Findings from the ÉpStan National Education Monitoring against the Background of the COVID-19 Pandemic. Online Supplement

Antoine Fischbach, Joanne Colling, Jessica Levy, Ineke M. Pit-ten Cate, Cassie Rosa, Charlotte Krämer, Ulrich Keller, Sylvie Gamo, Caroline Hornung, Philipp Sonnleitner, Sonja Ugen, Pascale Esch & Rachel Wollschläger

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Befunde aus dem nationalen Bildungsmonitoring ÉpStan vor dem Hintergrund der COVID-19-Pandemie

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Findings from the ÉpStan National Education Monitoring against the Background of the COVID-19 Pandemic

Online Supplement

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Table of Contents

The present material supplements the chapter **"Findings from the ÉpStan National Education Monitoring against the Background of the COVID-19 Pandemic"** from the National Education Report 2021 and follows the same structure: At first, we describe how students who participated in the ÉpStan 2020 compare to previous cohorts in different areas of competence before investigating the question of how parents elementary school-aged children and students in secondary school perceived distance learning in the school year 2019/2020. In the chapter published in the National Education Report 2021, students are compared with each other primarily with regard to their socioeconomic background. The materials presented here supplement the findings from the chapter by focusing on other factors such as the students' gender or language background. In order to understand the graphs in their respective context, we recommend to consider the publication in its entirety.

TRENDS 2020

Grade 9 - Language groups

As described in more detail in the chapter of the National Education Report 2021, students from socioeconomically disadvantaged households were more strongly affected by a decline in academic performance, and this especially with regard to German reading comprehension. The following graph adds to these findings by showing that students who do not speak one of the instruction languages (Luxembourgish, German and French) at home also show a decline in their German reading comprehension.
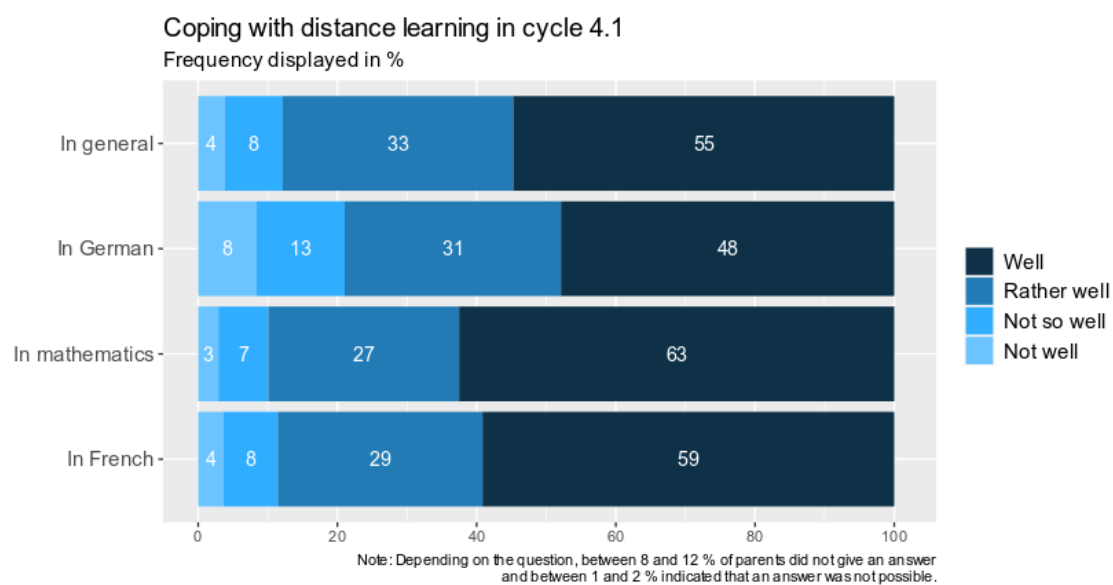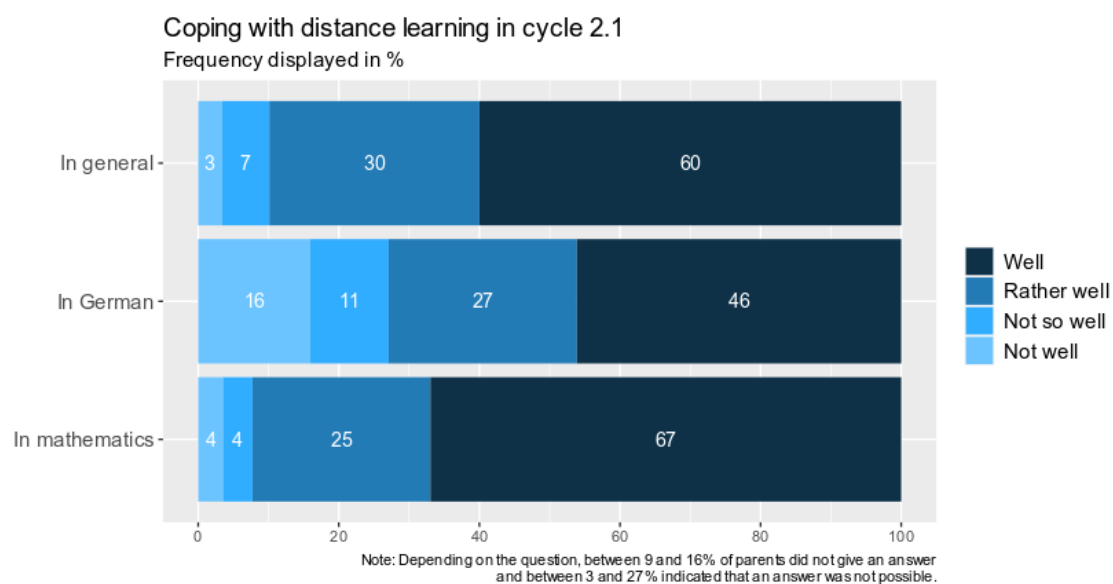

Results of the ÉpStan competency tests in secondary school
Mean values by language groups
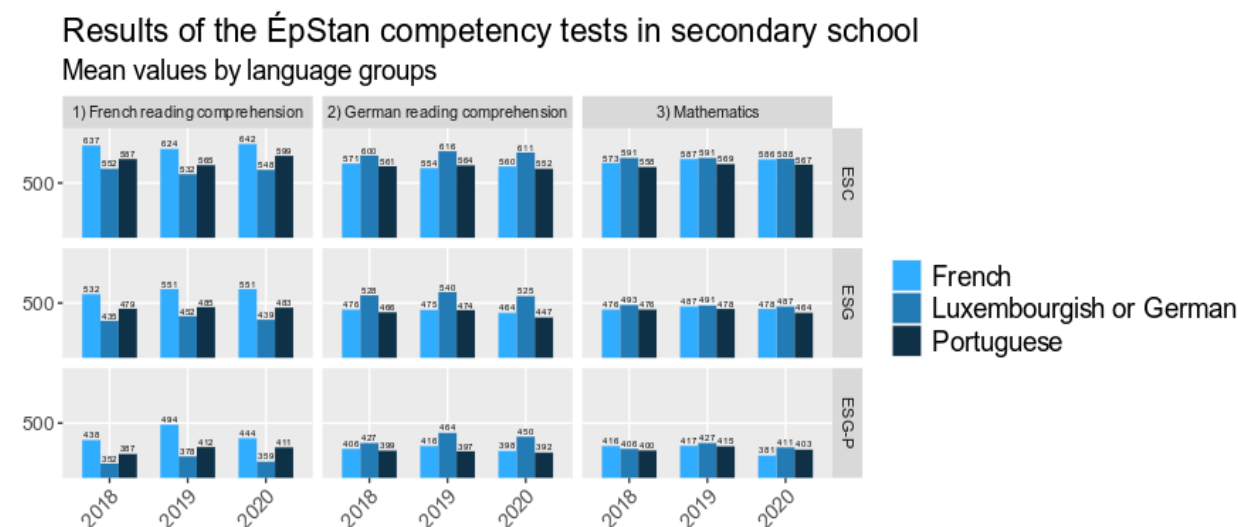
COVID-19 Questions

Elementary school

Coping

With regard to coping with distance learning, the following two graphs - based on **Figure 5** from the actual chapter - show that parents of students in cycle 2.1 and 4.1 have coped rather well with distance learning in general and in the subjects of mathematics and French (cycle 4.1), whereas distance learning in German has been perceived as a slightly greater challenge.

Coping with distance learning in cycle 2.1
Frequency displayed in %

	Not well	Not so well	Rather well	Well
In general	3	7	30	60
In German	16	11	27	46
In mathematics	4	4	25	67

Legend: Well, Rather well, Not so well, Not well

Note: Depending on the question, between 9 and 16% of parents did not give an answer and between 3 and 27% indicated that an answer was not possible.

Coping with distance learning in cycle 4.1
Frequency displayed in %

	Not well	Not so well	Rather well	Well
In general	4	8	33	55
In German	8	13	31	48
In mathematics	3	7	27	63
In French	4	8	29	59

Legend: Well, Rather well, Not so well, Not well

Note: Depending on the question, between 8 and 12 % of parents did not give an answer and between 1 and 2 % indicated that an answer was not possible.

