Study Information

Paving the Way to Collaborative fCM Modelling Sessions

Dear potential study participant,

With this letter, I would like to inform you about my study in the context of my master thesis at the chair for Business Process Technology at the Hasso Plattner Institute. Please go through this information sheet carefully before agreeing to participate in the study. If you have any further questions, do not hesitate to contact me. Therefore, I provide you my contact information at the end of this document. In case of any complaints, you can also contact my supervisors, whose contact information is also provided at the end of this document.

You can participate in my study if you fulfill the following inclusion criteria:

- You are aged 18 to 68.
- Furthermore, you own English language skills at least of B2 level.
- Not only that, but you completed successfully one of the basic lecture "Modellierung I", "Modellierung und Formalismen", "Business Process Intelligence" or an equivalent modelling lecture.

Please refrain from participating in this study if any of the following conditions apply to you. Please note that you do not need to provide any explanation or reason for your non-participation.

- You have problems to work concentrated for one hour without any break.
- You feel uncomfortable in working together in a four persons group.
- You decline being recorded during performing a given task.
- You have been diagnosed with a mental disorder.
- You may be in a dependent relationship with me.

Thank you for your interest and cooperation!

Best,

General Information and Objectives of the Study

Organizations increasingly rely on knowledge-intensive processes (KiPs). Such processes heavily depend on the involved process participants, which drive the execution of these processes by using their experience and knowledge. Due to the knowledge requirement, the modelling of such KiPs needs appropriate modelling notations which allows the expression of unpredictable process executions.

Recently, researchers developed the fragment-based Case Management (fCM) modelling notation, which is a suitable candidate for modelling KiPs.

However, existing research has not yet considered how a group of persons can collaboratively model a KiP with the help of fCM, although the knowledge about a business process is traditionally distributed across multiple process participants. In fact, collaborative modelling generally represents a challenge because the involved persons need to discuss and combine their different views on the process, besides finding the right formal expressions in the evolving model for their thoughts.

My master thesis addresses this research gap by (1) discovering issues that complicate collaborative modelling with fCM, (2) proposing methods to cope with the identified challenges and (3) evaluating the proposed methods. Eventually, my research could enable organizations to analyze and optimize their KiPs. Thereby, they could achieve process innovations, increase the quality of provided services and products or preserve the environment by avoiding waste.

The first and the third step of my master thesis incorporates a qualitative role play experiment, for which I am searching 16 study participants. The study participation comprises the answering of an initial questionnaire as well as the participation in two in-person sessions whose study dates are flexible. You can expect about 30 minutes time effort for answering the questionnaire, as well as 90 to 120 minutes of time effort for each of the two modelling sessions.

I initiated the study in the context of my master thesis.

Due to kind support of the chair of Business Process Technologies, I can raffle two €25 Amazon vouchers under all persons who have participated in both of the planned lab sessions. Furthermore, I appreciate your support by providing a piece of cake after each lab session.

Study Procedure and Data Collection

The planned study procedure comprises three steps consecutive steps.

Step 1: Filling out a self-test.

At the beginning, I hand you out a self-test which includes a brief introduction to fCM, some tasks to assess your fCM knowledge as well as questions to collect some

demographic information. You can fill out the self-test at home. It would take approximately 30 minutes to perform the self-test.

Step 2: Participating in the first modelling session.

For discovering problems in collaboratively modelling with fCM, you would participate in a role play experiment which takes place in a lab session at the HPI UX Lab. The HPI UX Lab is located ███████████████████. Together with three other fellow HPI students, you would perform a modelling task for eliciting a given KiP. Therefore, you would play a role of a process participant based on a given textual role description.

During the experiment, your performance is video and audio recorded from three distinct angles by the camera equipment in the UX Lab. Please note that I will not participate in the modelling session. Instead, I will observe your performance from an adjacent room. Furthermore, I may intervene by providing you further information through an intercom system.

After the role play experiment, I ask you to provide some details on your experiences during the modelling session. Therefore, you would fill out a short questionnaire.

The whole lab session takes around 90 to 120 minutes, including familiarization with your role, performing the modelling task and filling out the questionnaire.

