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Designing an expert search interface to increase diversity in expertise representation

Master's thesis

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Abstract

Finding the right expert for collaboration, interviews, or public speaking can be challenging, especially when trying to ensure the expert's credibility and relevance. While several expert search platforms exist, they often rely on keyword searches and self-reported profile data, which can disadvantage lesser-known or underrepresented experts. Users unfamiliar with a domain may struggle to find relevant results, and the visibility of certain experts is influenced by hidden ranking criteria. This raises questions about fairness, bias, and transparency in how experts are selected and displayed. This thesis explores how expert search platforms can be designed to better support diverse and fair representation of expertise. Through a combination of literature review, competitor analysis, and stakeholder interviews, this study identifies key challenges and proposes interface design improvements related to filtering, ranking, and data visualization. The findings aim to support the development of expert search tools that are not only functional, but also fair and inclusive.

Keywords: Expert search interface, expertise representation, interface design, diversity, bias, ranking systems, transparency, expert platforms

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1. Introduction

1.1 Problem Statement

Finding experts online has become an essential task for many groups in society. Researchers, journalists, policymakers, and students all need to identify relevant and trustworthy experts for collaboration, interviews, or advice. However, many current expert search systems reinforce existing biases in how expertise is represented. These systems often lack transparency in how experts are validated and ranked, and they do not support diverse or fair discovery well. This can lead to repeated exposure of the same well-known voices while less visible but equally qualified experts are overlooked.

Public discussions and institutional efforts have shown that this issue is highly relevant. In a LinkedIn post shared by Aalborg University (AAU) on March 8, 2025, the university described its work to make female researchers more visible in the media. After two years of focused effort, the share of women cited in the press rose from 19 percent to 30 percent. At the time, 38 percent of researchers at AAU were women. Among the 50 most cited experts from the university, 21 were women. This made AAU one of the most gender-balanced institutions in terms of expert citations in Denmark (see Appendix B).

To reach this result, the university offered media training to female researchers and published a dedicated list of female experts through the AAU Ekspertlister. However, the effort also sparked discussion. A student commented that many were not aware the list existed, which opened up debate about how the interface was designed. Some suggested changes in the placement or naming of the filter to make it easier to find. Others raised concerns about whether focusing on gender in this way could lead to new forms of exclusion. This example shows how interface design and visibility settings can strongly affect expert discovery and fairness.

The need to support more inclusive, transparent, and usable expert search systems is clear. This research focuses on addressing these challenges by exploring how expertise is currently represented online, how biases occur in search interfaces, and how better design can support more fair and diverse expert discovery.

1.1.1 Research Questions

This project asks the following research questions:

RQ1: How do existing expert platforms represent and validate expertise, and what biases exist in their systems?

RQ2: How can an interface be designed to improve the fair and transparent representation of expertise?

RQ3: What filtering, ranking, and visualization mechanisms can support diverse expert discovery?

RQ4: How do different stakeholders (e.g., researchers, students, industry, journalists, policymakers) search for expertise, and what are their needs?

RQ5: How can expertise visualization highlight diversity and propose alternative experts?

1.2 Research scope

This research was conducted in Denmark with the goal of designing an expert search interface that could be integrated into the national research portal, forskningsportal.dk. The project proposal is currently under evaluation, and funding is being considered to support further development. The focus is national, but the ideas and methods are relevant to broader international discussions about fairness, bias, and diversity in expert representation.

1.3 Outline

This thesis is structured as follows:

Chapter 2 provides a literature review, including the search strategy, analysis of related work, and a competitor analysis of existing expert systems.

Chapter 3 presents the theoretical framework that supports the research.

Chapter 4 outlines the methods used for data collection and analysis.

Chapter 5 introduces the analysis of stakeholder needs and expert representation.

Chapter 6 presents the results of the study.

Chapter 7 offers a discussion of findings in relation to theory and prior research.

Chapter 8 gives the final conclusion.

Chapter 9 outlines directions for future research and development.

Chapter 10 lists all references.

2. Literature review

This literature review follows Cooper's (1988) taxonomy, applying a conceptual organization to group existing research by themes such as expert discovery, interface design, bias and fairness, and evaluation practices. The aim of this review was to establish a foundation of existing knowledge, identify research gaps, and define the value and relevance of the new study. It also helped shape the research questions by highlighting inconsistencies and limitations in prior work (Cronin, Ryan, & Coughlan, 2008).

2.1 Systematic Review

A systematic review approach was adopted to provide structure and transparency in collecting, evaluating, and synthesizing literature related to expert search interfaces. This method ensured that a broad and inclusive list of studies was considered and that thematic saturation could be reached. The steps outlined by Cronin, Ryan, and Coughlan (2008) were followed: defining a research question, applying inclusion and exclusion criteria, selecting and assessing studies, and analysing the findings.

2.1.1 Searching

The initial search was conducted using Google Scholar and the Aalborg University Library catalogue. A broad query was used to retrieve studies on expert search systems, user interfaces, bias, fairness, and design:

("expert search" OR "expert finding")

AND (“user interface” OR “UX design” OR “interaction design” OR dashboard OR system)

AND (bias OR fairness)

AND (“design” OR prototype OR prototyping OR evaluation)

This search returned 2180 results. After reviewing 66 papers, a common pattern emerged: many studies focused on Community Question Answering (CQA) platforms or algorithmic models, which were not the focus of this thesis. To narrow the scope to more relevant human-centered design literature, an updated search query was used:

(“expert search” OR “expert finding”)

AND (“user interface” OR “UX design” OR “interaction design” OR dashboard OR system)

AND (bias OR fairness)

AND (design OR prototype OR prototyping OR evaluation)

AND –“community question answering”

AND -CQA

This revised query returned 1920 results. Papers were skimmed and filtered further by excluding algorithm-centric or network-ranking studies that lacked user interface or fairness considerations. While not every result was read in depth, relevant publications were evaluated for their focus on user-centered systems, interface evaluation, and the design of expert discovery tools.

The search process followed several strategies:

- Thinning: Starting broadly and narrowing by exclusion of irrelevant technical domains.
- Building blocks: Using Boolean operators to combine concept categories (e.g., “expert”, “interface”, “bias”, “design”).
- Pearl growing: Identifying key authors and references within relevant studies and exploring their networks of citations.
- Manual supplementation: Additional references were obtained through emails while searching for survey and interview participant and a supervisor, ensuring inclusion of literature or recent academic contributions.

A concept tracking spreadsheet was used to map themes, concepts, and methodological features across sources. Key inclusion criteria focused on papers that addressed:

- Search or discovery of experts (in academia, industry, or institutional settings)

- Human-centered or UX design
- Bias and diversity in interface use or system outputs
- Prototyping or evaluation of expert search platforms.

2.1.2 Literature Analysis: PQRS System

To analyse the selected literature, the PQRS method (Cohen, 1990; Cronin et al., 2008) was used:

- Preview - Skimming literature to classify relevance and gather preliminary insights into recurring themes.
- Question - Defining guiding questions for reviewing each paper (e.g., Does it involve user interface design? Does it address bias or fairness?).
- Read - Close reading of relevant papers to extract key findings, concepts, strengths, and methodological approaches.
- Summarize - Writing brief summaries in natural language, noting conceptual contributions and weaknesses, to support writing and synthesis in the final review.

The result is a literature base that covers not only the technical functionality of expert-finding systems but also reflects on their design, fairness, and accessibility, particularly for users such as journalists who rely on balanced expert representation. The literature review that follows draws from this analysis and informs the subsequent empirical chapters, including interviews, surveys, and prototype evaluation.

2.1.2 Reviewing

Finding and selecting relevant experts is an important part of many professional tasks, including academic research, policy development, and journalism. Expert search systems are designed to support these activities by helping users identify people with the right knowledge or skills. These systems often combine algorithmic recommendations with search interfaces, using both user input and background data to present relevant results (Husain et al., 2019, p. 1). However, the design of these systems also raises challenges related to fairness, bias, and usability.

Expertise itself is a complex concept. Collins and Evans (2007) argue that it can be divided into contributory expertise, based on producing knowledge in a field, and interactional expertise, which focuses on the ability to discuss that knowledge clearly. This distinction is important in journalism, where the ability to explain ideas clearly often matters more than research activity. Journalists may value experts who can speak to the public or media, rather than those who publish the most. This perspective challenges systems that rely mainly on academic metrics to evaluate experts.

Traditionally, expert search systems use measures such as publication count, citation scores, and affiliation rank to decide which experts to highlight (Lykke et al., 2023, p. 1053). However, these methods often ignore other important factors like communication skills, societal relevance, or public visibility. As Decorte et al. (2024) explain, many current expert ranking systems may unintentionally reinforce existing inequalities. Their study shows how some systems rate users' decisions as biased, when in fact the underlying system itself fails to provide a balanced pool of experts (p. 4).

Journalists are one of the most relevant user groups for expert search systems, especially in a media landscape where time pressure is high and credibility is essential. According to Hertzum (2022), journalists search for information in different ways depending on context. These include searching databases, relying on personal contacts, using social media, or calling known institutions (p. 4). Broersma et al. (2013) describe how the power balance between sources and journalists is shifting. Experts are now more media-trained and strategic, which influences how they are approached and evaluated by journalists (p. 389). The process of identifying trustworthy, available, and diverse experts has become more complex.