By SES

Based on **Figure 6** from the actual chapter, the two following graphs are showing mean values for coping with distance learning in elementary school (cycles 2.1 and 4.1) when looking at students from both socioeconomically advantaged and disadvantaged households. As in cycle 3.1, it can also be seen here that, on a scale from 1 (not well) to 4 (well), the mean value of students from socioeconomically disadvantages households is - according to their parents - significantly below the mean value for their classmates from socioeconomically advantaged households.
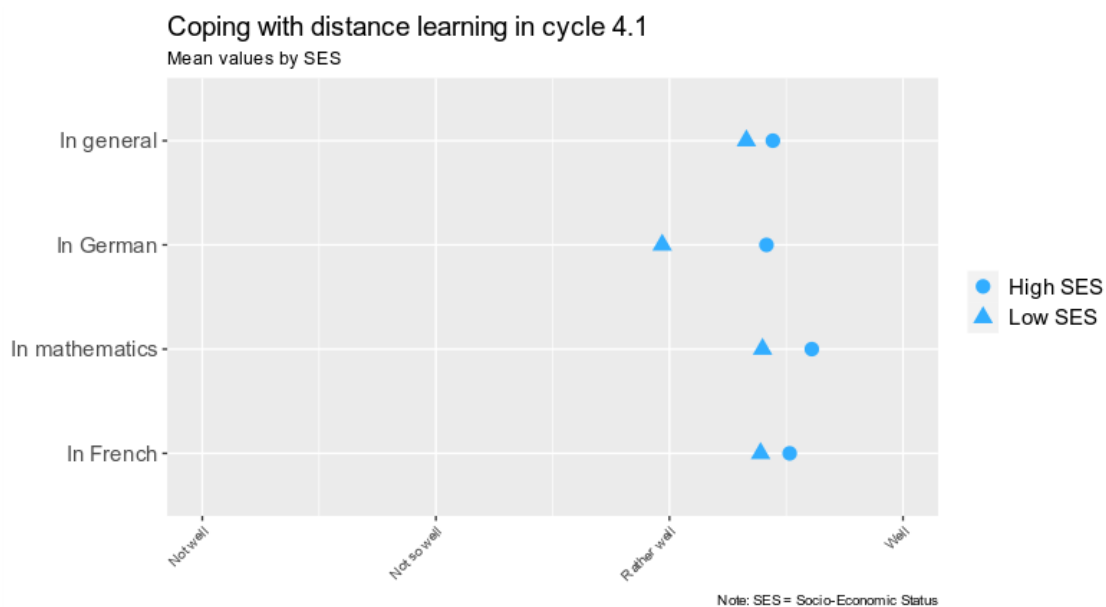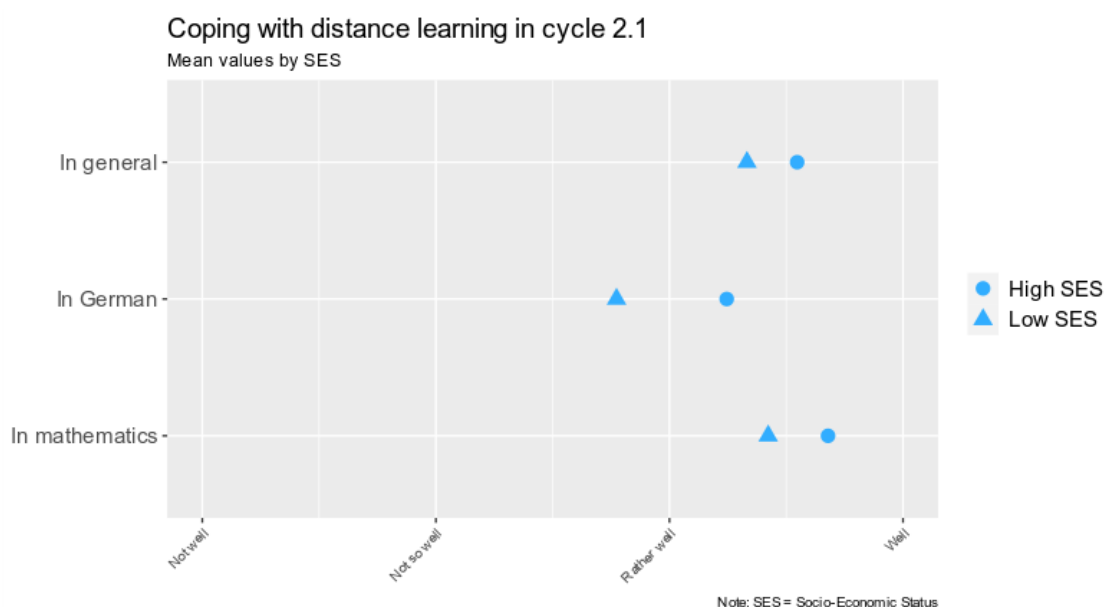
By language group

When looking at mean values split by language groups, a similar picture emerges across all cycle (cycles 2.1, 3.1 and 4.1): the mean value of elementary school students who do not speak any of the instruction languages at home is considerably below the mean value of elementary school students who speak Luxembourgish or German in their families. These mean differences are particularly large for coping with distance learning in German.

Coping with distance learning in cycle 2.1
Mean values by language group

- ● French
- ▲ Luxembourgish or German
- ■ Portuguese

Coping with distance learning in cycle 3.1
Mean values by language group

- ● French
- ▲ Luxembourgish or German
- ■ Portuguese

Coping with distance learning in cycle 4.1
Mean values by language group
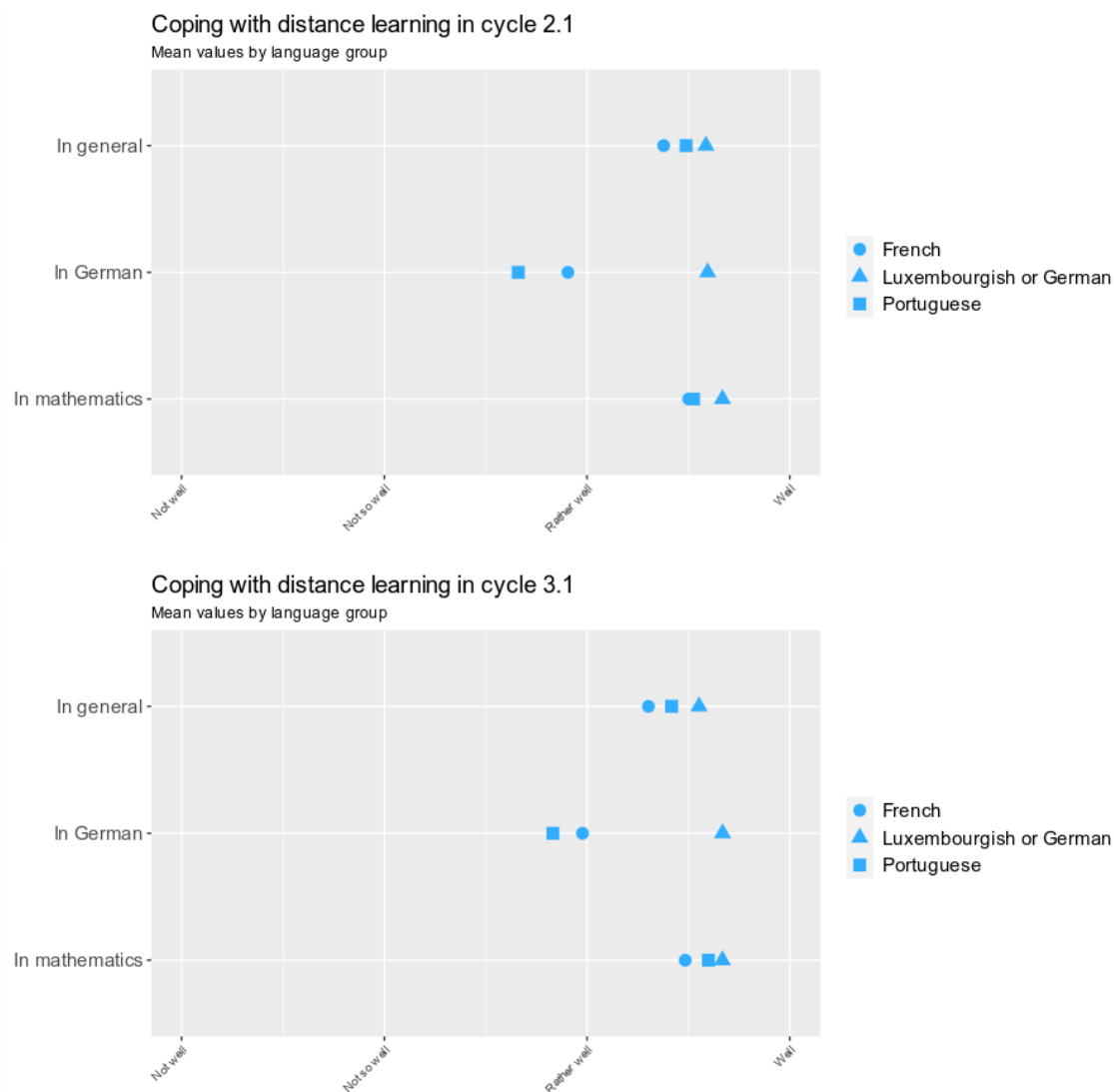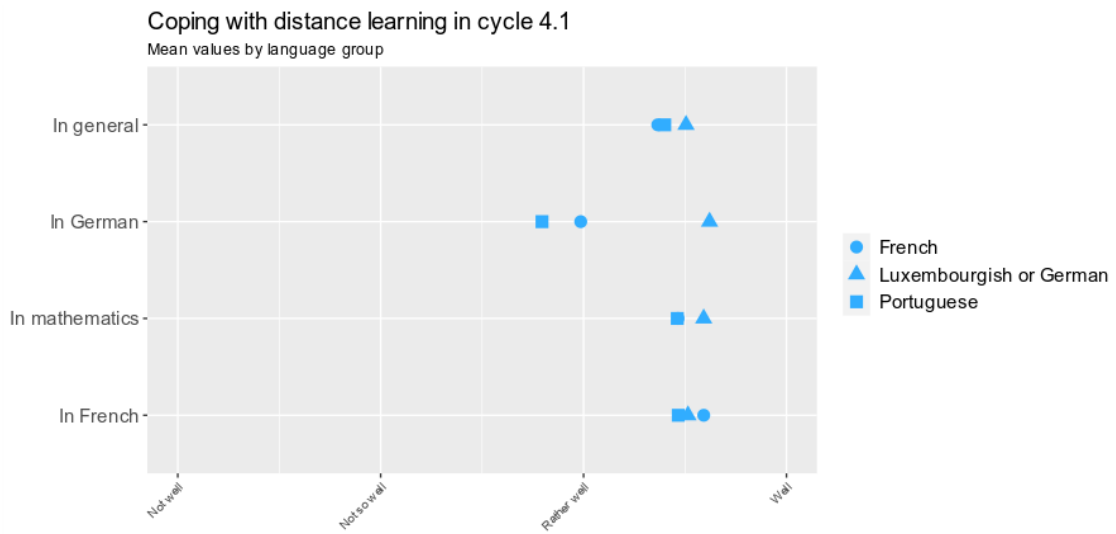
Infrastructure

With regard to the technical, material and spatial equipment of families during distance learning, the following three graphs show that the large majority of parents of elementary school students (cycles 2.1, 3.1 and 4.1) stated to have been rather well equipped.

