

PRIVACY NOTICE — GROWING MIND

1. IDENTITY AND CONTACT INFORMATION OF CONTROLLER

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2. CONTACT INFORMATION OF CONTROLLER'S DATA PROTECTION OFFICER

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University of Tampere

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3. PERSONAL DATA, PROCESSING OF PERSONAL DATA, AND PURPOSES OF PROCESSING

PURPOSE AND CONTENT OF THE GROWING MIND RESEARCH PROJECT

The project "Growing Mind: Educational transformations to support individual, social, and institutional reform during the Digital Era" (2018-2023) aims to support the reform of Finnish schools and teachers with the support of quality academic research. Positive development of youths is the most important resource of sustainable development of the future, which the project supports by means of 6 work packages, which deal with 1) gathering longitudinal data on the development and digital participation of young people and neurological studies, 2) interventions for empowering young people's learning, 3) realising invention projects and gaming projects to stimulate learning, 4) developing next-generation learning analytics, 5) supporting teacher know-how and systemic development of school, and 6) organising participatory interactive events based on researcher-teacher partnership.

INSTANCES PARTICIPATING IN THE RESEARCH

The Growing Mind project is funded by the Strategic Research Council of the Academy of Finland. Universities of Helsinki, Turku, and Tampere, as well as the schools and educational instances of Helsinki and the other cities, their rectors, teachers, students, and parents participate in the research. The research is realised in collaboration with certain other Academy-funded projects (Bridging Gaps, Co4-Lab, ENADA, PAART), as well as a project (InnoKomp) funded by the Ministry of Education and Culture and with the City of Helsinki Education department co-design of Kielilukio's new school building research project. A broad, national (Ministry of Education and Culture, Finnish National Agency for Education) and international research network is connected with the project. In addition, a range of businesses and communities are participating in co-creating workshops organised by the Growing Mind project.

THE FOLLOWING PERSONAL DATA WILL BE COLLECTED AND PROCESSED WITHIN THE GROWING MIND PROJECT

Personal data pertaining to the students will be collected by means of student self-report questionnaires, network questionnaires, individual interviews, group interviews, interventions, learning-analytics systems, log data gathered by gaming environments, online learning environments used by the schools, observation and interview notes, problem-solving tasks, and brain research. In addition to completing digital questionnaire forms, personal data pertaining to the students is gathered via recording of interventions and videoing group activities (invention projects, gaming jams). Also included in the data sets that may contain personal data are essays, presentations, electronic portfolios, games, and digital and material artefacts produced by the students. The following personal data will be collected via questionnaires: name, gender, email address, age, date of birth, name of school and class, home address, and names and contact information of parents or guardians. Personal

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data obtained from school registers include student ID numbers and grades as well as statistics on absence from school (number of hours of absence per student per year). Additionally, the phone number of those participating in the brain research will also be requested.

Certain groups of personal data, including the ethnic origin of the students' parents or guardians, will be handled in a limited way within the research project. Within the student questionnaires, information referring to health information, such as depression and school burnout symptoms and diagnosed learning difficulties. The students will be requested to give their place of birth and mother tongue, which will be handled in connection with the annual longitudinal student-questionnaire data collection in such a way that unambiguous identifying of individuals will not be possible. The longitudinal data collection will be realised in collaboration with the Bridging the Gaps project, which has drawn its own privacy notice (<https://growingmind.fi/bridging-the-gaps/>). In addition, parents will be asked to provide the following personal data: name, gender, age, address, email address, name of child/dependant, and information on the school, their occupation, and level of education.

Personal data pertaining to the teachers will be gathered by means of teacher questionnaires, network questionnaires, individual interviews, focus group interviews, tutor and specialist-teacher interviews, interview notes, interventions, log data gathered by gaming environments, and online learning environments used at the school. Teachers' personal data will be gathered digitally, via audio recording, and via videoing. Personal data pertaining to rectors and members of representative communities will be gathered by means of individual interviews both digitally and via recording. Personal data to be collected include: name, gender, age, email address, professional experience in years, and name of school.

Personal data gathered from members of representative communities (agents in local communities that collaborate with Growing Mind schools): name, community, email, profession, and age.

WHAT THE PERSONAL DATA IS NEEDED FOR

The multidisciplinary Growing Mind research project examines the effects of digitalisation on young people's learning as well as on the development of emotions, brains, and social interaction. The research aims to follow students' sociodigital practices and psychological, social, and cognitive development over the course of primary- and secondary-school studies, and support young people's learning and positive development. The digitalisation of learning environments emphasises the need to investigate blended technology-enhanced learning. Of particular interest is the connection between digitalised activities and learning, enthusiasm for learning, well-being, and experiences of communality. In addition, the aim is to examine the development of teachers' expertise and well-being as digitalisation proceeds in the schools. Information collected from the students using questionnaires includes their thoughts related to studying, motivation, efficacy beliefs, well-being, and use of information and communication technology.