Expert-finding in journalism also involves trust-building, credibility assessment, and filtering by characteristics like gender, ethnicity, or affiliation. While some journalists still rely on personal networks, others use online platforms or search engines. However, these systems do not always support diversity. Jørndrup (2022) found that Danish news still often quotes the same group of ethnic majority experts, which shows a lack of diversity in expert selection. A similar issue was highlighted in a Danish media ranking of the most cited experts in 2024, where 46 out of 50 were men (Siegumfeldt, 2025). These patterns show the need for better systems that help journalists find experts who are not only credible but also representative.

Bias in expert search systems can appear at several levels. Decorte et al. (2024) show that users' choices may seem biased because of system design. If a platform shows only certain types of experts or uses narrow evaluation criteria, the results will naturally favour already dominant groups. This problem relates to broader discussions of algorithmic fairness and representation. As Hertzum (2014) explains in his review of expertise seeking, there is no single best way to find experts. The process depends on context, task, and user goals (p. 776). Therefore, expert systems should be flexible and inclusive, rather than one-size-fits-all.

In addition to the challenges of evaluation and bias, the search interface itself plays a major role. Bates (1990) argues that systems should support different search behaviours and not expect users to know exactly what they are looking for (p. 577). Similarly, Beckers and Fuhr (2012) and Broder (2002) suggest that search interfaces should support a range of search modes-from exploratory browsing to focused lookup-to accommodate different user needs. Hofmann et al. (2010, pp. 995-997) highlight how expert search depends on context, such as the search purpose and similarity criteria, showing the need for interfaces that adapt to diverse user needs and expert domains. These ideas align with design principles in information architecture and user-centered design (Rosenfeld et al., 2015; Russell-Rose & Tate, 2012), as well as frameworks for discovery language that facilitate semantic and contextual adaptation in search systems (Russell-Rose et al., 2014, pp. 3-10). Nelson and Stolterman (2003, pp. 25-28; 2012, pp. 1-91) further stress that design is an iterative, judgment-driven process that must respond to unpredictable, real-world complexities. Koskinen et al. (2011, pp. 89-110) add that design research through practice helps create usable, context-aware solutions by involving users throughout.

While some expert systems include recommender features, most are not designed with journalists in mind. Research shows that recommender systems can be improved by considering novelty and diversity, not just accuracy (Cremonesi et al., 2011, p. 709). Pazzani and Billsus (2011, pp. 85-134) explain how content-based recommenders leverage profile features to personalize suggestions, but such systems must avoid reinforcing biases or limiting diversity. For expert search, this means showing a wider range of relevant experts, not just the most obvious or frequently cited ones. Systems that include topic modelling or contextual search, such as those based on probabilistic models (Blei, 2012), can help uncover experts who might otherwise be overlooked.

Recent studies have also explored how expert profiles are ranked and displayed. Schoegje et al. (2024) compared different ways of presenting expert search results and found that users prefer systems that are transparent about how experts are selected (p. 63). Visual and interactive interfaces can help users compare experts across dimensions like field, experience, and visibility. Liebregts et al. (2009) showed that combining profile data with structured metadata improves users' ability to find the right expert in university settings (p. 588). These findings are relevant for journalism, where quick comparison and credibility assessment are essential.

Finally, design research can support the development of better systems. The design-based research approach (Design-Based Research Collective, 2003) encourages working closely with users, in this case, journalists, to understand their needs and test interface ideas in real-world contexts. Co-creation methods, such as those proposed by Sanders and Stappers (2008), suggest involving end-users directly in the design process. Knapp's (2016, p. 20-50) design sprint method also provides a rapid, iterative way to test and refine solutions.

Conducting a thorough literature review is essential to framing this research. Rowley and Slack (2013, pp. 33-36) highlight the importance of systematic review methods for identifying key themes and gaps in knowledge, which has guided the empirical work presented here. Peters and Bucchi (2021, pp. 114-128) remind us that scientists' roles as public experts add complexity to how expertise should be represented and communicated, especially in media contexts.

This literature review has discussed the complexity of defining and evaluating expertise, the ways journalists search for experts, and the limitations of current expert search systems. It has also highlighted the importance of fairness, diversity, and user-centered design in developing tools for expert discovery. These insights inform the empirical part of this thesis, which focuses on journalists as primary users and explores their needs, experiences, and preferences through surveys, interviews, and interface evaluation.

2.2 Competitor Analysis of Expert Search Platforms

To inform the design of a more inclusive expert search interface, a competitor analysis was conducted of four platforms: London Speaker Bureau (LSB), DiverseEksperter.dk, Aalborg University's Expert Lists (AAU Ekspertlister), and Expertise Finder. Each platform represents a distinct approach to expertise discovery ranging commercial, advocacy-focused, and academic models. The analysis focused on six key areas: diversity and inclusion criteria, ease of finding experts, filtering systems, representation of expertise, expert profile structure, and search functionality.

Diversity and Inclusion Criteria

The platforms demonstrate varying commitments to diversity. DiverseEksperter.dk exclusively features female and nonbinary experts, reflecting a strong focus on gender equity. London Speaker Bureau includes curated categories such as "Inspirational Women", "Diversity", and "Youthtopia" (young changemakers with fresh perspectives) addressing gender and broader diversity to some extent, but without a comprehensive strategy. AAU Ekspertlister offers a dedicated filter for female researchers, supporting gender representation, though not as extensively as DiverseEksperter.dk. Expertise Finder adopts a generally inclusive approach but does not provide specific diversity filters. These differences highlight the need for future expert search interfaces to incorporate robust filtering and sorting options for diversity criteria.

Ease of Finding Experts

User experience in finding relevant experts varies. LSB and Expertise Finder both offer advanced search capabilities, including Boolean operators, allowing users to refine searches effectively. Also, expertise finder provides PDF file with a Google Search tips for journalists teaching search bar operators, writing a search query, and advanced image search. DiverseEksperter.dk relies on a simple keyword search with suggestions, which may limit search precision. AAU Ekspertlister utilizes the VBN (Videnbasen, The knowledge base) Aalborg University's research portal, which is comprehensive but potentially less user-friendly for new users. These findings suggest that new interfaces should implement effective keyword search and consider advanced options like Boolean search to accommodate various user needs.

Filtering Systems

Filtering features also vary in complexity. LSB provides advanced topic filters, enabling users to narrow searches by specific expertise areas. AAU Ekspertlister includes filters within its VBN portal for refined results. Expertise Finder allows filtering by institution and expertise. In contrast, DiverseEksperter.dk offers only basic category filtering. This underscores the importance of offering granular and diverse filters in new designs, such as by topic, institution, and specific expertise.

Representation of Expertise

Each platform represents expertise differently. LSB emphasizes professional visibility and speaking experience, highlighting experts as presenters. DiverseEksperter.dk focuses on professional achievements and media relevance, showcasing experts with strong records and media communication experience. AAU Ekspertlister provides research-based profiles, emphasizing academic credentials and public engagement. Expertise Finder targets media-friendly experts available for interviews. A new interface should ensure profiles include a range of expertise indicators, research, practical experience, and media presence, for a holistic view.

Expert Profile Structure

Profile structures vary in depth and usability. LSB offers rich profiles with videos and multimedia, providing comprehensive and engaging representations. DiverseEksperter.dk features structured profiles with key information and external links, offering concise overviews. AAU Ekspertlister links to detailed VBN profiles with publications, projects, and research outputs. Expertise Finder provides simple, essential profiles. An effective new interface should balance depth and usability, supporting expert self-representation and efficient access to key information.

Search Functionality

Search functionality ranges from advanced to basic. LSB supports smart suggestions, Boolean search, and keyword highlighting for a user-friendly experience. DiverseEksperter.dk relies on manual keyword search and static categories, limiting effectiveness. AAU Ekspertlister redirects to the full-text VBN search, which is powerful but not optimized for expert discovery. Expertise Finder is highly keyword-driven and minimalistic but effective. Future designs should include features like keyword highlighting and search suggestions to improve user experience and search effectiveness.

