

Discovery UX Research	Example of Research Areas to Investigate	Qualitative/Quantitative Techniques	Research Techniques Tools	Techniques Benefits	Techniques Limitations
Usability: The ability to do tasks intuitively and removing unnecessary steps/pain points	Mobile Discovery Look and Feel Downtime/availability Services visibility (e.g doc del) Accessibility on/off campus What users do and why they do it.	Qualitative Think-aloud (+ Think-afters) Techniques Semi structured Interviews Quantitative Online Survey	Interviewer survival pack: Pen/Paper for note taking Incentives (e.g Amazon voucher/donuts) Consent forms Topic Guide Equipment: Audio and video recordings software and hardware including Webcam, Microphone and Laptops Smartphones and tablets Other: Participants recruitment plan Survey Software (e.g. Qualtrics) Think-aloud plan: Type and level of difficulty of tasks. Degree of prompting Triangulation (e.g observation, interview).	Qualitative Rich Qualitative Data Think-aloud is an effective way to assess higher-level thinking processes (those which involve working memory) Data gathered can be analysed using different methods Data can be used to study individual differences in performing the same task Quantitative Quantitative data in online survey can be quick to analyse with the right software In the case of survey, easy to gather data and is useful for studying large numbers of users	Participants may not always match target audience in terms of area of studies, knowledge of tools etc. In the case of semi-structured interview, people's ability to self-report facts accurately is limited (practical demonstration vs verbal account) Unnatural situation – monologue Questionnaire – potential biases from subject sampling, Misinterpretations of questions in surveys and quantitative questionnaire Quantitative techniques like survey may not reveal the “Why”

Information Architecture : organising information to support usability. Information Architecture includes layout, navigation and labelling. Information Uncertainty: Investigating uncertainty can serve a diagnostic function in both the design and evaluation of user interfaces.	Time completing tasks/ completion time on current/new primo Things that are more important on Primo Key Services visibility (e.g. requesting a book) How do we help our users to complete/accomplish tasks/ search for information they have set out for (+ room for serendipity) In the case of information uncertainty, how controlled vocabularies, structuration of information and hierarchical levels of menu/ facets can promote an interactive heuristic approach to discovery and learning	Qualitative Think-aloud (+ Think-afters) Techniques Semi structured Interviews Quantitative Analytics Card Sorting – taxonomy AB testing Eye tracking	Interviewer survival pack: Pen/Paper for note taking Incentives (e.g Amazon voucher/donuts) Consent forms Equipment: Audio and video recordings software and hardware including Webcam, Microphone and Laptops Smartphones and tablets Eye tracking software Software for statistical/quantitative data analysis Other: Participants recruitment plan Smartphones and tablets Lab Room Analytic tools (e.g. Google Analytics and Primo Analytics) Think-aloud plan: (See details above)	Qualitative: Rich Qualitative Data Think-aloud is an effective way to assess higher-level thinking processes (those which involve working memory) Quantitative: Provides precise, quantitative, numerical data Data analysis is relatively less time consuming (using statistical software, analytics software)	Use of commercial Software – cost, reliability in terms of how does it process personal data Logs from analytics can be potentially intrusive Relevancy of users included in Logs (e.g librarians) Managing/storing large sets of qualitative/quantitative data Data management plan Sensitive data
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Information seeking behaviour: Investigating users' search, their keeping and re-finding behaviour, relevance selection and interactive behaviour Uncertainty as an aspect of information seeking behaviour Information interaction: Data from User Interaction and Info Seeking Behaviour research can help consolidate findings of information architecture testing.	How and where do they search/access/browse for resources. Info seeking goals Criteria for evaluating/distinguishing relevant resources from the rest (strategy for coping with information overload) Criteria for selecting relevant resources What information to they extract from the relevant resources How uncertainty serves as a useful variable in understanding and foreseeing information-seeking behaviour. How do they use the information they found e.g. sharing with other peers, saving digital copy, print, edit etc. Awareness of copyright/referencing/plagiarism	Qualitative Focus group: • Journey Mapping exercise when doing research/looking for info • Vote on issues with stickers • Roundtable ranking of strengths and weakness of search functions • Research Map • Role swapping • Empathy Mapping Semi-structured interview with Think-aloud Diary journal studies Observations	Interviewer survival pack: Pen/Paper for note taking Incentives (e.g Amazon voucher/donuts) Consent forms Equipment: Audio and video recordings software and hardware including Webcam, Microphone and Laptops - Lab Room Smartphones and tablets Other: Participants recruitment plan Focus Group Plan: • Timing: Hours/breaks/Length of sessions • Format: Type of exercises • Discussion Guide: Facilitator, script with variables, Moderating risks Flipcharts or/and whiteboards Think-aloud plan (see details above)	Rich Qualitative Data Involve participants with analysis/discussion of issues relevant to them Ethnography methods enable us to immerse in participants' lives and enables a relationship to develop with research participants. Mapping provides a rich source of visual data and helps to uncover unarticulated needs Diary studies captures behaviour in the different contexts of everyday life Qualitative data from provides understanding behind qualitative data Emotional behaviour of participants are captured Observations technique helps to identify differences between what people say they do and what they actually do.	Participants may not always match target audience in terms of area of studies, year, knowledge of tools etc. In the case of semi-structured interview, people's ability to self-report facts accurately is limited (practical demonstration vs verbal account) For focus groups some participant may find it difficult to express personal views in groups (fear to disagree with majority) Issues of co-construction or interactional context Hindsight bias Privacy and confidentiality Testing info interaction/behaviour in a naturalistic environment is difficult to achieve. Caution needed when attempting on simplifying/interpreting findings: Consider variables like prior knowledge, academic level, language, cultural/situational context etc.
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