GROWING MIND

SOCIODIGITAL PARTICIPATION IN AND OUT OF THE SCHOOL CONTEXT

STUDENTS' EXPERIENCES 2019

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PREFACE

Learning environments are changing rapidly, and there is an ongoing digital reform regarding both informal and formal learning contexts. Due to these changes, it´s important to produce scientific knowledge describing this changing environment, and to provide data to support decision making, advance teaching practices, and develop academic and policy agendas. With this report we introduce a new instrument, the Sociodigital practices inventory for young students, developed to capture the changing nature of these sociodigital phenomena. We share the initial findings of this longitudinal study conducted for the first time with this new and largely novel instrument that measures sociodigital participation.

We have also included measures of social capital, assessment, growth mindset, connected learning, and school belonging, as we view these as closely intertwined with the phenomena measured by the Sociodigital practices inventory. We see these findings as useful to educators, parents, politicians, and researchers alike.

We conducted this first data collection by using the Sociodigital practices inventory among Finnish students in the fall of 2019. 1262 students 11 to 12 years old and 1219 students 13 to 14 years old participated in this survey, for a total of 2481 valid responses. The survey was carried out in research-practice partnership with our team of researchers collaborating with city administrators and teachers from the City of Helsinki. The instrument itself was built as a joint effort by more than ten researchers[1] from partner universities, with a smaller group responsible for compiling this report.

On behalf of the Growing Mind consortium, we wish you an interesting read!

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Highlights

- *Students have a good grasp of basic digital technology skills, and these are commonly practised at school.*
- *In their free time, students engage in a broad variety of online activities, especially those driven by friendship and social relationships.*
- *Digital gaming is a common activity, with average gaming times of 9–11 hours per week.*
- *Problematic use of digital technology does not appear to be an issue for Finnish 5th and 7th graders.*
- *Innovative, creative, or non-linear pedagogies are largely missing in current school practice.*
- *There is a need to support teachers in the creative and transformative use of advanced technologies.*

SOCIODIGITAL PARTICIPATION IN THE SCHOOL CONTEXT

1.1 Digital competences

Both 5th and 7th grade students felt they could recognize safety risks online. While students described themselves as somewhat fluent in areas such as using word processing programs and solving basic IT programs, they reported much less confidence with more advanced tasks such as programming or working with spreadsheets.

Students' skills relating to digital technology were studied by presenting the students with 15 items depicting different activities. The students were asked "How well can you do the following things related to digital technology" and were then asked to evaluate the items on a 5-point fluency scale from 1=not at all to 5=very well.