Table 1

Competitor Analysis with Design Recommendations

Criteria	London Speaker Bureau (LSB)	DiverseEksperter.dk	AAU Ekspertlister	Expertise Finder	Key Notes for New Design
Diversity & Inclusion	Some curated categories (e.g., Inspirational Women, Diversity, LGBTQ, Youthtopia, global regions); diversity not central	Exclusively female and nonbinary experts; strong gender equity focus; selection based on education, achievements, media relevance	Filter for female researchers; some gender diversity; curated lists for specific topics	No explicit diversity filters; generally inclusive but not focused on diversity	Offer robust, multi-dimensional diversity filters (gender, geography, field, etc.); make diversity options visible and actionable
Ease of Finding Experts	Advanced search with Boolean operators; guided queries; sleek UI	Simple keyword search with suggestions; accessible but limited precision	Lists and sublists by topic; redirects to comprehensive VBN search (may be less user-friendly for new users)	Simple keyword search with suggestions; alphabetical categories; quick access	Implement intuitive keyword search with suggestions and Boolean options; ensure both simple and advanced search paths
Filtering Systems	Extensive topic filters; advanced filtering options	Basic category filtering only	Filters within VBN portal; filter by female researchers; topic-based lists	Filter by institution and expertise; some refinement options	Provide granular, multi-criteria filters (topic, institution, expertise, diversity); support easy filter combination
Representation of Expertise	Focus on public appeal, speaking experience, branding; multimedia profiles	Professional achievements, media relevance, leadership; advocacy-driven	Academic credentials, publications, projects, public engagement; research-based	Media-friendly, academic focus; availability for interviews	Support multiple expertise indicators (research, practical, media presence); allow experts to

					highlight unique strengths
Expert Profile Structure	Rich profiles with videos, multimedia, detailed content	Structured profiles with key info, external links, concise overviews	Comprehensive VBN profiles: publications, projects, collaborations	Simple, essential profiles; link to faculty page	Balance depth and usability; allow multimedia, links, and self-editing; make sure important information stands out and is easy to scan
Search Functionality	Smart suggestions, Boolean search, keyword highlighting	Manual keyword search, static categories; less advanced	Redirects to full-text VBN search; powerful but not optimized for expert discovery	Highly keyword-driven, minimalistic but effective, keyword highlighting	Include keyword highlighting, smart suggestions, and guided search; optimize for both precision and accessibility

Note. The analysis is based on publicly available features of each platform as of May 2025. "Diversity & Inclusion" refers to explicit filters or curated categories promoting underrepresented groups. "Ease of Finding Experts" considers search options and user interface intuitiveness. This table aims to inform design decisions for a new expert search interface, focusing on inclusivity and usability.

Summary

This competitor analysis highlights the diverse priorities and practices in expert search platforms regarding discoverability, inclusivity, and usability. Insights from this analysis will guide the creation of a new expert search interface that supports visibility, fairness, and discoverability for a broader range of experts, combining best practices in profile structure, search and filtering support, and how diversity is highlighted in expert profiles.

3. Theory

3.1 Human-Computer Interaction (HCI)

This thesis is grounded in the theoretical principles of Human-Computer Interaction (HCI). HCI is an interdisciplinary field that explores how people interact with computer systems and how those systems can be designed to support usability, accessibility, and human values (Preece, Rogers, & Sharp, 2019; Bardzell & Bardzell, 2016). It draws from areas such as computer science, cognitive psychology, design, and sociology to develop interactive systems that are effective, ethical, and context aware.

The research adopts a human-centered design (HCD) perspective, a foundational approach in contemporary HCI. HCD emphasizes designing systems that consider the full range of human experiences, contexts, and values, going beyond mere functionality to foster meaningful, fair, and inclusive interactions. In the context of expert search platforms, this means understanding how diverse users, such as journalists, researchers, and policy professionals, search for expertise, interpret profiles, and evaluate credibility within complex social and professional contexts.

Modern HCI theory is paying more attention to the social and ethical aspects of interaction design. Aligning with this critical approach, this thesis focuses on how design decisions influence the representation and discoverability of underrepresented experts, focusing on the importance of inclusivity and self-awareness in interface design.

To add to this inclusive view, the thesis also uses ideas from Feminist HCI (Bardzell & Bardzell, 2016), which supports making systems that encourage fairness, diversity, and careful thinking about bias. This is important for dealing with unfairness in how experts are shown, asking designers to question common stories and give more attention to less heard voices.

Together, these ideas offer a strong base for studying current expert search systems and helping create a new platform that is easy to use, socially responsible, and human-centered.

3.2 Human-Centered Design (HCD)

Human-Centered Design (HCD) is a core approach within HCI that focuses on designing interactive systems around the needs, goals, and contexts of the people who use them (Maguire, 2001). It involves iterative development cycles where designers actively engage with users to understand their experiences, gather feedback, and refine the system accordingly. This approach ensures that digital tools are not only functional but also intuitive, accessible, and meaningful in real-world use.

HCD methods include user research, prototyping, usability testing, and evaluation-all aimed at deeply understanding user behaviours and challenges (Lazar, Feng, & Hochheiser, 2017). In this thesis, HCD principles guide the exploration of how journalists, researchers, and policymakers interact with expert search platforms, shaping the design to better support their diverse ways of searching, interpreting, and trusting expert information.

By centering the design process on users and their contexts, HCD helps to reveal hidden biases and barriers in existing systems. It also opens opportunities to create more inclusive interfaces that accommodate a broad spectrum of expertise and user needs. This focus aligns with the broader goals of this thesis, to develop an expert search platform that is not only

efficient and usable but also fair and responsive to the social complexities involved in expertise representation.

4. Methodology

This chapter describes the methods used in this thesis. The goal of the project is to explore how an expert search interface can be designed to better support fair and diverse representations of expertise. To do this, I used a mix of qualitative and design-based methods that helped me understand user needs, explore existing platforms, and test design ideas through prototypes.

Because the topic involves both social and technical issues such as bias in expert selection and how users interact with digital tools, it was important to choose methods that could handle this complexity. These included stakeholder and competitor analyses, a survey, interviews, empathy map, personas, prototyping, usability testing, and thematic analysis. Each method contributed in different ways to building an understanding of the problem and developing possible solutions.

The overall process was guided by a design thinking approach. This is a method often used in design and innovation projects which helps structure the work into phases like understanding users, defining the problem, generating ideas, building prototypes, and testing them. It allowed me to move back and forth between research and design in an iterative way.

The next sections explain each method in more detail and show how they were used during the different stages of the project.

4.1 Participants

There were 13 participants in a survey and one in an interview. The survey participants came from a range of professional backgrounds, including students, journalists, researchers, policymakers, conference organizers, and other expert seekers. These roles were chosen based on the assumption that they represent key user types of an expert search interface. The list of roles was open-ended with an option to select “other” to allow for responses outside the predefined categories and to identify any roles that may have been overlooked.

Participants were recruited through email, LinkedIn posts, and direct personal messages. This recruitment approach aligns with using social media and online networks as sampling frames, a method that is increasingly common in research, but which may introduce bias by favouring individuals active on these platforms (Bhutta, 2012, pp. 60-61). The selection was purposive, aiming to reach individuals likely to have relevant experiences, which is a common approach in exploratory qualitative research (Bryman, 2012, pp. 415-416).

The interview participant was selected based on relevant expertise in the areas of media representation and expert systems. The participant was contacted via email following recommendations from several colleagues. National context was also considered important, as the interview aimed to inform the development of a Danish expert search platform proposed in this project.

Although participants represented a variety of roles, the sample was not intended to be fully representative of all potential users of expert search interfaces. The relatively small sample size reflects the qualitative and exploratory nature of this study. While quantitative research often requires larger samples to achieve statistical power and generalizability (Bryman, 2012, pp. 187-

188), it typically employs smaller samples to enable a deeper understanding of experiences and meanings (Bryman, 2012, pp. 424-426). The primary goal was to gather diverse perspectives that could inform the early design and development of an expert search platform.

4.2 Research Design

The research focuses on comparative design, comparing the perspectives of seven different stakeholder groups (students, journalists, researchers, conference organizers, recruiters, policymakers, and other expert searchers) to identify differences or similarities based on selected criteria, mostly derived from the literature review.

Bryman (2016) explains that comparative design starts by identifying distinguishing characteristics between two or more cases, which then form the basis for theoretical reflections and the discovery of contrasting findings (p. 68). This method allows for systematic exploration of potential users to reveal patterns, behaviours, causes, or effects. The goal is to develop a deeper understanding of the various interest groups involved in expert searching.

This study uses qualitative research methods, including surveys and an unstructured interview, to conduct an in-depth analysis of a case. Qualitative research prioritizes the collection and analysis of textual data to gain rich insights into participants' experiences and meanings (Foster et al., 2021, pp. 911-914).

The methodology chapter concludes by placing this research within a design thinking framework, highlighting how iterative, user-centered design principles will guide the development of an expert search platform responsive to the diverse needs and perspectives of stakeholders.

4.3 Selection of methods

4.3.1 Stakeholder Analysis

Stakeholder analysis was initially considered as part of the research design to systematically identify and understand the different groups involved in or affected by expert search interfaces. This method is useful for mapping the interests, needs, and influences of various stakeholders, which can inform more targeted and inclusive design decisions (Schmeer, 2000, pp. 3-5).

Although a formal stakeholder analysis was not conducted in this study, the importance of multiple stakeholder perspectives was addressed through purposive sampling in the survey and interview stages. The inclusion of diverse participant roles, such as students, journalists, researchers, conference organizers, recruiters, policymakers, and other expert searchers, reflects an effort to capture a broad range of user needs and viewpoints.

Future research could benefit from a more explicit stakeholder analysis to deepen understanding of stakeholder relationships, power dynamics, and potential conflicts, which are important considerations in the development of complex expert search systems (Schmeer, 2000, pp. 10-12).

