**Data Management Plan**

**Researcher(s):**

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| **1 Research Project Details** | |
| **1.1** | **Research Title**  How can AR technology be effectively utilised to design online shopping platforms that enhance consumer experiences and aid consumer decision making? |
| **1.2** | **Purpose of Research** The research project aims to explore the integration of Augmented Reality (AR) technology in enhancing the shopping experience across different retail sectors. The project builds upon existing studies on AR by delving into how the applications enhance consumer engagement and decision-making processes in different shopping contexts, specifically to understand the factors that make AR implementations successful in the retail sector. By focusing on these specific areas, the research will contribute to better understanding of AR’s practical benefits and limitations. The expected outcomes include developing a comprehensive framework of design principles tailored to online shopping experiences with the adoption of AR, which will be valuable for interaction designers and retailers in crafting AR features that are technologically feasible and align with psychological and practical needs of shoppers. Through analysing user feedback on existing AR platforms, the research will provide insights key user experience factors for designing effective AR shopping solutions. |
| **1.3** | **Funding & Budget**  Not applicable for Master of Interaction Design thesis research. |
| **1.4** | **Duration of Study**  Data collection will take place in September 2024. Data analysis will take place in October 2024. The thesis will be completed by November 2024. |
| **1.5** | **UQ Research Policy**  <https://policies.uq.edu.au/document/view-current.php?id=120> |
| **2 Data Collection & Analysis** | |
| **2.1** | **Data Creation**  Survey responses will be collected using Qualtrics, observation notes will be documented in Microsoft Word, and interviews will be audio recorded using individual researcher’s mobile device. |
| **2.2** | **Data Formats**  Survey data will be exported as .csv files, observation notes will be in the form of word documents, interview recordings will be in m4a format and be transcribed into word documents. For data analysis, NVivo files will be in .nvpx formats, Excel files will be in .xlsx formats and SPSS files will be in .sav formats. |
| **2.3** | **Hardware & Software**  Hardware: Mobile devices will be used for audio recording interviews, and laptops will be used for filling out surveys and jotting observation notes.  Software: Survey will be created and disseminated using Qualtrics, then analysed using SPSS or Microsoft Excel. Observation notes will be taken using Microsoft Word. Interview data will be transcribed and organised using Microsoft Word, then analysed using NVivo. |
| **2.4** | **Usage of Existing Data**  Existing data will not be used in the completion of this thesis. |
| **2.5** | **Metadata Creation & Management**  Metadata for the data collected in this study will be structured to facilitate clear identification, retrieval, and archival quality. This will include metadata fields for each dataset collected, such as participant ID, data type (survey, interview, observation), date of data collection, and file format. Metadata will be created at the time of data collection and will be included within each file name as outlined in 4.2 File Naming Convention. The file will be stored within the UQ Research Data Management System to ensure consistency and accessibility for future research and analysis. |
| **2.6** | **Data Processing Scripts**  Not applicable for this study. |
| **2.7** | **Team Data Management**  Team members will follow naming file conventions as outlined in detail below. |
| **3 Ethics Ownership & Intellectual Property** | |
| **3.1** | **Funding Body Requirements**  Funding not applicable to Master of Interaction Design Thesis. |
| **3.2** | **Human Subjects**  Participants will only participate in the study after reading the detailed Participant Information Sheet and signing the Consent form. All participants will be adults (above 18 years of age) and data collection and management policies have been clearly indicated in the Participant Information Sheet and Consent Forms. |
| **3.3** | **Code for Responsible Conduct of Research**  This study adheres to the code for responsible conduct of research as set out by the Australian Research Council. |
| **3.4** | **Queensland Privacy Act 2009**  This study does not collect personal or sensitive information from participants. |
| **3.5** | **Intellectual Property Rights**  Part of a Master’s of Interaction Design Thesis and IP will belong to the student researchers. |
| **3.6** | **Third Party Data**  Third party data will not be used when undergoing this thesis. |