Infrastructure during distance learning in cycle 2.1
Frequency displayed in %

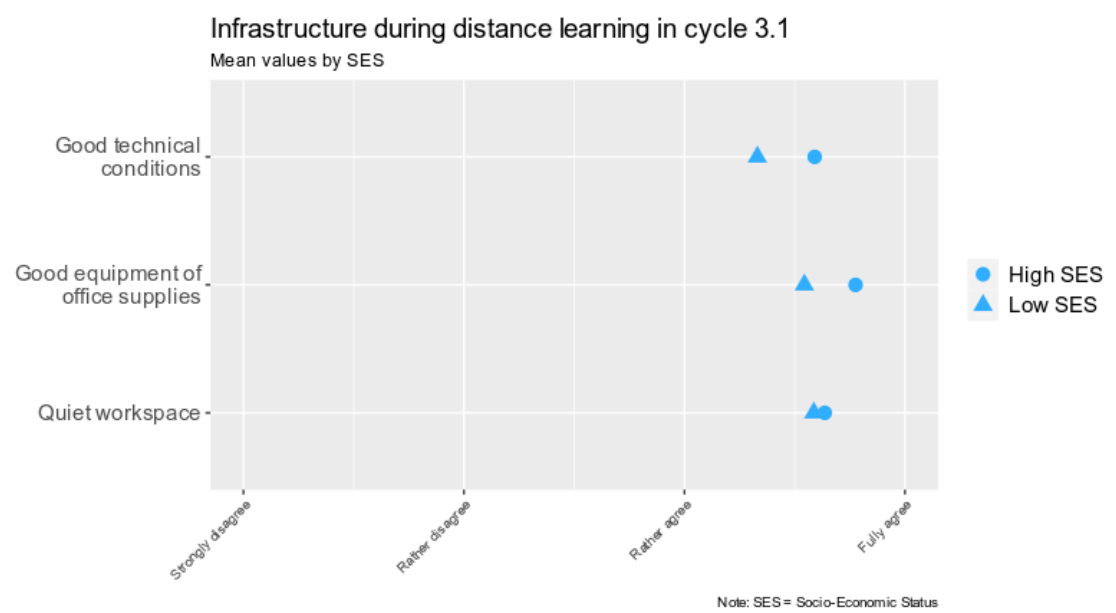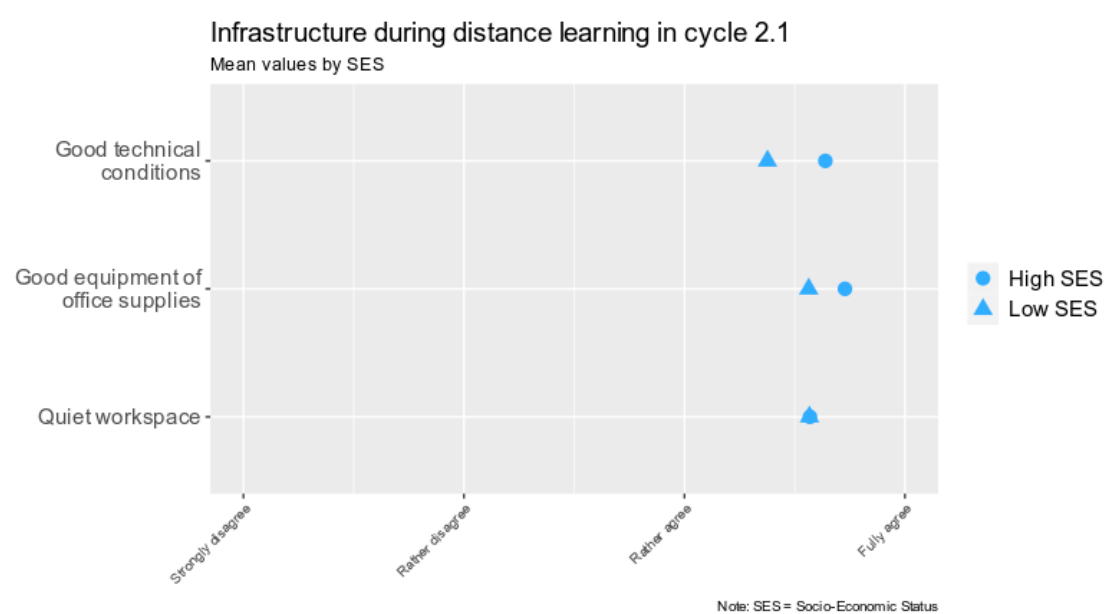|	Good technical conditions	Good equipment of office supplies	Quiet workspace

Note: Depending on the question, between 9 and 10 % of parents did not give an answer and between 2 and 3 % indicated that an answer was not possible.

Infrastructure during distance learning in cycle 3.1
Frequency displayed in %

Note: Depending on the question, between 8 and 10 % of parents did not give an answer and between 1 and 3 % indicated that an answer was not possible.

Infrastructure during distance learning in cycle 4.1
Frequency displayed in %

Note: Depending on the question, between 8 and 10 % of parents did not give an answer and between 1 and 3 % indicated that an answer was not possible.
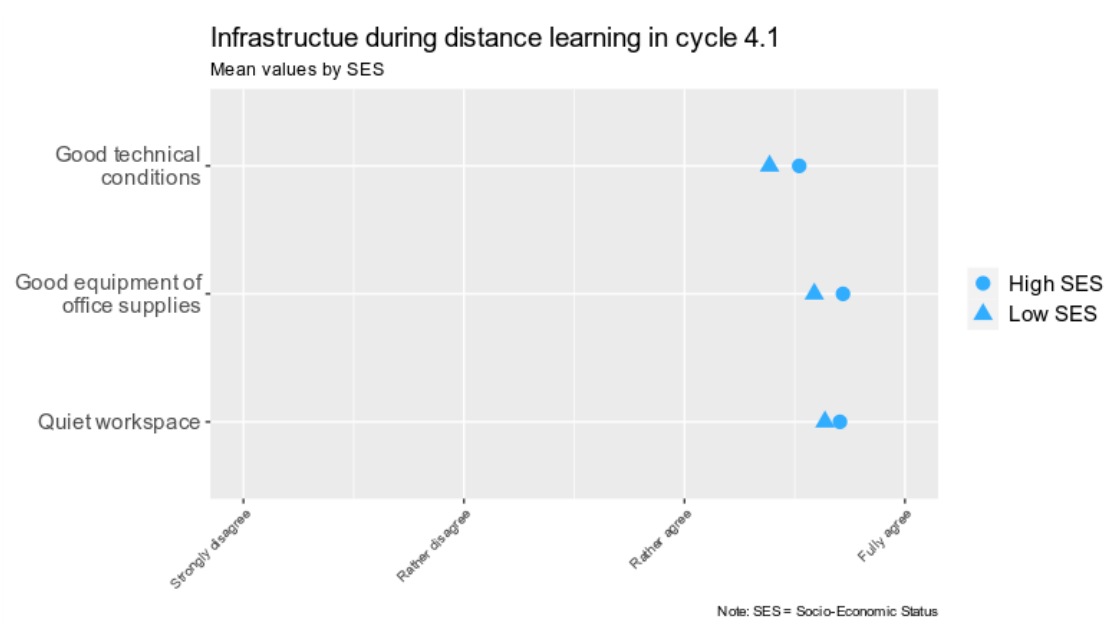
By SES

When looking at mean values for the technical, material and spatial equipment of families during distance learning split by socioeconomic background, it becomes apparent that especially students from socio-economically advantages households could rely on a very good infrastructure during distance learning.

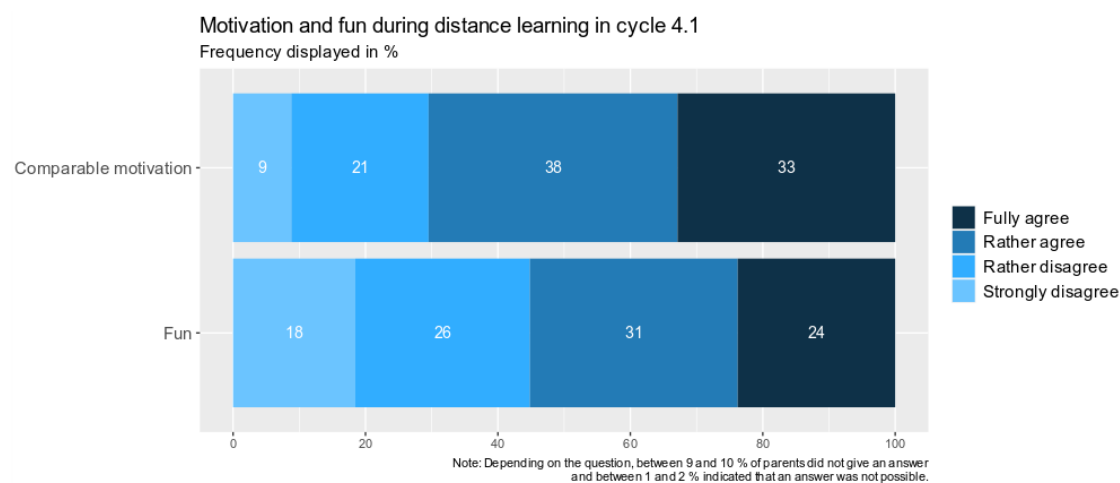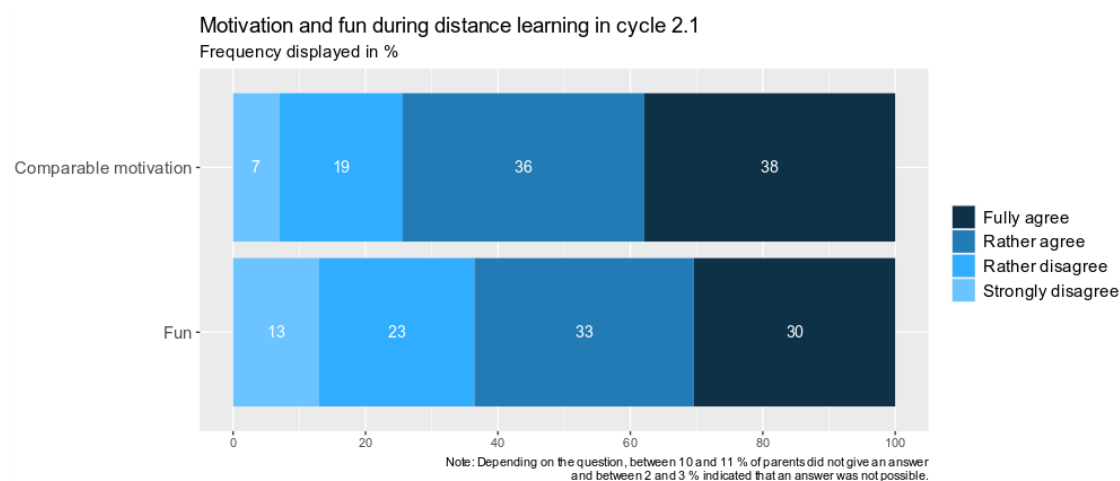Infrastructure during distance learning in cycle 2.1
Mean values by SES