4.3.2 Competitor Analysis

As part of a user-centered design approach, a competitor analysis was done to examine how existing expert search platforms present expertise, support discoverability, and deal with issues of bias. This method is commonly used in Human-Computer Interaction (HCI), user experience (UX) design, and design thinking to understand what works well or poorly in existing systems and to help guide new designs (Preece et al., 2015, pp. 408-410; Gibbons, 2019, pp. 22-25).

In this study, competitor analysis was used as a type of comparative interface evaluation. This means looking at how different platforms solve similar problems, with a focus on how their design supports users. This fits with the early "empathize" and "define" phases of design thinking, where designers study existing solutions to better understand user needs (Brown, 2009, pp. 40-45). It also draws on heuristic evaluation ideas from HCI, which aim to find common usability issues and highlight ways to improve interaction (Nielsen & Molich, 1990, p. 250).

Four expert search platforms were selected for comparison: London Speaker Bureau, a global speaker agency; DiverseEksperter.dk, a Danish platform for promoting women and nonbinary experts; AAU Ekspertlister, which lists researchers at Aalborg University; and Expertise Finder, a North American tool used by journalists to find academic experts.

The analysis was structured around six key aspects: diversity and inclusion criteria, ease of finding experts, filtering systems, how expertise is represented, expert profile structure, and search functionality.

These categories were not taken directly from existing literature but were based on what seemed important for designing an inclusive and usable expert search system. They were partly inspired by general design guidelines for search interfaces (Hearst, 2009, pp. 5-8) and discussions of fairness in digital systems (Binns et al., 2018, pp. 5-6). The goal of the analysis was to see what current platforms are doing well, where they might fall short, and how these insights could help shape the design of a new platform.

4.3.3 Survey

A short online survey was chosen to gather insights from a variety of potential users of expert search platforms. Although surveys are often linked to quantitative research, they can also be used in qualitative and exploratory studies when the aim is to capture a range of perspectives and identify themes or patterns (Bryman, 2012, pp. 232-234; Foster et al., 2021, pp. 238-239). In user experience (UX) research, surveys are useful for collecting input from multiple participants in a structured format (Goodman, Kuniavsky, & Moed, 2012, pp. 327-384).

The survey included both multiple-choice and open-ended questions. This mix allowed participants to respond quickly while still offering space to provide detailed input. Open-ended responses were especially important for identifying unexpected needs and gaining a better understanding of users' goals and challenges. Surveys that include qualitative elements are often used in early-stage design research to inform the direction of interface development (Goodman et al., 2012, pp. 327-330).

The survey was created using Microsoft Forms and shared through LinkedIn, email, and direct personal messages. This made it possible to quickly reach a diverse group of participants. However, using social media and personal networks as distribution channels can introduce sample bias, since it may favour individuals who are more active online or within the researcher's professional network (Bhutta, 2012, pp. 60-61).

While the sample size was small, the responses offered valuable insights into how different stakeholders, such as journalists, researchers, and conference organizers, search for experts and what they expect from such platforms. These findings were used to shape the initial design ideas and also informed the interview stage. Basic guidelines for survey research were followed to ensure that the results were reported clearly and with enough context (Grimshaw, 2014, pp. 206-213).

4.3.4 Interview

To get deeper insights, one unstructured interview was done with an expert in media representation and expert systems. Interviews are a common way to collect detailed information in qualitative research, helping us understand people's experiences and views (Bryman, 2012, pp. 468-470). They are useful in user research to learn about user needs and challenges (Goodman, Kuniavsky, & Moed, 2012, pp. 95-97).

An unstructured interview (see Appendix G) was chosen to let the participant talk freely. This way, new and unexpected topics could come up, and the researcher could ask follow-up questions (Kvale & Brinkmann, 2008, pp. 20-23). Although there was a general plan based on the survey and literature review, the conversation was open.

The interview was done in English on Microsoft Teams and lasted about one hour. It was recorded with the participant's permission (see Appendix F) and later transcribed for analysis (see Appendix O). The participant was chosen on purpose because of their expertise and was recommended by colleagues (Bryman, 2012, pp. 415-416; Goodman et al., 2012, pp. 107-110).

The interview provided useful insights about how experts are selected and represented in the media. These insights helped shape the design of the expert search platform, especially regarding how to improve visibility, trust, and diversity.

4.3.5 Empathy Map

The empathy map was chosen as one of the methods in this project to help build a deeper understanding of the target users, especially journalists and researchers who use expert search platforms. An empathy map is a visual tool that captures what users say, think, feel, and do, helping to synthesize qualitative data from interviews and observations into a user-centered format.

This method supports the design process by fostering empathy and highlighting users' needs, motivations, and pain points. It enables the research to move beyond raw data and engage with users' perspectives in a more holistic way. Using empathy maps aligns well with the human-centered focus of this thesis and the design thinking approach, which emphasizes understanding users' experiences before ideating solutions.

Empathy maps were selected over other similar tools because they provide a straightforward and flexible way to organize insights from diverse data sources. They helped bridge the gap between data collection and design activities, informing the creation of personas and guiding the prototyping process (Gibbons, 2018).

4.3.6 Personas

Personas were created to represent typical users of the expert search platform, based on data collected from the survey and interview. Personas help to humanize user needs and

behaviours, making it easier to design with real users in mind. They summarize key characteristics, goals, and challenges of different user types, which can guide design decisions throughout the project.

Although the personas are fictional, they are grounded in actual research findings and reflect diverse perspectives gathered during the study. This method is widely used in user-centered design to focus development on user needs and communicate insights effectively within design teams (Jansen, Jung, Salminen, Guan, & Nielsen, 2021).

By developing personas, the project aimed to ensure that the expert search interface would meet the expectations of a range of users, from students and journalists to researchers and policymakers, highlighting differences and similarities in how they approach expert discovery.

4.3.7 Prototyping

Prototyping is an essential step in design that involves creating preliminary versions of a product or interface to explore ideas, test concepts, and gather user feedback (Camburn et al., 2017). Prototypes can range from simple sketches to interactive digital models, depending on the goals of the design process and the level of detail required (Houde & Hill, 1997).

In this study, low- to mid-fidelity prototype pages were developed using Figma to visualize the expert search platform's key features. These included eight pages: search, results, compare, expert profile, two types of suggestion views (a list and a carousel), and a booking page. The prototype was introduced at the end of the interview session to engage the participant in prototype testing.

The participant was invited to explore and comment on the prototype, providing initial feedback and suggestions. This approach helped ignite discussion and enabled a form of co-design, where the potential user's insights directly informed the platform's development. Incorporating early user input through prototyping can uncover usability issues and support iterative improvements before more formal usability testing is conducted (Camburn et al., 2017; Houde & Hill, 1997).

4.3.8 Usability Testing

Usability testing is a way to see how real users interact with a system or prototype. It helps find problems, understand user frustrations, and gather ideas to make the system easier and more enjoyable to use (Nielsen, 1993, pp. 115-159). Users try to complete tasks while researchers watch and take notes.

Although usability testing was considered for this project, it was not done because of limited time and resources. Instead, surveys and interviews were used to collect early feedback. Usability testing is still important and will be recommended for future work to check how well the expert search platform works for users and to improve it (Gibbons, 2019).

4.3.9 Thematic Analysis

Thematic analysis is a way to study qualitative data by finding patterns or themes. It helps to organize and describe the data in detail (Braun & Clarke, 2006, pp. 79-81). This method is useful for exploring the different views and experiences of participants.

In this study, thematic analysis was used to look closely at the survey answers and the interview transcript. The process involved reading the data carefully, coding important points,

and grouping similar ideas into themes. This helped to understand the main topics that came up across different types of users.

Thematic analysis also helped to compare what different stakeholder groups said, showing where their views were similar or different. This way, the study could identify shared concerns and unique needs of groups like students, journalists, and policymakers.

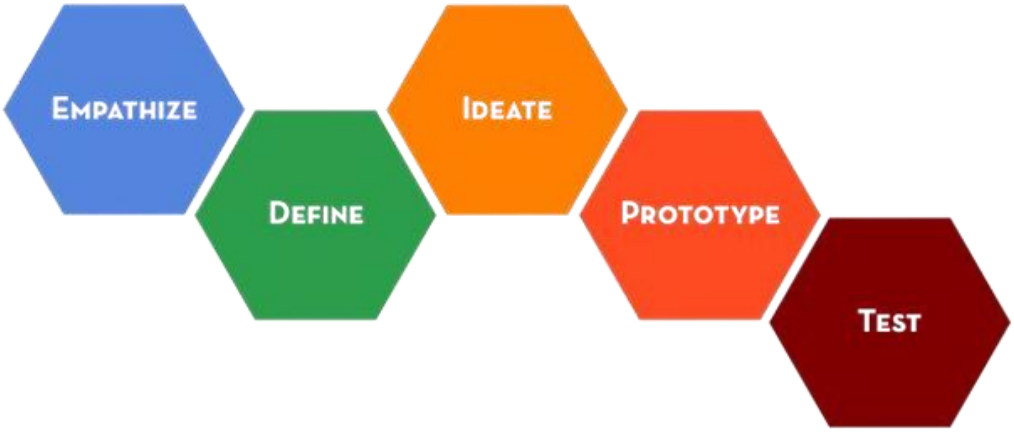
Using thematic analysis made it possible to get a clear and organized picture of the data, which informed the design of the expert search platform (Nowell et al., 2017, pp. 2-4).

