schools and that this has the potential to help develop the regular teaching and provide more tools for the adaptation of teaching to the needs of the students, with the aid of new and flexible solutions.

The school's efforts to alleviate negative consequences are decisive for the students

It is to be welcomed that schools have now to a large extent been able to return to normal teaching, and this is of great importance for students' learning and wellbeing. However, it is now essential that schools follow up how the situation has affected the students, if they are to be able to alleviate any negative consequences of the remote teaching and compensate for the long-term impact on students' knowledge development and health. Such follow-up needs to involve both students and school staff and be broad and systematic so as to facilitate the discovery of both individual needs and systematic differences, for instance particularly badly affected years, programmes, courses, or student groups. Concretely, this could involve having exploratory conversations with the students, carrying out surveys, or maintaining an ongoing compilation of student absenteeism and knowledge development. Based on this type of follow-up, the principal can, supported by the organisation, implement tailormade interventions at the level of the school as well as the individual. With more systematic work in this context and a strategic exploitation of resources it should also be possible to lessen the load for the institution's key individuals – the teachers. The Schools Inspectorate's remote inspections show that there are some student groups with a particularly acute risk of a negative impact of remote teaching, and who therefore might need particular attention during the follow-up activities of the schools:

Students who have received large parts of their education remotely. The findings indicate that the need for compensation could be particularly great among students who have received large parts of their education remotely. This applies, for instance, to students in years 7 and 8 in the compulsory school and years 1 and 2 in the upper secondary school, who have often received more of their education remotely out of consideration for those students who are soon to leave the particular education sector.

¹⁷⁹ See Schools Inspectorate (2021a-g).

These students might need compensation, particularly if the school was slow establishing functioning remote teaching of good quality.

Students who have suffered loss of overlearning and training in practical elements. Too little training means less possibility of developing abilities and skills needed for further studies or in working life. Students for whom practical elements have been replaced by theoretical elements, or who have not had the opportunity to consolidate important skills through overlearning, therefore have a need for compensation. This might be a question of opportunities to practise elements of care in real-life situations or to carry out laboratory exercises in science subjects. Institutions therefore need to find ways of providing students with more occasions and more time for practical training so as to consolidate their knowledge.

Students who have felt bad due to remote teaching. For many students their wellbeing has been affected negatively by remote teaching and it is important for schools now to monitor students' health and social situation so as to establish their support needs and implement adequate measures. If timely attention is not paid to this there is a risk of cementing negative effects on wellbeing or that a downward spiral is created.

Students who have experienced poorer motivation due to remote teaching. It is important that students whose motivation has suffered from the situation get help to recover their interest in schoolwork. Otherwise there is a risk that students who have lagged behind cannot cope with catching up on lost knowledge in parallel with their normal studies. In this connection, increased contact with study and careers advisors or holiday school throughout the year might be successful methods that should be included in the follow-up activities.

Students in the early stages of their language studies. For students at the start of their language studies it is particularly important to get opportunities for interaction with teachers and other students and to practise developing their spoken language on an ongoing basis. Students for whom Swedish is a new language, enrolled in introductory Swedish and Swedish for immigrants, should receive particular attention since the ability to speak Swedish is the key to further studies and entry into the labour market.

Possible gender-based differences. Girls have to a somewhat lesser extent felt that the teacher has paid attention to their need for support and to a greater extent experienced poorer health due to remote teaching. It can also be seen that girls appear to experience increased stress, while boys to a greater extent appear to suffer loss of motivation and a low level of commitment to their studies. These circumstances might have affected girls' and boys' ability to develop their knowledge during the period. The school might therefore need to monitor the observed differences in how boys and girls, respectively, have been affected by the remote teaching situation and institute appropriate measures.

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Annex 1. Methods and sampling

The remote inspections by the Schools Inspectorate

The remote inspections by the Schools Inspectorate have taken the form of learning and forward-looking inspections and are in several respects different from the authority's normal inspections. Interviews carried out as part of the remote inspections have focused on how the school, based on the current situation and going forward, will be able further to improve the quality of the teaching and promote students' health during remote teaching. The conversations have been carried out remotely, by preference through video conversations. When this has been the principal's preference, the conversation has taken place by telephone, and in those cases where there have been language difficulties, conversations with students have been carried out with the help of interpreters. When the remote inspection has included collection of survey input, the respondents (students, teachers, other school staff, or principals) have replied to online surveys in the course of the interviews. When the Schools Inspectorate has carried out lesson observations, these have also been digital.

During interviews and observations, the Schools Inspectorate's investigators have made notes of what was said or observed. Summary notes have been communicated to the organiser and the principal, and these have been given an opportunity to correct any errors. After completion of the remote inspection, written feedback and, when appropriate, also recommendations for future work have been issued to the school and organiser in question. It has then been for each institution (organiser or principal depending on the subject of the recommendation) to determine how to address the recommendations. The Schools Inspectorate has chosen to refrain from further follow-up, as the current situation has meant that institutions and their staff are already heavily burdened.

