



Swedish Agency for Work
Environment Expertise

The work environment of teachers in compulsory schools during the Covid-19 pandemic

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environments in Sweden (A2021/02355, A2021/02331 (partial))
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The Swedish Agency for Work Environment Expertise
Telephone: +46 (0)26-14 84 00, Email: info@mynak.s
www.sawee.se

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Preface

The appropriation directions presented to the Swedish Agency for Work Environment Expertise in 2022 tasked the Agency with analysing the short and long-term consequences of the Covid-19 pandemic on work environments in Sweden. To complete this major government assignment, the agency conducted five projects, each focusing on a professional group or groups particularly affected by the pandemic. These projects were also a way of highlighting general changes to the work environment, such as remote working and working in hybrid organisations. The results of these studies provide insight into how society can address similar crises and social disruptions in the future. The report, *The Covid-19 pandemic on work environments in Sweden A2021/02355, A2021/02331 (partial)*) presents a summary of the results from all of the projects included in the assignment.

The following report describes how the Covid-19 pandemic affected the work environments of teachers in compulsory schools. Unlike many other countries, compulsory schools (up to grade 9) in Sweden remained open during the pandemic and classroom-based teaching continued for both teachers and pupils. Changes to working methods in schools were implemented in order to prevent the spread of infection and keep activities running. The results of this report show that many teachers felt that their work environments deteriorated and their workloads increased during the pandemic. The results also demonstrate that in schools where systematic work environment management was regularly conducted before the pandemic, the adaptations introduced proved more successful.

Anders Fredriksson, PhD, has conducted both a qualitative and quantitative study on behalf of the Swedish Agency for Work Environment Expertise, the results of which are presented in this report. Fredriksson selected the theoretical and methodological starting points and is responsible for the results and conclusions presented in this knowledge compilation.

The Agency commissioned Docent Åsa Hirsh from the University of Gothenburg to appraise the quality of the report. Docent Robert Ljung was the process leader at the Swedish Agency for Work Environment Expertise. Communications Officer Sverre Lundqvist has overseen the communications efforts surrounding the project.

I wish to extend my heartfelt thanks to the external subject experts, the quality reviewer, and staff at the Agency who contributed to this report.

Gävle, March 2023



Nader Ahmadi,
Director-General

The report was written by:

Anders Fredriksson PhD, Vilna AB

Summary

Vilna AB has been commissioned by the Swedish Agency for Work Environment Expertise to conduct a study into the consequences of the pandemic for primary school teachers' work environment. The study is part of the agency's wider government commission to analyse the consequences of the coronavirus pandemic and the impact on the work environment in Sweden (A2021/02355, A2021/02331 delvis).

The study is based on surveys that were sent to approx. 1,000 primary school teachers, interviews with 50 primary school teachers and interviews with 10 head teachers. Data collection took place from August until mid-September 2022 and is based on teachers having been able to look back on how their work environment changed during the years of the pandemic.

The pandemic changed the conditions for primary school teachers' work

The study is based on the fact that Sweden, unlike many other countries, chose mainly to keep primary schools open during the coronavirus pandemic. Primary school teachers were charged with keeping up teaching in schools, while their working conditions changed dramatically at the same time. For example, the requirements that staff and pupils had to stay at home if they had symptoms led to high rates of absence among pupils as well as staff. The changed working conditions during the pandemic also meant that teachers had to work in new ways to some extent. Among other things, distance and hybrid teaching became a widespread practice, especially in upper secondary school. In order to keep the school open, infection prevention work had to be established, for example.

Changed working methods led to a poorer work environment for primary school teachers during the pandemic

The changed working conditions led to the worsening of many primary school teachers' work environment. This deterioration can be seen in the organisational and psychosocial, as well as the physical work environment. Primary teachers feel that in general their workload increased as a result of more and new tasks. Among other things, they had to cover for absent colleagues to an increased extent and make sure that absent pupils were able to learn from home. The pandemic also brought with it the rapid introduction of digital working methods in schools, which was particularly evident in upper secondary school, where teaching became digital for many teachers for periods of time. Teachers were also given extra work, for example as a result of infection prevention measures to protect themselves and pupils.

The pandemic also brought with it major psychosocial stress for many primary school teachers. The situation was often unclear with rapid changes. At the same time, the information was often insufficient and the management of the

work was unclear. Many teachers experienced poorer support from the school management and less participation in decisions at school. There was also the constant worry about becoming ill and, at the same time, many teachers felt that the infection was not taken seriously. Requirements for physical distancing and increased absence among pupils and staff also led to poorer cooperation to some extent with pupils and parents, and in some cases colleagues.

The work environment was also made worse by the fact that teachers were expected to introduce new methods of working, although workplaces were not always physically adapted to the changed work. For example, in many cases the equipment and skills were lacking to support digital working. Furthermore, protective equipment and hygiene items were often lacking or could not be used.

Risk factors: risk of infection but also exhaustion, stress and depression

According to the teachers in the study, the deterioration in the work environment gave rise to a number of risks of ill health for many primary school teachers during the pandemic. The decision to keep primary schools open gave rise to a greater risk of being infected with covid. Many teachers became ill. The increased workload and worry about the uncertain situation and becoming ill also gave rise to risks of stress and exhaustion. Some teachers in the study also testify that the deterioration in the work environment caused, for example, headaches, stomachache and sleeping difficulties. Although the primary schools were kept open, social isolation also increased for many teachers, which, according to the teachers, led to a risk of decreased motivation and depression.

The pandemic also meant that new working methods were tested which improved the work environment

However, not everything in the work environment deteriorated during the pandemic. Many teachers in the study speak of new working methods being introduced in some cases, which improved the work environment in certain respects. Among other things, teachers were given greater freedom to choose where and when they worked on planning and followup of teaching, which, according to the teachers, led to reduced stress and increased opportunities for a worklife balance. The introduction of digital means of holding meetings made their work more efficient and left more time for planning and followup of their own teaching, among other things. Fewer pupils in the school led to better sound levels and reduced noise.

Health factors: reduced stress and less risk of being infected

During periods of the pandemic, some teachers experienced greater flexibility and were able to determine where and when they would work. This flexibility led to reduced stress and increased opportunities for achieving a worklife balance. The teachers also explain that improved infection prevention work was introduced in schools, reducing the risk of various infections. According to the teachers, this has led to them having fewer colds and stomach bugs at work, for example.

After the pandemic, the work environment has improved but it still has extensive shortcomings

Now primary schools have largely returned to the working methods that were prevalent before the pandemic. This has resulted in primary teachers generally experiencing a better work environment than during the pandemic. However, the fact that the work environment has largely returned to how it was before the pandemic also means that primary school teachers have returned to the deficient work environment that existed in many places previously.

The pandemic still affects the work situation in primary schools

The interviews reveal that pupils did not develop in terms of knowledge and social competence in the same way during the pandemic. The teachers testify that there are gaps in knowledge that the pupils need to fill in order to achieve their goals. This is work that the teachers have to do now, at the same time as there is a lack of resources. The teachers also explain that they can see that the pupils have not always had the same social skills training since they have been absent from school more, which affects social interaction between pupils at school. This can result in more worry, commotion and conflicts in school than would have been the case if teaching had functioned as normal, according to the teachers. At the same time as there is work that needs to be repeated, several head teachers and teachers state that many teachers are exhausted following the years of the pandemic.

The consequences of the pandemic varied among different groups of teachers

None of the groups of teachers which can be compared in the study report an improved work environment during the pandemic. However, the study indicates that teachers' length of service, which year they teach and the teachers' gender and age are connected to the extent that the pandemic had negative consequences for their work environment. For example, the work environment deteriorated more for female primary school teachers than for male teachers and younger teachers were somewhat more affected than older teachers. However, the work environment deteriorated less for teachers of years 7–9. The study cannot give a clear answer to why different groups of teachers were affected in different ways in some cases. However, the report highlights some preliminary interpretations of the identified differences between the groups.

Schools with systematic work environment work suffered fewer negative effects of the pandemic

The study indicates that the school's organisation and methods of working with the work environment are connected to how powerful a negative impact the pandemic has had on the work environment. The deterioration of the work environment was felt relatively less in schools where the school management worked to improve the work environment for staff during the pandemic. The interviews with head teachers provide examples of aspects which were important for maintaining systematic work environment work.

In the light of the results of the study, the report highlights three areas of development

- **Followup of the development of primary school teachers' work environment:** a good work environment is critical for ensuring that more people want to become teachers, stay or return to the profession. The pandemic continues to leave its mark on schools, and therefore it is important at societal level that we continue to monitor the development of primary teachers' work environment
- **Making use of the lessons learned regarding the new working methods that strengthened the work environment during the pandemic:** the study shows that the work environment generally deteriorated, while at the same time changed methods of working brought about an improvement of the work environment in some respects, according to some teachers in the study. It would be valuable for the government but also the parties involved to systematically collect and discuss what lessons can be learned from the new working methods that developed and strengthened the work environment for teachers during the pandemic, based on the fact that both the quality of the school and the teachers' work environment are important – and rely on each other.
- **Strengthening the school's systematic work environment work:** the study indicates that systematic work environment work seems to have worked as a preventive factor against a deteriorating work environment. It may therefore be important to intensify the work of developing and disseminating knowledge that stimulates the schools' responsible authorities and head teachers to establish and maintain systematic work environment work.

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1. Introduction

The appropriation directions presented to the Swedish Agency for Work Environment Expertise in 2022 tasked the Agency with mapping and analysing the consequences and impact of the Covid-19 pandemic on work environments in Sweden (A2021/02355, A2021/02331 partial). The Government stipulated that the work must address both the long and short-term aspects and pay particular attention to groups of workers who were especially affected.

As part of this process, the Swedish Agency for Work Environment Expertise has analysed the pandemic's impact on various professional groups. The Agency commissioned Vilna AB to conduct a study on the consequences for the work environments of teachers in the compulsory school. The study is part of the Agency's broader programme on analysing the impact of the Covid-19 pandemic on work environments in Sweden.

The compulsory school: a major workplace with a vital social function

The compulsory school sector is large and heterogeneous. Approximately one million pupils attend compulsory school, and around 100 000 teachers work within the sector. The compulsory school comprises nine grades (1–9), and many compulsory schools also have a preschool class. There are approximately 4 740 compulsory schools. Of those, nearly 3 900 are run by municipalities and approximately 830 are independent. The way the schools are organised varies; some schools only teach grades 1–3, whereas others comprise all grades 1–9 (Swedish National Agency for Education, 2022a; Statistics Sweden, 2020).

Teachers in the compulsory school have a key role in society. The compulsory school is to enable pupils to acquire and develop knowledge and values that are vital for continuing study, becoming established on the labour market and for enabling pupils to live fulfilling lives in the future. Teachers in the compulsory school are to nurture all pupils' development and learning, and promote lifelong learning. They must work to promote and secure respect for human rights and the fundamental democratic values upon which Sweden is built. School is also to be a place where each pupil is able to discover their uniqueness and, in this way, be able to participate in society (SKOLFS 2010:37).

Sweden kept compulsory schools open during the pandemic

The outbreak of the pandemic at the start of 2020 had a major impact on, in essence, all areas of society, both in Sweden and abroad. The education system was just one area of society to fall under great pressure. Schools tend to be

places where many people meet in close proximity. Consequently, there was an increased risk of the spread of infection and subsequently, increased strain on national healthcare systems. This raised the question of how it would be possible to maintain the school's critical role in society – developing the knowledge and values of the young population – while simultaneously reducing the spread of the virus.

Unlike many other countries in our part of the world, as a rule, Sweden chose to keep the compulsory schools open during the pandemic (Lindblad et al., 2021). The Public Health Agency of Sweden (2020) had determined that the benefits of keeping these schools open outweighed the reduction in the spread of the virus and lesser disease burden that could be expected if schools were closed. This enabled pupils in the compulsory school to receive the majority of their education 'on site' during the pandemic. Sweden's teachers were therefore expected to attend their workplace every day – despite the risk of infection.

Purpose of the study

In general, Sweden chose to keep compulsory schools open during the pandemic. This strengthened the conditions for providing pupils with a good education. Yet at the same time, the labour conditions and work environments of schoolteachers changed drastically. A number of previous studies and reports from the professional press indicated that teachers' shifting labour conditions forced changes to working methods in schools (see, e.g.: Swedish National Agency for Education, 2022; Läraren, 2021). There are signs to suggest that teachers' work environments deteriorated as a result of the pandemic. This was, in part, the result of teachers' fears of becoming infected, but also due to increased teacher and pupil absences, distance teaching and the infection control measures implemented. These all contributed to a heavier workload and created stress.

It is important to map and analyse the consequences and impact of the Covid-19 pandemic on the work environments of teachers in compulsory schools. This is one way of identifying the consequences and any risks of ill health that may have arisen. However, it is also necessary for learning how society can be better equipped ahead of future crises that may affect the work of the compulsory school and its work environment. With this in mind, the overall purpose of the study has been to describe the consequences of the pandemic on the work environments of teachers in the compulsory school. The study is a complement to the follow-ups conducted by authorities such as the National Agency for Education that look at how the pandemic affected teachers' work. The study explores how the physical, psychosocial and organisational work environments changed, through descriptions of both the risk factors and positive impact generated by the pandemic. The following questions guided the analysis:

- What were, and are, the teachers' experiences of their physical, organisational and psychosocial work environments before, during and after the pandemic?
- Which health-related risk factors arose as a result of the changed work environment during the pandemic?
- What are the health and wellbeing benefits, if any, to have arisen as a result of the changed work environment?
- What influence did the individual and organisational factors have on how teachers perceived their work environments during the pandemic?

Outline of the report

Chapter 1 presents the background and purpose of the report. This chapter is followed by:

- Chapter 2: a description of the method and materials that form the basis of the study.
- Chapter 3: a description of how the schools included in the study perceived their work environments before, during and after the pandemic.
- Chapters 4–6: descriptions of how aspects of the organisational, psychosocial and physical work environments changed during the pandemic following the changes introduced to working methods. The chapter provides a more detailed account of the description in Chapter 3.
- Chapter 7: a presentation of the risk factors and benefits of changed work environments as a result of the pandemic, according to teachers.
- Chapter 8: a presentation of differences in the consequences of the pandemic on the work environment depending on the group of teachers. The chapter describes how a number of individual background and organisational factors counteracted or strengthened the pandemic's negative effects on the work environment.
- Chapter 9: a summary of Vilma's main results of the study, together with reflections on the future based on these results.