Questionnaire-related personal data enable joining the data collected during different years into so-called longitudinal data sets, which further enable examining the change and development of attitudes and different choices. The data sets will be joined based on participant names or given ID codes, but the actual further processing and analysis of the data will be conducted using pseudonymised data without names or other direct identifying information. The data will be analysed using statistical methods, in which the responses of individual participants will not be identifiable.

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Social network analysis is based on members of communities to which the respondent belongs. It will be realised using a pre-prepared list of names, from which the respondent chooses names according to given criteria (for example, friends, people who give advice or with whom they collaborate). Personal data enables annual collection of network data from the same group of participants, and joining these into longitudinal data sets. After data collection, the networks are converted into matrices, in which names will be substituted with codes. Thus, analyses and reporting of results will be conducted based on pseudonymised data, and identifying individual participants will not be possible.

Individual and group interviews aim to deepen the information gleaned from questionnaires, network analyses, projects, and interventions. The gathered personal data will enable re-interviewing the same participants, and detecting change and development. The interview data will also be utilised for creating egocentric network figures, which trace the social agents around the participants at the level of names, and examine the interactive relationships of the various agents. The interviews will produce recordings, network figures, and researchers' notes. The recordings will be transcribed, during which names mentioned will be pseudonymised and other identifiable information will be removed. The network figures will be digitally reconstructed and pseudonymised. Researchers' notes will be utilised to complement all above-mentioned operations. All data will be analysed based on pseudonymised data sets. Special attention will be given to interviewees not being identifiable, when reporting the results of the analyses and in giving direct quotes from relevant interviews.

Invention projects aim to trace learners' innovative ideas and the phases of creative making and inventing processes. The activity to be followed is very close to daily schoolwork, which includes individual and team work, meetings between whole classes, presenting invention projects, and presentations. Activity will be video-recorded and observed, with consent from students and/or their parents/guardians as well as teachers. All participants will be pseudonymised. The work processes and phases of participation will be classified and depicted as visual time series, images, and graphs. The images, electronic portfolios, and other written, digital, and material artefacts produced during the invention projects are included as part of the data to be examined. The materials produced by the students, as well as video clips, may be shared online and in researcher presentations, with consent from students and their parents. The faces of participants recorded in the videos can be blurred upon request, if the videos are utilised for research publications or other presentations. Special attention will be given to interviewees not being identifiable, when reporting the results of analyses and in giving direct quotes from relevant interviews.

Interventions for flexible mathematical thinking aim to test and further develop gaming environments and related pedagogical approaches, developed for understanding mathematical concepts and strengthening their flexible use. The contents of the interventions are directly in line with the curriculum, but qualitatively deepen learning. The gaming environments used with intervention teaching produces log data, which is utilised for analysing the results of the interventions. Additionally, in connection with the interviews, data on the development of mathematical thinking and mathematics-learning motivation will be collected using pre-, post- and delayed tests. All data gleaned from the studies will be analysed based on pseudonymised data sets, and direct identifying data will not be used in reporting the results.

Game-jam events aim to follow teachers', students', and formed participant-groups' innovative creation of game ideas and realisation of digital or analogue games, and to examine learning, reflection, and teachers' and students' attitudes in relation to the jam-style of working formed within this process. Data is collected by means of questionnaires, and in addition, the events will be video-recorded with participants' consent, and analysed

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in the same way as the invention projects. The games produced or videos recorded of them will be shared online with consent from the participants. The faces of participants recorded on video can be blurred upon request, if the videos are utilised in research publications or other presentations. Special attention will be given to interviewees not being identifiable, when reporting the results of analyses and in giving direct quotes from relevant interviews. The activities will also produce researchers' observation notes, which will be utilised to complement the analyses. Participants will be asked to give further interviews if necessary, which will be conducted as in the interview process described above. Limited personal data will be collected in the questionnaires (name, age, gender, grade level).

Growing mind interventions aim to assist learners in understanding that a large part of learning and intelligence development takes place through the students' own effort, persistence, and shared activity (growth mindset). Another central aim is to support students' learning and development during periods of academic transfer. The interventions include mind-activating writing tasks and thinking tasks related to the lifetime struggles and developmental stories of well-known specialists and researchers. The interventions will be utilised in planning pedagogical trials and innovations, which include different trial and challenge entities in the fields of science, technology, arts, and mathematics (STEAM), as well as realising communal game plans and above-mentioned invention projects. Additionally, the methods of exploratory, phenomenon-based, and flipped learning will be utilised in the pedagogical innovations. The data sets connected to this entity will be collected by means of videoing, audio recording, and interviewing. Data parts can also be combined with the questionnaire data described above. Personal data will be handled as described above.