Infrastructure during distance learning in cycle 3.1
Mean values by SES

Infrastructue during distance learning in cycle 4.1
Mean values by SES
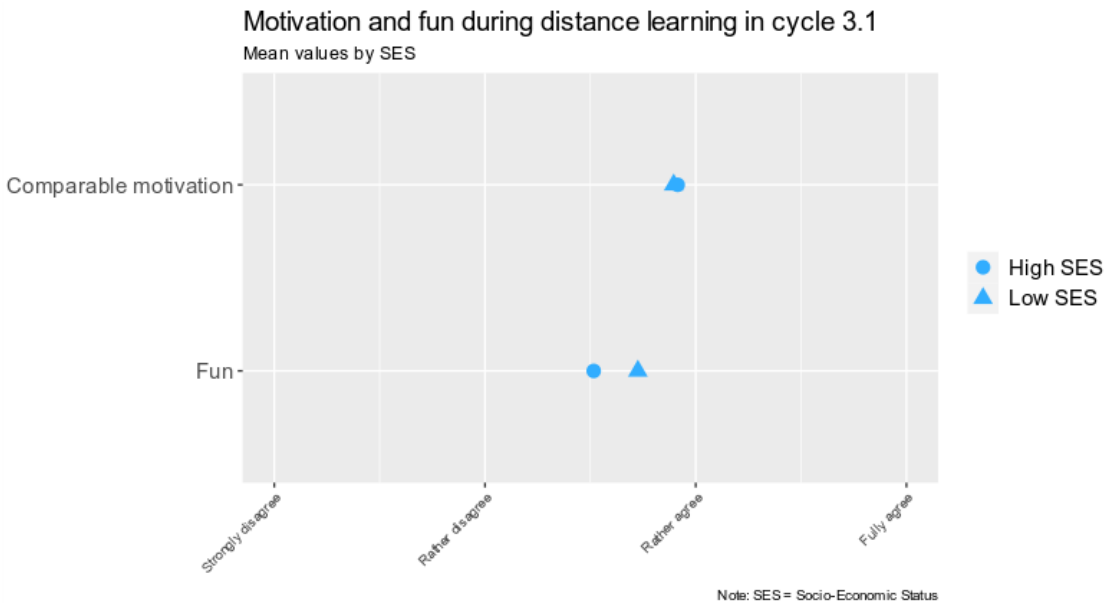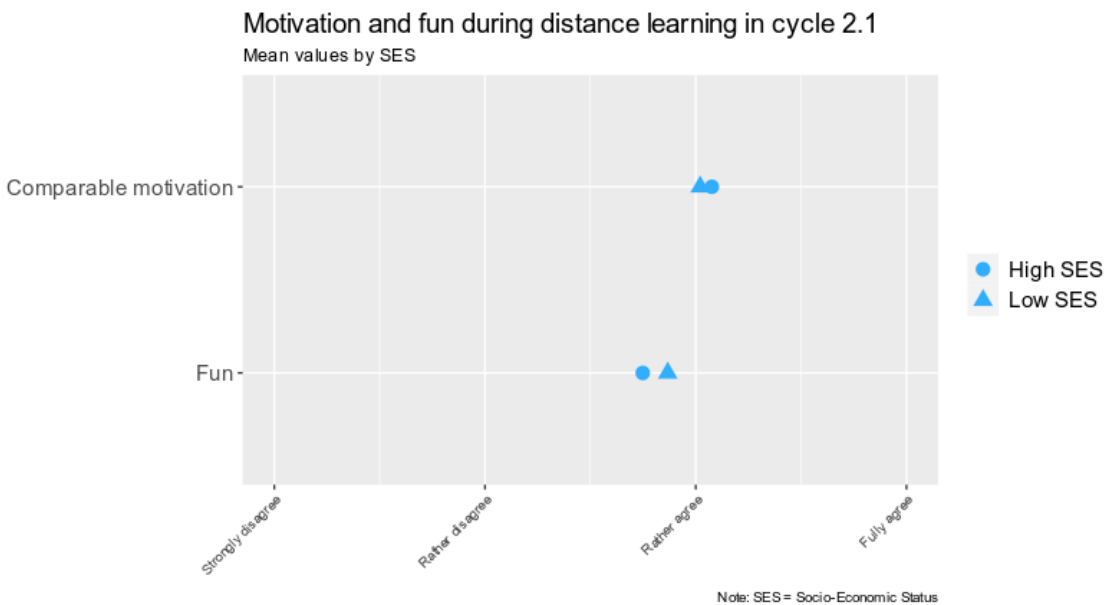
Note: SES = Socio-Economic Status
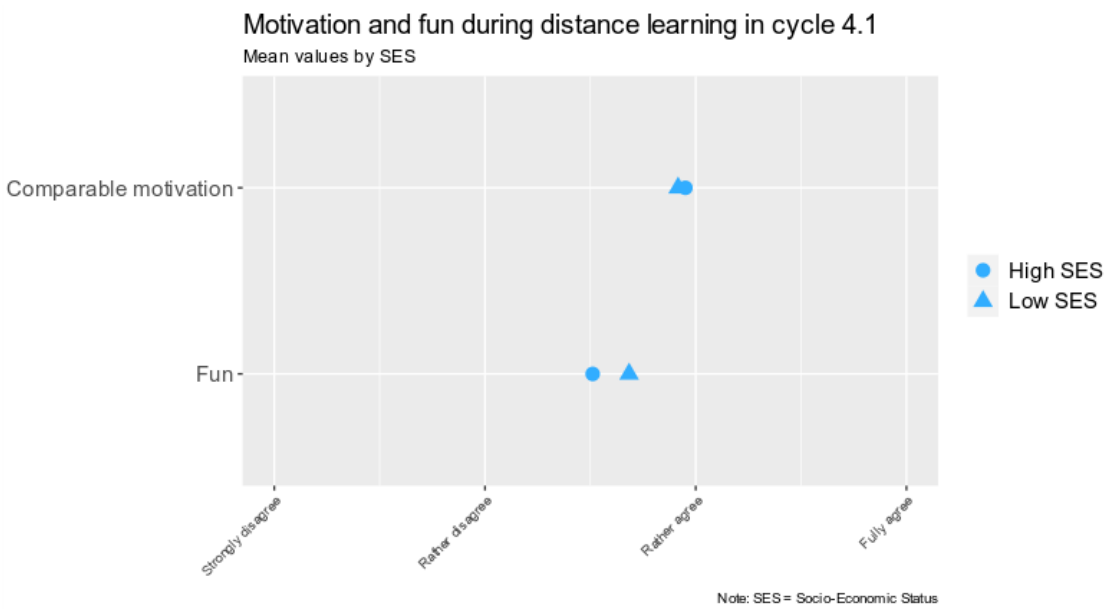
Motivation and fun

In terms of motivation and fun during distance learning, the results for students attending cycles 2.1 and 4.1 shown in the two following graphs are similar to those for cycle 3.1 (see **Figure 7** in the actual chapter): Approximately two-thirds of parents agreed with the statement that their child's motivation during distance learning was comparable to their motivation in regular face-to-face classes. However, 19 to 21% of the parents did rather disagree, and 7 to 9% did strongly disagree with this statement. When it came to fun during distance learning, parents' responses were even less consistent, with only about half of them saying that their child enjoyed distance learning, while the other half tended to rather or strongly disagree with the statement.

Motivation and fun during distance learning in cycle 2.1
Frequency displayed in %

	Strongly disagree	Rather disagree	Rather agree	Fully agree
Comparable motivation	7	19	36	38
Fun	13	23	33	30

Note: Depending on the question, between 10 and 11 % of parents did not give an answer and between 2 and 3 % indicated that an answer was not possible.

Motivation and fun during distance learning in cycle 4.1
Frequency displayed in %

	Strongly disagree	Rather disagree	Rather agree	Fully agree
Comparable motivation	9	21	38	33
Fun	18	26	31	24

Note: Depending on the question, between 9 and 10 % of parents did not give an answer and between 1 and 2 % indicated that an answer was not possible.

By SES

When studying mean values with regard to students' motivation and fun during distance learning split by socioeconomic background across cycles (cycles 2.1, 3.1 and 4.1), no mean differences were found between children from socioeconomically advantaged and disadvantaged households. However, in terms of the perceived fun during distance learning measured on a scale from 1 (strongly disagree) to 4 (fully agree), the following graphs illustrate that students from socioeconomically disadvantaged households enjoyed distance learning slightly more than their classmates from socioeconomically advantaged households.


Motivation and fun during distance learning in cycle 2.1
Mean values by SES

Note: SES = Socio-Economic Status

Motivation and fun during distance learning in cycle 3.1
Mean values by SES

Note: SES = Socio-Economic Status

Motivation and fun during distance learning in cycle 4.1
Mean values by SES

Note: SES = Socio-Economic Status
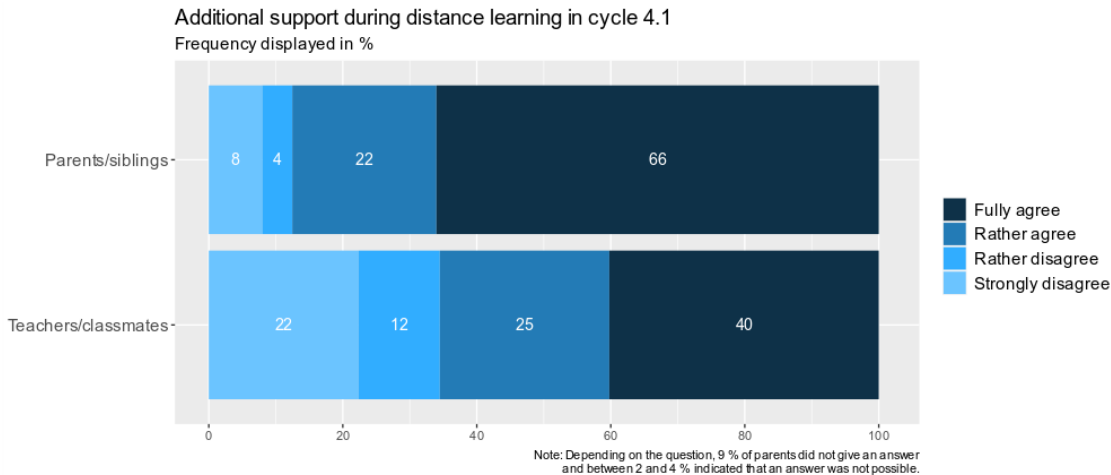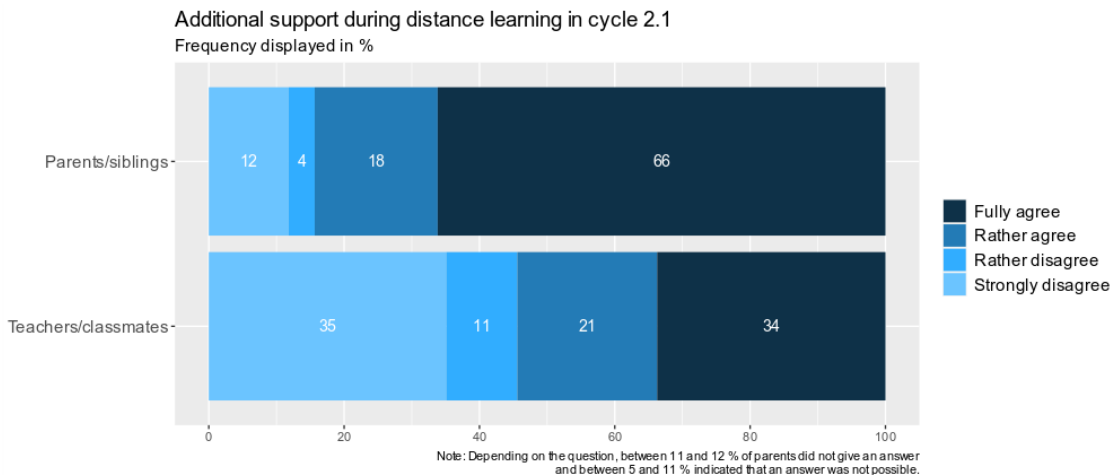
By gender

The three following graphs show the mean values of girls and boys in terms of their motivation and fun during distance learning: In general, differences between girls and boys were rather small. However, parents of girls reported a slightly higher motivation than parents of boys across all cycles (cycles 2.1, 3.1 and 4.1), and in cycle 2.1 girls seem to have enjoyed distance learning slightly more than boys. When looking at cycles 3.1 and 4.1, no gender differences were found in terms of fun during distance learning.