Documentary basis for the report

Conclusions presented by the Schools Inspectorate in this report are based on a comprehensive picture of the findings of the remote inspections and the observations made in the feedback to the reviewed institutions. These were in total 426, of which 141 compulsory schools, 213 upper secondary schools and 72 providers of municipal adult educations. Schools with public as well as independent organisers have been included in the remote inspections. There is a natural slant towards schools with public organisers. Just over three quarters of the schools have public organisers and one quarter have independent organisers.

The documentation is based on wide-ranging empirical material including remote interviews, remote observations and surveys. See the following table.

Tabell 1: Total documentary basis.

Documentation	Number
Interviews, principals/heads of institutions	426
Interviews, teachers	circa 470
Interviews, school health service staff, study and careers advisers	circa 100
Interviews, students	circa 1,100
Lesson observations	55
Written feedback	426
Survey input from principals, teachers, school health service staff, and students	circa 1,700

Not a nationally representative picture but can contribute important knowledge

The Schools Inspectorate's conclusions are based on an analysis of observations made via remote interviews, remote observations and surveys of the reviewed institutions. The sampling for the different remote inspections was not random which means that the Schools Inspectorate is unable to provide a nationally valid picture of the situation. This final report's extensive documentary basis can nevertheless provide important knowledge about the impact of remote teaching on students' learning and health. For a deeper understanding of how the teaching has worked in subjects that have been shown to be particularly challenging to teach remotely, interviews with teachers have primarily been focused on teachers in such subjects. The accounts of the teachers should be regarded in the light of this.

Moreover, it is important to note that the findings in this report reflect experiences culled from remote teaching – in this report the Schools Inspectorate does not analyse what the corresponding situation looks like in classroom teaching.

Does not capture the total impact of the pandemic

When interpreting the findings it is important to consider that the impact of remote teaching on students' knowledge development and health is to a large extent dependent on the *volume* of remote teaching. This means that

the impact of the consequences that are described in this final report is dependent on the amount of remote teaching that students have received. As already noted, there were differences within and between schools in terms of the volume of remote teaching and consequently its effects will vary.

In addition to the consequences of the remote teaching, other factors should also be considered if the whole effect of the Covid-19 pandemic on students' learning and health is to be captured at a national level. This applies for instance to increased absenteeism among students as well as increased use of supply teachers in the compulsory school. Only later will it become possible to arrive at a comprehensive picture of the consequences of the Covid-19 pandemic for students' chances of reaching set goals and for their health.

Sampling and implementation in each remote inspection

Below follows a description of selection and implementation in respect of those eight remote inspections that provide the documentary basis for this report. The findings of seven of these have already been published as separate memoranda and consequently their methods and sampling are only described in brief. Some of the memoranda were written during the final stages of a remote inspection. In other cases it was decided to add further to the remote inspection after the production of the memorandum. For these reasons some memoranda cover a somewhat lower number of schools or institutions than the total number of schools or institutions included in the remote inspection. More detailed descriptions can be found in each memorandum. 181 The final remote inspection within the framework of the Government assignment – Fjärr- och distansundervisningens konsekvenser för elever i grund- och gymnasieskolan [The consequences of remote teaching for students in the compulsory school and the upper secondary school] – are described in greater detail below, since the findings of this remote inspection have not previously been presented in a separate memorandum.

Municipal adult education

Remote teaching within municipal adult education

Remote inspection of municipal adult education, focusing on flexible education as well as support and encouragement. A total of 54 institutions were included in the documentary basis. The sampling was not random but captured a range of institutions and courses in the country. A key selection criterium was that parts of the courses were delivered remotely at the time of the inspection. Digital interviews were carried out with a total of 54 principals or heads of institutions and 153 students during February to March 2021. All those interviewed also answered survey questions.

¹⁸⁰ National Agency for Education (2021). *Covid-19-pandemins påverkan på skolväsendet*. Report on Government assignment, interim report 3.

¹⁸¹ See Schools Inspectorate website https://www.skolinspektionen.se/.

Compulsory school and upper secondary school Remote teaching in the compulsory school

Remote inspection of 56 compulsory schools, focusing on curriculum items, assessment and grading, students' health and support needs, and the school's efforts to promote attendance. The selection of schools for the review was based on a random distribution of compulsory schools with at least years 7 to 9 and who have or have had remote teaching because of the Covid-19 pandemic. The selection included an even distribution of schools in cities, large towns and smaller rural municipalities. Digital interviews were carried out with 56 principals and circa 170 students during Feb-ruary to March 2021. All those interviewed also answered survey ques-tions.