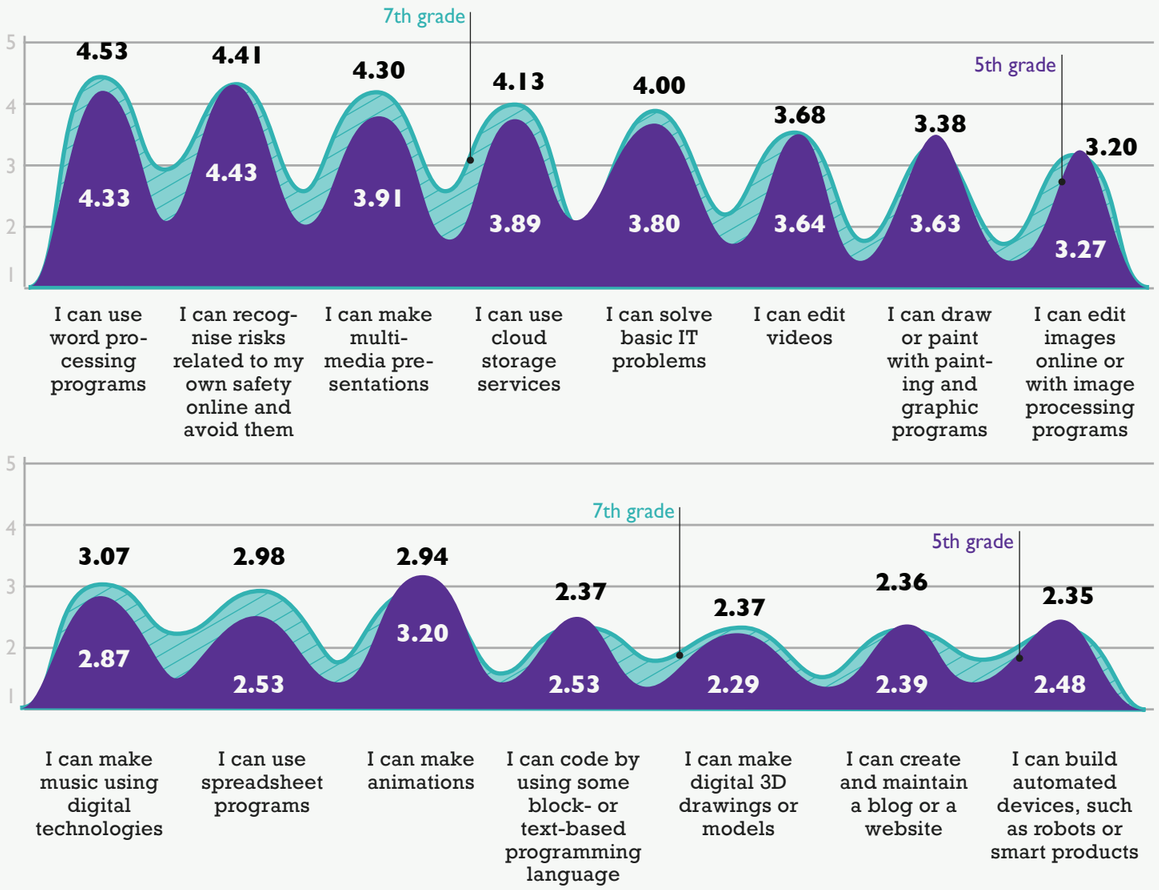


Figure 1. *Means of single items of sociodigital competences.*

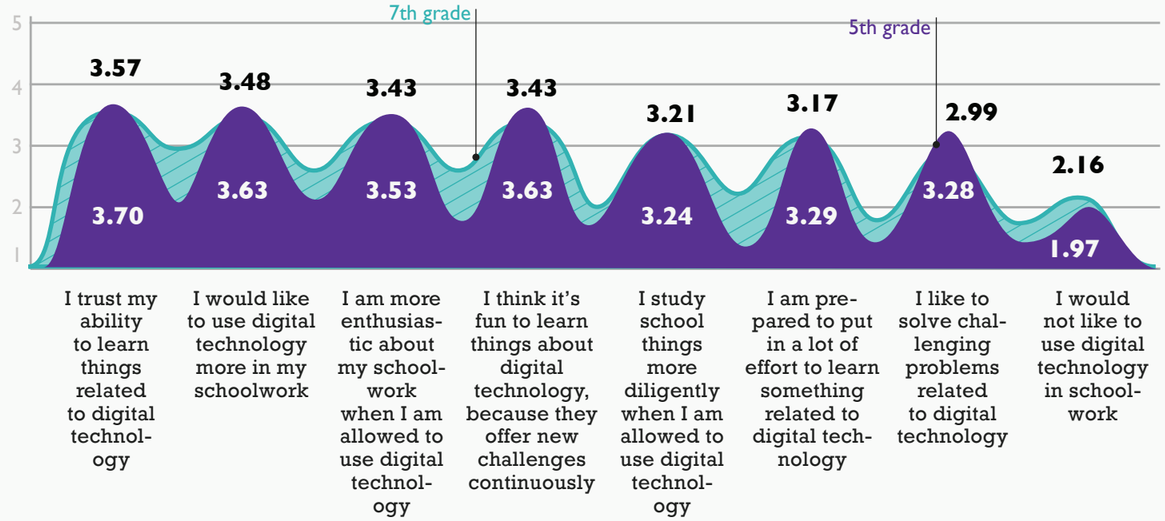


Figure 2. *Means of single items of digital learning orientation.*

Digital learning orientation was explored through eight items. Students were asked "How well do the following statements on digital technology describe you?" The answers were evaluated on a 5-point scale from 1=Completely disagree to 5=Completely agree.

1.2 Digital learning orientation

Overall, 5th graders had a more positive digital learning orientation compared to 7th graders. Their attitude towards challenges was more favorable, and they liked solving challenging problems related to digital technology more often than 7th graders.

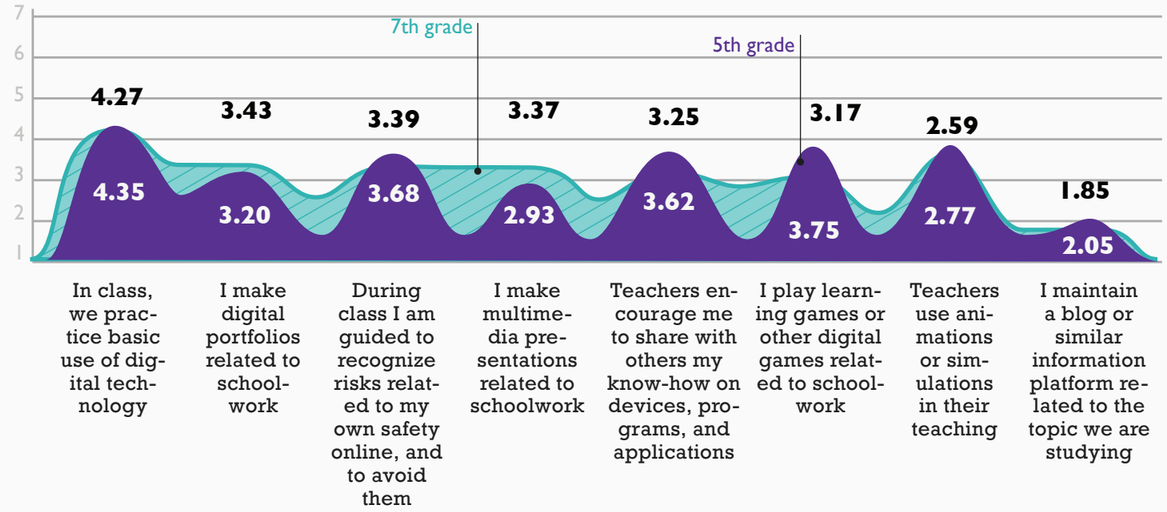
1.3 Digital practices

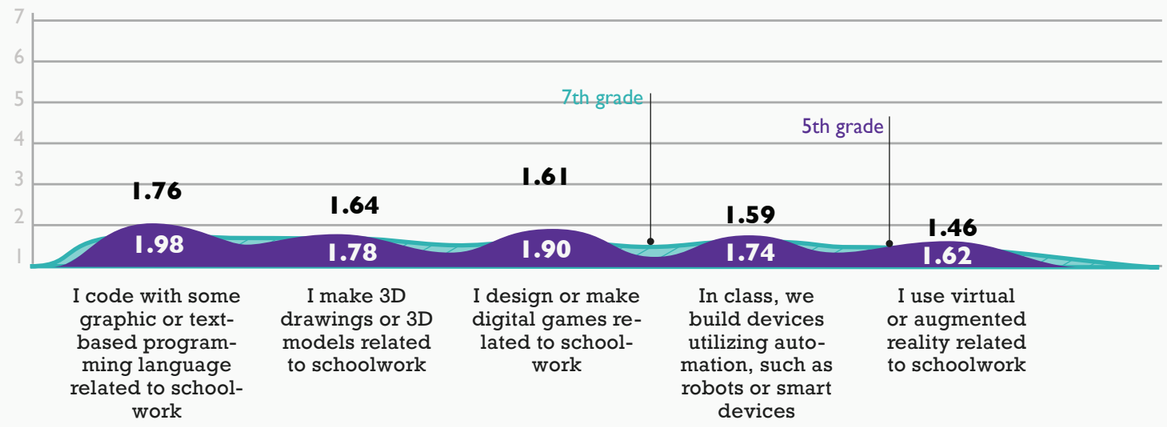
According to the students, technology practices in classrooms often consisted of practising basic uses of digital technology. The most common digital practice in schoolwork among 7th graders was making a multimedia presentation, followed by making a digital portfolio. 5th graders reported playing digital learning games, learning to recognize and avoid online safety risks, and sharing their own technology knowhow as more common than activities such as making portfolios or multimedia presentations.