Motivation and fun during distance learning in cycle 2.1
Mean values by gender

Motivation and fun during distance learning in cycle 3.1
Mean values by gender

Motivation and fun during distance learning in cycle 4.1
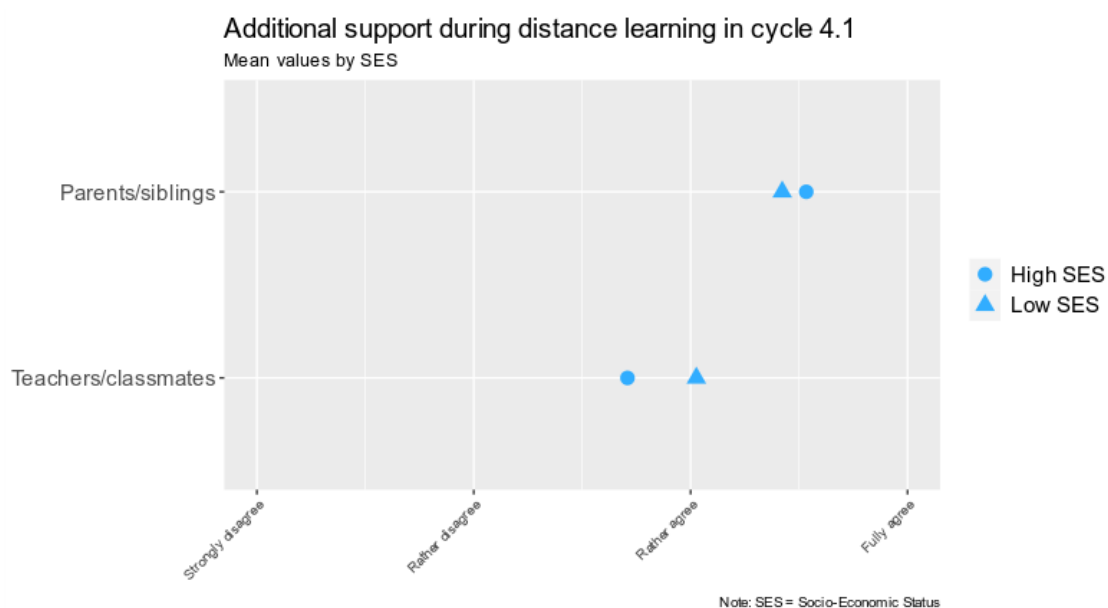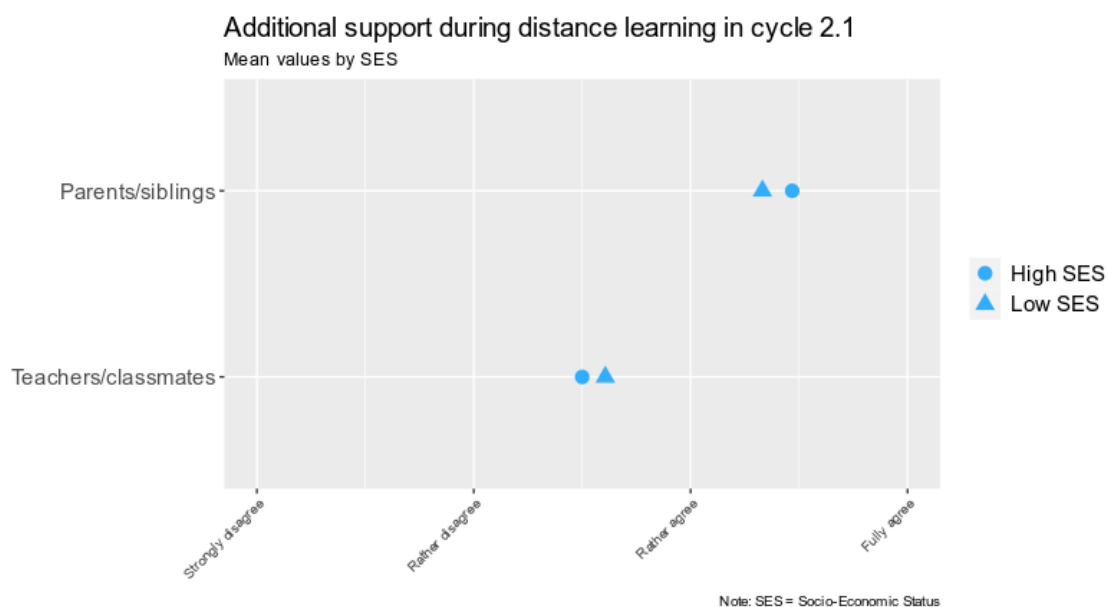Mean values by gender
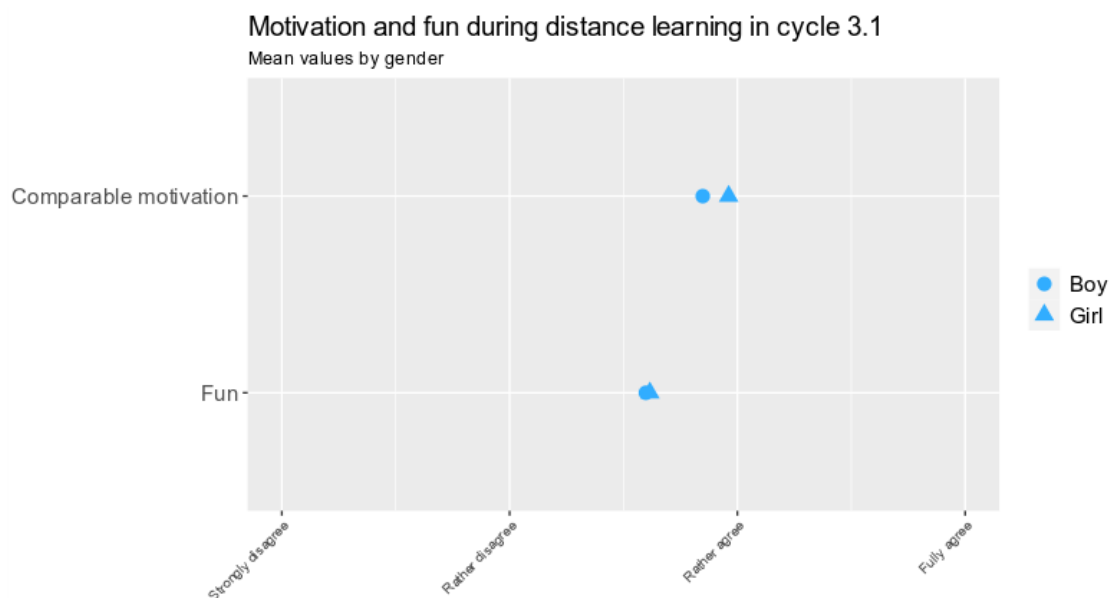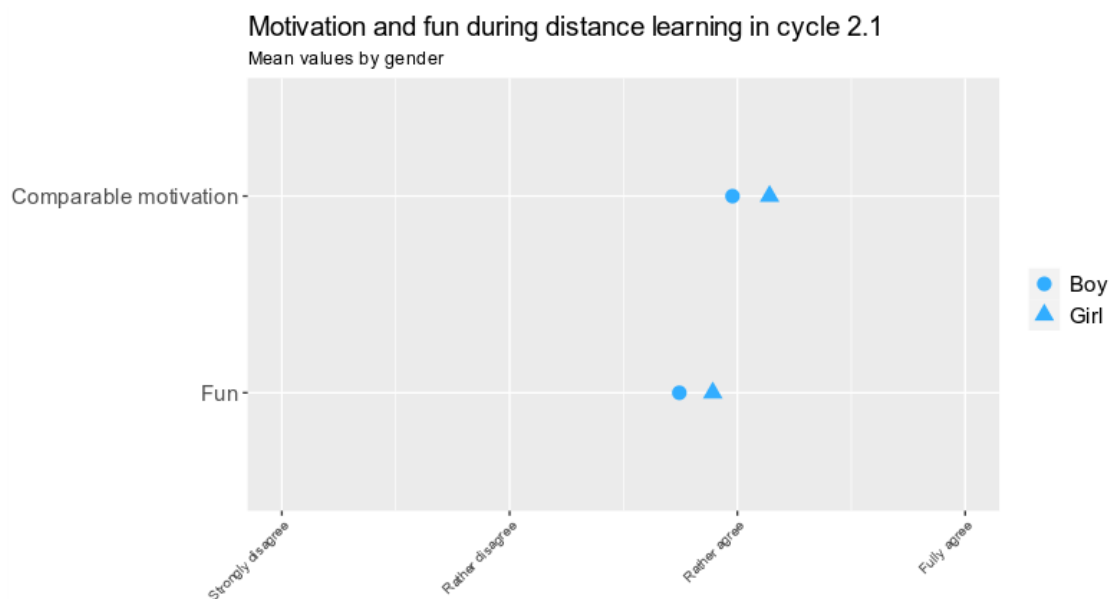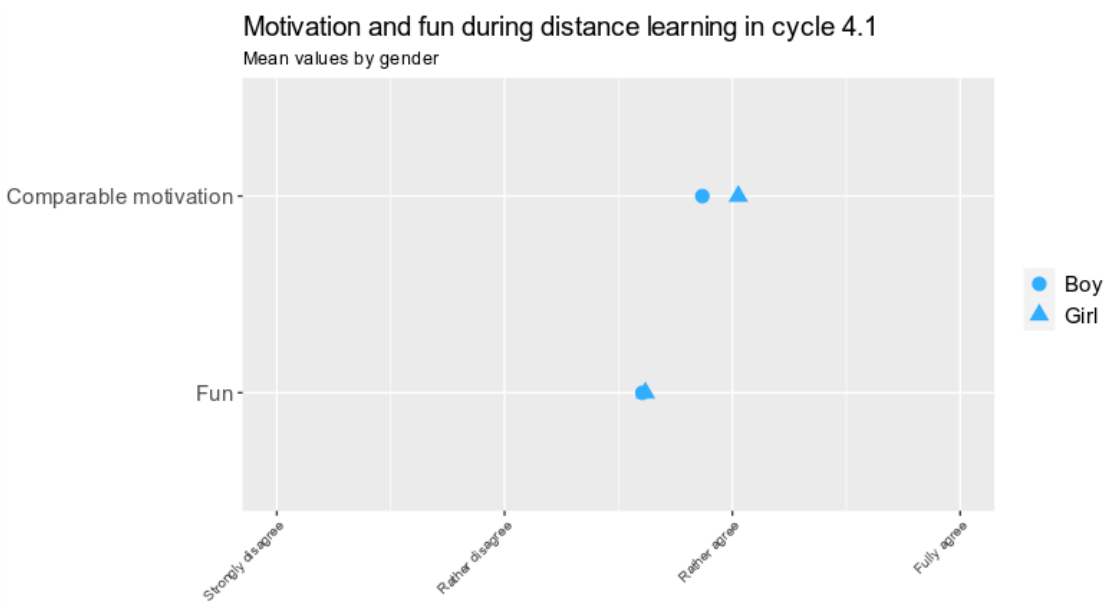
Additional support

