Plan Overview

A Data Management Plan created using DMPTuuli

Title: Analysing Finnish and English learners' perceptions of how learning environments affect their learning and wellbeing

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Project abstract:

Lisääntynyt ymmärrys monimutkaisista psykososiaalisten ja teknologia-avusteisten fyysisten oppimisympäristöjen yhteisvaikutuksista oppimiseen ja hyvinvointiin on lisännyt kiinnostusta niiden suunnittelua kohtaan. Vallalla oleva oppijakeskeinen ajattelu painottaa oppijoiden osallistumisen tärkeyttä oppimisympäristöjen suunnittelussa. Tarjolla ei ole kuitenkaan kokonaisvaltaisia instrumentteja, joilla voisi mitata oppijoiden käsityksiä siitä, kuinka oppimisympäristöt vaikuttavat heidän oppimiseensa ja hyvinvointiinsa. Oppijoiden oppimisympäristönäkemysten yhtäläisyyksiä ja eroavaisuuksia eri kouluasteilla (alakoulu ja yläkoulu) tai sosiokulttuurisissa konteksteissa ei olla myöskään systemaattisesti tutkittu. Tämä kolme vuotta kestävä tutkimusprojekti vastaa ensiksi tarpeeseen kehittää ja pilotoida standardoituja työkaluja oppijoiden näkemysten keräämiseen heidän suosimien, kokemien, ehdottamien, ja uudelleensuunnittelemien oppimisympäristöjen vaikutuksista oppimiseen ja hyvinvointiin. Työkalut kehitetään ja pilotoidaan ensin englanniksi ja suomeksi. Toiseksi, tutkimuksessa kerätään numeraalista ja kirjallista dataa (kyselyt) sekä suullista ja visuospatiaalista dataa (yhteissuunnittelutyöpajat) englantilaisissa, espanjalaisissa ja suomalaisissa kouluissa (osallistuvat oppilaat n = 900) sen selvittämiseksi, mitä yhtäläisyyksiä ja eroavaisuuksia on eri maissa asuvien ala- ja yläkoululaisten oppimisympäristönäkemyksissä. Tutkimus tuottaa vertailun mahdollistavia työkaluja kasvatukselliseen design-tutkimukseen ja yhteissuunnitteluun eri kouluasteiden ja maiden välille. Se tuottaa myös kansainvälisen vertailun mahdollistavaa tutkimustietoa koululaisten oppimisympäristöön liittyvistä käsityksistä.

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Aineiston yleiskuvaus

1.1 Millaiseen aineistoon tutkimuksesi perustuu? Millaista aineistoa kerätään, tuotetaan tai käytetään uudelleen? Missä tiedostomuodoissa aineisto on?

We will collect both quantitative and qualitative data as part of our research project and analyze it according to the principles of mixed method research. The data will include survey data (numeric and written, anonymized), pictures and lists of elements of visuospatial data (e.g., collaboratively collected scale models), and recordings and transcriptions (anonymized) of the group interviews/discussions in two countries and two languages (English and Finnish). In the case of recording videos and taking pictures of learning environment co-design sessions to be conducted as a part of research, permissions will be asked separately for their sharing and publishing. Audio recordings will be saved in MP3-format and possible audio recording of the same situations in MTS-format (AVCHD Video). Pictures will be jpg or png formats. Field notes will be in Word-format. The questionnaire data and numerically coded qualitative data will all be entered to SPSS and thus they are available in SAV-format. More precise methods and measures on data collection are introduced in the research plan.

1.2 Miten aineiston yhtenäisyys ja laatu varmistetaan?

The consistency and quality of the data in three languages used in the research is assured by using methods such as back translation and piloting the data gathering tools before their actual implementation. During the project, yet more meticulous instructions will be formulated in order to assure systematic data gathering, storage, and analysis.

Eettisten periaatteiden ja lainsäädännön noudattaminen

2.1 Mitä eettisiä seikkoja aineistosi hallintaan liittyy (esim. arkaluonteisten tietojen käsittely, tutkittavien identiteetin suojaaminen ja tietojen jakamista koskevan suostumuksen hankkiminen)?

The study will be planned, conducted, and reported according to the ethical guidelines of the Finnish Advisory Board on Research Integrity (2016) and instructions provided by the University of Jyväskylä Ethical Committee complying with national guidelines as well as Guidelines of the European Data Protection Board (2018). High amount of care is addressed to ensure ethically solid process of research and the Ethical principles of research in the humanities and social and behavioral sciences will be followed. The research will be carried out and results reported in compliance with scientific community practice. General diligence, accuracy, meticulousness and integrity are followed throughout the study. Scientific openness and transparency are set as strong goals.

Data will be collected following responsible conduct of research. Teachers and students are recruited on a voluntary basis, and participants will have the right to withdraw at any point without further obligation. With respect to participants under 18 years old, parental consent will be asked prior to the study. Children are also being asked about their own willingness to participate in the research. Consents will also be inquired from teachers. Data gathering will be conducted at schools during school hours. Participants will be informed about the study's aim, the data collection methods, and methods of reporting. Survey situation and co-design workshops will be made comfortable and proceed on participants' terms. Group interviews will be recorded, transcribed and the transcripts will be used as primary data, from which anonymized extracts can also be draw to publications. Separate permissions will be asked for taking pictures and video recordings on the co-design workshops for illustrative purposes.