Remote teaching in upper secondary schools during spring 2021

Remote inspection covering 119 upper secondary schools, focusing on curriculum items and workplace-based learning, availability of a broad and varied information base for assessments, special support, and student health services. The selection of institutions was not random, but captured a variety of upper secondary school programmes¹⁸² in the country. A key selection criterium was that parts of the courses were delivered remotely at (or close to) the time of the inspection. Digital interviews and surveys were carried out with 119 principals and 407 students. The remote inspection was carried out during April to May 2021.

Remote teaching of introductory Swedish

In-depth remote inspection of 16 upper secondary schools with introductory Swedish. The review focused on challenges linked to Swedish language introduction, such as the students' chances of reaching their individual goals and their opportunities for language development. The sample included schools from a variety of types of municipalities who have registered introductory Swedish as a programme and who had or previously had some (at least one day per week or corresponding amount) remote teaching within introductory Swedish during the spring semester 2021. Digital interviews were carried out with 16 principals, 54 teachers, 43 employees within student health service, circa 12 study and careers advisers, and 27 students enrolled in introductory Swedish. Survey questions to these respondents were also included. The review was carried out during May 2021.

Quality of remote teaching

Remote inspection in the form of an in-depth case study of 10 schools, half of them compulsory schools and half upper secondary schools. The review focused on observing the remote teaching in the light of a selection of key aspects of teaching. The school sample captured a variety of schools in the country, with a key selection criterium being that parts of the teaching was delivered remotely at the time of the inspection. A total of 55 digital lesson observations were carried out (4 to 6 per school) as part of the review, of which 29 lessons were observed in the compulsory school (final three years) and 26 lessons in the upper secondary school. Digital interviews

¹⁸² Higher education preparatory programme, Vocational programme including apprenticeship programme and introductory programme (this does not include introductory Swedish, which has been reviewed during a separate remote inspection).

were carried out with circa 60 teachers and 60 students. In addition, the principals of all the schools were interviewed. The review was carried out during April to May 2021.

The work of the student health services when teaching is delivered remotely In-depth remote inspection of 9 compulsory schools and 11 upper secondary schools, focusing on how far the student health services succeeded in transforming itself and in identifying vulnerable students. A key selection criterium was that teaching had been delivered remotely during the spring semester. The sample was evenly distributed between compulsory schools and upper secondary schools, with a spread of schools according to size. Digital interviews and surveys were carried out during May to June 2021, with circa 50 students, circa 60 teachers, 20 principals and 52 student health service staff.

Summer holiday school after three semesters with the Covid-19 pandemic Remote inspection of summer holiday schools at 46 compulsory schools and 16 upper secondary schools, focusing on whether students are offered holiday schools of adequate scope and quality. A key selection criterium was that a summer holiday school was offered by the school. An ambition was also to achieve a spread of holiday schools in cities, in large towns and in smaller rural municipalities. Digital interviews and surveys were carried out with 62 principals and circa 120 students. The review was carried out during June 2021.

The consequences of remote teaching for students in the compulsory school and the upper secondary school

Remote inspection of 25 compulsory schools and 28 upper secondary schools, focusing on how the remote teaching has worked out, lost teaching and measures applied. A key selection criterium was that teaching had been delivered remotely during the spring semester. For this reason only compulsory schools with years 7 to 9 were included in the selection. Checking of the extent of remote teaching in the schools was done manually by the investigators in contact with the schools. Public as well as independent organisers are represented in the sample. Of the 53 schools included in the sample just over two thirds had public organisers and one third had independent organisers. The sample also includes a variety of schools in big cities as well as in large and small municipalities.

Digital interviews and surveys were carried out with 60 principals and circa 300 teachers. In each school, two group interviews were carried out, each of circa 75 to 90 minutes and each group including 3 to 4 teachers. For a deeper understanding of how the teaching has worked in subjects that have been shown to be particularly challenging to teach remotely, interviews with teachers have primarily been focused on teachers in such subjects (mathematics, English, modern languages, practical subjects, vocational subjects (upper secondary school) and science subjects). In addition the schools themselves were asked to select teachers of subjects that were felt to have been challenging to teach remotely. The accounts of the teachers should be regarded in the light of this. In addition some teachers were interviewed who were responsible for mentorship or were class teachers. The principals were interviewed privately for circa 75 minutes. In some cases the deputy principal also participated.

The purpose of the interviews was to discover the views of teachers and principals about possible consequences of remote teaching for students' learning and health, and what lessons and strategies had been identified and developed based on the period of remote teaching. During the time devoted to the interview the teachers and principals also completed an online survey with questions on the same theme. This allowed the respondents to ask questions of the Schools Inspectorate investigators concerning possible lack of clarity in the survey questions. The review was carried out during September 2021.