2. Method and materials

The study builds on three data sets: a survey sent to teachers in the compulsory school and qualitative interviews with teachers and principals in the compulsory schools.¹

The survey

The survey aimed to obtain a quantitatively comparable understanding of teachers felt the pandemic changed their organisational, psychosocial and physical work environments before, during and after the pandemic. Furthermore, it also aimed to compare the experiences of different teacher groups regarding the consequences on the work environment.

Selection and implementation

The research company Enkätfabriken was tasked with conducting the survey on behalf of the Swedish Agency for Work Environment Expertise in collaboration with Vilna. The respondents were recruited via the Lärarbarometern survey run by Enkätfabriken. Lärarbarometern is an online survey panel comprising teachers from around Sweden.² Panellists were recruited via lektion.se – a site where teachers share lesson ideas.

The survey was conducted online and was sent to 9 099 panel members. A target of 1 000 responses was set, and the survey was closed once 1 006 teachers had responded. The survey was open for response between mid-August 2022 and mid- September 2022.

The analyses and accounts of the results collected from the survey and presented are based on the responses from 846 teachers who stated they had been working at the same school since February 2020 or earlier. This was to ensure that any changes to teachers' estimates of their work environments were not related to a change of workplace. There are somewhat fewer responses for certain indicators. This was due to participant drop out.

Indicators in the work environments of teachers in the compulsory school

The survey invited teachers to estimate how they perceived their work environment and they were asked to respond to statements on their thoughts about the work environment before, during and after the pandemic.

1 The Swedish Agency for Work Environment Expertise designed the major structure of the study. Vilna was instructed to create a study based on a web survey of approximately 1 000 teachers and interviews with a further 50. Enkätfabriken had already been enlisted to conduct the survey and interviews. Nevertheless, Vilna worked in consultation with the Agency on aspects such as forming the survey's indicators and interview questions.

2 Lektion.se and Enkätfabriken are behind the study.

- ‘Before the pandemic’ refers to the months before the Covid-19 outbreak in Sweden, i.e. prior to March 2020.
- ‘During the pandemic’ refers to the time from the pandemic’s outbreak in Sweden in March 2020, until it was no longer classed as being dangerous to public health and society in March 2022.
- ‘After the pandemic’ refers to work at the time of writing (i.e. when the survey was open to teachers between August and September 2022).

Vilna created the indicators in consultation with the Swedish Agency for Work Environment Expertise and Enkätfabriken. These were designed based on the Swedish Work Environment Authority’s provisions, and adapted to the work environments in compulsory schools, together with work environment aspects that may have been affected by the pandemic based on findings from previous studies (AFS 2015:4; AFS 2001:1). The indicators were also adapted to equivalent surveys in the other studies included in the Swedish Agency for Work Environment Expertise’s Government assignment on the

Table 1. Indicators of organisational, psychosocial and physical work environments

Organisational work environment

- I had/have enough time to complete my tasks.
- I was given/have enough assistance from support functions when needed (e.g. substitute teachers, pupil administration, IT and orders).
- I received/receive sufficient support from school management when I needed/need it (e.g. meetings with the principal).
- School management was/is involved in the work I did/do.
- I felt/feel active in decisions taken at school.
- I received/receive enough information from school management about things that affect my work.
- Guidelines from public authorities (e.g. the Swedish National Agency for Education) contributed/contribute to clarity on how my tasks should/must be performed.
- I had/have good access to my own learning and development (e.g. continuing professional development and collegial learning).

Psychosocial work environment

- I had/have a functioning cooperation with my colleagues.
- I felt/feel support from colleagues when I needed/need it.
- I had/have a functioning cooperation with my pupils.
- I felt/feel support from parents when I needed/need it.
- I felt/feel that society appreciated/appreciates my work as a teacher.

Physical work environment

- The premises could/can be adapted based on the needs for teaching at school.
- I had/have enough equipment at work (e.g. teaching materials, technology).
- My own workplace was/is suitable for planning and following up on my teaching.
- Ventilation at the school was/is acceptable.
- Noise levels at the school were/are acceptable.

consequences of the Covid-19 pandemic. Table 1 presents the indicators of the organisational, psychosocial and physical work environments respectively, included in the survey.

Teachers were able to respond to the indicators by selecting one of the following statements:

- strongly disagree
- disagree
- neutral
- agree
- strongly agree.

Teachers were also able to select ‘don’t know/prefer not to say.’

Background questions

The survey asked a number of background questions about the teacher’s gender identity, year of birth, grades taught, scope of their employment, whether the school was municipal or independent, and the number of teachers working at the school. They were also asked to estimate their knowledge about how to improve their own work environment, and the extent to which school management addresses systematic work environment management to improve conditions at their school. These questions were asked to enable comparisons of perceived work environments based on teacher groups.

Furthermore, teachers were asked to state whether they had been working at the same school since February 2020 or earlier, i.e. before the pandemic. The survey concluded with an open question where respondents could provide their opinions and comments.

The 846 teachers whose answers form the data analysed in this report have been categorised as follows:

- Gender identity: man 19 per cent (169), woman 81 per cent (682) and other/prefer not to say 0 per cent (4).
- Year of birth: 1963 or earlier 33 per cent (277), 1964–1972 35 per cent (293) and 1973 or later 32 per cent (273).
- Grade: Preschool class–3 24 per cent (200), 4–6 29 per cent (241), 7–9 46 per cent (390) and other/prefer not to say 2 per cent (14).
- Scope of employment (% of full-time): 35% or below 2 per cent (18), 36–75% 11 per cent (93) and 76% or more 87 per cent (726)
- Type of school: municipal 89 per cent (755), independent 10 per cent (84), other 1 per cent (5) and prefer not to say/cannot say 0 per cent (1)
- Number of teachers working at the school: 28 people or fewer 34 per cent (279), 29–45 people 34 per cent (278) and 46 or more people 32 per cent (257).

Interviews with teachers

The study also builds upon quantitative interviews with teachers in the compulsory school. The interviews are a complement to the survey, and deepen the understanding of how the pandemic affected teachers' work environments. The interviews asked about the changes introduced to work following the pandemic, and how these changes affected the work environment. Teachers were also able to answer questions about whether they believe the changed work environment has generated health risks for teachers. They were also asked if they believed the work environment had improved in any way during the pandemic, which may have improved health and wellbeing.

Vilna developed the interview questions in consultation with the Swedish Agency for Work Environment Expertise and three pilot interviews were conducted. Teachers were recruited to the interviews via Lärarbarometern. The selection was made by Enkätfabriken in collaboration with Vilna and the Swedish Agency for Work Environment Expertise. The selection process aimed to generate a varied group of teachers based on characteristics such as gender, grade, type of school, size of municipality and location in Sweden.

A total of 50 teachers were interviewed. Approximately 70 per cent of interviewees are women. Around 60 per cent teach grades 7–9, 30 per cent teach grades 4–6 and 20 per cent teach from the preschool class to grade 6. Approximately 80 per cent work in municipal schools, and just under 20 per cent are health and safety representatives.

Enkätfabriken conducted the teacher interviews between August and October 2022. The interviews followed a guide created by Vilna, ensuring all interviewees were asked the same questions. However, the interviews were adapted based on the interviewee's reasoning, with Enkätfabriken often asking teachers to clarify and elaborate their thought process. The interviews were recorded and transcribed by Enkätfabriken before being presented to Vilna. Vilna analysed the transcribed interviews following the principles for conversational interviewing (Esaïasson, 2017). This involves interviews being reviewed based on a hunt for a recurring theme in the teachers' descriptions, in relation to both the interview questions and questions asked in the study. Recurring themes were identified and described.

Interviews with principals

Vilna conducted additional interviews with a small number of principals. These interviews aimed to include the perspectives of school management on how the pandemic had affected the work environment. The principals were asked to respond to questions on how they believed changes to work methods during the pandemic affected the work environment at the compulsory school, and how school management approached systematic work environment management. Vilna created the interview questions for principals in consultation with the Swedish Agency for Work Environment Expertise.

The principals were recruited from the Swedish National Agency for Education's register of schools. Vilna presented an initial proposal for a selection of 20 schools. The schools were chosen to ensure variation such as a school's geographical location, type of municipality and type of school (municipal or independent). The selection was confirmed with the Swedish Agency for Work Environment Expertise before Vilna contacted the relevant principals for interview. A total of ten principals agreed to participate. Others declined or did not respond despite email reminders.

Hence, Vilna interviewed ten principals. An interview guide provided structure for the conversation and ensured that each principal was able to respond to the same questions. The interviews also enabled elaboration and follow-up questions. During the interviews, Vilna took general written notes. As with the interviews of the teachers, Vilna analysed the principals' interviews based on the principles for conversational interviewing.

Limitations of the methods

Methodological limitations are generated by allowing teachers to use surveys and interviews after the pandemic to estimate and describe their work environment both pre- and post-pandemic. Memories likely change, meaning it is possible that teachers would have provided different estimates and descriptions had the study enabled them to provide information about their work environment in closer proximity to the period they have been asked to assess. It is not possible to provide generalised statistics applicable to the teachers in the compulsory school based on the survey results. This is due to teachers having been recruited via a panel, rather than randomly selected.

Nevertheless, it is reasonable to assume that the overall results of the study are robust and can be applied to teachers in the compulsory school in general. The survey builds upon responses from a rather large number of participants recruited from a panel of teachers with varying backgrounds. Furthermore, there is a large consensus among teachers – both in the survey and interviews – regarding their descriptions of the pandemic's impact on the work environment. The results are also in line with those from similar studies and reports on the consequences of the pandemic on the work environment (National Agency for Education, 2022), again indicating that the results are valid.

3. Changed working methods during the pandemic resulted in poorer work environments

The combined study results show how work in compulsory schools changed, which for many teachers led to a poorer work environment. However, the pandemic's impact on the work environment varied over time, partly in line with the various waves of the virus, but also based on local conditions relating to sick leave. It emerged that at some schools, work was the most problematic at the start of the pandemic. Other schools, in contrast, struggled towards the final stages of the pandemic, around late December 2021, when staff and pupil absence was particularly high.

Problems with teachers' work environments before the pandemic

The teachers who participated in the study stated that the working methods and conditions before the pandemic were already causing work environment problems. The poor work environment is evident in the results of the survey and from the interviews with teachers and principals. For example, the survey shows how very few teachers believed they had a work-life balance, nor were they satisfied with work in general. Only around half of teachers stated having a good work-life balance before the pandemic, and approximately eight out of ten stated they were satisfied with life in general before the pandemic. However, the majority – 96 per cent – believed they performed well at work before the pandemic.

Several of the survey's indicators show that many teachers had problematic work environments before the pandemic. For example:

- 57 per cent stated they had enough time to complete their work.
- 51 per cent stated they could adapt the premises based on the needs for teaching at the school.
- 53 per cent stated having good access to continuing professional development.
- 33 per cent felt that society appreciated their work as teachers.³

In the interviews, teachers and school management described a pre-pandemic work environment that was characterised by problems. They recount major

³ These indicators were included in the survey, but are not part of the three indexes on organisational, psychosocial and physical work environments.

time pressures, parental demands, lack of support from school management, lack of work resources, substandard classrooms, comprehensive administration and lack of calm study environments when teaching. Below, three teachers describe their work environments before the pandemic:

Been working in schools for nearly 25 years and have never worked full-time because of the work environment. But I love teaching, so that's why I'm still doing it.

(Teacher for the preschool class to grade 3, municipal school)

There are things like really large teaching groups and many of the pupils need extra support or adaptations. And we don't have the resources to be able to provide for them, unless you're prepared to run yourself ragged all the time.

(Teacher for grades 4–6, municipal school)

They've made far too little effort to create a good work environment. Bad ventilation, painfully warm during the summer and not enough space for staff and pupils. Work environments in schools would never be accepted anywhere else.

(Teacher for grades 7–9, municipal school)

The pandemic had an overall negative effect on teachers' work environments

The study shows that the outbreak of the pandemic changed teachers' working conditions, meaning they had to adopt new methods. Aspects that contributed to poorer work environments for teachers included an increased workload as a result of more and new duties, rapid changes, chaotic and unclear work situations, and constant fear of being infected and becoming ill. This worsened the already problematic work environment for teachers, according to the study's participants.

Both the survey results and interviews highlight the changes in work and deteriorating work environments brought about by the pandemic. For example, the survey found that fewer felt they had a good work-life balance during the pandemic. As Diagram 1 illustrates, the proportion agreeing that they had a good balance dropped from 55 per cent before the pandemic to 42 per cent during the pandemic.⁴

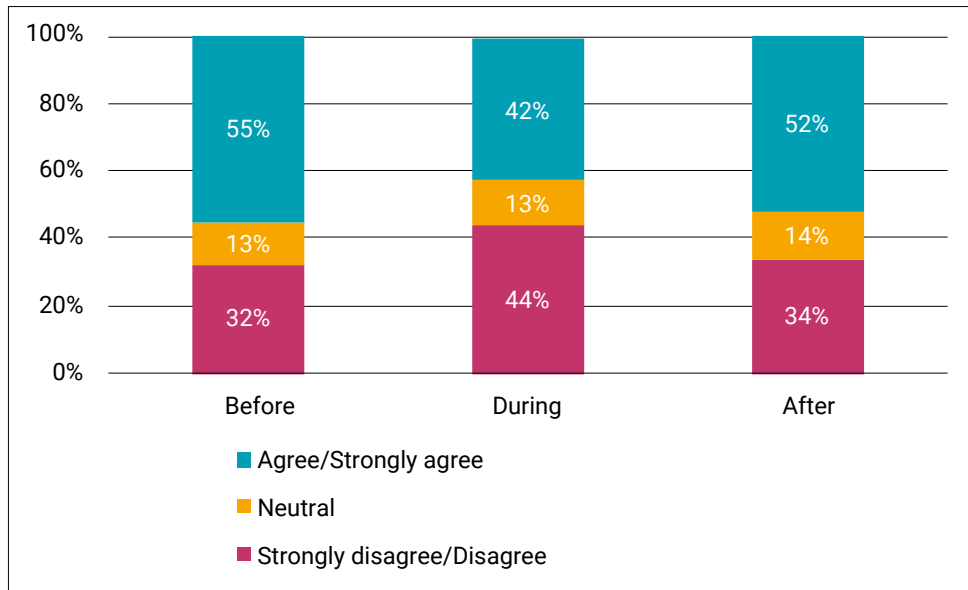
Similarly, the survey shows that fewer teachers were satisfied with their work in general during the pandemic compared to before, decreasing from 77 per cent before the pandemic to 54 per cent during the pandemic. The proportion who felt they performed well at work also fell during the pandemic compared

to before. The proportion who felt they performed well dropped from 96 per cent before the pandemic to 84 per cent during the pandemic.