4.3.10 Design Thinking

Design thinking is a human-centered approach to problem-solving that emphasizes understanding users' needs, exploring ideas, and testing solutions in an iterative way (Luchs, 2015, pp. 1-4). It is often broken down into stages such as empathize, define, ideate, prototype, and test (see Figure 1).

Figure 1

Design Thinking Model



Note. Model of Design Thinking developed by the d.school of Stanford. Reprinted from *An Introduction to Design Thinking PROCESS GUIDE* (2010), https://dschool.stanford.edu.

This study's methods fit well within the design thinking framework, helping to guide the process from understanding users to creating and refining an expert search platform.

Empathize

To understand the needs and experiences of different users, a survey was conducted with various stakeholder groups including students, journalists, and policymakers. This helped gather broad insights into user needs and challenges. Additionally, an unstructured interview with an expert provided deeper understanding and context (Bryman, 2012, pp. 468-470; Goodman, Kuniavsky, & Moed, 2012, pp. 95-97).

To further deepen user understanding, empathy mapping was employed as a tool to organize qualitative data from interviews and other sources. Empathy map helped capture what user say, think, feel, and do, allowing the research to gain richer insights into users' perspectives and experiences. This supported the creation of more accurate personas and guided the design process towards addressing real user needs (Gibbons, 2018).

Define

A competitor analysis was performed to examine how existing expert search platforms represent expertise and address bias. This helped clarify problems with current solutions and set goals for the new design (Preece, Rogers, & Sharp, 2015, pp. 250-255; Gibbons, 2019).

Ideate

Based on insights from earlier stages, personas were created to represent key user types. These personas helped focus design ideas on real user needs and contexts (Jansen et al., 2021).

Prototype

Low-fidelity prototype pages were designed using Figma to visualize ideas and features. These prototypes were reviewed during the interview to gather feedback and support co-design discussions with the expert user (Camburn et al., 2017; Houde & Hill, 1997, pp. 367-370).

Test

While formal usability testing was not conducted, the interview feedback included a form of informal prototype testing. This provided early insights into the usability and usefulness of the design. Usability testing is recommended for future research to validate and improve the platform (Nielsen, 1993, pp. 115-120; Gibbons, 2019).

By structuring the research and design process around these design thinking stages, the study ensured a user-focused and iterative approach that helps create more effective and inclusive expert search tools.

4.4 Implementation of methods

4.4.1 Competitor Analysis

A competitor analysis was carried out to examine how existing expert search platforms handle search functionality, diversity representation, and profile structures. Four platforms were selected for comparison: London Speaker Bureau, DiverseEksperter.dk, Aalborg University's Expert Lists, and Expertise Finder. The analysis focused on six criteria: diversity and inclusion, ease of expert discovery, filtering options, representation of expertise, profile structure, and search functionality. This process helped identify best practices and gaps in current systems and directly informed design decisions for this project. A full breakdown of platforms and evaluation criteria is included in Chapter 2.2 of the Literature Review.

4.4.2 Survey

To better understand expert search practices, preferences, and challenges across various stakeholder groups, I designed and distributed a survey using Microsoft Forms (see Appendix C). The survey consisted of 13 questions, divided into five thematic sections: background, search behaviour, filters and features, engagement and preferences, and follow-up.

The *first section* gathered basic information about participants' roles and how frequently they searched for experts. Stakeholders included students, journalists, researchers, conference organizers, recruiters, and policymakers. This contextual data helped interpret responses and identify frequent users of expert search tools.

The *second section* explored participants' current search strategies and decision-making criteria. Respondents indicated which tools they typically use to find experts, including Google Search, LinkedIn, ResearchGate, Google Scholar, conference speaker lists, personal networks, speaker bureaus such as the London Speaker Bureau and WBN, and internal workplace databases. They also identified key selection factors, such as academic credentials, industry or speaking experience, media presence, social media following, and demographic attributes like age and gender. Participants could also describe additional considerations or challenges they encounter when searching for experts.

The *third section* aimed to inform the design of a future expert search interface. Respondents rated the usefulness of various filters on a 5-point Likert scale (1 = not useful, 5 = very useful). These included filters for field of expertise, affiliation (e.g., university, industry, think tank), location, language proficiency, years of experience, publication or citation count, speaking experience, availability for interviews or consultations, social media presence, and diversity filters. An open text field allowed suggestions for additional filters.

The *fourth section* assessed participants' engagement with and preferences for an expert recommender platform. They were asked whether they would use such a platform, which three features they considered most important, and what information should be included in expert profiles. Respondents also described how they typically verify an expert's credibility and were invited to leave further comments or suggestions.

The *final section* invited participants to leave their email addresses if they were open to being contacted for follow-up interviews or contextual inquiries.

Survey Distribution

The survey was distributed through a combination of direct outreach and online promotion. I emailed editorial or main contact and some personal addresses at a range of Danish media organizations, including Aller Media, Berlingske, Ingeniøren, Estate Media, Altinget, TV2 Nord, Politiken, Jyllands-Posten, Journalistforbundet, Journalisten, KNR, Sermitsiaq, and The Danish School of Media and Journalism (DMJX).

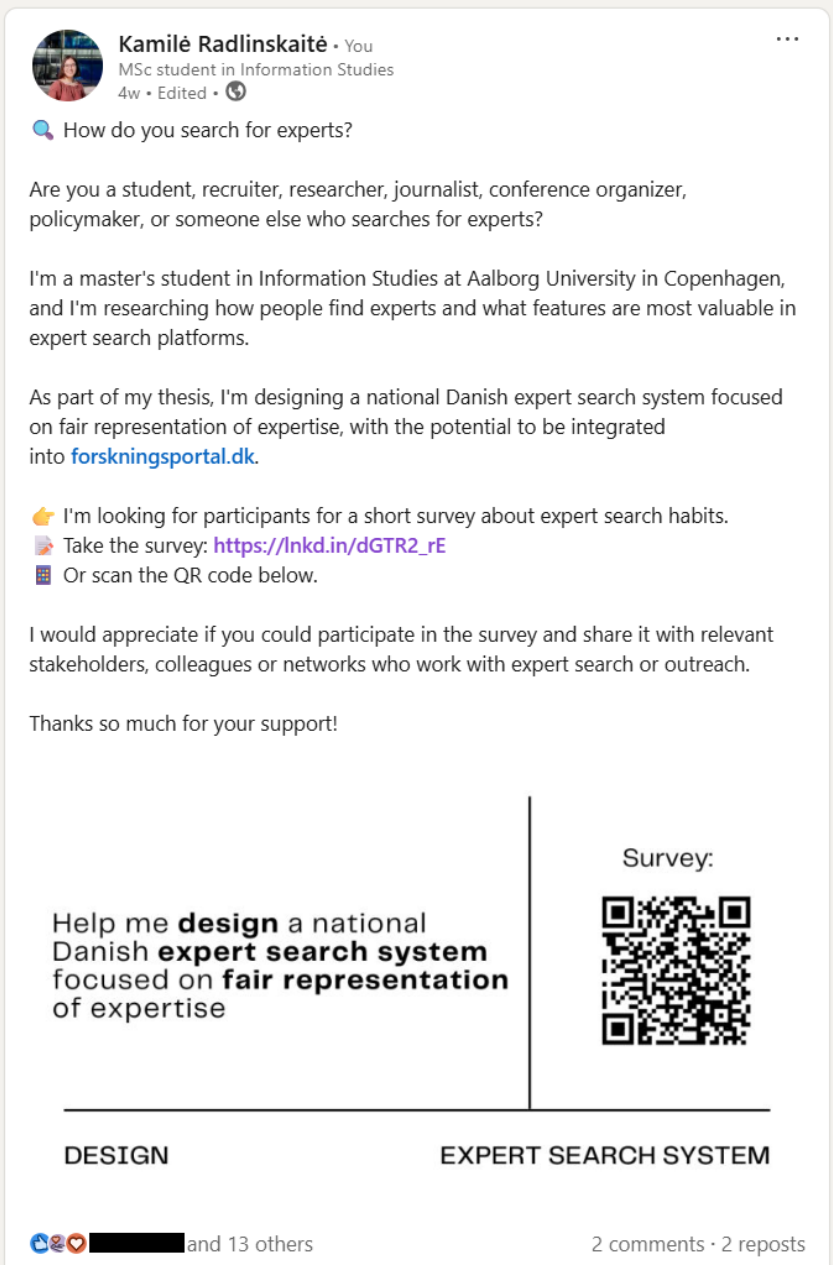
At a career day event (KarriereDagene), I met recruiters from JobIndex and Academic Work Denmark, collected their contact details, and followed up with them afterward. I also attended the Open House event at DR Byen and DR Copenhagen, where I received the contact information of a journalist/student.

In addition, I contacted professionals based in Denmark whom I found via LinkedIn, focusing on individuals working in industry roles that involve organizing conferences, meet-ups, and corporate events. One of these interactions led to a brief Zoom conversation, which I summarized in Appendix A. I also reached out to people from my personal network. Some contacts were identified through my own research, while others were suggested by individuals I had already spoken to.