With regard to the additional support during distance learning provided by parents and/or siblings, results for cycle 2.1 and 4.1 displayed in the two following graphs are similar to the results for cycle 3.1 (see **Figure 8** from the actual chapter): The majority of parents agreed with the statement that their children received additional support from them and/or their siblings when needed. Responses from parents, whether students received additional support from their teachers and/or classmates when needed, were similarly heterogeneous in cycle 2.1 and 4.1 than in cycle 3.1.

Additional support during distance learning in cycle 2.1
Frequency displayed in %

Note: Depending on the question, between 11 and 12 % of parents did not give an answer and between 5 and 11 % indicated that an answer was not possible.

Additional support during distance learning in cycle 4.1
Frequency displayed in %

Note: Depending on the question, 9 % of parents did not give an answer and between 2 and 4 % indicated that an answer was not possible.
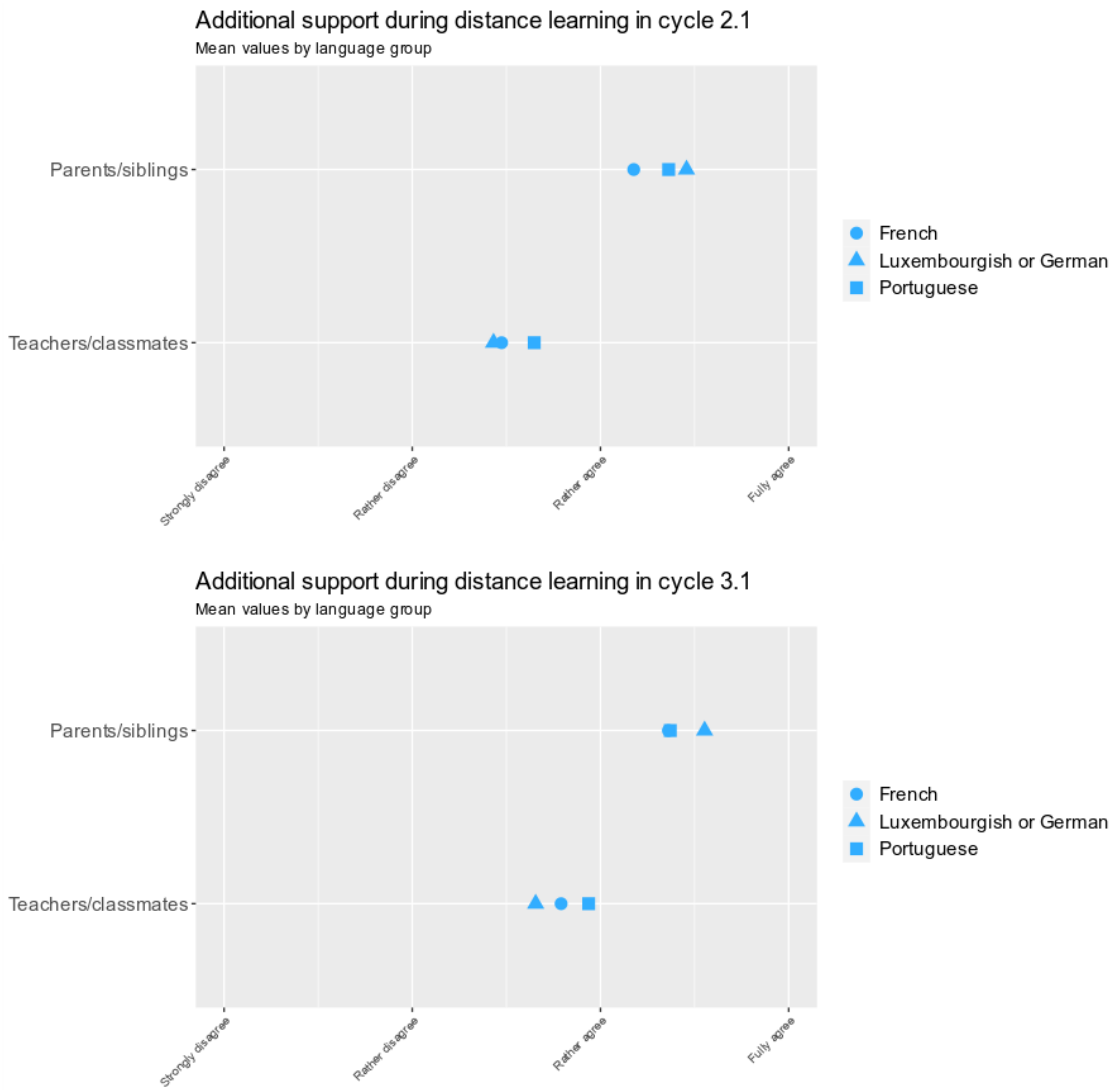
By SES

As shown in **Figure 9** in the actual chapter for cycle 3.1, the two following graphs also reveal differences between students from socioeconomically disadvantaged and advantaged households in cycle 2.1 and 4.1: On average, students from socioeconomically advantages households received slightly more support from their parents and/or siblings than students from socioeconomically disadvantaged families. The opposite picture emerges in terms of additional support from teachers and/or classmates. Here, students from socioeconomically disadvantaged households received, on average, slightly more additional support when needed than their socioeconomically advantaged classmates.
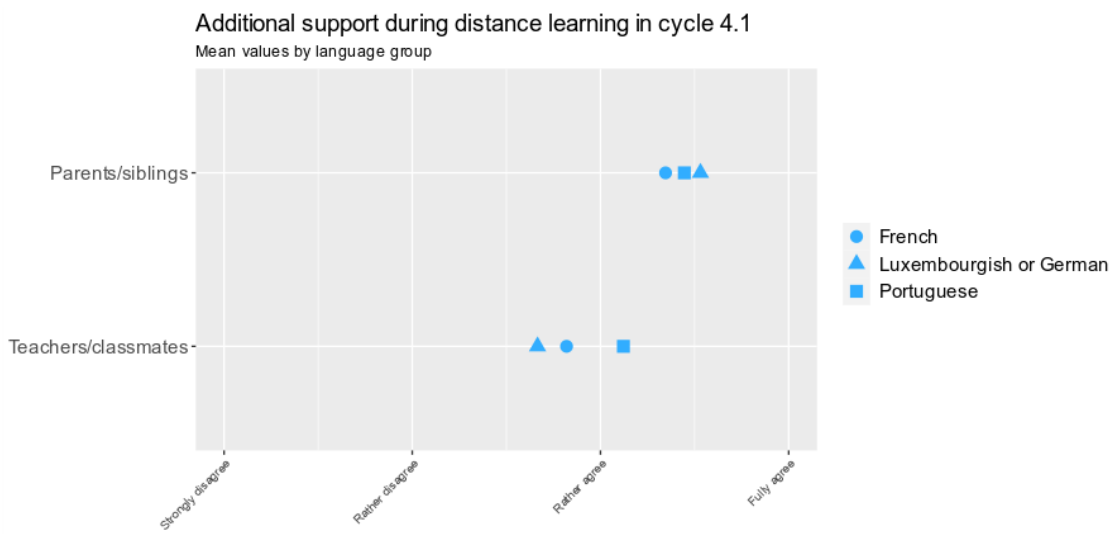

Additional support during distance learning in cycle 2.1
Mean values by SES

Additional support during distance learning in cycle 4.1
Mean values by SES

By language group

When looking at mean values split by language groups, a similar picture emerges across all cycles (cycles 2.1, 3.1 and 4.1): Students with a Portuguese language background received more support from their teachers and/or classmates than students from a Luxembourgish/German or French language background.