Furthermore, the survey found that the pandemic led to a deterioration

⁴ The teachers who answered 'Don't know/Prefer not to say' have been excluded from the diagrams in this report, hence why the proportion of respondents for 'during' the pandemic does not make up 100 per cent (rather 99 per cent).

Diagram 1. Total who felt/feel that they have a good work-life balance.



Number of responses: 846 before, 846 during and 845 after

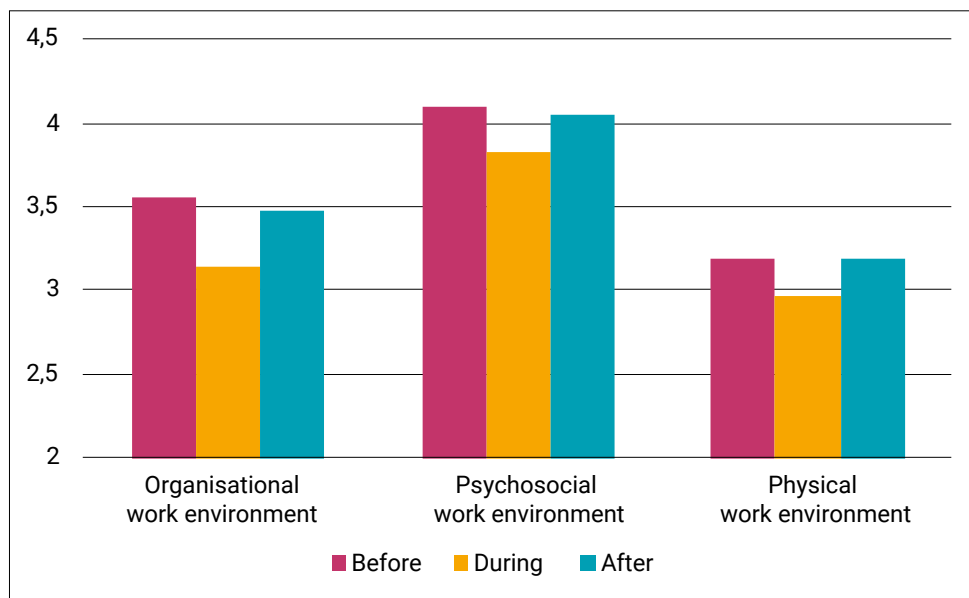
in teachers' organisational, psychosocial and physical work environments. Diagram 2 presents the values under the three indices for organisational, psychosocial and physical work environments before, during and after the pandemic.⁵

If we compare the situation during the pandemic with the situation before, we can see negative changes can be seen in the organisational, psychosocial and physical work environments. The changes relating to the organisational work environment index are relatively greater, which points towards a somewhat larger deterioration during the pandemic, compared to the psychosocial and physical work environments. This is confirmed by the interviews, that give the overall impression that the organisational work environment was the one that deteriorated the most during the pandemic.

The interviews with teachers correlated with the survey results; there was a major consensus that the pandemic as a whole changed work tasks and led to a poorer work environment. The two quotes from two teachers that follow are typical of the way teachers describe how the work environment changed in general during the pandemic.

⁵ Vilna and Enkätfabriken designed the indices by taking each respondent's answers and adding the values for each indicator, then dividing it by the number of indicators in the index. The Method and materials chapter presents the indicators included in each index.

Diagram 2. Changes in the indices for organisational, psychosocial and physical work environments.



The physical work environment was a problem throughout the pandemic, with continually high levels of absence due to illness and lack of substitute teachers. Half of the staff were off sick on a weekly basis over long periods, leaving the rest of us to pick up all the slack. I was completely mentally drained after a day at work. I often worked extra during the pandemic, couldn't take time off when I didn't have enough energy left. The school had to stay open no matter what, which felt like the right thing to do, but were we strong enough to see it through?

(Teacher for grades 4–6, municipal school)

It was an incredibly stressful time. Many issues arose that needed sorting there and then, and you didn't really know what applied. You didn't really feel cared for by the authorities either. It was us teachers that were left to keep everything open, but we weren't given any extra support with anything like priority vaccination and such.

(Teacher for grades 7–9, municipal school)

Some improvements to the work environment during the pandemic

The materials in the study clearly show that the pandemic created a number of additional problems in teachers' work environments. Nevertheless, there are signs to suggest that changes to working methods during the pandemic led to certain improvements. The study also found that not all teachers felt the pandemic changed the work environment for the worse. Some teachers have a more positive outlook on the pandemic's effects:

It was always so calm and so nice, and we didn't face as many problems as usual. I was happy with my timetable. We met with management, talked; communication was good. Cooperation was good, we saw each other, we talked to each other, we solved problems. We worked our usual hours. We had time off; we had our own lives. We coped well, actually.

(Teacher for grades 7–9, municipal school)

No, the work environment wasn't directly worse. It was just different, but not just worse, somewhat better too... But we were more sedentary, but at the same time the environment was calmer during the pandemic.

(Teacher for grades 7–9, municipal school)

Improved work environment after the pandemic – yet still somewhat worse than before

The interviews with teachers and principals found that working methods in schools have, for the most part, returned to how they were before. The changed methods that came about as a result of the pandemic, and that had mainly negative effects on the work environment, are no longer used. Consequently, the teachers in the study now believe their work environment has improved since the pandemic. This is clear in both the surveys and the interviews. For example, the surveys found that the proportion who believe they have a good work-life balance, that are very satisfied with work in general, and who believe they perform well, is higher now than during the pandemic. As Diagram 1 shows, the proportion who believe that they have a good work-life balance has increased from 42 per cent during the pandemic, to 52 per cent after the pandemic. Similarly, Diagram 3 on the next page illustrates that the proportion who believe they are now performing better at work is higher than during the pandemic.

The teachers in the study feel that their work environments improved after the pandemic, compared to during the pandemic. This is reflected in the indices for the organisational, psychosocial and physical work environments. Diagram 2 illustrates how the levels in the indices have recovered after the pandemic, compared to the situation during the pandemic. The individual work environment indices (presented in more detail over the next three chapters) also show that generally, the levels have returned to how they were before the pandemic.

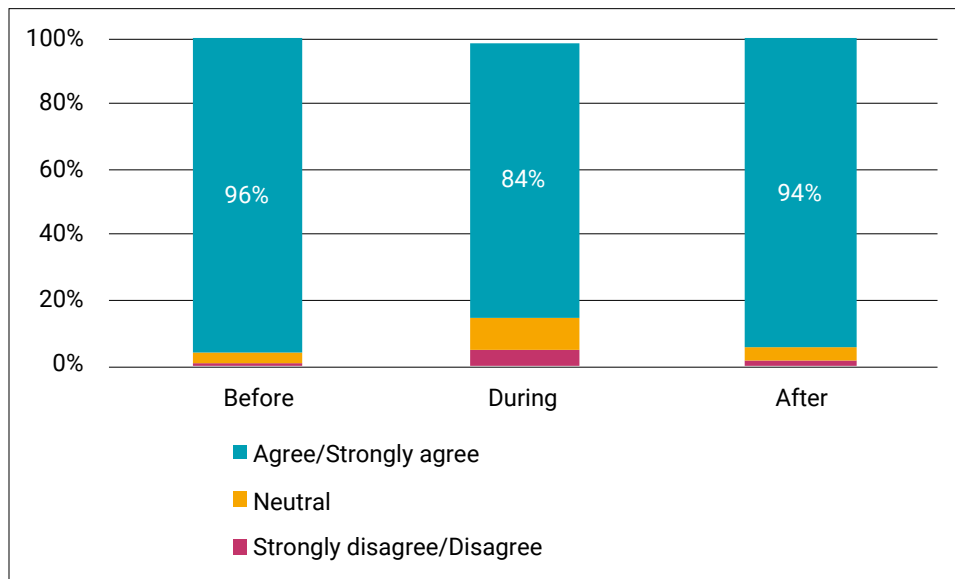
The interviews also describe how teachers' work environments improved after the pandemic and, on the whole, are close to the levels before the pandemic. One teacher of grades 4–6 at a municipal school shared the overall reflection, *'It's over, it feels like it's over, and that feels good.'*

Another describes how work methods were normalised and the work environment improved after the pandemic:

I think it's better now after the pandemic. The restrictions have been lifted on the number of people that are allowed to meet and so on. We can also use our spaces as we want, regardless of whether pupils are there or not. So things have gone back to normal, just as we'd hoped. I don't think things are worse after the pandemic.

(Teacher for grades 4–6, municipal school)

Diagram 3. I performed/perform well at work.



Number of responses: 846 before, 845 during and 846 after

Certain lingering effects post pandemic

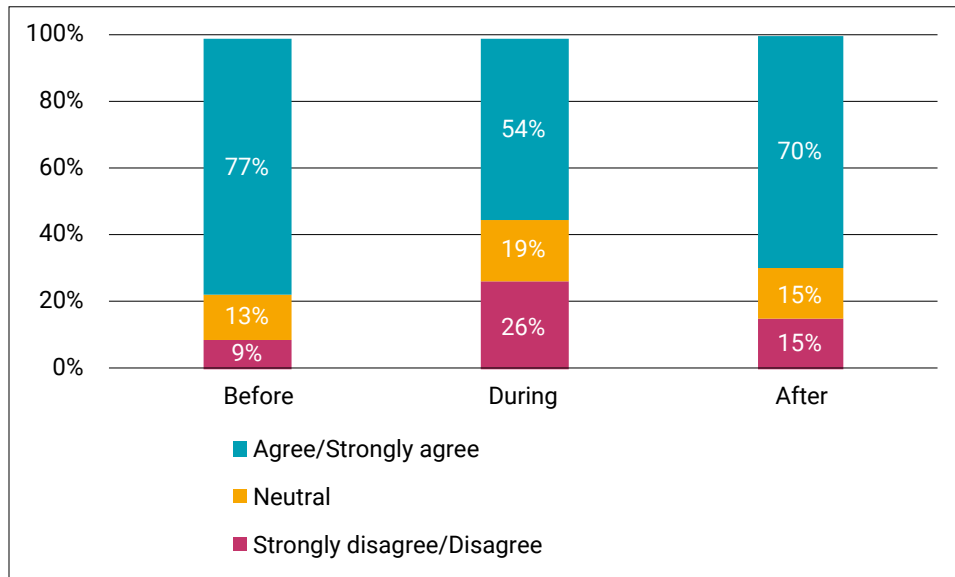
According to the teachers, their work environments have certainly improved after the pandemic. However, the work environment is still somewhat worse than it was before the pandemic. This is evident in many areas of the survey results. As previously illustrated in Diagram 1, the proportion of teachers whose survey responses reported a better work-life balance after the pandemic is slightly lower now (52 per cent) than it was before the pandemic (55 per cent). Similarly, Diagram 3 shows that the proportion who believe they are performing well at work is somewhat lower after the pandemic (94 per cent) than pre-pandemic (96 per cent).

It is especially clear from the survey that the proportion who are very satisfied with their work has, on the whole, decreased compared to before the pandemic. Diagram 4 shows that 77 per cent agree that they were satisfied before the pandemic. The figure is only 70 per cent after the pandemic.

The organisational, psychosocial and physical work environment indices also show that there have been improvements to the work environment, although they have not reached the same levels as before the pandemic. However, some differences appear in each of the three areas. As Diagram 2 demonstrates, neither the organisational nor the psychosocial work environments have recovered fully since the pandemic. The physical work environment is now at the same level as before the pandemic.

In the interviews, both teachers and principals state that the teachers' work environments at certain schools are not at the same level as before the pandemic. Furthermore, they point out certain lingering post-pandemic effects

Diagram 4. I was/am very satisfied with work as a whole, everything combined.



Number of responses: before 845, during 846 and after 846

– even though the working methods have generally returned to normal and the work environment is similar to how it was before the pandemic. It is also clear from the interviews that pupils’ knowledge and social skills did not develop in the same way during the pandemic. This is affecting ongoing work in schools. Teachers report knowledge gaps that pupils need to fill in order to achieve the learning objectives, this applies in particular to pupils in grade 9. Teachers also need to work harder to create the conditions necessary for pupils to meet targets:

Certain things are lagging behind, maybe; it was difficult to reach out to some pupils during the pandemic. Pupils who already had major needs, the ones you gently push in the right direction: “now we’ll be doing this...” the natural actions in the classroom, many pupils are really dependent on this. Things were incredibly difficult for those pupils, and us too. It was very frustrating. Maybe we’ve been able to address this retroactively, in a different way, because there are gaps or other problems now.

(Teacher for grades 7–9, municipal school)

Teachers also describe seeing pupils who did not receive social training during the pandemic, as they were absent from school. This in turn affects social interaction between pupils after the pandemic, with more unrest, disturbances and conflicts at school than would have been the case if teaching had been as usual. Many schools paused or lowered development work during the pandemic, hence there is a ‘development debt’ at certain schools that needs addressing. Work needs to be restarted and part of this work, according to teachers and principals, is the responsibility of the teachers.

At the same time as this work needs to be tackled, many principals and teachers have witnessed more teachers with burnout following the pandemic. One teacher describes how after the pandemic, there are risks that the backlog of work that accumulated during the pandemic will take its toll on health:

I've been worried that many will end up burnt out, and I think that'll happen this term, now we're all relaxing slightly and there's not the same pressures. Now, we're working as normal, but are still revved up.

(Teacher for grades 7–9, municipal school)

4. A changed organisational work environment

The study shows that during the pandemic, the organisational work environment of teachers in the compulsory school changed and deteriorated in several ways. In certain respects, changes to working methods have led to improvements in the organisational work environment in terms of a perceived increase in flexibility with working hours and improved efficiency.