To expand the survey's reach, it was also promoted on LinkedIn via posts made by me (see Figure 2) and my thesis supervisor (see Appendix D). The supervisor's post, originally written in Danish, was translated into English for the purpose of this thesis.

Figure 2

LinkedIn Post

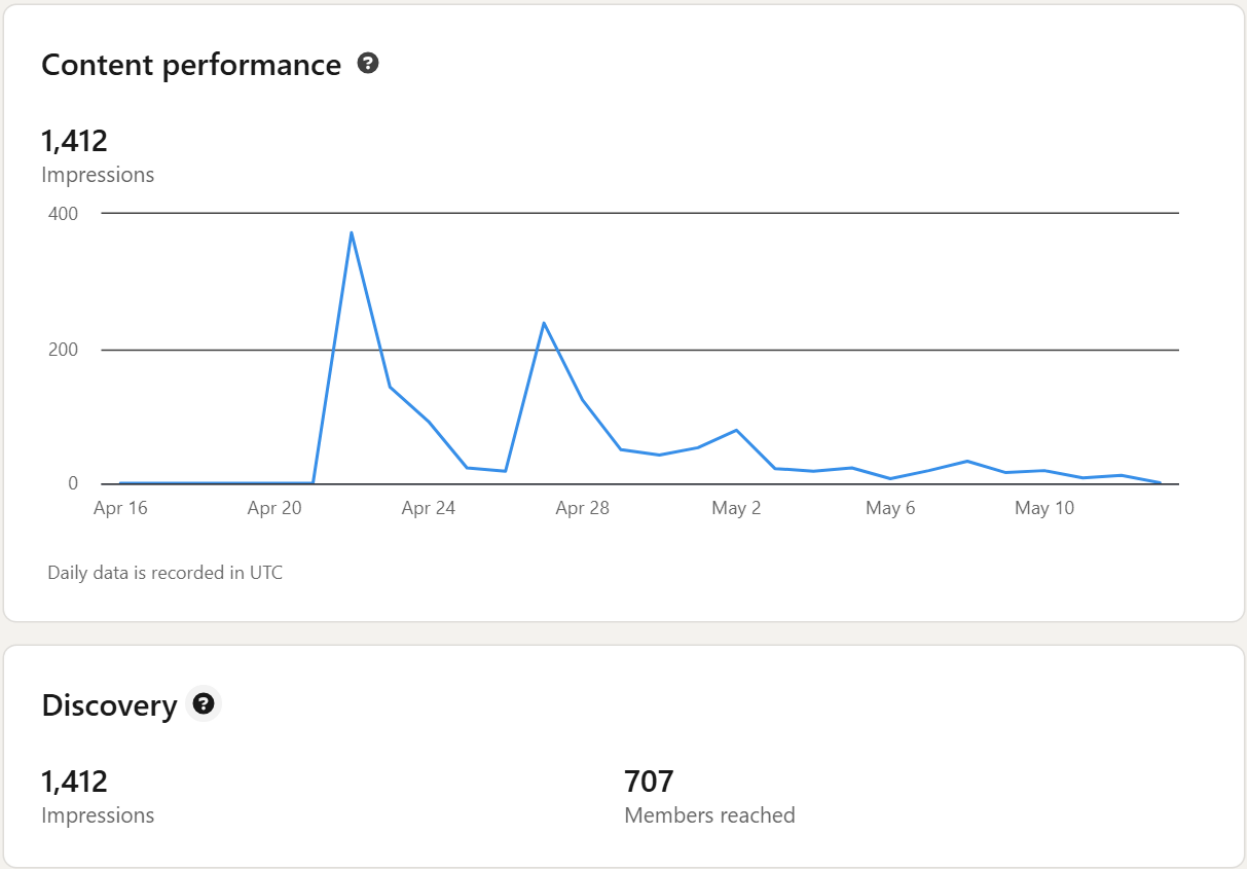


Note. The LinkedIn post explained the research purpose and included a link and QR code for easy survey access.

The performance of my post is summarized in Figure 3.

Figure 3

LinkedIn Post Performance



Note. Content performance graph shows change in number of daily impressions during the selected time range. The post received 1,412 impressions and reached 707 unique users. It generated 14 reactions, 2 comments, and 2 reposts. One comment recommended using Survey Circle (https://www.surveycircle.com/en/) a platform designed to expand survey reach via targeted communities and promotional visuals.

Additionally, my supervisor contacted the communications department at Aalborg University to support further promotion of the survey (see Appendix E).

4.4.3 Interview

Interview participant

The interviewee is an associate professor at the Danish School of Media and Journalism and is currently pursuing a PhD. The academic focus includes journalism education, particularly how students are taught to use expert sources. The role involves developing and teaching relevant courses and conducting research on how expertise is identified and represented in the media.

Interview participant was found through emails and references from colleagues.

Interview structure and questions

The interview began with a short introduction (see Appendix F) and a verbal consent statement (see Appendix G). Once consent to record and use quotes was given, the interview proceeded. It was conducted online using Microsoft Teams, and the audio was recorded for transcription and analysis.

The interview (see Appendix H) consisted of 13 prepared questions, supported by follow-up questions that emerged naturally during the conversation. The questions were grouped into the following themes: background, expert search behaviour, defining expertise, bias in representation, platform evaluation, prototype testing, co-creation, and wrap-up.

Content of the Interview

The interview covered several topics, including how journalism students are taught to search for experts, what characteristics are considered important when selecting an expert, and the challenges of ensuring diversity and avoiding bias. The conversation also included a discussion of design ideas for an expert search interface, with a focus on usability, availability, and relevance.

Platform Evaluation and Prototype Testing

To gather feedback on existing expert search tools and the early-stage prototype, a digital Miro whiteboard was used during the interview (see Appendix I). The board was divided into sections based on different platforms discussed in the competitor analysis chapter 2.2, London Speaker Bureau, DiverseEksperter.dk, AAU Ekspertlister, and Expertise Finder, as well as the new prototype created for this project.

Each section on the board included screenshots and links to the platforms, allowing for direct comparison and discussion. The interviewee was encouraged to reflect on what worked well, what was missing, and how the prototype could be improved based on their experience and perspective.

4.4.4 Empathy map

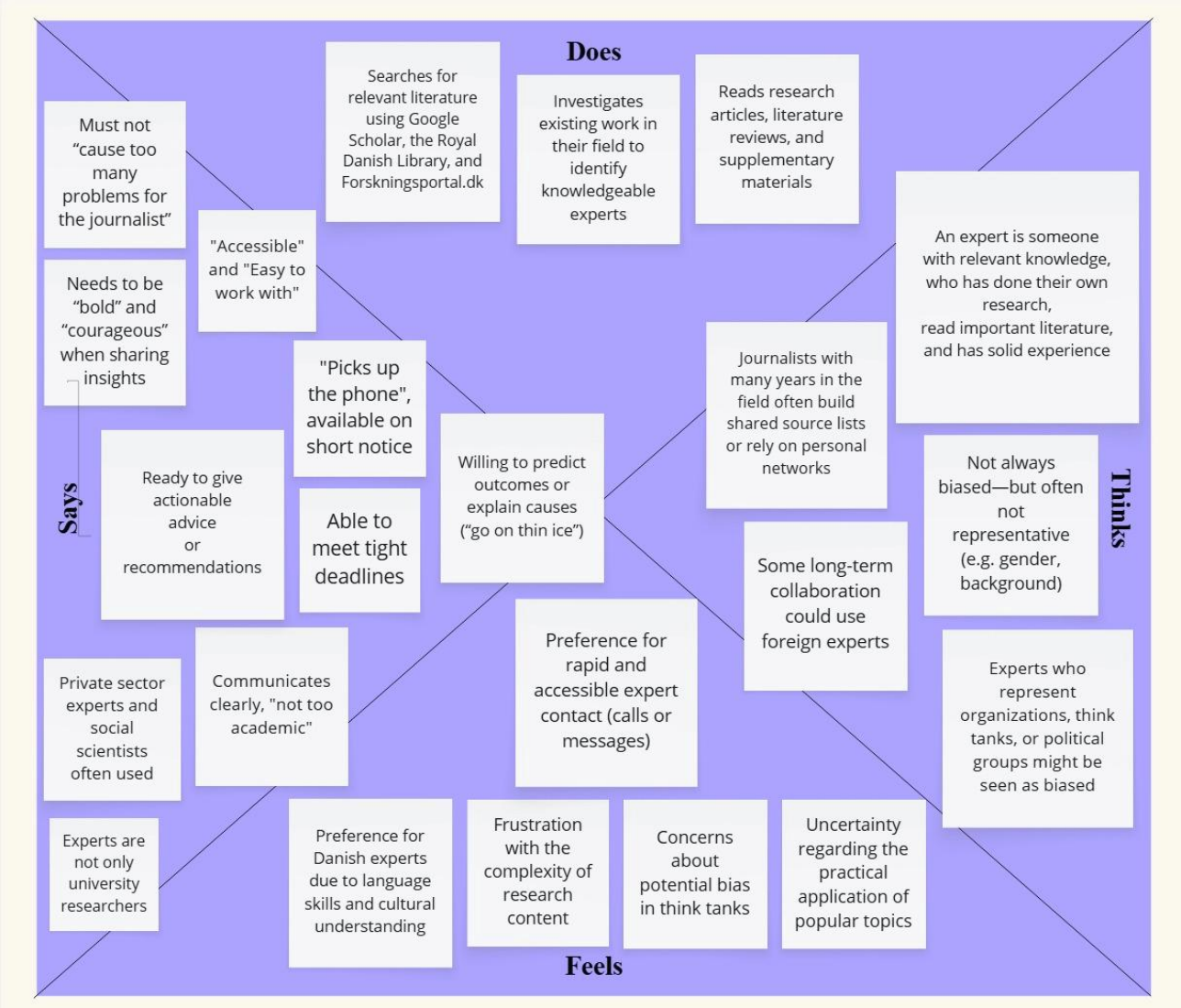
To better understand the needs, feelings, and challenges of users involved in expert search, an empathy map was created based on the interview data. The map captures what the user says, thinks, feels, and does when searching for experts, providing a clear picture of their experience.

