2. Design Implications & Opportunities

Due by: *4:00pm 16 August 2024 (Week 4)*

Weighting: *x 2 total (1 x Pair Design Implications, 1 x Individual Design Opportunity)*

Tasks:

Design Implications Research (in pairs): *short statements describing design space and implications for your chosen domain drawn from current literature.*

Design Opportunity Poster (individual): *Describe a specific problem/area to be explored informed by the research you conducted as a pair. Presented in the form of an A4 information sheet.*

Peer Critique (in pairs): *of design opportunities of allocated peers (pass/fail; due later in Week 5)*

Introduction

In this task, you'll explore how social (collaborative) and web/mobile technologies can be applied to support **people in your chosen domain** to do things differently, more effectively, more meaningfully, in ways that take advantage of social and mobile possibilities for technology. Later in the Design Prototype assessment, teams will draw on the ideas and research generated here to create a digital, interactive prototype that demonstrates an innovation within a chosen domain using human-centered design methods.

Your task involves researching the domain, including previous design efforts, to gain a critical understanding of the problem space. You'll identify implications for design based on the current literature and uncover opportunities for new designs within the domain. The purpose of this assessment to build a critical understanding of your problem space or domain through observation, literature review, and discovery.

Concentrate your research on a specific area, issue, concern, or opportunity that you find interesting. This research will serve as a foundation for generating more focused individual ideas. You'll compile a bibliography, with a short discussion of the domain, it's design implications as a pair; and individually present concepts inspired by your research. For example, your pair research might explore the issue of safety at large work sites (i.e. hospitals, shopping centres); then as individuals you would present different ideas for how that issue might be addressed with new technologies based upon the research that you did.

What to do

Design Implications Research (in pairs)

In your pair submission, you are asked to:

1. Define the domain or problem space you will be exploring; describe it in sufficient detail to demonstrate more than a superficial understanding of issues specific to that domain.
2. Present design implications / insights drawn from current literature.
3. Provide an overview statement that connects these insights together into a cohesive design guide for the domain.

1. Define the domain or problem space you will be exploring through your research, in approximately 400 words. Your domain or problem space should be specific enough to allow you to focus your research. You might think about how a particular technology or theory may be applied to the problem space; or you might identify a dilemma within the problem space that a social or mobile technology could address.

For example, you may want to broadly explore the ways that families communicate and coordinate. To focus your research, you might choose to look at specific styles of families (extended families, young children, working parents, split families with shared custody arrangements) or focus on a particular activity that they are communicating or coordinating around (i.e. shared calendars, daycare, transportation to/from extra-curricular activities).

We will be generating a list of potential domains during the contact sessions.

2. In pairs, you are to review peer-reviewed literature associated with that problem space (each student must review a *minimum of 5* papers each) that best:

- describe the paper's domain or problem space;
- describe central social/mobile concepts that are applicable to that domain (e.g. awareness, articulation work, location-specificity);
- describe previous attempts to design technology into that space;
- and that provide insight into specific issues/considerations within that domain or problem space.

You should aim for broad coverage of the points above to give a well-rounded view of the design space. For example, one or two papers that describe the domain, a paper or two that describe specific aspects of the domain, a paper or two that describe attempts to design technology for that space or perhaps methods or methodological considerations appropriate to that space. Avoid repetition in your selection—choose papers that best support/explain what you are focussing on and that provide a breadth of context for your domain. For example, if you are exploring the issue of household waste, don't cite 5 papers that describe the issue of household waste.

Add each paper to the course Zotero library and tag it with your domain title, for your peers to find easily come project time.

Papers should be high-quality, peer-reviewed sources, ideally those archived in the ACM digital library https://dl.acm.org. In the first instance, papers should be those published in conferences CHI, CSCW, or DIS; or in journals Communications of the ACM, Transactions on Computer-Human Interaction, or Personal & Ubiquitous Computing, or similar venues.

For each paper (x 5 per student), write 250 - 500 words that describe the specific domain concerns and/or relevant implications for design from that paper.

Your statements might:

- describe recommendations and/or principles for designing for the domain;
- describe specific features of, or issues for, that domain or user group;
- highlight issues inherent in designing in that space that are in contrast with your understanding of the domain or established approaches.

Note, your statements are not intended to provide a summary nor a critique of the paper but should draw out the relevant implications for designing for your chosen domain.

In your document, each paper should be presented as Reference, Abstract, Implications Statement.

Example below:

Reference: Berke Atasoy and Jean-Bernard Martens. 2020. Applying Storycraft to Facilitate an Experience-Centric Conceptual Design Process. In Design, User Experience, and Usability. Interaction Design: 9th International Conference, DUXU 2020, Held as Part of the 22nd HCI International Conference, HCII 2020, Copenhagen, Denmark, July 19–24, 2020, Proceedings, Part I. Springer-Verlag, Berlin, Heidelberg, 39–58. https://doi.org/10.1007/978-3-030-49713-2_3

Abstract: "The design profession is shifting from designing objects towards designing for experiences, and the main premise of this paper is that designers need strategic guidance in bringing the emotional, contextual, and temporal aspects of experiences into discussion. Existing externalization strategies are not obviously equipped to help incorporate the transient characteristics of experiences into the designer's creative thinking. [...] Our studies have confirmed that incorporating storycraft within conceptual design by means of Storyply resonated well with design teams and indeed helped them to discuss and frame ideas in an experience-centric fashion."

Implications: [... your 250 - 500 words here...]

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3. Finish with an overview statement (max 400 - 500 words) that connects the papers together in relation to the design space. Here you may choose to focus on the successes and failures of previous attempts, or on different methods/approaches used to explore the space or synthesise these into key considerations for your chosen design space. You may also bring in non-literature-based insights here – such as those derived through observations of the user group or domain.