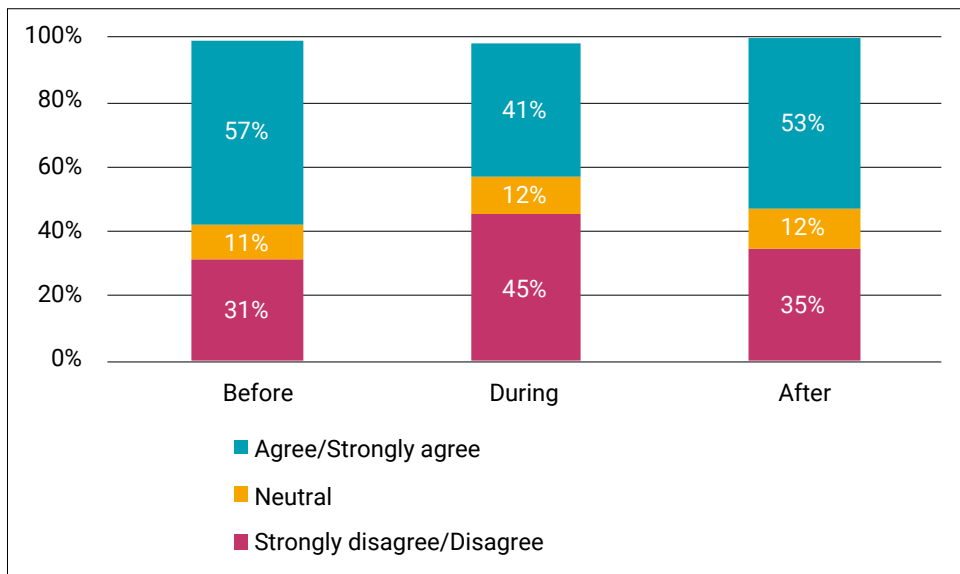
Increased workload due to more and new duties

The pandemic changed teachers' working conditions. Teachers in compulsory schools needed to work in new ways, which increased workloads for many. Not only did workloads grow as a result of teachers having to work more, but they were also presented with new duties. A number of their existing duties, such as skills development, study visits and conducting national tests, had to be postponed at times during the pandemic, yet despite this, the teachers in the study report an overall increase in workload.

It is clear from both the survey results and teachers' interviews that their workload increased during the pandemic. For example, the survey shows that the proportion of teachers who believed they had enough time to complete their work decreased during the pandemic compared to before. Diagram 5 shows that 57 per cent of the teachers in the study felt that they had enough time to complete their work before the pandemic. This number fell to 41 per cent during the pandemic.

The interviews also indicate a clear workload increase caused by the pandemic. The teachers and principals interviewed repeatedly describe how the changes to working methods resulted in a heavier workload in many respects. Several teachers and school managers witnessed high levels of sickness absence among staff during the pandemic, and substitutes were seldom enlisted. Consequently, the teachers who were still at work were made to work more. Teachers often had to take care of more pupils and teach subjects other than their own. At the same time, they had to conduct their own lessons with their regular classes. This meant that teachers had to initiate lessons with one group and then move on to another classroom and teaching group, then introduce pupils to the lessons they were about to take. The teachers report how their workday became more fragmented:

Diagram 5. I had/have enough time to complete my tasks.



Number of responses: 846 before, 844 during and 839 after

For example, you have to work with three classes, but they can't all be in one classroom, as the children still need to be socially distanced. So you have to go between three classrooms and teach in roughly the same way for all three... You can't be in three classrooms at once, even if you're responsible for three classes at the same time, because the other two teachers are sick, but you don't have a substitute. You were forced to be in three places at once, three or four at once, depending on how many colleagues were sick.

(Teacher for the preschool class to grade 3, municipal school)

Work increased in various ways, due to the fact colleagues were absent but no substitutes were enlisted. Teachers met with more pupils in groups they had never worked with before and were left to follow whatever planning they had to cover teaching new classes and subjects. Sickness absences resulted in an increased workload during the pandemic:

Having to cover for each other more than usual when colleagues are off sick has been hard. This has made things a bit tougher. We've had to hop in and cover others, be substitutes, so as soon as I have my planning period, I've had to go and teach grade 4 maths instead.

(Teacher for grades 7–9, municipal school)

The pandemic meant that many pupils had to stay home due to illness or being symptomatic and at times, several pupils would be absent. When pupil absence was high, teachers had to adapt their lesson planning, partly to be able to teach in the classroom and partly so pupils that were at home but were 'well enough' could access teaching materials and be able to study independently. Hence, teachers needed to plan lessons in more detail than before, so lessons would work both in the traditional setting and for pupils at home. Teachers also spent more time contacting guardians to explain how pupils were to approach the tasks.

As many pupils stayed home at times, teachers also needed to follow up on how the pupils' knowledge had progressed when they returned to school. This work often involved fewer teachers than usual, as staff absence due to illness was often high. One of the teachers in the study described how changes in contact with pupils and guardians increased their workload:

Maybe it was more individual contact with pupils who weren't at school. Usually, you have your regular lessons and follow the same type of planning. But during the pandemic, we might have been forced to publish everything on the Classroom platform at the same time as we were teaching on site. And you have a duty to make sure that they were actually at home doing what they should, so maybe you were emailing the parents and the pupils, more to make sure that they're keeping up with what they need to keep up with.

(Teacher for grades 7–9, independent school)

Workloads also increased as teachers had to digitalise elements of their work during the pandemic. In order to reduce the risk of infection, teachers were expected to carry out pupil-conferencing and team and workplace meetings online. Several teachers also taught online at certain stages of the pandemic. This applied in particular to teachers of grades 7 to 9, but also to teachers included in the study that taught other grades. Digitalising teaching was a greater transition for many teachers, compared to the in-person teaching they were more familiar with planning, implementing and following up. Many teachers explain how online teaching works differently to classroom-based lessons, and required more work to adapt planning, implementation and follow up.

Additionally, many schools held hybrid lessons at certain points during the pandemic, where teachers would teach online and in the classroom simultaneously. Hybrid lessons were introduced to reduce the spread of infection. It was common for schools to implement alternating timetables, where half of the pupils would be on site and the remainder would stay home. This would often increase the complexity of teachers' work and their workload. There was a common theme – some teachers were better equipped for online teaching than others:

If there was an outbreak in a class, then you would have to prepare for online lessons with little warning. Even though this wasn't the prevailing norm, you still needed to do it, so it became standard at times anyway. There's also an incredible amount of extra prep work, especially for colleagues that might not always have the best digital skills.

(Teacher for grades 4–6, municipal school)

Workloads also increased as teachers had to spend time implementing infection control measures in schools. This generated completely new tasks for the majority of teachers. Teachers would often have to make sure that pupils followed social distancing both inside and outside the classrooms, wipe down desks and teaching materials, air rooms, and get pupils to regularly wash their hands and use hand sanitiser. Keeping guardians outside of the school premises was also a task that may arise.

The teachers in the study also state experiencing higher workloads as a result of new administrative tasks intended to relieve school management or colleagues who were absent, or for meeting new requirements on schools in conjunction with the pandemic. The tasks could include assuming responsibility for regular timetabling to address staff absences, plan how pupils could move around the school to minimise physical contact, and report the number of infected pupils to the necessary authority. One teacher described how they were given new and additional duties and how this created new stress:

I had to think on my own more, I had to try to solve problems myself. Like timetabling, those of us who were already involved in timetabling were given much more responsibility. Management delegated greater responsibilities, but unfortunately, we were left accountable to our colleagues for the timetables, something that's usually management's job.

(Teacher for grades 4–6, municipal school)

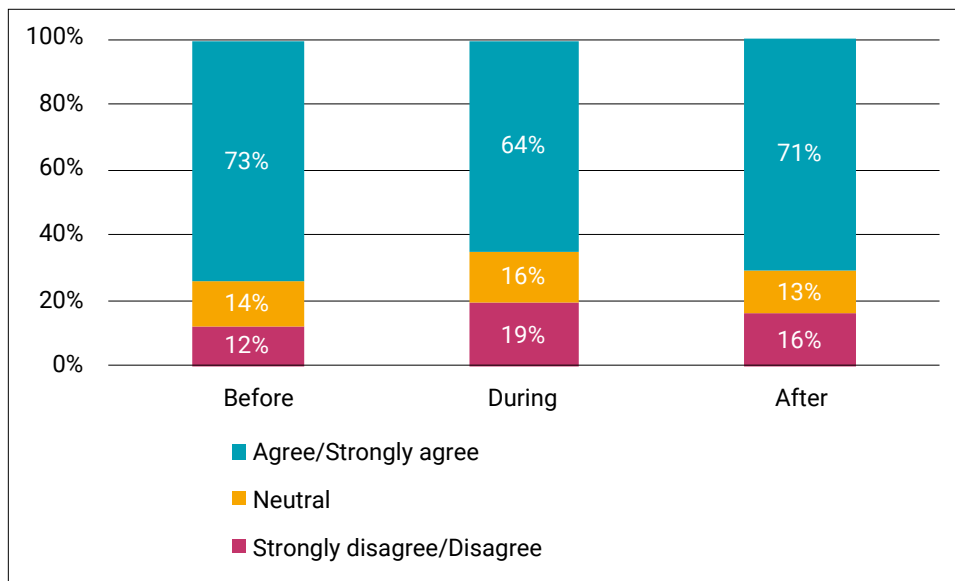
Uncertain conditions, rapid changes, inadequate information and unclear governance

Throughout the pandemic, work in compulsory schools was characterised by uncertain conditions, rapid changes, inadequate information, and unclear governance. Covid-19 created new conditions for both society and schools. Above all, the initial months of the pandemic generated many uncertainties on how it should be managed. The spread of infection changed repeatedly during the pandemic, and these changes were often rapid. The teachers and principals in the study state that the Government, private education providers and principals did not always know what schools needed to do, nor did they always manage to issue updated information and governance in time. This created an information deficit in schools, leading to uncertainty and rapid changes for teachers.

Both the interviews and survey show that the pandemic created uncertain conditions together with sudden changes and sometimes insufficient information and unclear governance. The survey also shows how fewer teachers felt that the authorities' pandemic guidelines clarified the way they should be working. Approximately 60 per cent of the teachers believed that recommendations issued by public authorities provided clarity before the pandemic, whereas only 40 per cent felt this was the case while it was ongoing. The survey also indicated that during the pandemic, there was a lower proportion of teachers who believed they had received sufficient information about their duties from school management, compared to before the pandemic; approximately 70 per cent felt they had received enough information from management before the pandemic, compared to 60 per cent during. Diagram 6 illustrates this.

It is often clear from the interviews that the lack of information, unclear governance and rapid changes brought about by the pandemic all had a negative impact on teachers' work environments. The lack of clarity led staff to feel that:

Diagram 6. I received/receive enough information from school management about things that affect my work.



Number of responses: 844 before, 842 during and 842 after

Certain things were tougher, especially at the start when there was a lot of contradictory information. New rules were frequently introduced and it was difficult to know how to act in relation to everything. There was a constant fear of needing to close down schools. And then needing a plan for this. This created a double workload to a certain extent, when you were always forced to make sure that there was a plan in place if the school had to close.

(Teacher for grades 4–6, municipal school)

New questions arose, and it was unclear how schools were to manage different situations such as if they needed to close. When teachers arrived at work in the morning, they did not always know which colleagues were absent and which pupils they would be teaching. The work irregularities during the pandemic placed a strain on many teachers:

Of course it's harder when you get new guidelines every week, and maybe have to send children with runny noses home, and don't know whether you have to provide distance teaching, you have to copy a load of materials and send them home.

(Teacher for grades 4–6, independent school)

Many teachers found that there was a lack of structure in the school, being almost chaotic at times. The interviews found that the situation was messy and kept changing at several schools during the pandemic:

I would like to say that we were all on our knees. We had absolutely no energy because we never knew if we would need substitutes or not. There was always the worry whether I would be able to plan or not, if I had to hop in and take over that really difficult group that I don't like teaching? Do I need to go and teach a subject I haven't got a clue about? Despite being a Swedish teacher, you're forced to go and teach Art all of a sudden. (Teacher for grades 4–6, municipal school)

Some teachers also believed that following infection control guidelines was impossible and they were illogical. For example, many state that the social distancing guidelines in place did not work in a school environment, and it was odd that pupils were expected to distance in the dining halls when they interacted during break times. Consequently, teachers were left to work with a practically impossible task that often felt pointless in relation to the desired effects:

But it was impossible to socially distance when the children returned to school in the spring. We tried to establish distances in the dining hall, wash and sanitise hands, but this was impossible with over 500 pupils.

(Teacher for grades 4–6, municipal school)

Worse support from school management and reduced participation

The pandemic also generated an increased workload for principals, as they were tied up with new duties. It is clear from the interviews with school management that principals were under pressure for various reasons, including:

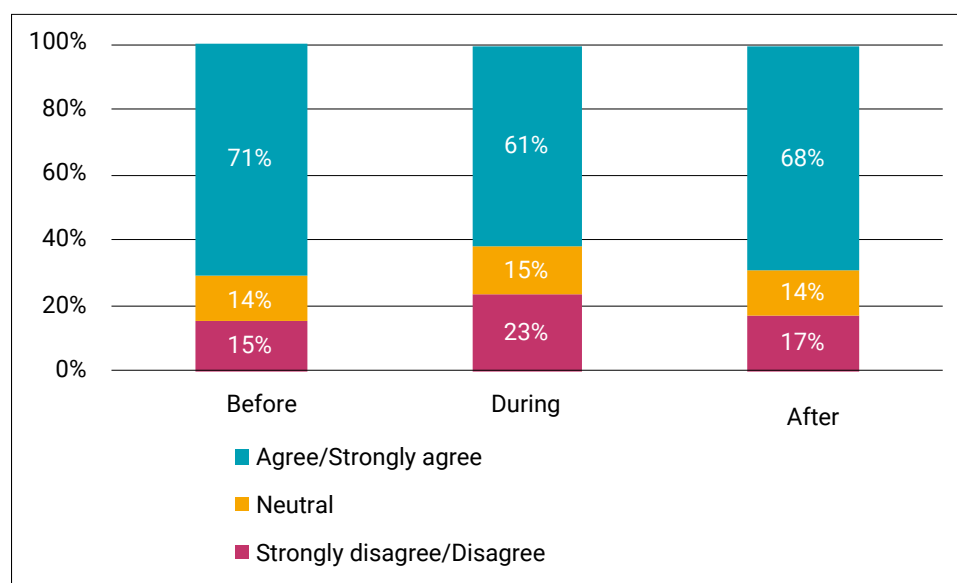
- managing high levels of staff absence;
- implementing infection control measures;
- continually re-prioritising;
- informing staff, pupils and guardians about the pandemic;
- supporting teachers who were worried about the pandemic.