The students reported only sporadic use of virtual or augmented reality technology. Similarly, classroom activities focused on building automated devices, making digital games, or programming, appeared mostly as curiosities: they were reported to not be done at all, or at most only a couple times a year.

School related digital practices were studied using 13 items. The students were asked "How often are the following things involved in your schoolwork?" The items were evaluated on a 7-point frequency scale from 1=Never to 7=Daily.

Figure 3. *Means of single items of sociodigital practices at school.*



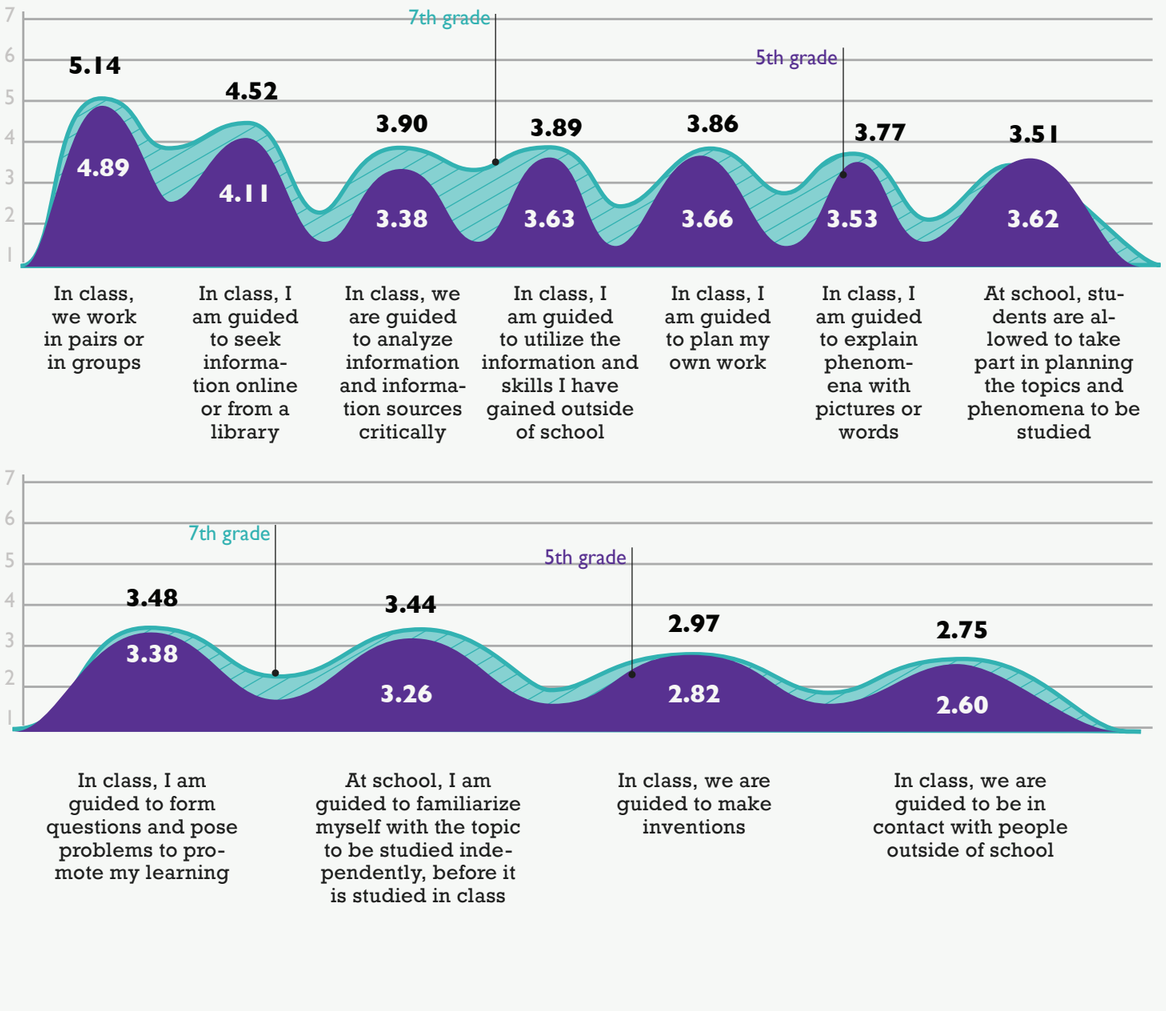


1.4 Co-creative practices

Students reported being guided to work in pairs or groups on average once a week, and this was the most frequent co-creative pedagogical practice of those measured. In turn, making inventions and contacting people outside of school were rare practices, with an average frequency ranging from a couple of times a year to once a month.

Co-creative practices at school were examined by asking the students "How often are you guided to do the following during class?" Responses were evaluated on a 7-point scale from 1=Never to 7=Daily.

Figure 4. *Means of single items of pedagogical practices at school studying.*



1.5 Collaborative activities

On average, students reported utilizing the internet to support their studies once a month or less frequently. Although students watched video tutorials, asked for help or helped others online, and took part in study-related online conversations, these activities were largely occasional.

Students' self-directed internet use to support schoolwork and learning was studied with 6 items. The students were asked "How often do you do the following things online"? The items were evaluated on a 7-point scale from 1=Never to 7=Daily.

