CSCI 4163/CSCI 6610

Winter 2013

Assigned January 16, 2013

Group Mini-Project 1

Learning goals:

The goal of this mini-project is to have you gain experience in designing and running a user study with the purpose of understanding user behaviour and needs. This type of study is often used when doing (often exploratory) research into existing behaviours or in a user-centered design process when capturing user requirements. The process will include the experimental design, writing a research proposal for ethics, trying out your study protocol on your classmates during the tutorials, analyzing and communicating the results (including an in-class report), and writing up an experimental report in the format of a conference paper. A second goal is to illustrate the tradeoffs of various research methodologies; much of this learning goal will be realized through participation in each other's protocols, an in-class discussion of the various findings achieved through the different methodologies, and the reflective component of the project report.

Project teams:

Project teams should have 4-5 members and may be a combination of undergraduate and graduate students. Self-select your project team and send me an email to me (hawkey@cs.dal.ca) and the TA (Sukhveer Dhillon, sdhillon@cs.dal.ca) with the project team letter (assigned today), members, their banner numbers, and their email addresses, and the methodology the team will use (assigned today). If for some reason you did not become part of a team by the end of the tutorial on January 16th, email me and I will perform match-making services.

Project topic:

The project topic will be decided upon during the tutorial on January 16th. All groups will explore the same topic, using a particular methodological approach. To be effective, it should be on a topic that all class members will have experience as a user and where there is the opportunity to observe/reflect upon their current practices.

Methodology selection:

The particular methodological approach will be assigned to each group so that we have good coverage of all approaches. Where possible, group preferences for approaches will be taken into consideration. The approaches include:

- Jan 23: Interviews (unstructured, semi-structured)
- Jan 30: Focus groups (with group activity, w/o group activity)
- Feb 6: Observations (pure, contextual inquiry)
- Feb 13: Surveys (paper, on-line)

Self-directed learning:

We will briefly cover all these methodologies in class; however, the timing and depth of the in-class coverage will likely necessitate additional self-directed learning on the research methodology that your group will use. In the on-line course schedule, you will find links to various resources that may be useful. If you find other good resources, please share them with me and I will add them to the resource list. Be sure to reference any resources that you use when writing up your experiment and justifying aspects of your approach.

Deliverables:

Each team will maintain a project binder and include in it the following documents:

- Minutes of project meetings. These should include group members present, topics discussed and key decisions made, reports on progress by each member, and action items.
- Ethics proposal, which will present your experimental design and include appendices of all study materials (consent forms, recruitment notices, questionnaires, coding sheets, protocol details, etc.) Examples of ethics proposals and/or proposal components are available on the main course website. Also included is an example of an internal experimental design document, which would have been used to generate the ethics proposal. While completing an experimental design document is not a deliverable for this mini-project, it can help focus you on not only your research design, but all the gory details necessary to run a good study – please review it and consider including similar discussion points / appendices in your ethics proposal and/or final project report. It is strongly suggested that you get feedback on your experimental protocol from either the TA or myself before trying it out on your classmates during the assigned tutorial. Your documents, including the ethics proposal, should reflect a mature process. As documents are revised, maintain a history of key modifications on the title page. It is expected that the experimental design will be refined based on feedback from the instructor/TA, initial pilot testing, and feedback from classmates during the tutorial. If substantial changes have occurred, include prior versions to show the progression. The final version of your ethics proposal should be suitable to submit for formal ethics approval.
- "Data" collected during the tutorial (if electronic, include a copy of the data or a link to it). Note: this is a class exercise, so no true data is being collected (your classmates can make up a story if they don't want to share their actual experiences), but you need to demonstrate that you were able to capture the data you wanted to collect and to understand the limitations and benefits of your methodological approach.
- Slides from class presentation of initial "findings"
- Experimental report written using the ACM SIGCHI format (http://www.sigchi.org/chipubform). Sections should include introduction, related work, research questions, methodology (general approach, study protocol, data collection, data analysis, recruitment and participants), "findings", a brief discussion of four key findings, limitations (discussion of the limitations of your methodological approach, your ability to generalize your findings given the participant population, and reflections on any methodological tradeoffs that you made), conclusion, and

references. In the box for the copyright notice, put "Submitted as a course deliverable to CSCI 4163/CSCI 6610 on March 4, 2013."

Additionally, each team member will submit a peer evaluation report of their group members to the instructor on March 4th (template forthcoming).

Timeline:

- Jan 16: groups formed, email sent to Kirstie/TA, groups assigned methodological approach, research topic chosen, broad research questions developed. After this, groups can begin researching the topic area (e.g., finding related work, determining the target user population, and refine the broad research questions based on the assigned approach.
- Before your assigned tutorial (Jan 20-Feb 13): initial experimental design complete and an initial review of your experimental design by the instructor/TA. Further pilot testing with your group members is highly recommended to refine your protocol and study materials. This will likely reveal flaws in your protocol/study materials that may hinder your ability to collect the desired "data".
    - Note 1: as this is just a class exercise and we are not actually getting ethics approval, you will NOT be conducting this research as a study and actually recruiting participants or doing formal pilot testing. Any feedback prior to approval should be limited to reviews of your experimental design and individual materials and rehearsals of the protocol with other class members during the tutorial time.
    - Note 2: the earlier groups will have much less time to develop their protocols, so we expect to see a rougher initial design. However, only the final product will be marked, and all groups are expected to demonstrate a mature, reflective process whereby their initial ideas have been refined.
- February 20: During the tutorial, verbally (with a few slides – details TBA) present the initial "findings" of your group. We will then do synthesis of the results as a class and discuss some of the methodological tradeoffs
- March 4: submit the project binder, including the experimental report.

Marking:

This mini-project is worth 20% of your mark in the class. All final project deliverables are due March 4th. The breakdown is as follows:

- Overall experimental design: 20%
    - Completeness, appropriateness of design given methodology assigned and the research questions, etc.
- "Running" of the study (data collection and analysis of findings): 20%
    - Preparedness on assigned tutorial day
    - Success of data collection, appropriate analysis able to be carried out
- Ethics submission: 20%
    - Completeness, professionalism, clarity, appropriate level of detail, etc. Full marks if I would expect the ethics board to approve it as is.
- Experimental report: 25%
    - Completeness, professionalism, clarity, appropriate level of detail, presentation of "findings", depth of discussion/reflections on the appropriateness of the methodological approach to the research questions, etc.
    - Verbal presentation of findings to contribute to class exercise on Feb 20th
- The overall process: 15%
    - Pilot testing, incorporation of feedback, effort, etc.

Note: Weighting of group marks to team members may vary. Anything less than an equal distribution will only occur if there is documentation (e.g, meeting minutes, and project deliverable documentation) in addition to peer assessments that reveal inequities in effort and commitment.