School management was often made to take quick decisions. At times, there would be day to day uncertainty around which teachers would be able to work and how many pupils would attend school. There would be periods when teachers and other staff did not work on site. Instead of being able to hold quick meetings at the school, the principal would have to book an online meeting or telephone their staff. The growing distance between teacher and school management resulted in a decrease in support and leadership for teachers from management. At the same time, teachers were not as able to participate in decisions that affected the school. For infection control purposes, many teachers worked from home when their presence was not required in the classroom. This got in the way of brief and informal meetings with the principal.

The survey also found that teachers felt that support and leadership from managers deteriorated during the pandemic. The proportion of teachers who report having received sufficient support from school management when they needed it decreased from approximately 70 per cent before the pandemic to 60 per cent during the pandemic, see Diagram 7.

There was also a decrease in the proportion of teachers responding that they believed school management was less involved in the work they conducted, going from almost 70 per cent before the pandemic, to 60 per cent during the pandemic. In addition, there was a fairly similar decrease in the proportion of teachers that felt they were included in decisions taken at their schools during

Diagram 7. I received/receive sufficient support from school management when I needed/need it, e.g. meetings with the principal.



Number of responses: 846 before, 844 during and 844 after

the pandemic. Furthermore, during the pandemic, fewer teachers believed they received enough support from support functions when they needed it in terms of substitutes, pupil administration, IT and orders. The proportion of respondents reporting they felt they received sufficient support from support functions decreased from almost 60 per cent before the pandemic, to less than 40 per cent during the pandemic.

The interviews also suggest that certain teachers did not feel they received support and leadership from organisers and school management, which had a negative effect on their work situation. Several of the interviewed teachers state a lack of substitutes and support for new administrative tasks that arose due to the pandemic. One teacher in the study describes the absence of contact and support from school management and the lack of participation as follows:

Things got worse and became unclear once management and the municipality issued their instructions. To a certain extent, I can understand that they weren't prepared for a pandemic nor did they really think it through, but still. There should be some kind of plan in place for risks like these, so everything is the same for everyone and can be implemented relatively quickly. But that means those at the very top need to be able to send out instructions, telling everyone to do the same, and that this is as well thought out as possible.

And that they contact those on the ground so they are involved and can say "this is working, this idea will work and this one won't." At some point we felt that we weren't asked and our expertise was overlooked, because we were the ones on the ground and knew where these instructions would lead.

(Teacher for grades 7–9, municipal school)

Fewer opportunities for continuing professional development

One other effect of the pandemic was that several duties were paused, particularly continuing professional development work. On the one hand, this reduced workloads at a difficult time, but on the other hand, it caused problems for teachers' access to professional development.

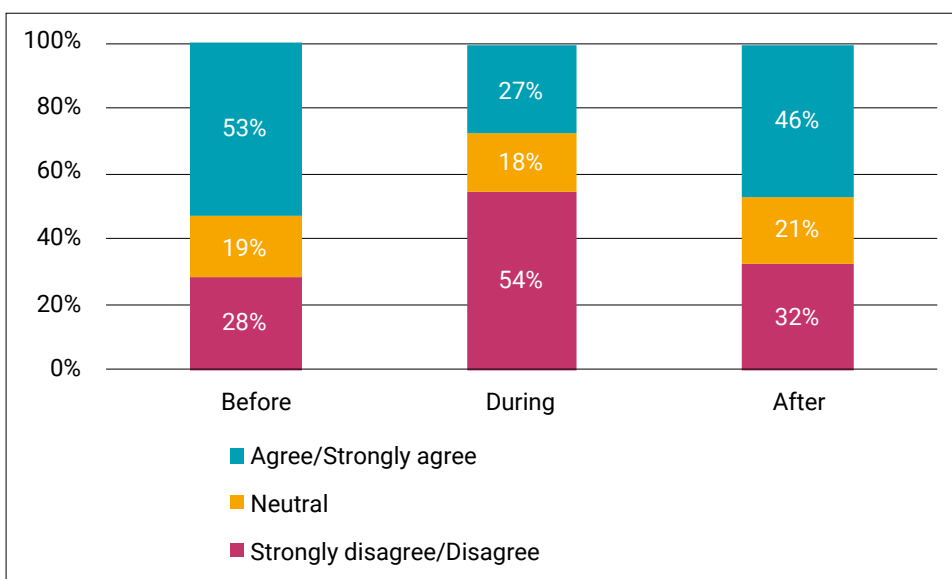
The survey demonstrates a clear regression during the pandemic in the proportion of teachers in the study who believed they had good access to their own learning and development, compared to before the pandemic. Diagram 8 shows how approximately 50 per cent of teachers felt they had good access to their own learning and development prior to the pandemic. This figure was slightly less than 30 per cent during the pandemic. Poorer access to individual learning is one of the survey indicators to have deteriorated the most compared to before the pandemic.

One senior teacher describes how continuing professional development and further training were put on hold during the pandemic:

It was a bit like this: "As it stands, we can't do anything about this, we will have to wait." Other elements, such as further training, for me – as I'm also a senior teacher and have a set duty – I couldn't really perform my duty during Covid, because we didn't have these meetings. It was always "No, we'll have to wait."

(Teacher for grades 7–9, independent school)

Diagram 8. I had/have good access to my own learning and development, e.g. continuing professional development and collegial learning.



Number of responses: 846 before, 845 during and 845 after

Increased flexibility thanks to more remote working opportunities

In order to limit the spread of infection, teachers had more freedom to plan and follow up on lessons elsewhere, such as at home. Additionally, more meetings were conducted online, including team or local workplace meetings and pupil-conferencing. Thus, teachers had greater opportunities for participating in meetings from home. For many teachers of grades 7–9, lessons were held partly online at certain stages of the pandemic. When combined, this provided teachers with greater flexibility over deciding when and where they would work:

Things improved as we didn't need to be at the school. During our planning periods or when we were not with the children, we didn't need to be on site. In that respect, things were positive – we had more freedom to manage our own planning.

(Teacher for the preschool class to grade 3, municipal school)

This greater freedom meant some teachers felt they had received more trust from school management. One teacher reflected on how the work-related freedom during the pandemic led to an increased sense of responsibility:

Maybe now, in hindsight, we can see how we had more freedom, that you see that you can actually do the job, that you've been trusted more. Maybe that's what would be better, that we actually take responsibility for our jobs, get done what we say we will, without anyone breathing down our necks. Maybe that's it, and that we had more freedom afterwards to be able to have other meetings on Teams.

(Teacher for grades 7–9, municipal school)

Some teachers in the study spent less time commuting thanks to the freedoms afforded by digitalisation of their work. One teacher explains:

I didn't need to commute. I saved an hour each day that I could spend doing other things.

(Teacher for grades 7–9, municipal school)

Increased efficiency thanks to greater use of digital methods

The transition to more digital working also increased work efficiency. Teachers and principals describe how they noticed that online meetings were often shorter than in-person meetings. This did not necessarily compromise their quality. The time saved could then be allocated to other tasks, such as planning and following up on teaching. One teacher describes how workplace meetings (APT) were more efficient during the pandemic:

It was quite nice having these APTs online. Unfortunately, they tend to end up being information meetings where the principals say what they have to say and nobody has any questions. No, good, they took 20 minutes instead of one and a half hours. You had more time at your disposal to do things you feel you don't usually have time for otherwise. I tend to say that lessons get in the way of administration these days, sadly. So in that respect, it was nice. You spent more time in your office and had more time to do your own things, as there weren't any unnecessary meetings.

(Teacher for the preschool class to grade 3, municipal school)

A number of teachers felt they were being listened to and they were more able to contribute to collegial discussions at school, as online meetings have settings that make it easier to keep to the order of speakers. One teacher expressed how the feeling of being listened to by colleagues was strengthened thanks to online meetings:

It was easier for teachers that talk a lot, they sometimes just blurt out things, especially in smaller groups. But in online meetings, you have to click the "raise hand" button and someone keeps an eye on things there. So that makes it easier, you can join in and feel that you are being listened to, by taking turns, instead of a person just grabbing the attention of the group somehow. We should remember to do this during in-person meetings, but this can be difficult for a number of colleagues.

(Teacher for grades 7–9, municipal school)

Many of the teachers mention how pupil-conferencing with parents was more efficient. Online pupil-conferencing is more focused and takes less time. According to the teachers, another advantage of online pupil-conferencing is that it is possible to participate from home, where things are quieter. In addition, guardians do not need to visit the school. This may make participation easier for certain guardians. The teachers state how the online meetings enabled more than one parent to attend the pupil-conferencing, something positive for both the pupil and teacher:

One good thing was pupil-conferencing taking place over Teams instead. This made things easier for both teachers and families. Instead of everyone having to come to the school for a meeting that lasts 15–20 minutes, they can stay home, meaning it only takes quarter of an hour for them. Generally, we're also at home. It's quieter and more peaceful, that also makes things easier, I'm on home ground.

(Teacher for grades 7–9, municipal school)

Online meetings also facilitated meetings between teachers and external parties. Teachers describe how online meetings removed the need to travel, thus saving time and enabling more meetings to take place during the working day. The following teacher describes how online meetings facilitated external contact with services such as child and adolescent psychiatry (BUP):

One advantage, for example, is that meetings can take place at any time during work hours, not just in the afternoon. Online meetings also mean we don't have to travel to meetings with external parties, such as social services or rehabilitation with BUP. We've been able to connect for the hour, have the meeting, then it's all done. So this is positive. Technology has improved things.
(Teacher for grades 4–6, municipal school)

Despite teachers and principals seeing the advantages with online meetings, they also mention their limitations and how they are not always suitable. Conducting development work via online meetings is more difficult, as is discussing sensitive topics.

5. A changed psychosocial work environment

The new work methods the pandemic imposed resulted in changes to teachers' psychosocial work environment. The study shows how the work environment deteriorated in several ways. At the same time, the interviews suggest that the pandemic increased solidarity among colleagues, reinforcing a 'we-feeling' in many schools.

A constant fear of falling ill but the virus not being taken seriously

Unlike many other countries, the Swedish Government chose to keep compulsory schools open during the pandemic. Even though these schools implemented several infection control methods, by remaining open, teachers were more likely to meet with both pupils and colleagues on a daily basis. The fact that teachers and pupils were in schools meant that teachers were at a greater risk of being infected, compared to those who had little or no physical contact with others at work.

The study found that teachers had mixed feelings about contracting Covid-19 at school; some were more concerned than others. It became clear from the interviews with teachers and principals that older teachers and those with underlying illnesses were particularly concerned. Many teachers worked in constant fear that they would be infected, especially at the start of the pandemic when little was known about the dangers of the virus and before a vaccine had been developed. Some were also worried about taking the virus home from school and infecting those close to them. The interviews show that this fear would occasionally manifest itself as a frustration towards society, organisers, school management and, in certain cases, pupil guardians who sent their children to school despite them having symptoms. One teacher, who was not so concerned about the virus, saw how colleagues suffered working with the risk of infection. This led to frustration:

I feel sorry for the people who are worried. It must be really hard for them. They've found things more difficult and have been very distressed when children have been snotty.

(Teacher for grades 4–6, municipal school)

At the same time, some teachers felt that society did not take the risk of teachers falling ill seriously. Some of the teachers interviewed report feeling that their health was being sacrificed in order to keep schools open:

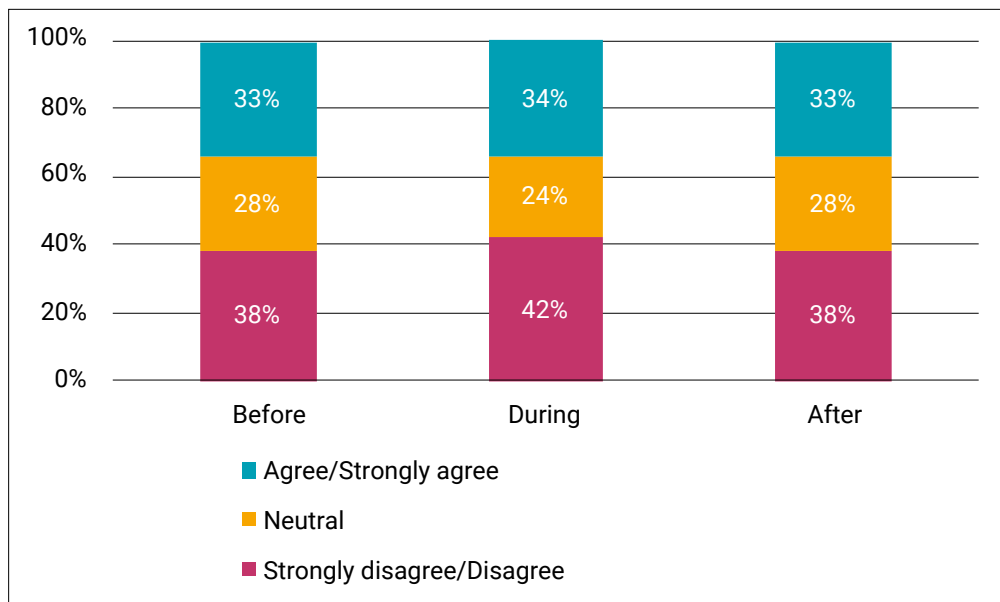
You were living with the expectation of becoming ill; resigned to the fact that during the pandemic you'd get sick and die but nobody would care anyway. The authorities will only care when we're dead. There was a strong sense of resignation among teachers.

(Teacher for grades 7–9, municipal school)

No sense of appreciation from society

It became clear from the study that some teachers did not feel that society fully appreciated their efforts during the pandemic. It was certainly clear from the survey that the number of teachers who believed that society appreciated their work was roughly the same before the pandemic as it was during. See Diagram 9. However, during the pandemic, there was a slight increase in the proportion of teachers who disagree that they felt appreciated.