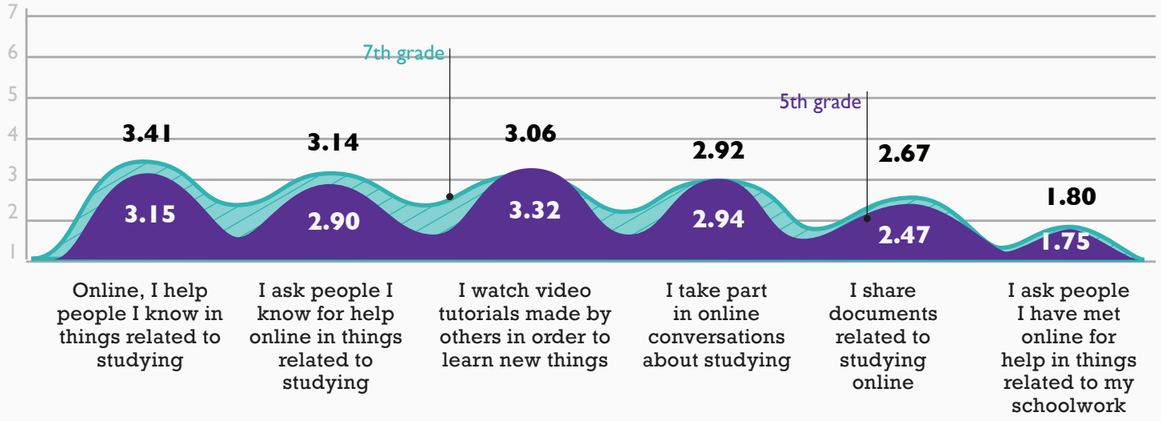


Figure 5. *Means of single items of collaborative activities online.*

1.6 Connected Learning

This section consists of two items measuring different principles of connected learning: one focused on asking others for ideas and advice, and the other examining interest-powered and academic orientation.

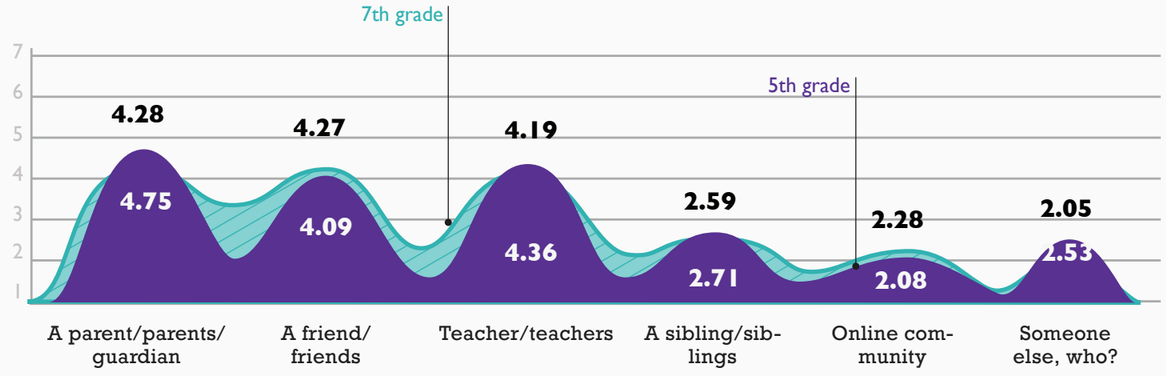
When using digital technology to support studying, 5th grade students most often asked for help from their parents, followed by teachers and friends. 7th graders asked for help from parents, friends, and teachers equally often.

In addition to the groups mentioned, advice was sought from grandparents as well as other relatives such as cousins, uncles, aunts, and godparents. Pets were also commonly mentioned.

Students reported that tasks at school and projects related to studying had awakened their interest and made them aware of skills that they did not previously know they had. This was more common for 5th graders than 7th graders, whereas it was more common for 7th graders to report that skills they had picked up in their spare time had helped them with their schoolwork. Differences between cohorts were minor, however.

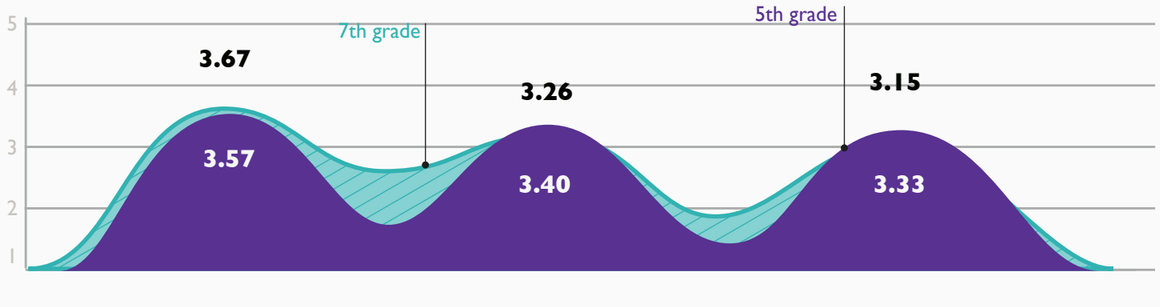
Students' receiving of help and advice was studied with the question "how often do these people give ideas or advice when using digital technology to assist studying?" The question was evaluated on a scale of 1=Never to 7=Daily.

Figure 6. *Means of how often these people give ideas or advice when using digital technology to assist studying*



Interest-powered and academic orientation was explored with three statements. The students expressed their agreement with the individual statements using a 5-point scale from 1=Completely disagree to 5=Completely agree.