The lab session will take place between end of June and start of July.

Step 3: Participating in the second modelling session.

For evaluating my proposed methods to cope with the discovered challenges, you would participate in a second lab session. The procedure is equal to the previous step, except that you may get further instruction on how you should behave during performing the modelling task.

The whole lab session takes around 90 to 120 minutes, including familiarization with your role, performing the modelling task and filling out the questionnaire.

The lab session will take place in a time frame which starts end of July and ends end of August.

Risks and Benefits

In the following, I illustrate risks and benefits of my planned research. Furthermore, I explain how I face the identified risks.

Risk 1: Incidental Findings

Although I am neither psychologist nor social scientist, I may identify pathological behavior patterns. Due to my professional background, it is unlikely that this risk occurs. However, such information may cause huge harm. To cope with the risk, I ensure that the information remains confidential. Especially, I will not store or communicate the information in any way.

Risk 2: Increased Stress Level

During the modelling session, you may experience some stress due to the interaction with your group members as well as the modelling task. It is likely that you experience the increased stress level. As the conduction of the study increases the stress level only temporarily, it causes no harm. Especially, you do not have to worry about any negative consequences related to your performance. If you feel uncomfortable, you can leave the modelling session or the study at any time without telling any reasons.

Risk 3: Inappropriate Assessment of Persons

My findings may be used to assess behaviors of persons within organizations. The used qualitative research approach limits the generalizability. Nevertheless, persons could assess other persons unfairly by improper usage of my findings. I assess the risk as low because my findings will not include concrete guidelines to judge persons' behavior, wherefore huge interpretation effort and future work would be necessary for a particular application. However, I will clearly map out limitations of my work in general, its maturity level as well its applicability and generalizability to cope with the described risk.

Risk 4: Technical Monitoring of Employees and Persons

Furthermore, my findings could serve as a baseline for artificial intelligence systems to automatically assess persons' behavior. Thus, my findings could contribute to increased monitoring of employees. The risk can be assessed similarly as the previous risk. Besides transparency about my work's limitations, I will not publish the recorded audio and video data which may serve as training data. Following my data storage concept, I will delete the audio and video recordings after my master thesis defense.

Benefit: Process Innovation

The relevance of KiPs increases continuously. Traditionally, certain areas heavily depend on KiPs. For instance, medical doctors incorporate their knowledge to provide patient-oriented treatments. Simultaneously, latest achievements in process automation allowed organizations to provide products and services which depend increasingly on high-level, innovative and agile thinking rather than on clerical execution of repetitive tasks. My work facilitates the comprehension of KiPs and allows thereby their improvement. Organizations can either provide further innovative services and products, improve the quality of their outputs or reduce waste.

Conclusion

Following the guidelines of the University of Potsdam and the KonsortSWD[1], research requires the approval of the ethic commission if the risks of the results dominate the potential advancements or if the research conduction jeopardizes the involved study participants more than their everyday life.

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[1] https://www.konsortswd.de/themen/best-practice-forschungsethik/

Study Information

The qualitative study design of my research limits the generalizability and applicability. Thus, the findings yield only low risks. Simultaneously, my work could serve as a starting point for great achievements in understanding KiPs. Consequently, I assert that the benefits dominate the risks.

I implemented measures to protect personal information about the participants. Furthermore, the induced stress is not noteworthy higher than in daily situations, as it is only temporarily and limited to a consequence-free situation. Participants can leave the study at any time. Thus, my research conduction does not harm the involved study participants more than their everyday life.

In conclusion, my research does not require the approval of the ethic commission. Furthermore, I conclude that it can be conducted.

Reviews

The presented risk assessment is reviewed by █████████████

Participation

You can withdraw from participation at any time without giving a reason. Your participation is voluntary. You can only be included in the study if you agree. If you don't want to participate, you don't have to fear any disadvantages. You have the right to revoke your consent to participate in the study or to the further processing of your data at any time and to end your participation in the study.

You will not incur any costs by participating in the study.