Diagram 9. I felt/feel that society appreciated/appreciates my work as a teacher.



Number of responses: 846 before, 845 during and 845 after

The interviews found that there was a sense that teachers were making a major effort for society, without being seen or recognised for their work. Some teachers compared themselves with healthcare workers, whom they believed received greater appreciation, and that teachers' efforts were not treated in the same way. Many of the teachers interviewed and survey participants express a frustration around how society viewed teachers' efforts during the pandemic:

What did the manhandled, disadvantaged teachers receive as thanks for their sacrifices? As thanks that Swedes were able to send their children to school, so they could stay home, in peace and quiet, without being disturbed, so they could work, compared to similar people in other countries? A salary bonus? More vacation? Pay rise? Day at the spa? No. We got to share a CAKE! Work environment, yes please!

(Teacher for the preschool class to grade 3, independent school)

Poorer cooperation with pupils and guardians

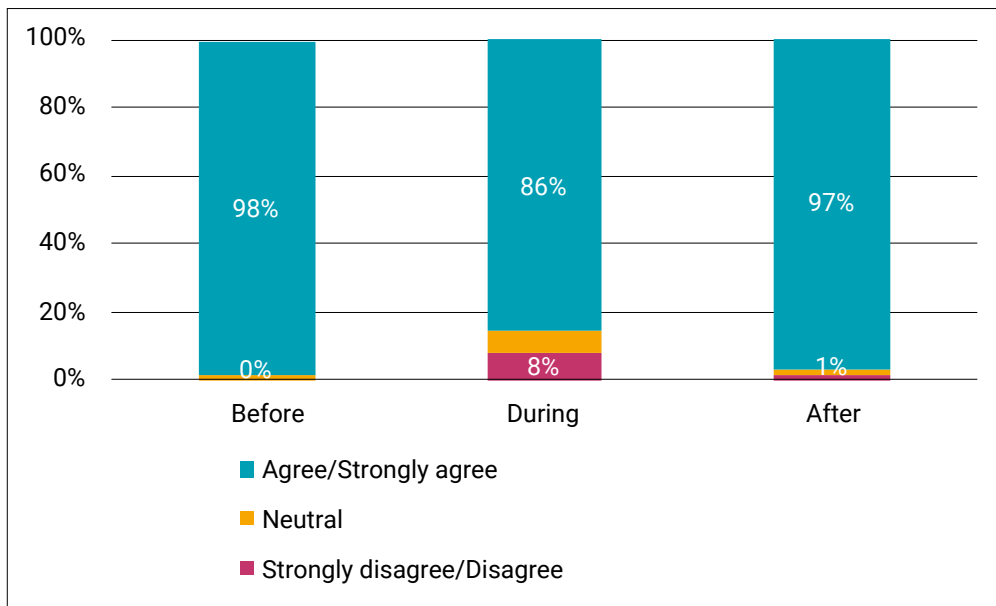
Adaptations were made to working methods in schools in order to reduce the risk of spreading infection. This resulted in fewer physical meetings in schools. Even though the compulsory school remained open during the pandemic, the recommendation that pupils should stay at home if they had symptoms resulted in more pupil absences than usual. Pupils studied from home to a greater extent. Thus, at certain stages of the pandemic, many schools introduced remote or hybrid lessons, especially for grades 7–9. This meant that pupils did not attend school in the same way. As a rule, guardians were not permitted to enter schools in a bid to avoid infection. Additionally, teachers conducted more of their planning and follow-up work from home. This also led to fewer opportunities for spontaneous meetings with pupils and guardians.

Consequently, the changed work methods led to changes and deterioration in teachers' contact with pupils and guardians. The survey clearly shows that the pandemic resulted in a sense of poorer cooperation with pupils and guardians. The pandemic saw a decrease in the proportion of teachers who believed they had a functioning cooperation with their pupils. Diagram 10 indicates how almost all teachers who responded to the survey believed they had a functioning cooperation with their pupils before the pandemic. During the pandemic, over 10 per cent of teachers believed they did not.

There was also a decrease in the proportion of teachers who felt they were supported by guardians. The survey shows how before the pandemic, almost 80 per cent felt that they received support from parents when they needed it. This figure was less than 70 per cent during the pandemic.

The interviewed teachers describe how changes in contact made cooperation with pupils difficult. Teachers felt it was harder to monitor pupil development, both academic and social. Obtaining feedback on what the pupils knew and were learning was more difficult with pupils working from home. They also struggled to develop and maintain social relationships with their pupils. There was less opportunity for pupils to stay behind after class and talk about schoolwork, and identifying conflicts between pupils was also more difficult. Teachers also describe a decrease in the 'we-feeling' with their classes during the pandemic. Two teachers describe the problems with cooperating with pupils:

Diagram 10. I had/have a functioning cooperation with my pupils



Number of responses: 846 before, 845 during and 845 after

Many pupils were at home, very few were in the classroom, so people worked from home. And it isn't quite the same. Establishing the connection between pupil and teacher is more difficult when people do not see each other in person. We created homework tasks for everyone that could work from home. They could come into school a few times a week and leave their answers and pick up new tasks, but it didn't work out so well, so it was 50% I'd say, at best.
(Teacher for grades 4–6, municipal school)

So many aspects of teaching remotely were different and new. The teacher that worked with grade 8 pupils at the other school said she really struggled to establish a bond with the pupils when you only see them during teaching and not in the corridors or other contexts. So it can have a negative effect on contact with the pupils. Especially when you're a new teacher, because if you've already established a bond with your pupils it's different. If you start out as a teacher with a class on distance, it's not as easy.
(Teacher for grades 7–9, independent school)

The interviews also suggested that cooperation with the pupils' guardians also changed during the pandemic. Meetings and pupil-conferencing went from being in person to online. This reduced the exchange of informal conversation, although at the same time it enabled some parents to participate in the pupil-conferencing. The pandemic resulted in teachers being in closer contact with more guardians for reasons such as following up on how completing schoolwork at home was going, and finding out whether the pupils had Covid before reporting to infection control services.

Teachers also report encountering new problems with pupils' guardians, for example pupils with symptoms that were not supposed to be in school:

The arguments with parents when we sent the children home, they were really irritated because they had to stay home to care for their children: "Why can't the pupils come to school?"

(Teacher for the preschool class to grade 3, municipal school)

The teachers state that on occasion they would have to argue with guardians who were afraid of sending their children to school. This resulted in teachers having to defend the Government's decision to keep schools open against parents, whereas the majority of other countries had decided to close schools due to the risk of infection.

Guardians asked us [teachers] questions such as: "Why aren't you closing the school?" They didn't understand that this wasn't our decision, we ended caught in the middle somewhat. The parents would talk to each other during football practice and discuss things such as: "There's now 13 children in 9D with Covid and they're not closing the school" and then they would get in touch. These things happened. We had to switch off and say it wasn't our decision.

(Teacher for grades 7–9, municipal school)

Poorer cooperation with colleagues

The pandemic changed the working conditions for colleagues, making cooperation difficult. In order to reduce the spread of infection, many schools changed working methods related to in-person interactions. Teachers spent more time working from home and co-planning teaching online. Some schools introduced guidelines on only meeting colleagues from their own teams in person. Some also chose to avoid physical contact with as many people at school as possible, staying in their own classrooms even when lessons were not ongoing. Conferences, training and social gatherings for staff were often cancelled or moved online. The high levels of sickness absence at times often led to less physical interaction between colleagues.

The survey results show that fewer teachers had successful cooperation and support from colleagues during the pandemic. The proportion of teachers who could successfully cooperate with their colleagues during the pandemic reduced from approximately nine out of ten before the pandemic to less than eight out of ten during the pandemic. The proportion who believed they received support from their colleagues when needed was also lower during the pandemic than before, falling by 10 percentage points.

In the interviews, teachers describe how their work during the pandemic was less social and more isolated. During the pandemic, small talk and time spent together in the staff room and around the coffee machine vanished at some schools. The decline in cooperation with colleagues made teachers' work more difficult. One teacher described how work became more isolated, which had a

negative impact on the work environment.

You didn't spend time with colleagues in the same way, especially those you usually see but don't work with every day; you pretty much never saw them, which generated more distance. Greater distance was also created between work groups as there was no chance to stop and chit chat every now and then, or squeeze in small collaborations. We were forced to work more on our own. Small talk usually leads to a reduced workload; when fewer people need to reinvent the wheel and you can learn from each other's planning, you can fill in the gaps for each other in a different way, and borrow ideas from one another. The work environment got worse.

(Teacher for grades 4–6, municipal school)

Changes to work methods in schools as a result of the pandemic led to teachers often feeling guilty. When the teachers were ill and the school did not enlist substitutes, teachers were aware that their colleagues would have more to do. This made the psychosocial work environment worse according to some teachers:

If you got ill, you felt bad because another colleague had to pick up the workload and go and teach your classes as well as their own. It's just not sustainable, especially in a situation where you had to stay home given the slightest sign of illness. It had a huge impact. Getting sick stressed you out because you just knew someone else would have to cover you.

(Teacher for grades 7–9, municipal school)

Some teachers described how conflicts between teachers were more common during the pandemic. According to the interviews, these conflicts related to work, the pandemic and vaccination. Digitalisation of tasks was also thought to have made conflict management more difficult.

There were significant conflicts around tasks and how we were supposed to work. People express themselves in different ways. Things are also different when you communicate behind a screen, and it's not the same as when you can talk easily in everyday situations... Conflicts intensified because they weren't sorted out from the very bottom, and because it was difficult since we weren't on site.

(Teacher for grades 7–9, municipal school)

Feeling unable to perform

The pandemic meant that many schools had to reprioritise. Several schools had to focus on staying open. Both school management and teachers report having to lower ambition levels around teaching during the pandemic. Quality deteriorated due to factors such as pupils sometimes not being taught in their usual groups by their regular teachers. The teachers believe that teaching quality also deteriorated because lessons were given on distance or in hybrid form.

Changes to teaching methods during the pandemic resulted in pupils experiencing poorer learning conditions. As a result, many teachers were unsatisfied and concerned. It was difficult for the teachers to feel that they were unable to perform properly. The fact that teaching quality was suffering during the pandemic also generated the pressure that this would lead to more work

after the pandemic.

It was incredibly difficult to encourage the pupils attending remotely. This caused stress for many teachers, because they thought that the pupils weren't doing anything at home, how will these pupils manage, how will they meet the targets and how can they develop?

(Teacher for grades 7–9, municipal school)

Teachers were particularly concerned about pupils whose circumstances meant that they would be unable to fully access teaching for reasons such as special needs or difficult conditions at home. Many teachers in the study repeat great feelings of concern for those who lived in crowded conditions, whose guardians could not help with schoolwork, or where conditions at home were not entirely safe:

Of course this affects the weakest pupils, and the ones who were the worst at working by themselves. The smart pupils excelled in terms of collecting and finishing tasks, showing they were good. As always, the weakest ones are the ones most affected by these changes.

(Teacher for grades 4–6, municipal school)

Challenges managing the pandemic united colleagues

The pandemic created a poorer psychosocial work environment in many ways. Nevertheless, some teachers and principals mention how the pandemic generated an increased sense of community among staff. Some schools and staff groups believe that they were brought together as a result of the experience of cooperating to address the major challenge of keeping schools open, despite the pandemic. One principal describes how the combined efforts of staff working to address the consequences of the pandemic partly formed a positive psychosocial experience:

It was madness, but the team became much tighter since we supported each other. There was also something positive with it. The feeling that we managed this together.

(Principal, independent school for grades 7–9)

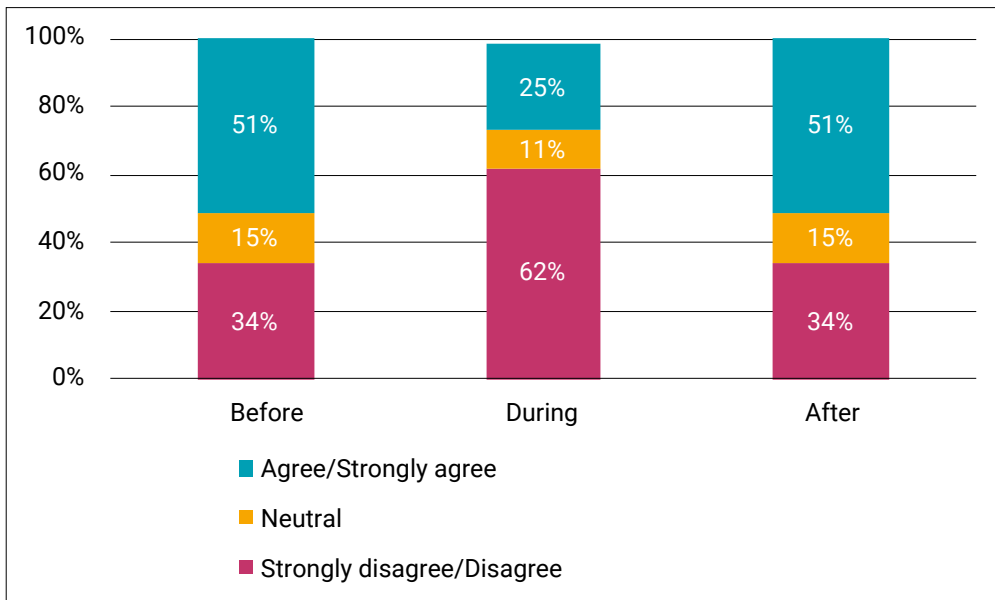
6. A changed physical work environment

Following the outbreak of the pandemic, compulsory schools needed to change working methods based on the premises and equipment already available. Consequently, the work environment of many teachers deteriorated during the pandemic. This was particularly the case at the start of the pandemic when schools were forced to rapidly transition.

The workplace was not suited to the changed work during the pandemic

Both the survey and interviews show that many schools were not adapted to the changed work during the pandemic. The survey found that fewer teachers believed that premises could be adapted for teaching based on needs during the pandemic compared to before, with the proportion decreasing from half of all teachers before the pandemic to one in four during the pandemic (see Diagram 11).

Diagram 11. The premises could/can be adapted based on the needs for teaching at school.