Figure 7. *Means of single items of connected learning on.*



Skills I have picked up in my spare time have helped me do my schoolwork

Tasks at school or projects related to studying have awakened my interest in new things

Tasks at school or projects related to studying have made me notice that I have skills I didn't know I had

1.7 School belonging

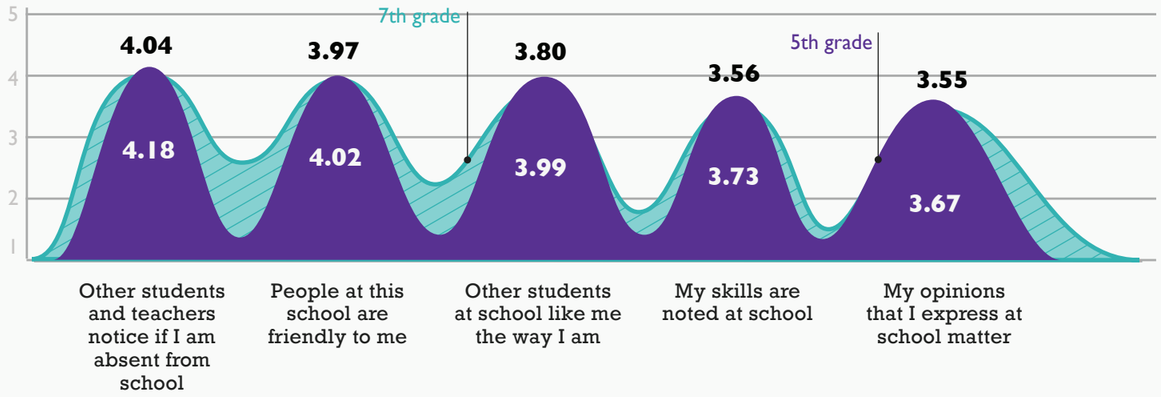
On average, students mostly felt that other students and teachers notice if they are absent from school, and that people at school are friendly to them. However, it was somewhat less common for students to report that they felt getting heard or that they mattered to other people at school.

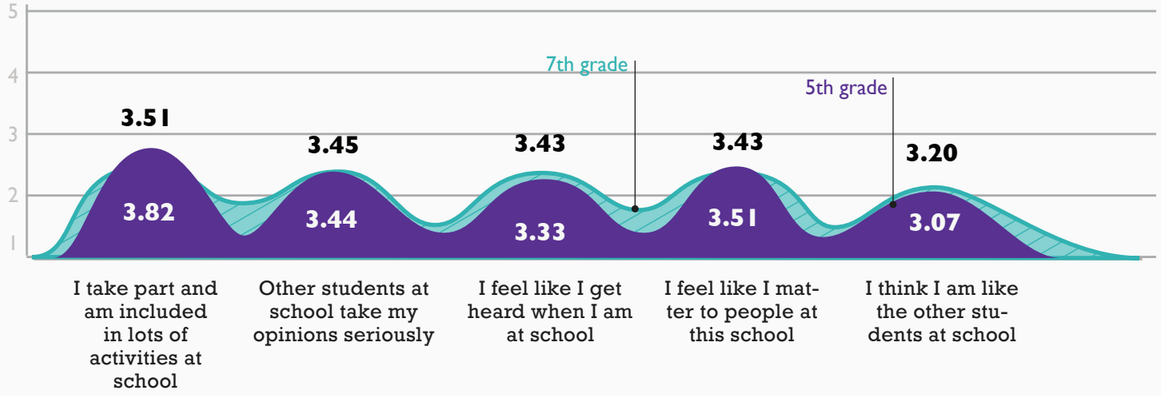
Most of the items measuring school belonging were rated slightly higher amongst 5th graders than 7th graders. An interesting exception to this was an item stating that "other students at school take my opinions seriously", in which the average values were nearly identical between cohorts.

School belonging was studied by asking students to choose the option that is closest to how they feel on a 5-point scale from 1=Completely disagree to 5=Completely agree.

Figure 8.

Means of single items of school belonging.



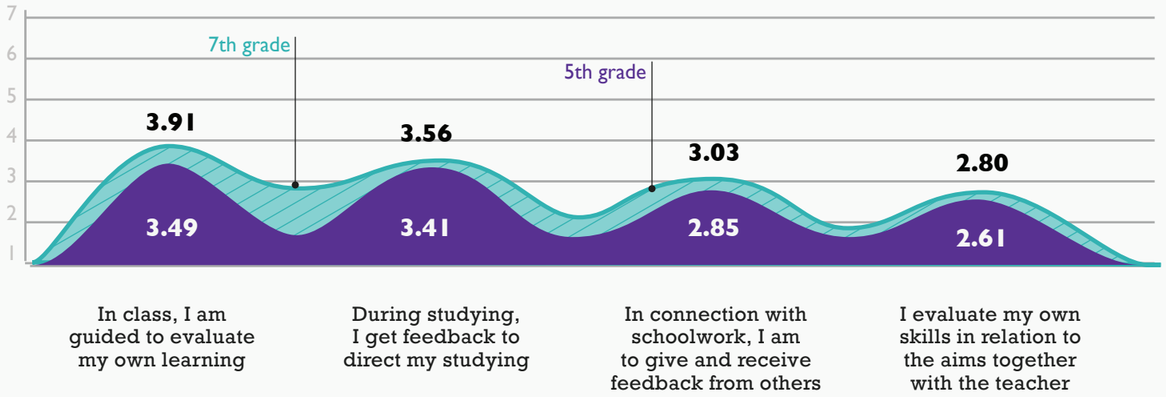


1.7 Assessment

Pedagogical practices related to assessment were applied from a few times a year to a few times per month depending on the practice. Self-assessment and getting feedback during studying were the most common assessment practices. All practices were more common in the 7th grade cohort.

Assessment was examined by asking the students "How often do things described in the statements happen during class?" Responses were evaluated on a 7-point scale from 1=Never to 7=Daily.