| **4 Organising & Storing Data** | |
| **4.1** | **Size of Data**  The estimated total size of data is around 300MB, this includes surveys, observation notes, interview recordings, interview transcripts, qualitative analysis files and quantitative analysis files. |
| **4.2** | **File Naming Convention**  Surveys will be conducted via the Qualtrics platform and should yield a single .CSV file following its completion.  Observation, interview and interview transcript word documents will adhere to the following naming convention: “category\_participant number\_researcher name”. An example of this is “observation\_participant1\_chantal” or “transcript\_participant2\_emily”.  Interview recordings will adhere to the following naming convention: “recording\_participant number\_researcher name”. An example of this is “recording\_participant3\_chantal”.  Data analysis files will adhere to the following naming convention, and its format will also depend on the analytic platform used: “data type\_researcher name.document type.” An example of this for data analysis conducted on Excel would be “quantitative\_chantal.xlsx”. |
| **4.3** | **Storage**  Data collected for this research will be stored on the UQ Research Database Management System, and only the research team (listed above) will have access to the data. |
| **4.4** | **Raw Data (PIC)**  Interview recordings will be conducted via individual researcher’s phones. Raw data from interview recordings will be promptly uploaded to UQRDM and deleted from local devices. Student researchers will be in charge of ensuring this is completed. |
| **4.5** | **Data Back-Ups (PIC)**  Data will be backed up weekly (at the end of each week) onto the UQ Microsoft 365 Drive, and only the research team (as listed above) will have access to the links to the relevant files. Student researchers will be in-charge of ensuring this is completed. |
| **4.6** | **Security**  The UQRDM is a secure platform; only students and staff of the University of Queensland can access it. |
| **4.7** | **Hardware & Software**  Hardware: Data collection and analysis will be conducted using secure laptops and mobile devices with password. The devices are equipped with the necessary and licensed software and meet the latest security standards to ensure data integrity and protection.  Software: Data will be collected using Qualtrics for surveys, while NVivo will be used for qualitative data analysis, and SPSS or Microsoft Excel for quantitative data analysis. The software are standard within the academic community, offering robust data processing and analysis capabilities. All software utilised will be installed with UQ software licensing and are updated to their latest versions to ensure compatibility and security. |
| **4.8** | **Access Control**  UQRDM for this study will be set-up by the Chief Investigator who will only grant access to student researchers' part of this study. |
| **4.9** | **Internal Data Sharing**  All necessary files and data will be stored on the UQRDM and will be made available to those in the research team as outlined above. No other sharing convention will be utilised to guarantee data security. |
| **4.10** | **Dataset Management**  Original datasets such as interview recordings, interview transcripts, observation notes and survey responses are not to be modified once uploaded onto the UQRDM. For data analysis, researchers will create separate files to conduct further analysis on the respective analytical platforms. |
| **4.11** | **Sensitive Data Management**  No sensitive or personal data will be collected in this study. All data will be further de-identified to ensure participant privacy. |
| **5 Long-term Preservation** | |
| **5.1** | **Data Storage Duration**  The data will be destroyed following the completion of the thesis. The Chief Researcher will ensure all thesis related data in the UQRDM will be deleted once the thesis has been marked and graded. |
| **6 Data Sharing & Publishing** | |
| **6.1** | **Interested Parties**  Participants of the study. |
| **6.2** | **Reason(s) for Not Sharing**  Not applicable for this study. |
| **6.3** | **Funding Obligations for Data Sharing**  Not applicable for this study. |
| **6.4** | **How and When Data is Shared**  Following the completion of the thesis, data or parts thereof within the paper can be shared with participants via email if they have previously requested it prior to their participation in the study. |
| **6.5** | **Data Repository**  Not applicable for this study. |
| **6.6** | **Potential Restrictions**  Not applicable for this study. |
| **6.7** | **Embargo Period**  Not applicable for this study. |
| **6.8** | **Right-of-First-Use**  Not applicable for this study. |
| **6.9** | **Citation & Licensing**  Not applicable for this study. |