Number of responses: 846 before, 845 during and 845 after

During the pandemic, fewer teachers believed that their workplace was suitable for planning and following up on teaching, compared to before the pandemic. 77 per cent stated that their workplace was suitable before the pandemic, with this figure falling to 65 per cent during the pandemic. The proportion of teachers who felt they had sufficient materials for their work was also lower during the pandemic compared to before, decreasing from almost seven out of ten to approximately six out of ten during the pandemic.

The introduction of online working posed a particular challenge for many schools. Teachers mention how the necessary equipment for online working was not always available, making work with teaching, meetings and pupil-conferencing challenging. Even if the necessary digital equipment was available, not all teachers (and pupils) had the necessary skills to use it. Nor was support always available for teachers getting started with the equipment. The lack of equipment and knowledge about its use was a problem particularly at the start of the pandemic:

There were also equipment problems, since it was difficult to get this distance teaching going. We had to give classes via Teams and getting help with this was difficult.

Many teachers were unfamiliar with the technology and didn't know what to do. Pupils were also unfamiliar with this format, so it was a bit messy in some places at the start, before we got going. Then things were up and running. There were issues like computers not working, networks going down, it was difficult to find take home tasks and you had to think of new things that neither the teachers nor pupils were used to. You're used to seeing each other every day.

(Teacher for grades 7–9, municipal school)

The transition to more online work also meant that some teachers' workdays became more sedentary. Less activity and physical strains at work were described by two teachers as follows:

At the same time there's an increased physical strain on me, because you have to be accessible in a completely different way when you're online, meaning you just sat behind the screen all the time. I'm used to standing up and running around, I don't really spend time sat down at work at all. Sitting at the computer for such long periods, you had the donkey work too, it wasn't that great on your body if you put it like that. So it was physically difficult for that reason, but it wasn't all the time.

(Teacher for grades 7–9, municipal school)

In order to reduce the risk of the spread of infection, teachers also needed to work with social distancing and airing rooms. However, teachers often found this difficult as many schools are crowded and the classrooms are not suitable for the number of pupils today. It was clear from the survey that many teachers work in schools with poor ventilation, almost seven of ten believed that ventilation in schools was poor even before the pandemic. This figure was roughly the same during the pandemic. Generally, the teachers in the study did not feel that ventilation got worse. However, during the pandemic, poor ventilation became a problem according to some of the teachers interviewed. One said the following about their school's ventilation in relation to the need for fresh air that came about due to the pandemic:

Our ventilation is bad, which was not at all ok during the pandemic. Too many people in a classroom with poor ventilation and no fresh air isn't any good, for the virus.

(Teacher for grades 7–9, municipal school)

Lack of or unusable personal protective equipment

There was a risk of infection at school, even if pupils and staff were supposed to stay home if they had symptoms. Teachers were therefore expected to protect themselves and others from the virus at school, by using various hygiene products and protective equipment, such as soap, tissues, hand sanitiser, face masks and face shields. Nevertheless, many teachers report having few or no hygiene products and protective equipment at the start of the pandemic:

About the protective equipment and lack of at the start of the pandemic, there was none of that as they were saying children didn't spread the virus.

(Teacher grades 4–6, municipal school)

The situation got worse as the possibility of protecting yourself decreased. Hand sanitiser was a typical thing that took a while before it reached every classroom, as were procedures for using it. I know some teachers solved the problem by using a spray bottle to spray sanitiser on the pupils' hands before they were allowed in the classroom. These were more individual solutions rather than school procedures.

(Teacher grades 7–9, municipal school)

Despite availability of protective equipment such as face masks and face shields, not all teachers found them suitable. For example, teachers describe how face masks and face shields could not be used when teaching:

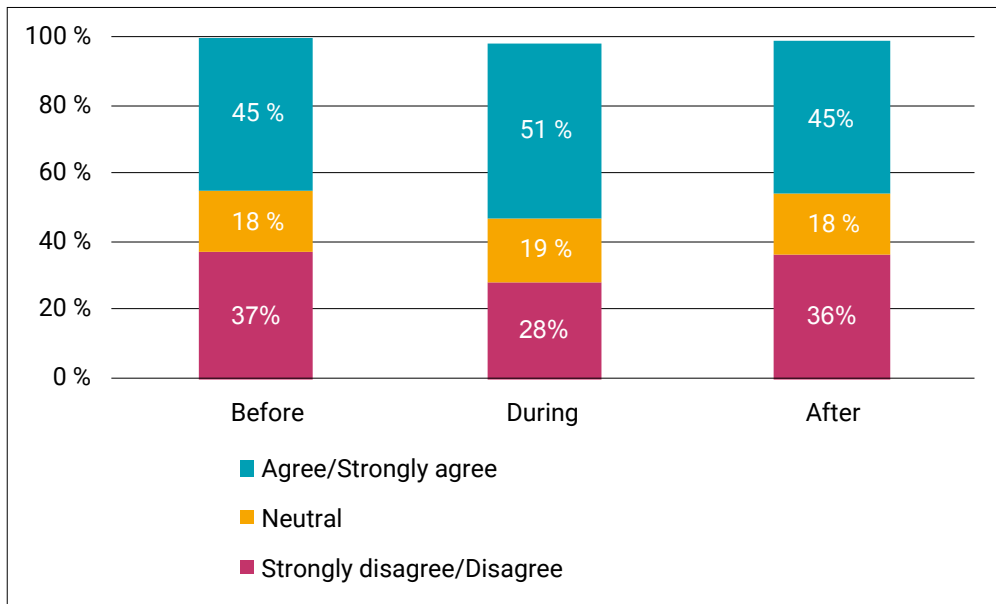
We got face shields in November or December when the debate about using them in schools was ongoing. But many – myself included – found it difficult to get children to understand when we were wearing them. Talking when wearing a face shield was uncomfortable because the noise bounces back. We weren't comfortable wearing them, it's safe for me to say.

(Teacher for the preschool class to grade 3, municipal school)

Better noise levels with fewer pupils in school and many being taught remotely

Noise levels in schools improved during the pandemic as many pupils were absent. Diagram 12 shows that teachers found noise levels acceptable during the pandemic, compared to before. This survey indicator demonstrates a clear improvement during the pandemic compared to the situation before the pandemic.

Diagram 12. Noise levels at the school were/are acceptable.



Number of responses: 846 before, 845 during and 844 after

The improvement in noise levels during the pandemic is also evident from the interviews. Many teachers describe how it was clear that the regular number of pupils in schools is too large in relation to the size of the premises. For example, when interviewed, one teacher said the following about the improved noise levels:

There were fewer pupils, and we noticed it was much calmer and noise levels were better. So we realised just how crowded it is when many pupils are in a small space. This was great when we didn't have all the pupils on site.

(Teacher for grades 7–9, municipal school)

7. Risk and positive factors that arose due to the changed work environment

According to teachers and principals, the changed work environment during the pandemic led to more risks of ill health. However, there were also positive aspects to the changed work environment.

Decision to keep compulsory schools open led to risk of catching Covid-19

Catching Covid-19 was a risk during the pandemic that several teachers described in the interviews. Teachers reported that both they and several colleagues caught the virus, sometimes on more than one occasion during the pandemic. Some teachers also mention how the virus affected them for a long time. Some were mildly ill, whereas others became severely ill:

Many colleagues caught Covid, some got really ill. It's a dangerous disease and you could be affected in so many different ways. Some developed serious symptoms that lasted for a long time, so naturally it was worrying. It's a dangerous disease.
(Teacher for the preschool class to grade 3, municipal school)

The majority of people working in schools caught Covid at some point or another. I don't think anyone didn't. One principal got really ill and died. Obviously, that was traumatic for many and affected the mood around the vaccination.
(Teacher for grades 4–6, municipal school)

The risk of catching Covid-19 has also created a lasting fear and stress among teachers. The extent to which teachers were afraid varied. Some of the teachers interviewed express greater fear, whereas others stated little or no concern. The interviews suggest that the fear of being infected has abated over time, following the introduction of the vaccine and as we have become used to living with the virus:

We teachers risked life and limb when we were forced to go to work and were squeezed into a classroom with 30 others, while others could take cover by working from home. It wasn't even possible to open the window to air the classroom. It took and continues to take its toll... Two out of six of my unit colleagues went on long-term sick leave because of stress, burnout, the pressure of teaching pupils when people were falling ill.
(Teacher for the preschool class to grade 3, independent school)

Increased workload created risk of stress and burnout

According to the teachers and principals, the deteriorating work environment during the pandemic has also led to fatigue, irritation, stress, sleep disturbances and burnout among teachers. Many of the work environment problems described in this report have contributed to the risk of stress and burnout:

- increased workload
- rapid need to transition to online working
- uncertain conditions with rapid changes during the pandemic
- poorer support from school management
- the constant fear of falling ill
- the virus not being taken seriously
- the feeling of not being able to perform.

One teacher describes the situation as follows:

I've been worried about my colleagues becoming burnt out. Not that they'd catch Covid but that they'd crash, purely out of exhaustion. That's what I've been afraid of because the majority of teachers are already wearing themselves thin. And Covid meant we had to work even harder.

(Teacher for grades 4–6, municipal school)

Some teachers describe how fatigue, fear or stress resulted in difficulty sleeping, stomach complaints and headaches:

It was really stressful. I mean, you would really like to stay with that class throughout the school day, but because we needed to be out as break monitors and the situation in the dining hall, we had to dash about from, say, a 40-minute Swedish lesson, to a 30-minute break, to the dining hall where you'd have to eat with a completely different class with 25 pupils you have no links to. You feel your shoulders tense up, you get a headache, you get stomach pain. You're running from one activity to the next where you need to quickly get stuck in. If you work full time then there's eight hours of trying to sort out breaks so everyone gets their 30 minutes.

(Teacher for the preschool class to grade 3, municipal school)

The interviews suggest how stress, fatigue and burnout have also had negative effects on the private lives of some teachers. One teacher described how stress led to problems in life outside of work:

I didn't feel as good. I felt more stressed about work than usual, and what it means to maybe not be able to live family life to the full, I'm easily irritated, and sleeping was a bit harder. That all got worse, these stress symptoms grew over that period.

(Teacher for grades 7–9, municipal school)

Social isolation led to risk of low mood

Even though teachers continued to work in schools during the pandemic, the infection control measures in place led to less social interaction and increased

isolation. Teachers tried to work in their classrooms for the most part, and went home once their lessons had finished for the day. Conferences, team meetings and social activities were either cancelled or conducted online. In addition, many teachers of grades 7–9 worked from home at times during the pandemic, which further reduced contact with both pupils and colleagues. In the interviews, the teachers described how increased isolation posed risks to motivation, created feelings of resignation and low moods:

I have the advantage of having excellent colleagues at the school where I work. There's a positive atmosphere between us, which is really important. When we didn't have this exchange with our colleagues, we noticed we felt more isolated and even a bit depressed.
(Teacher for grades 7–9, municipal school)

Partly reduced stress and better infection control measures

The changes to working methods during the pandemic had some positive effects on the work environment. Those interviewed stated how the increased flexibility regarding where and when work could take place reduced stress and increased the work-life balance for many teachers. The introduction of online methods also reduced teacher stress. Some also stated how conducting lessons and meetings from home also reduced stress:

My colleagues have said they thought it was nice, being able to teach certain lessons from home. They were more relaxed and the conditions were less stressful, because otherwise it could be stressful. It's a big school with many people, noise and movement. So some found distance teaching positive.
(Teacher for grades 7–9, municipal school)

Teachers also describe how the pandemic led to improved work with infection control, which reduced the risk of other diseases. Many schools introduced new hygiene procedures to reduce the risk of staff and pupils catching Covid-19. They describe how staff and teachers were better at staying home when they had symptoms of a cold, regularly washing their hands and social distancing. Teachers describe how improved work with infection control measures has resulted in fewer colds and stomach bugs among both pupils and teachers, compared to before the pandemic:

I also think that the whole thinking things through, physical hygiene-wise, means that we don't have as many absences due to illness now, regular sickness absence, because we're used to always washing our hands now. We've got used to not being too close to each other. We've learnt to live in such a way that's become engrained after the pandemic years, I think, so it stops us from catching things. I'd like to say this is something positive about the pandemic. The whole not spontaneously shaking hands with every parent and such. It's nice, but it's also a source of infection. Before the pandemic, teachers felt they would be ill more often with 'regular' conditions, compared to now. I don't know what it's like at other workplaces, but I think this all boils down to us having learnt to focus on avoiding infection, it's really stuck, part of our daily life.
(Teacher for grades 4–6, municipal school)

8. The pandemic's effects varied between groups of teachers

The overall picture suggests that the pandemic changed work for the majority of teachers in the compulsory schools. These changes had a clear negative effect on their work environment. However, simple bivariate covariations of survey data point to varying degrees of negative consequences depending on teacher groups. However, this study does not contain a comparable group whose work environment improved during the pandemic.

Individual factors were significant to how the pandemic affected the work environment

Scope of employment

The survey shows that the scope of a teacher's employment appears to have affected how the pandemic affected their work environment. Comparisons of survey responses from teachers working 35 per cent or less of full time, 36–75 per cent and 76 per cent or more show that those who worked more hours experienced greater deterioration in their work environment, compared to those who worked less. Teachers who worked 76 per cent of full time or more experienced a relatively major negative effect on their work-life balance during the pandemic compared to those who worked less. There is also a tendency that the teachers working 76 per cent or more experienced a greater decline in their perceived performance during the pandemic, compared to other teachers. The organisational and physical work environments also deteriorated to a relatively greater extent for those with a higher scope of employment. Teachers who worked 76 per cent experienced a greater decline in the index for the organisational and physical work environments respectively, compared to other teachers. In contrast, the teachers who worked 36–75 per cent experienced a greater decline in their psychosocial work environment during the pandemic.

The grades the teachers taught

The grades being taught are also thought to have had an impact on how the pandemic affected the work environment. Those who taught grades 7–9 report a slightly lower degree of negative impact from the pandemic, compared to other teachers in the compulsory school. However, this is not without ambiguity. On the one hand, the survey shows how teachers of grades 7 to 9 were less likely to report a poorer work-life balance. On the other hand, teachers of grades 7 to 9 report a greater decline in performance compared to before the pandemic. Two out of the three work environment indices show a trend that teachers of grades 7–9 experienced a relatively smaller deterioration in their work environments during the pandemic. Compared to teachers of

the preschool class to grade 3 and grades 4–6, teachers of grades 7–9 report a relatively smaller decline in both the organisational and physical work environment. However, teachers of grades 7–9 report a greater decline in the psychosocial work environment compared to other teachers.