Figure 9. *Means of single items of evaluation.*



11 SOCIODIGITAL PARTICIPATION BEYOND THE SCHOOL CONTEXT

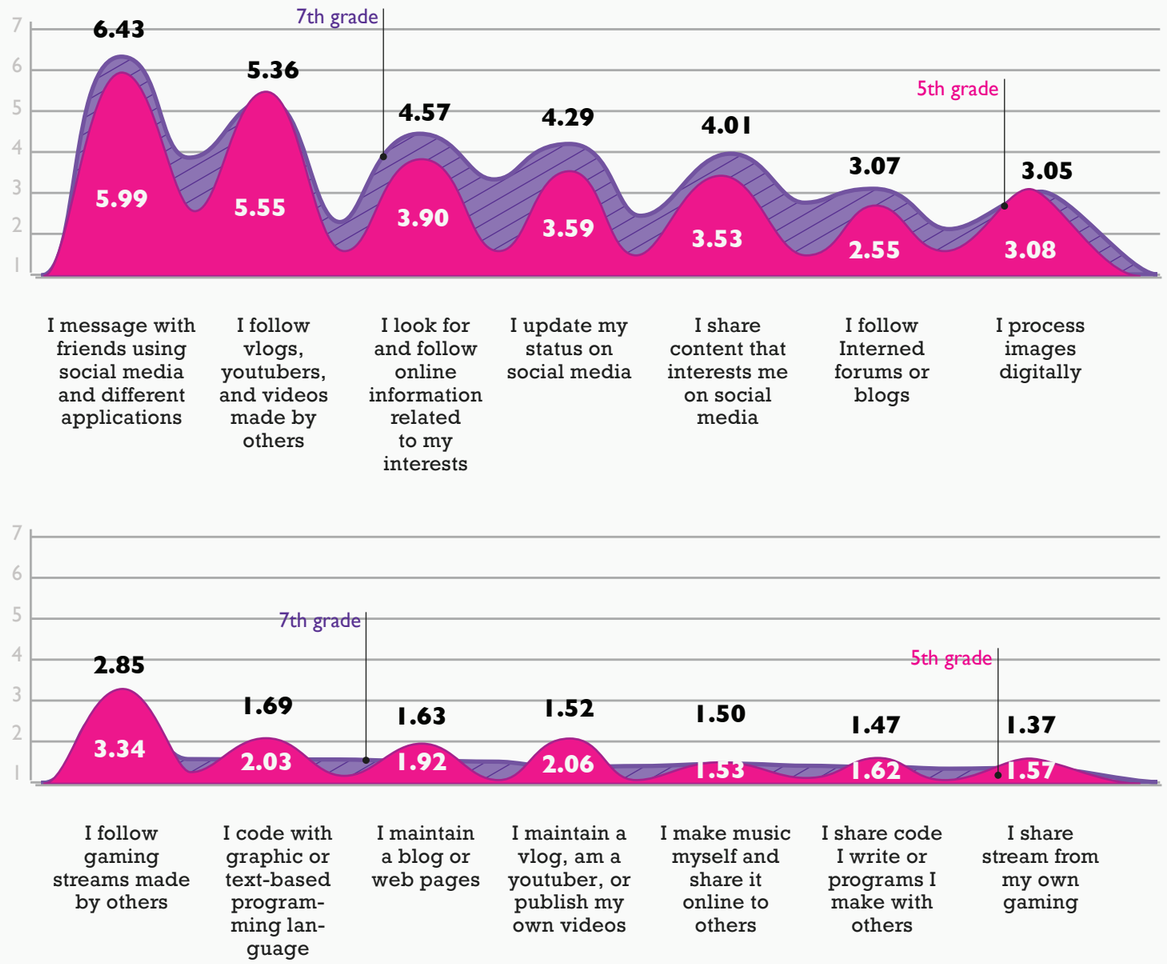
2.1 Sociodigital participation

Students messaged with friends and peers daily and used other online platforms weekly or several times a week. It was considerably more common for students to view content made by others than to share their own content. Activities driven by friendship and social relationships were more common than interest-driven activities.

7th graders' free-time internet use was slightly more active than 5th graders', with the older students more commonly seeking and sharing information related to their own interests.

Students' use of digital technologies and social media beyond school context was explored by asking students "How often do you do the following things using digital technologies?" The items were evaluated on a 7-point scale from 1=Never to 7=Many times a day.