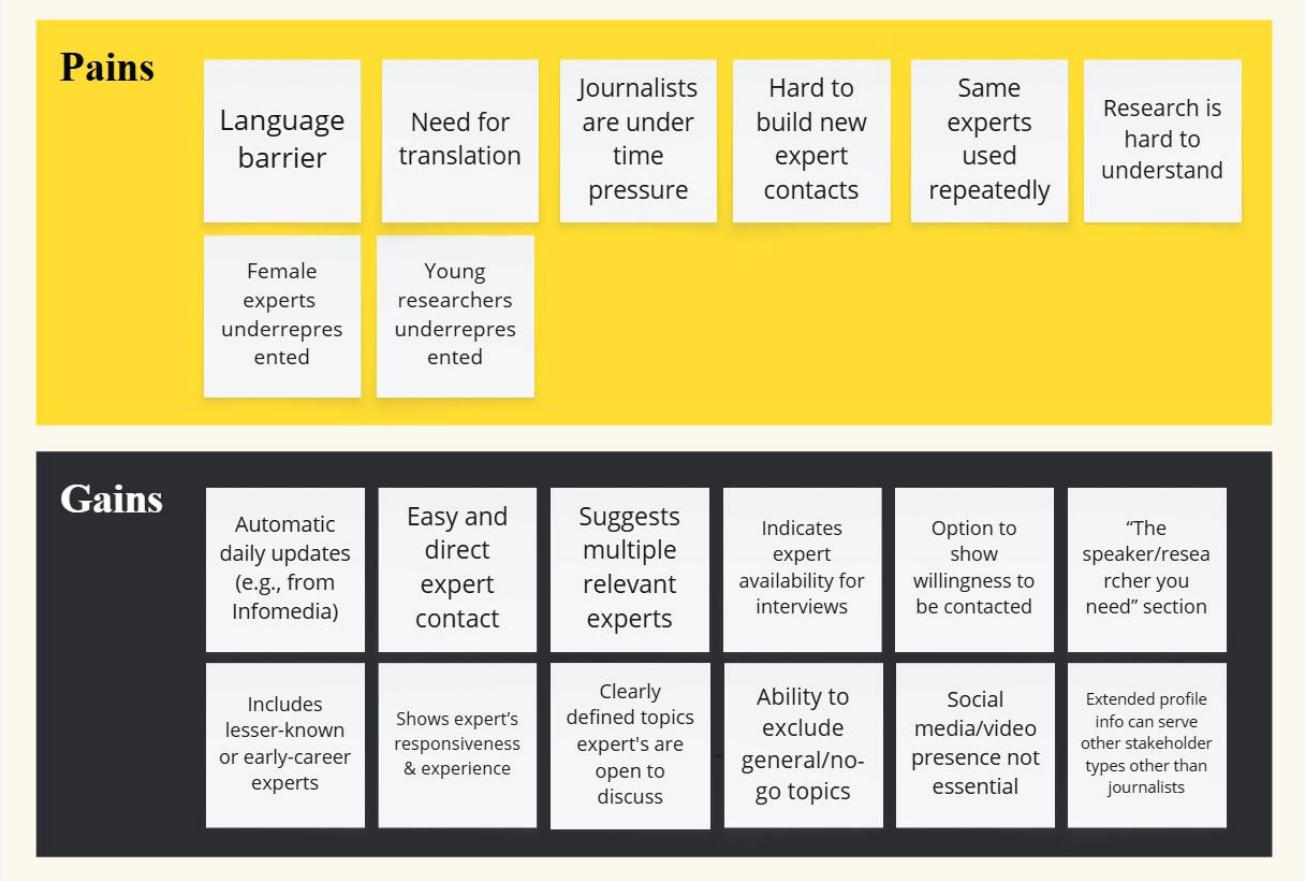
The empathy map highlights key insights such as user motivations, frustrations, and decision-making factors. These insights guided the design of the expert search interface to better address user priorities like ease of use, relevant results, and trustworthiness.

Figure 4 shows the visual empathy map created from the interview. It combines direct quotes and observations to represent the user's perspective and helps identify opportunities for improving the platform's inclusivity and usability.

Figure 4

Empathy map





Note. The empathy map visualizes key aspects of the participant's perspective, including what is said, thought, felt, and done, along with associated pains and gains related to the expert search system. Data were gathered from a qualitative interview and analysed thematically.

4.4.5 Personas

Personas are fictional but realistic profiles that represent key user groups of the expert search system. They are created based on qualitative and quantitative data gathered through interviews and surveys. Personas help to clarify the needs, motivations, and challenges of different stakeholders, guiding the design decisions to ensure the interface meets real user requirements.

The Journalism Educator Persona

Marianne is an associate professor and PhD student at the Danish School of Media and Journalism in Aarhus, Denmark. With over 10 years of experience teaching and researching journalism, Marianne focuses on educating students about critically evaluating expert sources and understanding bias and representation in the media. She is analytical, purpose-driven, and deeply aware of systemic issues, especially regarding diversity (see Figure 5).

Behaviours

Marianne regularly reviews academic articles and curated literature lists to identify credible experts for her research and teaching. She actively introduces students to research platforms such as Google Scholar, Forskningsportal.dk, Infomedia, and the Royal Danish Library, emphasizing ethical sourcing and the importance of diversity. When evaluating experts, Marianne considers their independence, clarity in communication, and representation across gender, age, and media experience.

Wants & Needs

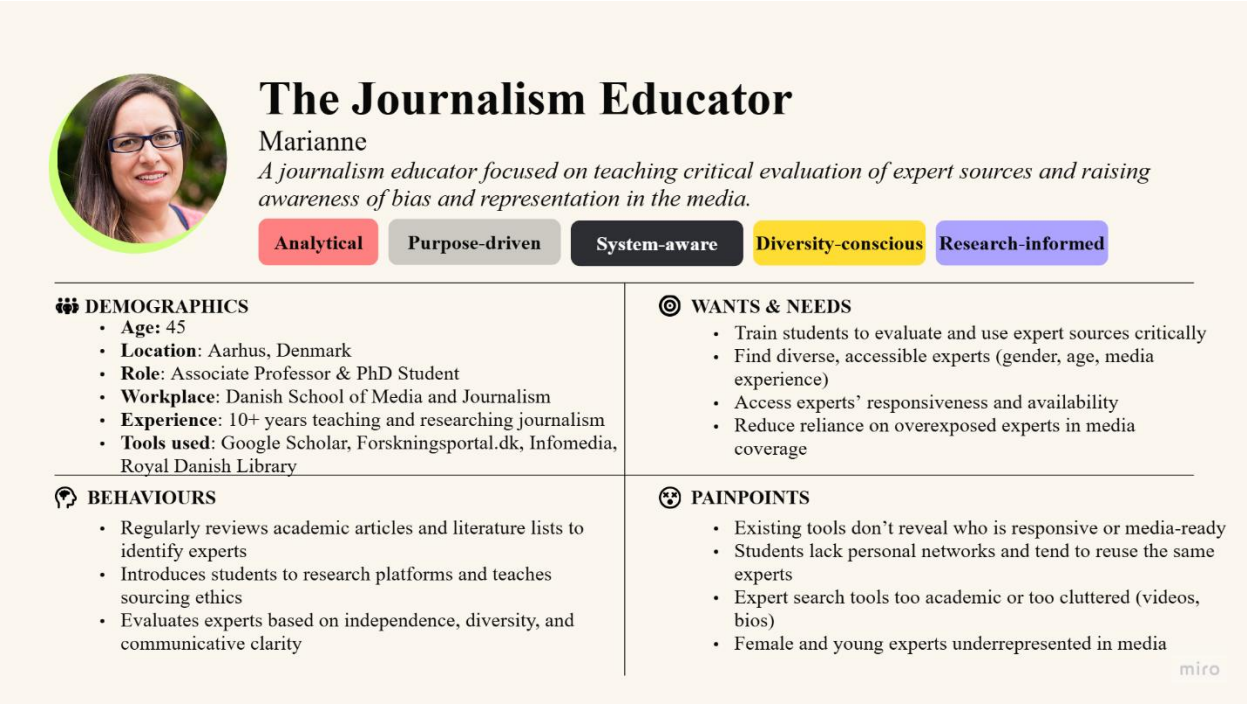
She aims to train students to critically assess and responsibly use expert sources. Marianne wants to easily find diverse and accessible experts, including those less visible in traditional media. She values insights into experts' availability and responsiveness to avoid relying on a limited pool of frequently quoted individuals.