Gender

Data from the survey indicates that women teachers saw a relatively greater decline in their work environment. The survey shows that there was a larger proportion of women teachers who reported a decrease in positive work-life balance during the pandemic, compared to men. The proportion of women teachers who were very satisfied with their work in general also decreased during the pandemic in relation to their male colleagues. Furthermore, the survey shows how the organisational and physical work environments worsened more for women compared to the men. There was a particularly significant decline in the organisational work environment for women teachers.

Age

Finally, there is a tendency that younger teachers experienced a somewhat greater decline in their work environment during the pandemic. This decline was slightly less for older teachers. Comparisons of teachers born in 1963 or earlier, 1964–1972 and 1973 or later show how those born after 1973 experienced a greater negative impact on their work-life balance compared to the other age categories. The survey also shows that teachers born in 1963 or earlier experienced a smaller decrease in satisfaction compared to other age categories. Teachers born after 1973 also report greater deterioration in their perceived performance at work. The three work environment indices also demonstrate the tendency for younger teachers to experience greater deterioration during the pandemic compared to their older colleagues. The organisational work environments of teachers born after 1973 deteriorated somewhat more in comparison with the other age categories. At the same time, teachers born in 1963 or earlier report a somewhat smaller deterioration in the physical work environment.

Why has the pandemic affected teacher groups in different ways?

As can be ascertained from the above, individual factors are thought to have affected how the pandemic affected work environments. However, this study has not been optimally designed to explore why the pandemic has affected various teacher groups differently. Further analyses are necessary to be able to more thoroughly explore how various factors relating to the teachers are integrated with how the pandemic affected aspects of their work environment. It is possible that a more refined and controlled comparison of various sub-groups and indicators could prove new and more nuanced correlations. Nevertheless, it is possible to identify tentative differences between groups. Perhaps the most startling is that teachers who worked more hours experienced greater deterioration in their work environments. Those working more hours likely work under greater pressure and have less time to recuperate. The changes to working methods caused by the pandemic – including the increased workload – have probably affected them more.

There is less of a significance relating to how the grades taught affected the work environment. The various correlations may possibly require understanding in different ways. Distance teaching was more common for the higher grades of the compulsory school. This could be why teachers of grades 7–9 were less likely to report a poorer work-life balance during the pandemic. Being able to work from home increased flexibility. At the same time, the transition to more digital teaching methods may be the reason teachers in grades 7–9 felt there was a relatively significant deterioration in their performance compared to before the pandemic. For many teachers, this way of working was new and it was harder to teach online compared to in the classroom.

The fact that women experienced a relatively greater decline in the work environment may be in line with the fact that women in general face poorer work environments (see e.g. Swedish Work Environment Authority, 2022). Other studies have also shown that women teachers experience poorer work environments at school compared to men (see e.g. National Union of Teachers in Sweden, 2013). We can see this pattern in our survey. Women respondents report having poorer work environments before the pandemic compared to men. For example, it is evident that women teachers experienced a negative work-life balance and were less satisfied with their work on the whole before the pandemic. They also reported poorer organisational and physical work environments. Many women already faced poorer work environments before the pandemic. This in turn could mean that changes to the work environment generated by the pandemic hit this group harder. However, this does not appear to apply to all women. The transition to more remote working may have benefited some. One of the women teachers interviewed reflects on how working from home during the pandemic increased the chance of a work-life balance, particularly for women:

I think that I and many others have felt – there's many women in the group – there's less stress in one way, because we can put on a load of washing, or tidy up a little when we have a break. It's been easier to deal with the workload at home. We don't have to spend time on travel every day. It's not the work situation or the work environment, rather other parts of life were easier.

(Teacher for grades 7–9, municipal school)

The results showing that younger teachers felt there was a greater decline in their work environment during the pandemic may be related to them generally being less experienced. The new work tasks and highly chaotic environments posed a greater challenge for them.

The organisation was significant to how the pandemic affected the work environment

Greater decline at municipal schools

School organisers appear to have been somewhat significant to how the pandemic affected work environments. The survey shows that teachers at municipal schools experienced a greater decline relating to more indicators than teachers at independent schools. For example, teachers at municipal schools experienced greater deterioration in their work-life balance during the pandemic, compared to teachers at independent schools. Teachers at municipal schools also felt there were greater problems with the organisational, psychosocial and physical work environments.

This study cannot provide a single answer to why teachers at municipal schools experienced a relatively greater deterioration. There are studies that indicate that teachers at municipal schools report being less satisfied with their workplace compared to those at independent schools (see e.g. Swedish Association of Independent Schools, 2022). In addition, our survey shows that teachers at municipal schools generally found their work environments had already deteriorated prior to the pandemic, in comparison to those at independent schools. For example, municipal teachers state having a poorer work-life balance. They also reported poorer organisational, psychosocial and physical work environments. The difference in work environment perception may be due to a number of reasons, for example, municipal and independent schools have different pupil numbers and municipal schools have greater needs. It is possible that teachers in independent schools have made a more active choice to work at a certain school or for a certain company. This could have a positive effect on their experiences. The fact that teachers at municipal schools experienced a relatively greater deterioration may be related to the existing high-pressure situation at municipal schools before the pandemic.

The pandemic had less of a negative effect on schools running systematic work environment management

Negative effects on the work environment during the pandemic were relatively lower at schools where teachers reported systematic work environment management to improve conditions for staff. The pandemic had less of a negative impact on schools conducting more active systematic work environment management. This is clear in both the combined indices for organisational, psychosocial and physical work environments and in individual indicators. There is a relatively low decrease in teachers' overall work satisfaction among those who believe school management operated systematic work environment management during the pandemic to improve conditions for staff in schools. The decline in teachers' perceived performance was also relatively low among those who believe school management operated systematic work environment management during the pandemic to improve conditions for staff in schools.

The teachers who believed that school management conducted systematic work environment management during the pandemic to improve conditions also experienced a relatively smaller decline in the organisational, psychosocial and physical work environments during the pandemic compared to before. The overarching pattern shows that negative changes are more significant where teachers have rejected the statement that their school management conducted systematic work environment management during the pandemic to improve conditions.

Thus, the implementation of active work environment management is thought to have lessened the pandemic's negative effects on teachers' work environments. This can also be seen from the interviews with principals. The interviews illustrate how schools who had systematic work environment management procedures in place prior to the pandemic were better equipped for addressing the changes to working methods that arose due to the pandemic. Functioning work environment management structures may include several components. The interviewed principals describe some of the following aspects as effective:

- annual wheel that visualises the relationship between elements of systematic work environment management and responsibilities for them (investigating, risk assessment, measures, monitoring)
- regular health and safety inspections with checklists adapted to different parts of the school, such as playgrounds and sports halls
- regular staff surveys to obtain an understanding of the situation and work environment trends
- living forum for information, discussion and collaboration on the work environment, involving the health and safety representative, union representative and staff (e.g. during workplace meetings)
- school management conducting a continual follow up of all aspects of the work environment
- collaboration with the organiser on matters such as shared procedures and monitoring new rules, guidelines and recommendations.

The interviews with principals found that if work environment management structures were already established and continued to be used during the pandemic, schools could more easily discover and rectify risks in the work environment for teachers (and other staff):

We have an annual wheel to follow, with workplace meetings, surveys and collaboration. We did a lot of risk assessments [...] It kept going, I think it worked well. We've been able to plan ahead [...] We followed our existing structure, it was no big deal. It was nice having a framework in place. We followed the systematic elements of our work environment management [...] Staff suggested it was working. We have a positive collaboration with the union.

(Principal, municipal school for grades 7–9)

At the same time, principals stated it was important that work environment management was modified to the new situation in schools. They describe how work environment management needed to focus on the pandemic and its consequences, such as the new risks of infection faced by staff, or social isolation caused by remote working. Many of the principals also describe intensified work with risk assessments; during certain periods they would be conducting risk assessments once a week or every day.

Several of the interviewed principals describe how their school did not have any systematic work environment management in place before the pandemic. They did not conduct regular health and safety inspections, had poor dialogue and collaborations with health and safety representatives, union representatives and staff on the work environment, or they did not follow up on work environment management in their management groups. The pandemic forced significant changes to teachers' work, which challenged the work environment. Identifying and managing the shortcomings and work environment risks that arose during the pandemic was harder as no functioning work environment management structures were already in place. Thus, schools without systematic work environment management likely had worse conditions for counteracting the negative effects of the pandemic on teachers' work environments.

9. Concluding comments

Primary observations

The purpose of this study has been to explore how Covid-19 affected the work environments of teachers in the compulsory school. It shows that changes to work methods had a short-term negative impact on the work environment. The organisational, psychosocial and physical work environments of teachers all deteriorated during the pandemic. Consequently, there were more health risks such as burnout, stress and depression.

The study also found that individual factors have impacted the pandemic's effects on the work environment. Teachers who worked fewer hours, taught grades 7–9, men and older teachers are all thought to have been less affected by the pandemic. Furthermore, the study demonstrates how the organisation is significant to how the pandemic affected the work environment. There was less of a deterioration in the work environments of teachers who believed that their school management worked systematically during the pandemic to improve their work environment. Teachers at independent schools reported a relatively small deterioration in the work environment compared to municipal schools.

However, changes to work methods during the pandemic did not simply cause problems. In certain cases, the pandemic resulted in an improved work environment in terms of reduced stress and lower noise levels. The work environment has assuredly improved since the pandemic, however negative effects linger. Teachers have returned to a work environment, which – just as before the pandemic – is characterised by major shortcomings.

Reflections on the results of the study

In light of the study's results, Vilna wishes to conclude with highlighting a number of areas for development. It is our assessment that these areas are particularly important in the continued work with managing the pandemic's effects on teachers' work environments at all levels of society. They also provide significant lessons for society and – above all – the Government, stakeholders and organisers ahead of forthcoming challenges that may affect work environments in schools.

Follow up on the development of teachers' work environments

The study shows that compulsory schools have, on the whole, returned to how they worked before the pandemic. For example, classroom teaching dominates once more, and many of the infection control measures implemented during the pandemic have since been removed. As a result, the teachers in the study report an improved work environment following the pandemic.

However, there were shortcomings to teachers' work environments before the pandemic. The fact that there has been a return to how things were before the pandemic means that many teachers in the compulsory school continue to work in problematic environments. Despite clear improvements compared to conditions during the pandemic, the study also shows how the work environment is worse than before the pandemic. The proportion of teachers who are very satisfied with their work in general is lower after the pandemic compared to before. Neither the organisational nor psychosocial work environments have fully returned to their pre-pandemic levels. Many teachers feel burnt out following the pandemic. Furthermore, many teachers feel they were let down by society when compulsory schools were kept open, and in many cases, they lacked hygiene products and protective equipment.

A positive work environment is critical for encouraging more people to become teachers, stay in the profession, or return to teaching (see e.g. Swedish National Agency for Education, 2020). As the pandemic continues to leave its traces on schools, it is important that society continues to follow the development in teachers' work environments. Regular follow-ups need to be conducted on the organisational, psychosocial and physical work environments to obtain a comprehensive understanding of the situation.

Drawing on the lessons learnt from the new methods that boosted the work environment during the pandemic

Although the study shows that there was a clear, overall deterioration in the work environment during the pandemic, we also see certain positive changes. Teachers felt that noise levels improved considerably when the number of pupils was better suited to school buildings. Many teachers were positive towards the increased flexibility surrounding when and where to work. They also appreciated the increased efficiency as a result of online meetings, including pupil-conferencing and meetings with external providers. Some teachers have stated that the increased flexibility and introduction of digital methods contributed to reduced stress and an increased work-life balance. Studies from other sectors also found that the increased ability to influence working hours has a positive effect on the work environment and health (Swedish Work Environment Authority, 2018).

The compulsory school has embraced some of the new methods to have developed during the pandemic. For example, the study has found that many schools continue to conduct their pupil-conferences online. However, in other respects, it appears as though they no longer use some of the methods that improved their work situation. In order to help the compulsory school develop as a workplace, it may be important to keep the new work methods that improved teachers' work environments in mind. At the same time, we must not undermine what creates the conditions for quality in schools, for example, as a rule, teaching works best in person and is better if teachers can plan and follow up their lessons together. There are national regulations and central and local agreements that set the framework for where teaching is to take place and where teachers are to plan and follow up on their lessons. It

may be worthwhile for the Government and other parties to systematically compile and reflect on which lessons can be learnt from the new methods that developed and strengthened teachers' work environments during the pandemic, based on the fact that the school's quality and teacher's environment are significant – and go hand in hand.

Strengthening systematic work environment management in schools

The study indicates how systematic work environment management has served as a protection factor during the pandemic. Teachers suggested that the schools that had systematic work environment management measures in place experienced fewer negative effects during the pandemic. At the same time, the interviews with principals suggest that there were varying degrees of success with maintaining systematic work environment management during the pandemic. The overall impression is that schools that operated structured systematic work environment management before the pandemic were more likely to be able to manage the negative effects of the pandemic. Some of the conditions for being able to identify and address risks in the work environment include a positive dialogue with school management, health and safety representatives and staff. In addition, trusting relationships and constructive discussions between teachers and school management further contributed to more successful work environment management.

This study has demonstrated the importance of systematic work environment management, hence there is the considerable challenge that it does not function at all schools. In 2017, the Swedish Work Environment Authority (2017) published a report indicating that there were shortcomings in systematic work environment management measures at 90 per cent of the approximately 6 000 compulsory and upper secondary schools inspected by the Authority between 2013 and 2016.

Successful systematic work environment management can improve the work environment for teachers, pupils and other school staff. Research indicates that this can contribute to the compulsory school becoming a workplace where more will choose to work and continue working (see Casely-Hayford, et al., 2022). Successful systematic work environment management can also create a resistance against unnecessary negative repercussions that future crises may have on the work environment. It was a pandemic that caused great pressure on schools this time around. In the future it may be something different. Hence, it may be important to intensify the work to develop and spread knowledge that stimulates school organisers and principals to establish and maintain systematic work environment management.

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