Figure 10. *Means of single items of sociodigital participation.*

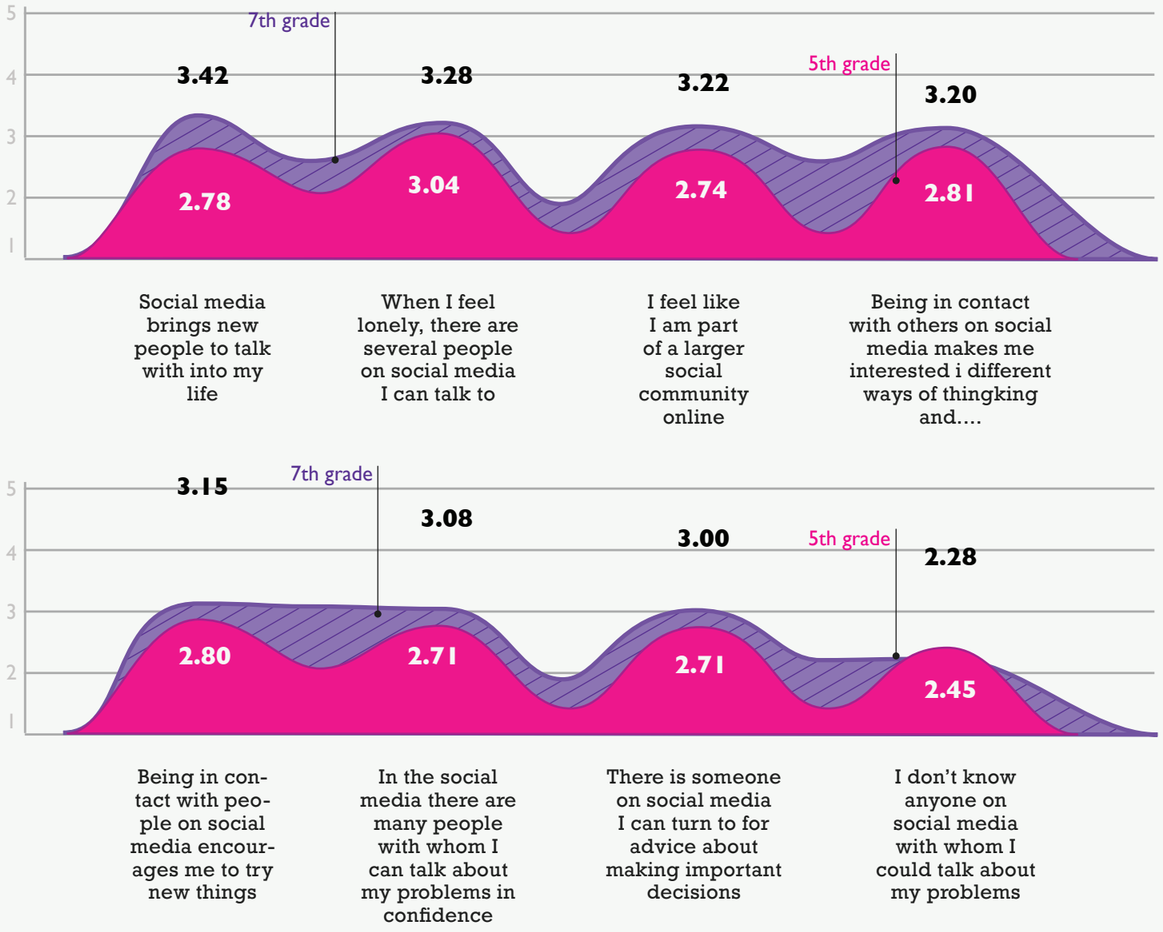


2.2 Social capital

Students' responses showed online interactions to be more common for older students. It was much more common for 7th graders than 5th graders to report social media bringing new people into their lives, and feeling that they were part of a larger social community online.

Students' social capital online was measured with the question "What kind of social networks do you have online?" Items focused on social media based social capital and they were evaluated on a 5-point scale from 1=Completely disagree to 5=Completely agree.

Figure 11. *Means of single items of sociodigital participation.*



2.3 Gaming

Students' digital gaming practices were studied through questions examining who they played with, their gaming motives, engagement with broader gaming culture, and gaming amounts. Most items were evaluated on a 7-point scale from 1=Never to 7=Daily, with gaming motives evaluated on a 5-point scale from 1=Completely disagree to 5=Completely agree.

Students played digital games both alone and with others. Gaming with friends and acquaintances was much more common than with strangers. 5th graders played on average slightly over 9 hours per week and the 7th graders approximately 11 hours per week, although individual variation was considerable. Motives for gaming varied, with competence-related motives prominent. In addition to playing digital games, some students engaged with gaming culture in other ways, for example creating content for games or designing games themselves.

Figure 12. *Means of single items of how often do you play digital games.*

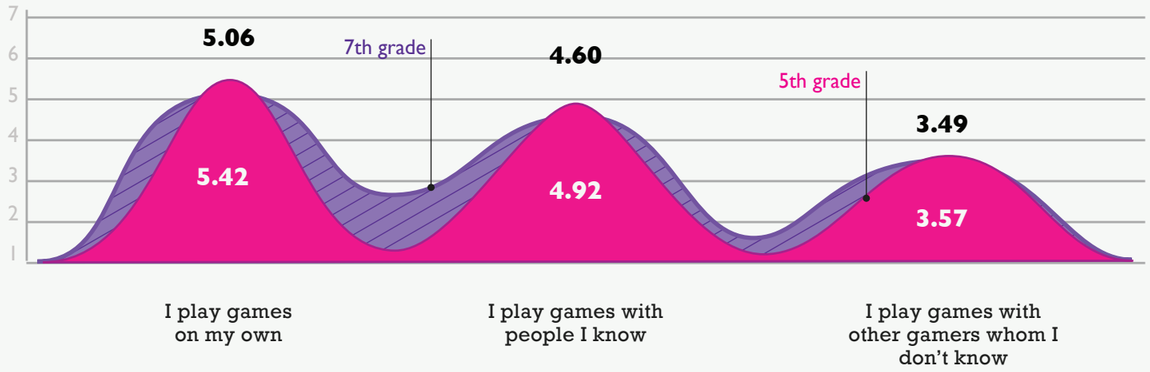


Figure 13. *Means of single items of how often do you do related to digital gaming.*

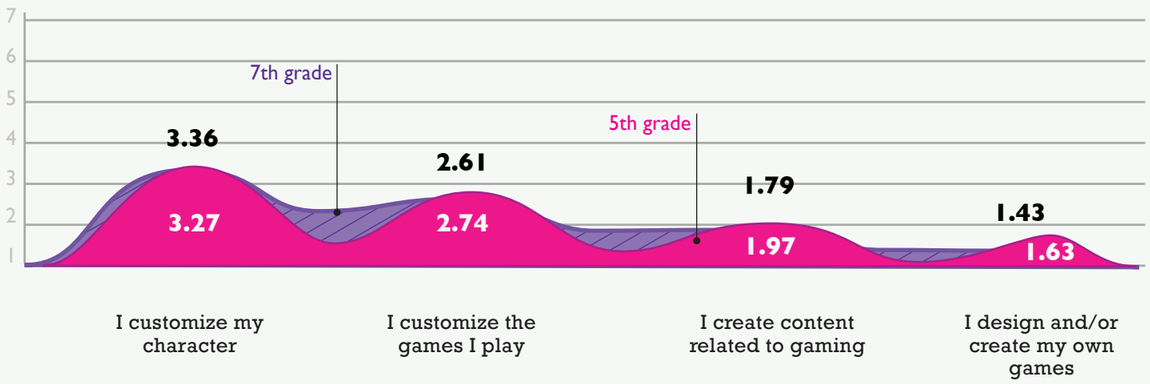
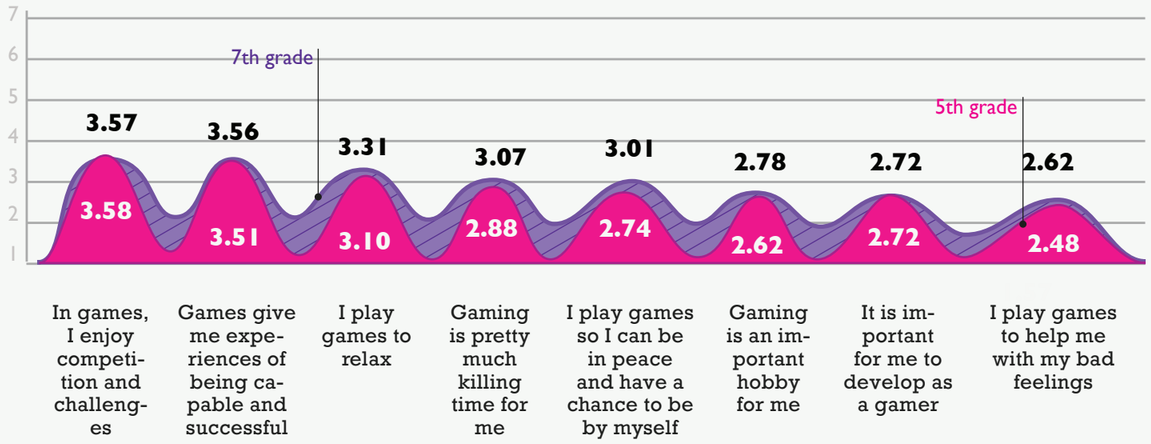