Brain research aims to gather further information on how various technologies shape and influence the human mind and brain. On the one hand, we search for the positive effects of technology on learning, creative participation, and cognitive skills. On the other hand, we examine the potential risks of technology use, such as connections between intensive use and repeated interruptions, and attention and concentration. The participants will be chosen based on the students' longitudinal questionnaire data, after which they will be divided into test and control groups. The research will utilise neuroimaging (sMRI, fMRI), during which the participants will complete different reading and listening tasks or solve mathematical problems in varying circumstances. In addition to neuroimages, the research produces digital answers to the tasks, log data, and MRI imagery data. Every participant will be given a participant ID, which will be utilised to connect the image data and individual people, and later, to combine data acquired during different years. Analyses and results produced based on the research will be presented based on pseudonymised material, and identifying individual persons will consequently not be possible.

Automatised learning analytics aims to utilise the data recorded from the students to develop teaching and learning. With learning analytics, we can automatically follow learners' progress and identify potential misunderstandings and learning difficulties. In data collection, we utilise a teaching system that automatically checks students' tasks, and collects detailed information on their proceeding through the tasks and the order of problem solving. The analyses and research results are produced via quantitative methodologies, which are based on comparisons of different groups and profiles, and it is consequently not possible to identify individual people. **Social learning analytics**, instead, utilises the information gathered via the automatic system through qualitative analyses. This information will be utilised together with the learning experiences students report, in which the focus is on the progress of studies, self-regulation of learning, peer feedback, and sharing information related to learning with peers. Materials created will be analysed based on pseudonymised data sets. Special attention will be given to interviewees not being identifiable, when reporting the results of the analyses and in giving direct quotes from relevant interviews.

HOW PERSONAL DATA WILL BE STORED AND TRANSPORTED

Digital data: The digital observations described above, such as responses to questionnaires (including specific personal data), games, tasks, and neuroimages as well as log data will be stored on the servers of the programmes with which the responses, observations, and images will be collected. All programmes used in the research project are compatible with the demands of the General Data Protection Regulation (GDPR). Access is password-protected and restricted, for which reason the programmes collecting personal data only have a few moderators within the research project. Access to the programmes has been restricted to the employees, researchers, or students of the Growing Mind project within the Universities of Helsinki, Tampere, and Turku, or to the City of Helsinki employees employed in this project, when the observations are gathered with programmes managed by them. At the point of uniting the information into research data proper, the data related to identifying individuals will be pseudonymised, and they will be stored, depending on the area, in University of Helsinki, Tampere, or Turku GDPR-compatible and password-protected digital storage spaces. Data can also be stored where appropriate on the secure IDA service maintained by the Ministry of Education and Culture, which is intended specifically for storing research data. Access to the storage space is restricted according to the principles that apply to the above-mentioned data-gathering programmes. In the case of observations being gathered with City of Helsinki maintained programmes, the same principles of data storage and programme access apply. Transportation of data for analysis will take place either via encrypted email or protected external hard drives or memory sticks. An exception to the above is brought about by the social network data, for which analyses are conducted with the name data included. Access to these is restricted, and the analyses are conducted within protected environments. Combining data from different years into so-called longitudinal data sets has been restricted per University to only a few users.

Video data will come about based on the invention projects, game jams, and videoing of some interventions. The videos will be moved as they are, depending on the location, to the University of Helsinki, Turku, or Tampere GDPR-compatible and password-protected digital storage space, which is accessible to a restricted group of users. The data will be analysed by a limited number of persons from the above-mentioned Universities' research group members. The faces of participants recorded in the videos can be blurred upon request, if the videos are utilised for research publications or other presentations.

Audio recordings: Interviews are recorded with a digital, password-protected recorder. After this, a limited user group within the research project's universities will transcribe the audio recording into digital text format, during which personal data will be pseudonymised. Identifying data on particular individuals will not be stored in transcription. The transcribed data will be archived, depending on the area, in University of Helsinki, Turku, or Tampere GDPR-compatible and password-protected digital storage spaces, to which entrance has been restricted in accordance to the principles of other digital data. Transcribed data will be analysed by employees, researchers, research assistants, or students within the research project. All research results and reports will be pseudonymised.

Paper data will be created in the form of researchers' notes, participants' writings, and drawings. The personal data contained within different data and data types may hence vary by participant and writer. All paper data will be stored, depending on the area, in locked spaces of the Universities of Helsinki, Turku, and Tampere, to which entrance is restricted. Paper data will be analysed by a restricted group of employees, researchers, or students of the research group. Particular care will be taken with paper data.

