

Project Proposal

Student Name: Shaun Davies

Student Number: 1104018

Course Title: BSc Computing (Software Engineering)

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Aim & Objectives and Research Area

Aim:

The aim of this project is to develop a mobile application that facilitates real world socialising among young people, with the goal of reducing social isolation and supporting positive mental health outcomes.

Objectives:

1. To review literature and applications to find effective ways of promoting social connections and supporting mental health through mobile apps and technologies.
2. To collect and analyse requirements from young people through surveys or interviews to ensure the app can meet their expectations.
3. To design the user interface (UI) and user experience (UX) of the app, prioritising engagement, ease of use, accessibility, and effectiveness in facilitating social connections.
4. To develop and implement the app, creating features that enable users to initiate and maintain social interactions in real-world contexts.
5. To evaluate the usability, engagement, and potential impact of the app through user testing and feedback, assessing its effectiveness in encouraging social connections and supporting wellbeing outcomes.

Research Philosophy

A research philosophy refers the underlying beliefs and assumptions of how knowledge is created and interpreted. For this project the appropriate philosophy is Pragmatism. Pragmatism focuses on a practical approach of prioritising solutions that work in real-world situations, allowing the use of both quantitative and qualitative methods. [1]

Quantitative methods include the use of statistical analysis and numerical data from surveys or usage analytics and qualitative methods such as interviews help to explore user experiences and perspectives. [2]

This philosophy allows the project to focus on what works in practice such as designing an app that effectively encourages real-world socialising while acknowledging the complexity of social behaviour and mental wellbeing in young people.

Search Tools

To ensure best practice and the utilisation of existing knowledge, a range of search tools and databases will be used:

- **Search Engines (Google Scholar)** – a broad academic search engine to access peer-reviewed articles on mobile app design, social networking, and mental health interventions.
- **Digital Libraries** – UWTSD library articles, reports and e-books for studies in computing, software engineering, and social technologies.
- **PubMed** – useful for research on digital health, psychology, and the effectiveness of mental health apps.
- **IEEE Xplore** – for technical studies on mobile application development, user experience, and human-computer interaction. [3]

Using a combination of tools and databases ensures that the project can draw from multiple areas in the research area. This allows for a deeper understanding from aspects in computing, health sciences and behaviour.

Search Strategies

Strategies to identify relevant research related to the project will include:

1. **Keyword Selection** - Choosing specific words based on the project aim, such as:
 - "mobile application", "user experience", "social connection".
2. **Boolean Operators** - Combining keywords to refine searches:
 - "mobile application" AND "mental health" AND "young people"
 - "social connection" OR "friendships" AND "mobile app"
3. **Filters and Limits** - Configuring filters such as publication date, peer-reviewed status, subject area (computer science, psychology, health)
4. **Backward Chaining** - Starting with a good relevant source and checking who has cited them to find additional related literature. [4]

These strategies play a crucial role in ensuring that the most relevant and high-quality literature is identified. Combining keywords, Boolean operators and filters the search process remains focused and comprehensive. Backward chaining further helps finding notable studies that may not appear in initial searches.

Research Strategies

Strategies to Enhance Validity, Reliability, Generalisability and Ethical Considerations

Validity and Reliability are important for ensuring the quality of data. Validity refers to whether the methods used are the correct ones for the aims of the project and if they do truly measure what they intend to measure. Validity will be strengthened by ensuring that the survey and interview questions will be closely aligned with the research aim: encouraging social connections and improving mental health through a mobile app.

Reliability evaluates the stability of the data collection measures through standardisation to minimize errors in the process. For example, all participants in a survey will be asked identical questions with consistent wording. [5]

Generalisability refers to the extent to which the findings from a study can be applied to settings beyond the initial research. In this project efforts will be made to gather data from participants from diverse backgrounds in terms of age, gender and social experience. [6]

Ethical considerations are required to ensure the integrity and moral responsibility in research. In the case of young people and mental health informed consent will be sought from all participants, and information sheets will outline the purpose of the study, data usage and the voluntary nature of participation. Anonymity will be ensured by removing identifying information from datasets and participants will have the right to withdraw at any point. [7]

Data Collection Methods

To gather high-quality data, a mixed-methods strategy will be employed, consistent with the project's pragmatic research philosophy.

Surveys: Online surveys will be used to collect broad data on you people's current habits, preference for social apps, and perceived barriers to socialising. Likert-scale questions will allow measurements of attitudes and experiences in a way that can be analysed statistically.

Interviews/Focus Groups: Random sampling will be chosen to conduct interviews and focus groups to allow deeper exploration of user perspectives. These will provide insight into how young people feel about social apps and what features they would find most engaging.

Pilot Study: A pilot study will be designed to be a short online survey with five questions for a small group of students. Feedback will be gathered on clarity, length and relevance. The feedback will be used to refine the survey design to ensure that questions are understandable and relevant for the target population. The study can also identify any potential issues early on in the research process before the larger study, ultimately contributing to a more robust and reliable outcome. [8]

Quantitative and Qualitative Analysis

Quantitative and qualitative analysis offer different ways to understand research data.

Quantitative analysis uses numbers and statistics. Simple descriptive statistics like averages, percentages, and frequency counts help summarise data from surveys or app usage. Graphs and charts make patterns easy to see. More advanced methods, like correlation or regression, can show if there is a link between variables—for example, whether using the app is associated with more social connections. Quantitative methods help identify trends and outcomes that can be measured and compared.

Qualitative analysis focuses on non-numerical data from interviews, focus groups, or open-ended survey questions. Methods like thematic analysis look for recurring ideas or patterns, while content analysis codes key words or phrases. This approach captures the experiences, feelings, and motivations of users, helping explain why certain outcomes happen.

Using both approaches together is valuable. Quantitative analysis shows measurable results, while qualitative analysis gives insight into user experiences and behaviours. This combination can guide the design of a mobile app that effectively encourages socialising and supports mental wellbeing in young people. [9]

References

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Appendix