Figure 14. *Figure 14. Means of single items of motivations for gaming. Revised version of this scale includes two items on social motives.*

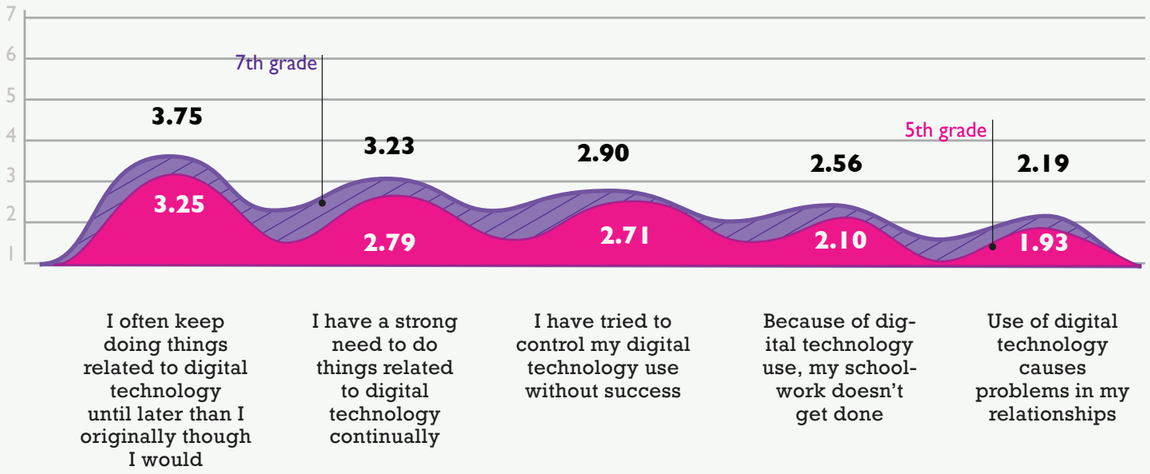


2.4 Problematic use of digital technology

On average the use of digital technology did not appear to be problematic for students. While some students reported difficulties controlling their digital media use, on average digital technology use did not appear to negatively impact relationships or schoolwork. Overall, the problematic use scores were lower for 5th graders than for 7th graders.

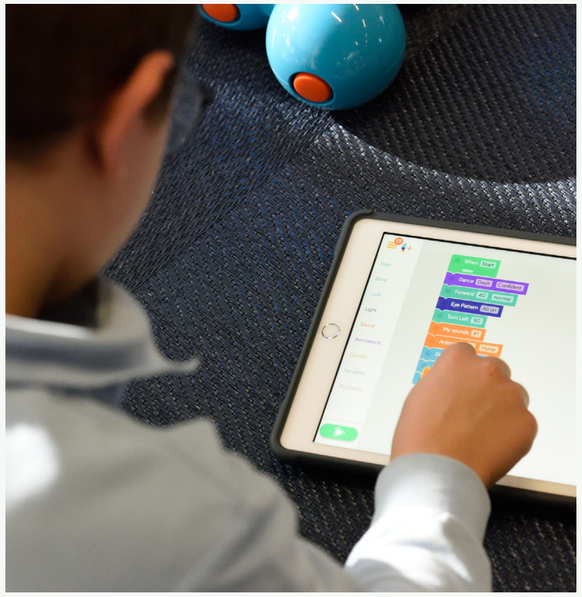
Students' problematic use of digital technology was examined through five items. Students were asked "How well do the following statements dealing with digital technology describe you?" and the statements were evaluated on a 7-point scale from 1=Completely disagree to 7=Completely agree.

Figure 15. *Means of single items of problematic use.*



2.5 Growth mindset

A growth mindset was common among both 5th and 7th graders. This was indicated by most students believing that human intelligence and giftedness are traits that can be developed, rather than immutable.



Students' beliefs regarding the nature of intelligence and giftedness were studied through questions examining whether intelligence and talent are fixed traits or if they can be developed and changed. Items were evaluated on a 6-point scale from 1=Completely disagree to 6=Completely agree.

Figure 16. *Means of single items of growth mindset. Lower value indicates higher growth mindset.*

The Growing Mind project (2018–2023) produces means for the renewal and development of schools, teachers, and students on the personal, social, and institutional level. The project aims for societal impact and brings to the forefront the challenges arising from digitalization. The project activities are done in cooperation between school practitioners and university researchers. The activities support the aims of the Finnish core curriculum, students' 21st century skills and teachers' professional development. The research-based models produced by the project will be disseminated throughout the country through the national Innokas Network. Follow us on our website https://growingmind.fi/theproject/ or on Twitter: @GrowingMindEdu

RESEARCH

This research has been conducted as part of the Growing Mind consortium project with the University of Helsinki, Tampere University, and the University of Turku. This report presents the Sociodigital practices inventory co-designed by the consortium researchers and initial findings.

FIELDWORK

The fieldwork was carried out in research-practice collaboration between Growing Mind researchers and teachers from the City of Helsinki.

GRAPHIC DESIGN

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