Additional support during distance learning in cycle 2.1
Mean values by language group

Additional support during distance learning in cycle 3.1
Mean values by language group

Additional support during distance learning in cycle 4.1
Mean values by language group

Legend:
- French
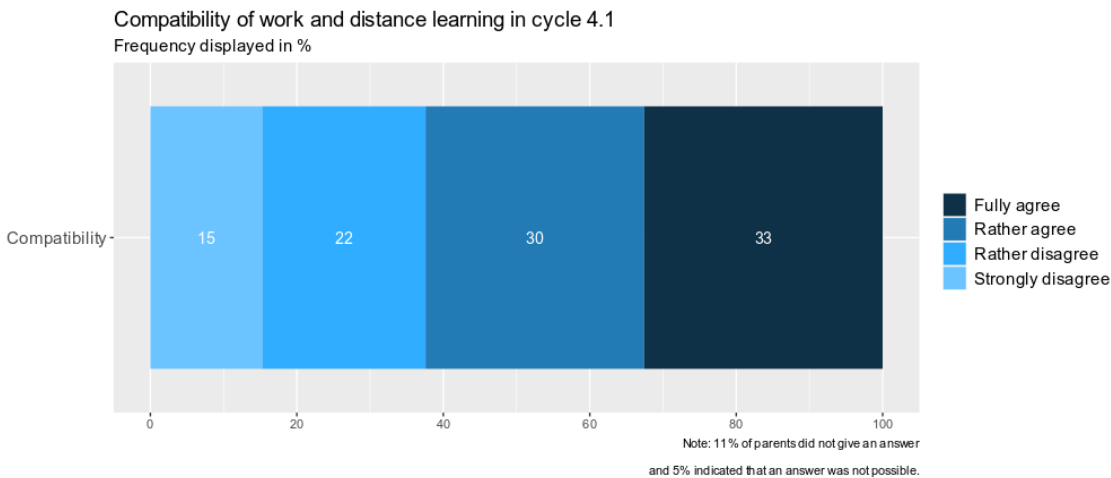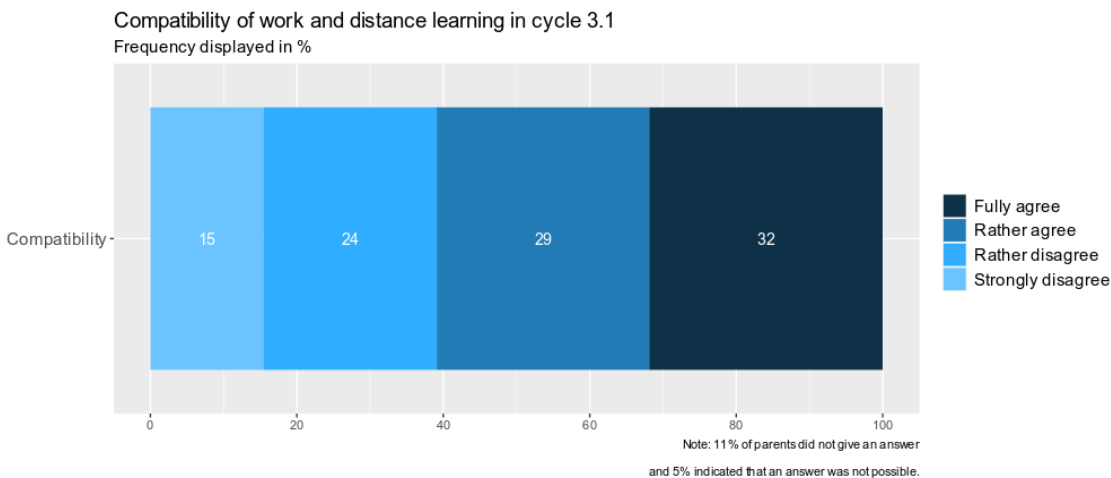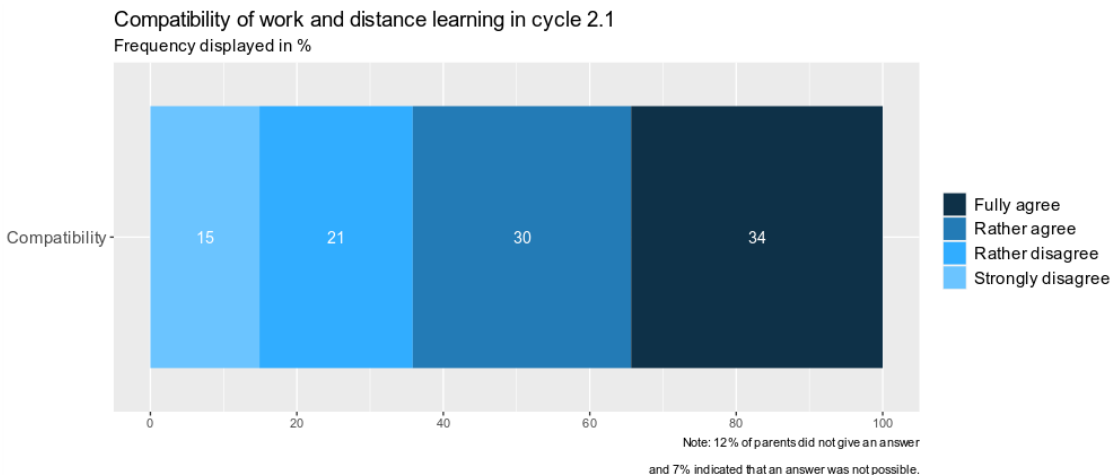- Luxembourgish or German
- Portuguese

Contact with teachers

As shown in **Figure 10** in the actual chapter for cycle 3.1, the two following graphs for cycle 2.1 and 4.1 illustrate that teachers and students/parents were in regular contact with each other during the period of distance learning. In addition, it shows that teachers consciously selected their respective communication channels: Socioeconomically disadvantages households not only reported a more frequent contact with teachers, but it furthermore took more frequently place in the form of additional phone calls, text messages and postal mail.

Contact with teachers in cycle 2.1
Frequency given in % by SES

Contact with teachers in cycle 4.1
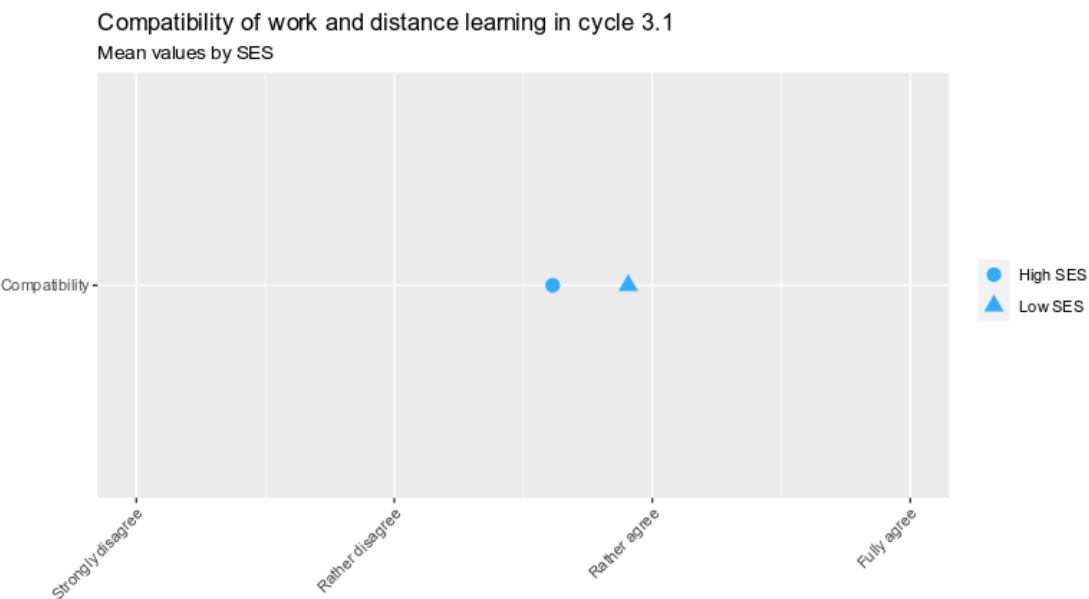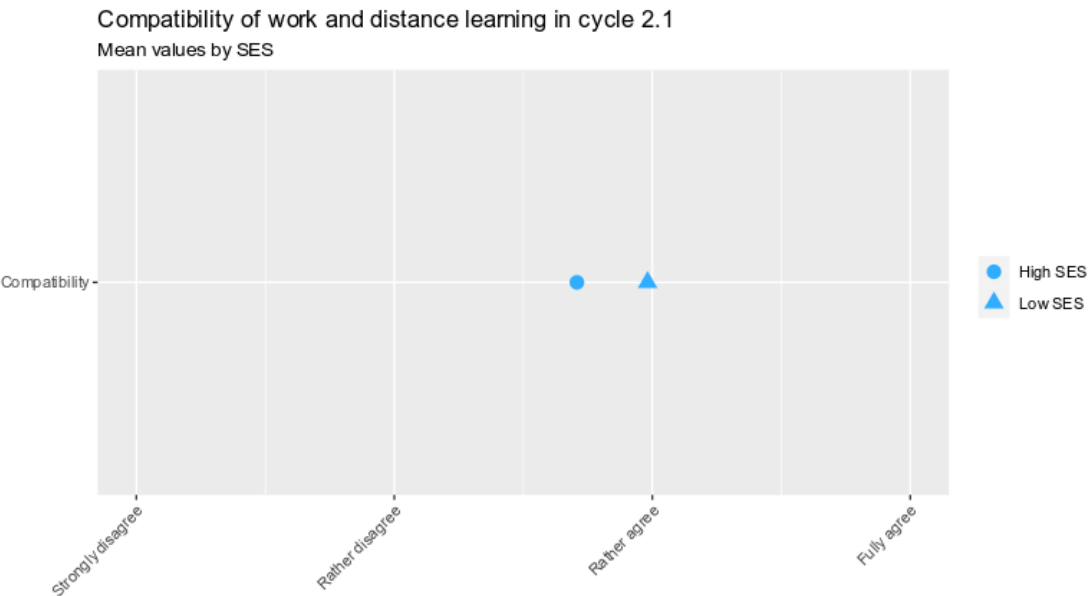Frequency given in % by SES
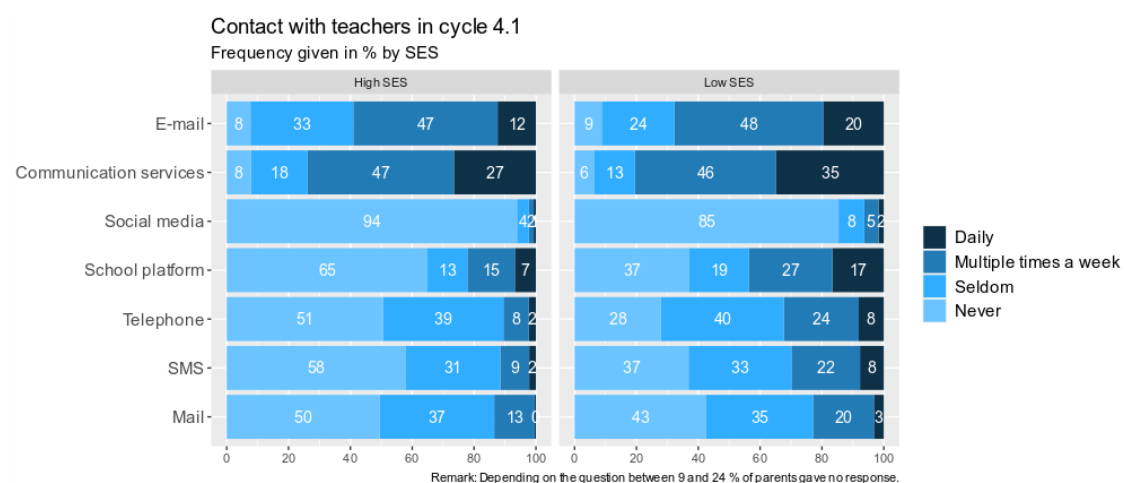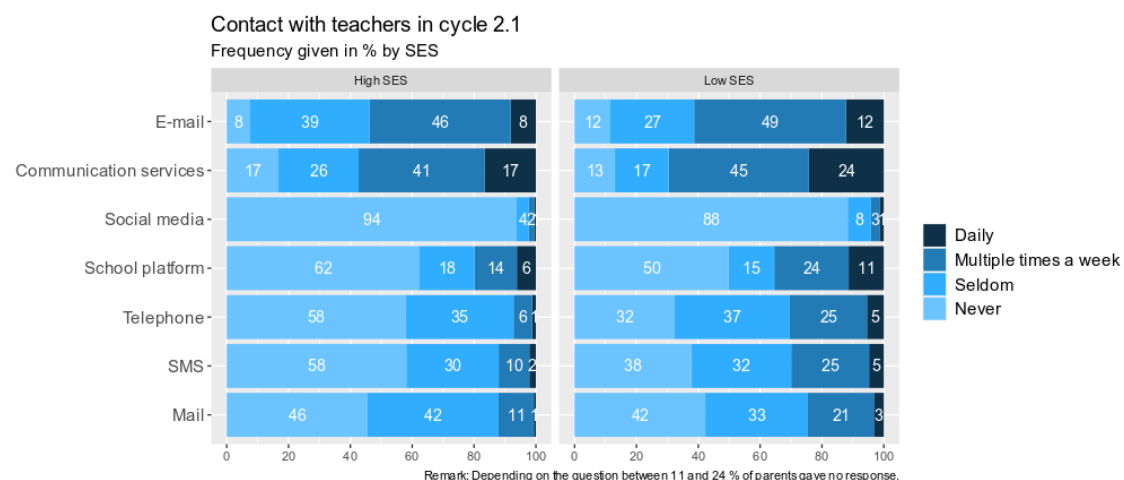
Compatibility