Data processors within the project: Employees, researchers, research assistants, and students participating in the Growing Mind research project will commit to handling research materials and data containing personal data in confidence and with particular care. Individuals who do not have a contract of employment with controllers' organisations will sign a written contract on the handling and confidentiality of personal data. Controllers will draw clear written guidelines on managing personal data acquired through various means.

4. LEGAL BASES FOR PROCESSING PERSONAL DATA

The legality of processing personal data in the Growing Mind research project is based on public interest as stated in Article 6 paragraph 1 subparagraph e of the data protection regulation, which is further specified in national data protection law (1050/2018) 4 § paragraph 1 subparagraph 3:

- According to the data protection regulation Article 6 paragraph 1 subparagraph e, the processing is legal, when the processing is necessary for the performance of a task carried out in the public interest or in the exercise of official authority vested in the controller.
- The national data protection law (1050/2018) 4 § paragraph 1 subparagraph 3 defines the bases for processing in public interest in the context of Finnish research framework and legal framework. According to it, personal data may be processed, if the processing is necessary for scientific or historical research purposes or statistical purposes and it is proportionate to the aim of public interest pursued.
 - The Government Bill (He 9/2018 vp) states that the provision would not limit the circle of operators able to appeal to this basis of processing. According to the provision, personal data could be processed by natural persons and public and private legal persons.

5. PERSONAL DATA ACQUIRED FROM SOURCES OTHER THAN THE REGISTERED

Information essential for the research will be collected, in accordance with the bases as stated in paragraph 4 above, from City of Helsinki Educational Administration Register, Finnish Agency for Education's upper-secondary education's joint-application register, and from the Ministry of Education and Culture's Matriculation Examination Board's register. From the latter, the essays written, the grades of final exams for the Matriculation Examination, and the Matriculation Examination grades will be collected.

6. TRANSFERRING OR COMMUNICATING PERSONAL DATA OUTSIDE THE PROJECT

The researchers in the Growing Mind project collaborate with a national and international network of researchers, but analyses of data sets containing personal data will always be done by an employee, researcher, research assistant, or student of the Growing Mind project. Due to this, it is possible for researchers of the network outside of the project to analyse only anonymised data.

7. TRANSFERRING PERSONAL DATA TO THIRD-PARTY COUNTRIES

Personal data with identifiers gathered in the research project will not be transferred in any form outside of the European Economic Area (EEA). All programmes used in the research project are GDPR compatible and their servers are located in the EEA.

8. STORAGE PERIOD OF PERSONAL DATA

Personal data will be stored for the duration of the Growing Mind project. The project is of indefinite duration, so a precise storage period is not possible to define. The direct identifier data of the participants will be destroyed/removed six months after the project is terminated. The period of six months is required for carrying out the removal, and secondly, to ensure that personal data has definitely been removed from all technical environments in which they have been stored. Ensuring this requires information-technological auditing. After removal, an archive copy of the personal data referred to above will be stored, but not used for other research. The research data will be stored in the University of Helsinki for 2018-2028, until it will be transferred to the University of Tampere social sciences' data archive, or potentially to the new international data archive in Norway.

9. RIGHTS OF THE REGISTERED

ON THE RIGHTS OF THE REGISTERED IN GENERAL

According to the data protection regulation, the registered has the right to

- receive information on the processing of their personal data
- receive access to their data
- correct data
- notification requirement of correction of personal data or limiting processing
- object to data processing
- not to be made subject to automatic decision-making.

More detailed information on the rights of the registered can be found on the Data Protection Ombudsman's web pages: <https://tietosuoja.fi/en/what-rights-do-data-subjects-have-in-different-situations>

The participant has a right to information on whether their personal data will be processed in the project, and what personal data pertaining to them will be processed in the project. The participant can if desired request a copy of their personal data being processed, via a written request for their personal data to the representative of the controller mentioned in paragraph 1. The participant has the right to have erroneous personal data pertaining to them corrected by informing the representative of the controller mentioned in paragraph 1 in writing of the corrected personal data.

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Written and signed requests are to be submitted to the mailing address of the controller mentioned in paragraph 1. The maker of the request must be able to prove their identity and their right to the data requested.

EXCEPTIONS TO THE RIGHTS

In certain individual cases, exceptions to the above-mentioned rights may be made on grounds stated in the data protection regulation and Finnish legislation on data protection, insofar as the rights are likely to render impossible or seriously impair the achievement of the scientific or historical research objectives or statistical objectives (GDPR Article 17.3 paragraph d and Article 89). The need to derogate from the rights will always be evaluated on a case-by-case basis.

THE RIGHT TO LODGE A COMPLAINT TO THE REGULATORY AUTHORITY

The registered has the right to lodge a complaint at the Office of the Data Protection Ombudsman, if they consider the data processing to have broken existing data protection legislation.

Office of the Data Protection Ombudsman
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