There is no need to provide references for the papers explicitly reviewed in your reference list at the end of the research document as each paper should be accompanied by its reference information. However, any external sources referred to in the opening or finishing statements should be cited and listed in a reference list at the end of the document. Although American Psychological Association (APA) style is preferred, there is no mandated referencing style, however all references must use the same style. For more information on referencing styles visit https://web.library.uq.edu.au/research-tools-techniques/referencing-style-guides

Design Opportunity Poster (Individual)

Taking the research you conducted, generate a poster that describes a particular aspect or problem with the potential for further exploration through the team/group project; and that outlines a process for discovery and verification that uses interaction design methods.

Using the supplied template, present your design opportunity as a **single page A4 informational poster** containing:

1. **A description of the specific aspect or problem you are exploring** This might be a research question; a defined problem you want to solve; or an experience you want to impart. You will need to include imagery or potential solutions to help portray your concept. Using the example from point 1 above, if one of the insights garnered through your research was that certain family members were consistently lax in checking & updating their activities in the shared calendar, you could then pitch to explore the potential for a reminder system that would alleviate this issue. You don't yet want to pitch one specific implementation of that solution (i.e. mobile app) - but you may put forward some ideas that you have in that space.

2. **A statement connecting your pitch to the research** and if relevant, introducing additional sources to inform your pitch. These sources do not necessarily need to be from peer-reviewed sources but might be examples of existing solutions (or approaches from other domains that relate).

3. **An outline for what approaches/methods** you would use for user and domain discovery to further your understanding of the problem space. This should draw upon methods from prior experience, discussed in contact sessions and/or discovered through your research. This should provide enough detail to *describe HOW* you would apply that approach - for example: if you propose to conduct interviews with users, you should describe who & how many will you interview and what you hope to learn (specifically) in the interviews.

4. **Include images, diagrams and/or tables to support your communication.** These should support your discussion and should illustrate key concepts difficult to explain in text.

5. **Reference any papers or external sources** cited on your poster. As stated above, there is no mandated referencing style, but all references should be consistent in style.

Peer Critique (pass/fail)

Following submission of the research and individual pitches, you will:

- Provide detailed critique for the work of 2 other students. Critiques should be completed as a pair, and should represent a synthesis of individual critiques, identifying and acknowledging where opinions may differ.

- Critiques should consider both the research and the pitches; the clarity of the domain description; the relevance of the research to the domain specified; the relevance of the pitches to the domain specified; the usefulness of the methods described in verifying and uncovering the problem space.

- As you critique, you may start to see themes and/or relationships emerging between the submissions you are allocated. Note these down in preparation for team brainstorming.

Informed by this process, we will form thematic groups for the major project during the contact sessions.

Submission

Submission & Preparation of Documents:

For ease of submission, **each individual** must submit the pair-produced **Design Implications Research Document** and their own **Design Opportunity Poster** to the Turnitin Submission link on **Blackboard by 4pm Friday 16 August**.

Submission should be a single .pdf document containing both the Design Implications Research Document and Design Opportunity Pitch Poster, with pages ordered as described below. You can use a PDF editing application, such as Adobe Acrobat, to combine separate PDF documents into a single document. Your file should be named as Surname1_Surname2_2_DIO.pdf where Surname1 is your last name and Surname2 is your partner's last name.

- Page 1: Acknowledgement of Original Work signed by both individuals in the pair. This can be found in the Assessment folder on Blackboard as an editable Word document.
- Page 2: Design Opportunity Poster, with student name in the footer.
- Page 3+: Design Implications Research, with student names in the footer.
- Any appendices should be placed after the Design Implications Research.
- Do **not** put your student number in the text of page's 2 onwards as these will be displayed publicly for peer critique.

Students should be aware of the policy for late submissions as outlined in the ECP.

Shortly following the deadline, we will download all submissions and make them accessible for critique on Miro. An announcement will be sent to inform you that documents are ready for critique. Critiques are to be made directly to Miro, following the instructions provided on the Miro board by **4pm Friday 23 August.** This will be discussed further in class.

Criteria

This assessment will be marked across 3 parts – Design Implications, Design Opportunity and Peer Critique according to the following criteria and weightings.

Design Implications

- Critical, considered description of domain/problem space.
- A variety of high quality (peer-reviewed), relevant sources cited (min. 5 per student).
- Concise & critical statements clearly articulate design implications from each source.
- Overview demonstrates relevance of sources in application to domain / problem space.
- Language and writing style are fluent.

Design Opportunity

- Critical, considered description of specific aspect or problem to be explored.

- Relevance and connection to pair research is clearly articulated, with additional sources provided for clarification.
- Highly appropriate methods and approaches proposed to further investigate design space.
- Language and writing style are fluent.

Peer Critique (Pass/Fail)

- Considered and constructive critique of design opportunities with actionable suggestions for improvement.

- Critically reviews quality of research and relevance to proposed domain / problem space.

Note on the use of GenAI tools. If you have used any Generative AI tools (ChatGPT, Gemini or similar) you must acknowledge their use and attach a copy of both the prompts and responses you obtained from those tools as an appendix to your assignment.

This task, particularly the design implications component based on existing research papers, has been conceived such that the design implications that you draw out of the papers you read must GO BEYOND the paper itself, identifying a lesson that you learned that you could subsequently apply to your domain, or to the development of social/contextual computing for that domain. Tools such as ChatGPT can summarise papers, but struggle to go beyond/apply the lessons from those papers to a third context. If we suspect that you have outsourced this assignment to ChatGPT (or similar tools) we reserve the right to subsequently **interview you** to ask questions about what you have submitted to check that you have read, and understand, the papers you have critiqued. The understanding you display in the interview can be used to update your grade so that it accurately reflects the learning/understanding you are able to display.