The three following graphs show that the majority of parents agreed across all cycles (cycles 2.1, 3.1 and 4.1) with the statement that their own work was compatible with distance learning.

Compatibility of work and distance learning in cycle 2.1
Frequency displayed in %

Note: 12% of parents did not give an answer and 7% indicated that an answer was not possible.

Compatibility of work and distance learning in cycle 3.1
Frequency displayed in %

Note: 11% of parents did not give an answer and 5% indicated that an answer was not possible.

Compatibility of work and distance learning in cycle 4.1
Frequency displayed in %

Note: 11% of parents did not give an answer and 5% indicated that an answer was not possible.

By SES

When looking at the compatibility of work and distance learning while taking the socioeconomic background of families into account, it can be seen across all cycles (cycles 2.1, 3.1 and 4.1) that parents from socioeconomically disadvantaged households assessed their possibilities of reconciling work and distance learning somewhat more positively than parents from socioeconomically advantaged households. Possible explanatory hypotheses for this result are presented under the section "Compatibility of work and distance learning" in the actual chapter.
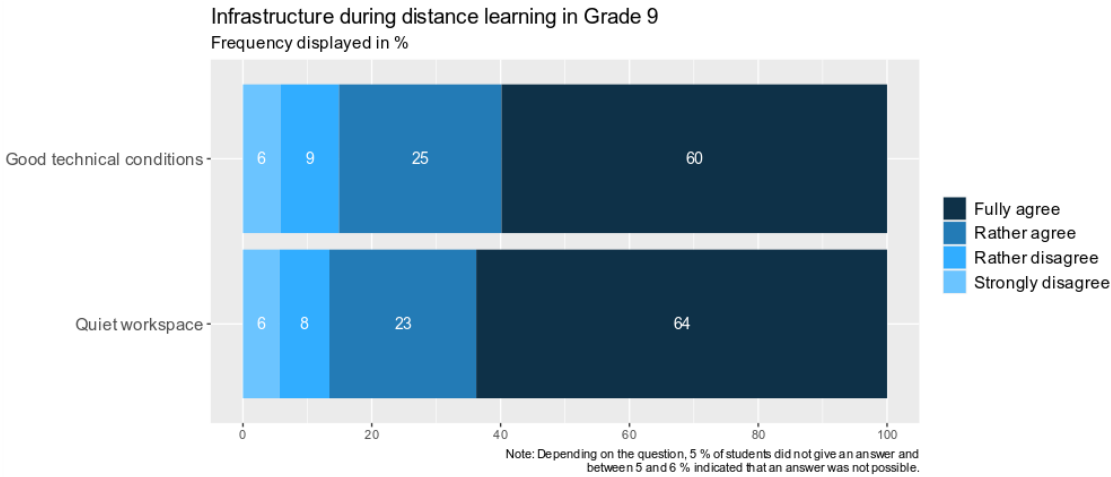
Compatibility of work and distance learning in cycle 2.1
Mean values by SES

Compatibility of work and distance learning in cycle 3.1
Mean values by SES

Compatibility of work and distance learning in cycle 4.1
Mean values by SES
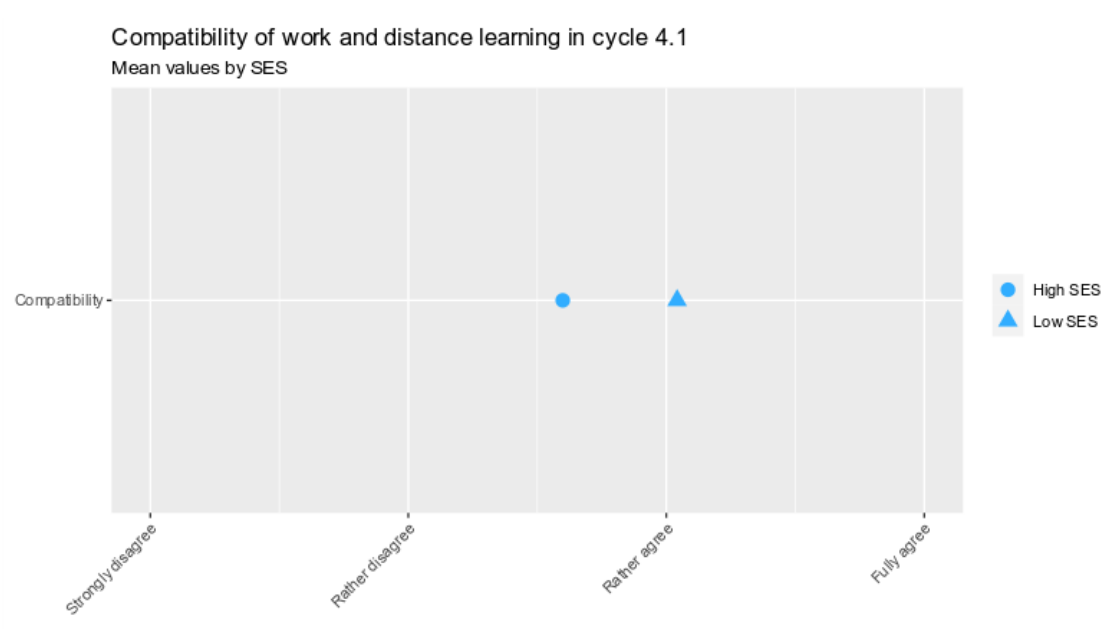
Secondary School

Infrastructure

The following graph on the technical and spatial equipment during distance learning shows that the large majority of students in 9th grade reported to have been rather well equipped.

Infrastructure during distance learning in Grade 9
Frequency displayed in %

Note: Depending on the question, 5 % of students did not give an answer and between 5 and 6 % indicated that an answer was not possible.

By school track

When looking at mean values for the technical and spatial equipment of 9th grade students during distance learning, taking into account their socioeconomic background and/or the school track they are allocated to, it becomes apparent that particularly students from socioeconomically advantaged households and/or attending higher school tracks could rely on a very good infrastructure during distance learning.

Infrastructure during distance learning in Grade 9
Mean values by school track
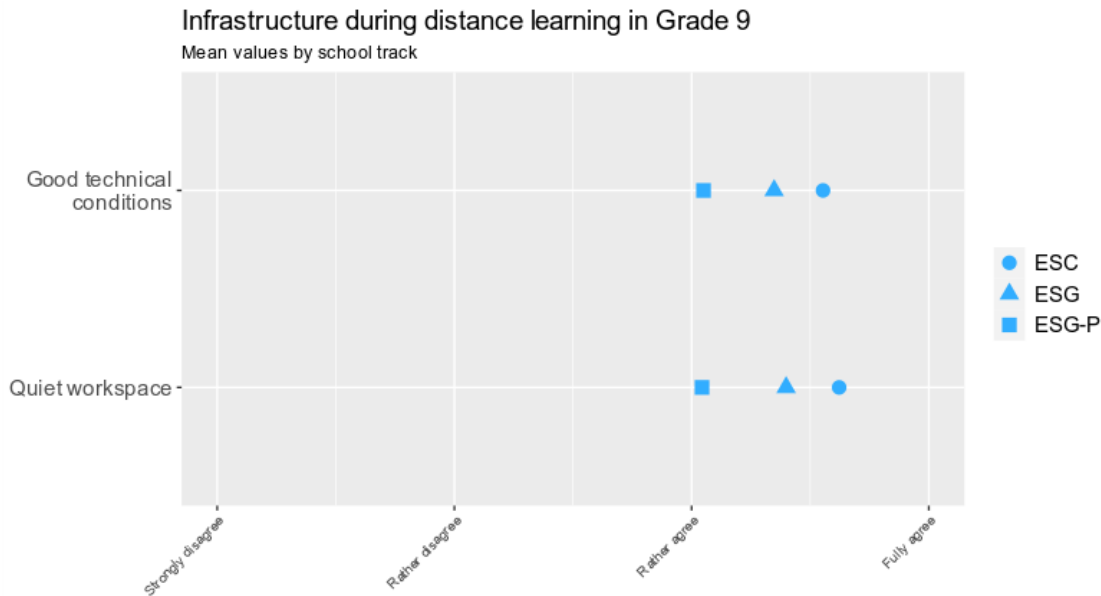
Motivation and fun

By school track

When looking at mean values of 9th grade students in terms of their motivation during distance learning split by school track, no mean differences were identified between students from ESG and ESG-P on a scale from 1 (strongly disagree) to 4 (fully agree). ESC students reported a slightly higher mean value with regard to their motivation. In terms of fun during distance learning, mean differences between school tracks have also been found: ESC students had more fun during distance learning than ESG and ESG-P students.

Motivation and fun during distance learning in Grade 9
Mean values by school track