Data Storage

Your demographic information, your answers to the self-test and the questionnaires after the two modelling tasks and the audio and video recordings of the modelling sessions will be stored locally on an encrypted hard drive. Thereby, no pseudonymization or anonymization will be conducted. The data will only be accessible to me as well as to the supervisors of my master thesis. After defending my master thesis, I will delete the audio and video recordings of the modelling sessions and anonymize the answers of the self-test and questionnaires.

The anonymized results of the self-test and questionnaires will be appended to my master thesis. Furthermore, my master thesis may cite or describe given answers, speeches or behaviors. Thereby, I ensure that you cannot be identified through the citation. No further data publication will happen.

Data Processing

Your data will be only processed for the outlined purpose to identify challenges in collaborative modelling with fCM as well as to evaluate designed methods to overcome these challenges. The data will not be used for secondary purposes.

The interpretation of the audio and video records consists of watching the recordings multiple times to identify concepts, their meanings and means how these concepts are expressed. Thereby, digital systems will exclusively be used for viewing the data. Especially, neither local, cloud- nor server-based tools which support computer vision-based analysis will be used.

Categorical and numerical answers of the questionnaires may be subject to statistical analysis, which will be performed locally on my personal computer.

The data processing is mainly driven by myself. However, I may consult my supervisors or further qualified researchers of the HPI to support my analysis. Consequently, they will read the collected data, too.

Data Protection

In compliance with the applicable data protection regulations, in particular the EU GDPR and the Federal Data Protection Act (BDSG), please go through the following information:

Data Controller

███████████████████████████████████

Purpose of Processing

The purpose of data processing is the implementation of the research procedures for identifying challenges in collaborative fCM modelling, as well as for evaluating proposed countermeasures.

Lawfulness of Processing

The legal basis for personal data processing is your consent (Art. 6 paras. 1 sentence 1 lit. A of GDPR).

Right to Withdraw

You have the right to withdraw your consent at any time. The withdrawal of consent does not affect the lawfulness of processing based on consent before its withdrawal. However, once your data is anonymized your data cannot be associated with your person and, therefore, not deleted anymore. No disadvantages arise for you in the event of your withdrawal from participation. If you consider that your personal data processing infringes the GDPR, you have the right to complain to the supervisory authority for data protection.

Recipients of Your Personal Data

Following good scientific practice, I will publish only anonymized data in my master thesis or related publications. Especially, no video or audio records are published in any form.

Duration of Data Storage

I will store the audio and video records as well as the answers to the questionnaires until the defense of my master thesis has happened. After the defense of my master thesis, I will delete the audio and video records. Furthermore, the anonymized versions of the answers to questionnaires remains in my master thesis, related publications, on my personal data storage as well as the data storage of the chair of Business Process Technology at HPI for an indefinite time. You can revoke your consent before and during data collection, upon which I will delete your data.

Your Rights

You have the right to obtain information from the data controller whether your personal data are being processed and, if so, to obtain access to the personal data and additional information (right of access). You also have the right to obtain from the controller, without undue delay, your personal data to rectify inaccurate personal data. I meet the legal requirements of article 17 or 18 GDPR, according to which you are entitled to your data's erasure or a restriction of the processing. Please note that restricted processing of the data may not be possible in every instance. You have the right to receive your data in a structured, standard, and machine-readable format or to request the transfer to another controller (right to data portability, Art. 20 GDPR). Furthermore, you may object to your personal data processing under the conditions outlined in Art. 21 GDPR.

Contacts

If you consider that your personal data processing infringes the GDPR, you have the right to complain to the supervisory authority for data protection. This study information sheet, with the version from June 24, 2024, remains with the study participant.

Acknowledgement

My master thesis heavily depends on your vivid participation in my study. I hope, I could clarify all your questions, convey the relevance of my study and motivate for your participation. Do not hesitate to reach me out for further questions.

I am looking for your volunteer participation and be genuinely thankful therefore!

Consent

I, Mrs/Mr. (Given Name, Family Name)_____
declare that I read and understand this study information. Furthermore, I grant consent that my data is recorded and processed as described. I am aware that I can revoke my consent at any time without telling any reasons.

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City, Date, Signature