Data will be stored securely at the University of Jyväskylä. The participants' privacy will be considered. Information pertaining to persons will be assigned a code number. The list connecting names to codes will be kept in a locked file and will be destroyed after the study is completed. The problems related to data protection of personal information will be properly handled (Henkilötietolaki (523/99) 10 §). Only information on participant´s gender, age, nationality, and school will be reported without linking any other personal data to their responses. The results of the study are reported in a way that individuals cannot be identified.

Various researchers will participate in the data analysis (researcher triangulation). Results will also be presented to participants who will have changes to evaluate their truthfulness. Research and its preliminary results will be presented at several national and international meetings and conferences. Articles will go through a double-blind peer review process. Other researchers' work and achievements will be referred in an appropriate way according to good scientific practice, and the funding sources, and other associations relevant to the study will be reported.

Research participants will be informed according to ethical principles and notified about anonymization and archiving of research data. The data will be anonymized following the guidelines of the Finnish Social Sciences Data Archive (FSD). Folder structure along the ID numbers will protect the anonymity of the participants. All the data that is compiled as the research project operates on system of ID numbers. Each school, classroom, teacher and child will be given an ID number and no names or identifying information will be included to the final data analysis (e.g., SPSS data files). In the publication process the anonymity is explicitly ensured as the issue is stated in the consent forms.

2.2 Miten aineiston omistajuuteen, tekijänoikeuksiin ja immateriaalioikeuksiin liittyviä asioita hallintaan? Estävätkö tekijänoikeudet, käyttöoikeudet tai muut rajoitukset aineiston käyttämisen tai jakamisen?

Data collected by PI in collaboration with the local collaborators is owned by the principal investigator (PI). For the international analysis, authorship will be granted for all research partners contributing to analytical process. The research team will draw up an agreement specifying the tasks, responsibilities and rights relating to data collection, data management and data use. The agreement will be binding to the team members and potential collaborators.

Dokumentointi ja metatiedot

3.1 Miten dokumentoit aineistosi, jotta se on löydettävissä, saavutettavissa, yhteentoimivaa ja uudelleen käytettävissä sekä itseäsi että muita varten? Mitä metatietostandardeja, README-tiedostoja ja muuta dokumentaatiota käytät, jotta muut voivat ymmärtää ja käyttää aineistoasi?

The data will be stored in classroom/group specific folders on a University of Jyväskylä's safe network drive (backup copies will be done to external hard drive governed by the PI of this application). Each folder contains audio-data and anonymized field notes of the given group. Folders will be named along a classroom ID number assigned to each classroom.
Individual participants' survey data will be inserted to SPSS with each participant's personal ID number as the case identifier, furthermore Center ID and Classroom ID will be added. Every main folder and sub-folder will include a README.txt file to serve as a guide on file naming and function, and which will be updated according to any changes made within its respective folder.

Tallentaminen ja varmuuskopiointi tutkimushankkeen aikana

4.1 Minne aineistosi tallennetaan ja miten se varmuuskopioidaan?

During the project, the storage of data will be undertaken in accordance with the University Jyväskylä Ethics Committee Guidelines (stored securely in a locked filing cabinet under video camera control) in the university auspices and the Finnish Law on person-registers. The university offers network storage space of 100 GB capacity, which will be used for the duration of the project. This space, its automatic backups, and security are provided and technically administered by the IT- services at the University of Jyväskylä. Additionally, the transcripts will further be stored on a USB stick to be used solely by the PI. After coding the material, it is electronically stored protected with a password in a place which is not available to public. At this point, the data do not include information identifying any of the participants.

4.2 Kuka valvoo pääsyä aineistoon ja miten suojattua pääsyä aineistoon valvotaan?

Technical access control is controlled by the IT-services, but the right to access the data lies with the PI. Should data need to be shared for feedback and measurement analysis, the sharing of data will be done through a secure VPN network. The master code key (for connecting a person and his/her information) is stored in a locked safety-box to which only a restricted number of personnel has access.

Aineiston avaaminen, julkaiseminen ja arkistointi tutkimushankkeen päätyttyä

5.1 Mikä osa aineistosta voidaan asettaa avoimesti saataville tai julkaista? Missä ja milloin aineisto tai siihen liittyvät metatiedot asetetaan saataville?

During the first three years of the project, the data will primarily be used by the PI and collaborators. The research partnership will be based on a written agreement from the responsible researchers. A possibility of archiving data at the FSD after the completion of the project will be further explored. (The FSD is a national resource centre which preserves digital research data in a reliable manner and enables the reuse of the data online for registered users. All services of the data archive are free of charge.) The FSD assigns persistent URN identifiers (PIDs) to all archived datasets. Because the data will be anonymised, registered users of the FSD may reuse the data for research, teaching and study purposes.

5.2 Mihin pitkällä aikavälillä arvokkaat tiedot arkistoidaan ja kuinka pitkäksi ajaksi?

The data collected and used for this project will be archived in JYX (University of Jyväskylä's digital repository) for a minimum of 10 years in their original format.

5.3 Arvioi, kuinka paljon aikaa ja työtä tarvitaan aineiston valmistelemiseen julkaisua tai arkistointia varten.

The data will be analysed and the first results will be published during the three years of the project. Data will be systematically archived throughout the research project so as to make storing it for the future use as easy as possible. Particularly during the final months of the project, time will be dedicated for archiving data for the possible future use.