Pain Points

Marianne finds that current expert search tools often fail to show which experts are responsive or media-ready. Students tend to lack broad personal networks and frequently reuse the same well-known experts. Many tools are either too academic or cluttered with unnecessary information like videos and extensive bios. Additionally, she is concerned about the underrepresentation of female and younger experts in media coverage.

Figure 5

The Journalism Educator persona



Note. This persona highlights the goals, frustrations, and behaviours of journalism educators based on interview insights.

The Journalism Student Persona

Emil is an undergraduate journalism student based in Copenhagen, Denmark. At 22 years old and one to two years into the program, Emil is still learning how to find and evaluate credible expert sources for course assignments, often under tight time constraints. He is curious but inexperienced, task-focused, pragmatic, and tends to act quickly (see Figure 6).

Behaviours

Emil often relies on experts recommended by teachers or classmates, or he reuses sources that have been previously quoted. He prioritizes experts' responsiveness and clarity of communication over deep academic expertise.

Wants & Needs

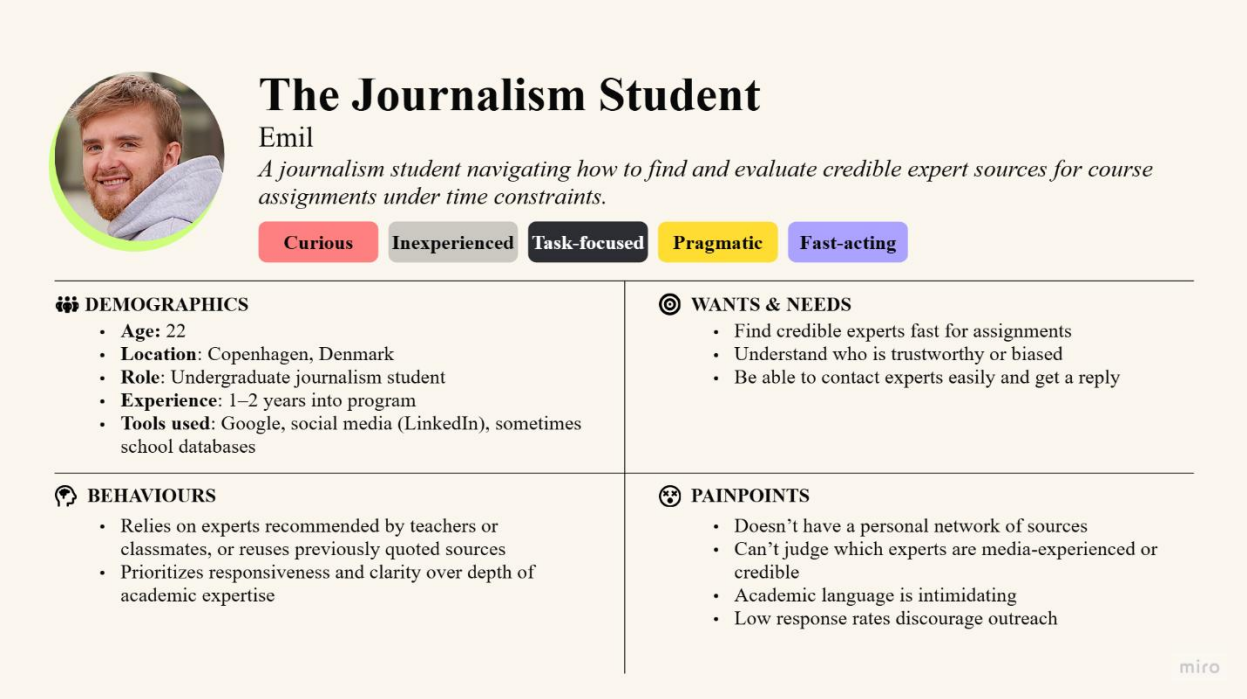
He needs to find credible experts quickly for assignments and wants to understand who is trustworthy or biased. Easy contact and timely replies from experts are important to him.

Pain Points

Emil lacks a personal network of sources and finds it difficult to judge which experts are media-savvy or credible. Academic language often feels intimidating, and low response rates discourage him from reaching out to experts.

Figure 6

The Journalism Student persona



Note. This persona illustrates the typical needs, thoughts, and barriers faced by journalism students when searching for expert sources.

The Working Journalist Persona

Mads is a 38-year-old staff journalist based in Copenhagen, specializing in politics and social affairs. With 7 to 10 years of experience, Mads works under tight deadlines and values efficiency and results. He is experienced, critical, and deadline-driven (see Figure 7).

Behaviours

Mads typically calls or emails experts directly, prioritizing speed over detailed biographies or media-rich profiles. He usually avoids foreign experts unless working on a long-term project and relies on past interactions and citations to judge reliability.

Wants & Needs

He needs quick access to relevant and quotable experts, especially those who are Danish-speaking, responsive, and clear communicators. Mads wants to confirm expert credibility fast and prefers media-savvy or "alternative" experts. Finding lesser-known or underused experts is important to avoid repeating the same voices.

Pain Points

Mads faces over-reliance on the same few experts and encounters language and time barriers with international sources. He often lacks visibility into whether an expert is open to media contact and needs backup experts if the first contact doesn't respond. Interface features such as videos or social media links tend to slow down his workflow.

Figure 7

The Working Journalist persona

Note. This persona summarizes the motivations, pain points, and preferred features for working journalists engaging in expert search.

Figures 5, 6 and 7 provide visual summaries of the three personas, The Journalism Educator, The Journalism Student, and The Working Journalist, based on interview data. Each figure highlights key attributes such as behaviours, needs, and pain points relevant to expert search practices.

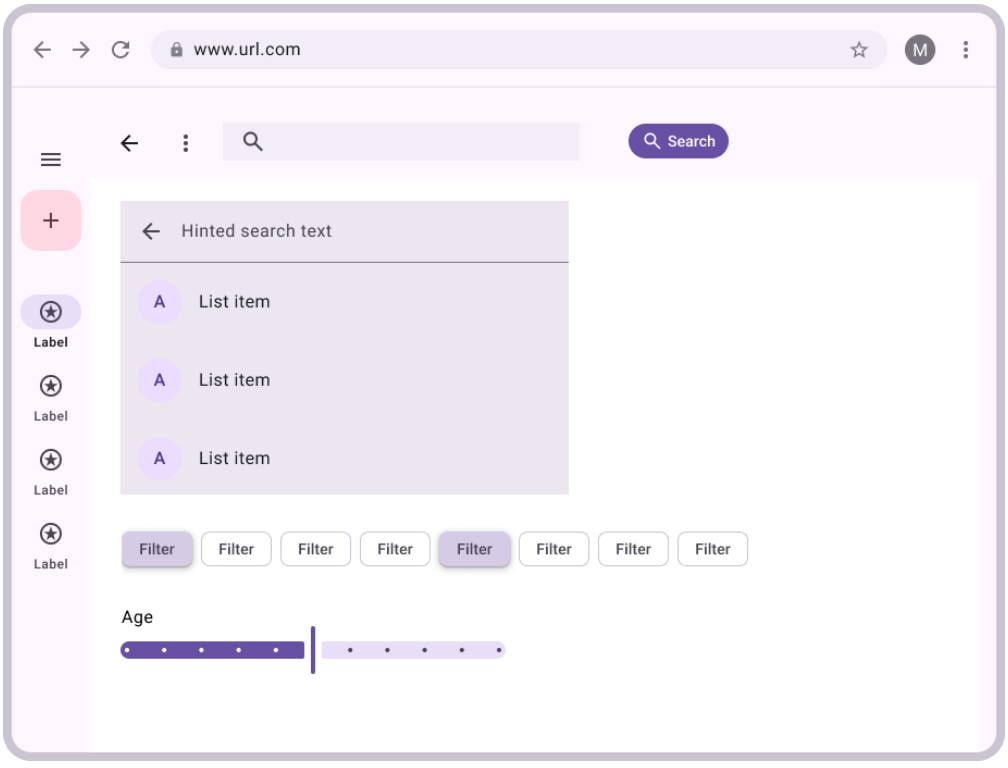
4.4.6 Prototyping

The prototype was created to gather feedback and engage in co-design with a potential user of the expert search system. It was shown during the interview (see section 4.4.3) to ignite discussion and test early design ideas. The prototype was developed in Figma and consisted of eight different pages, each representing a core interface element.

The first page was the Search interface (Figure 8), which featured a search bar with input suggestions and filtering options by topic and category. An age slider was also included to provoke discussion about whether diversity filters should be more visible or optional.

Figure 8

Search page prototype

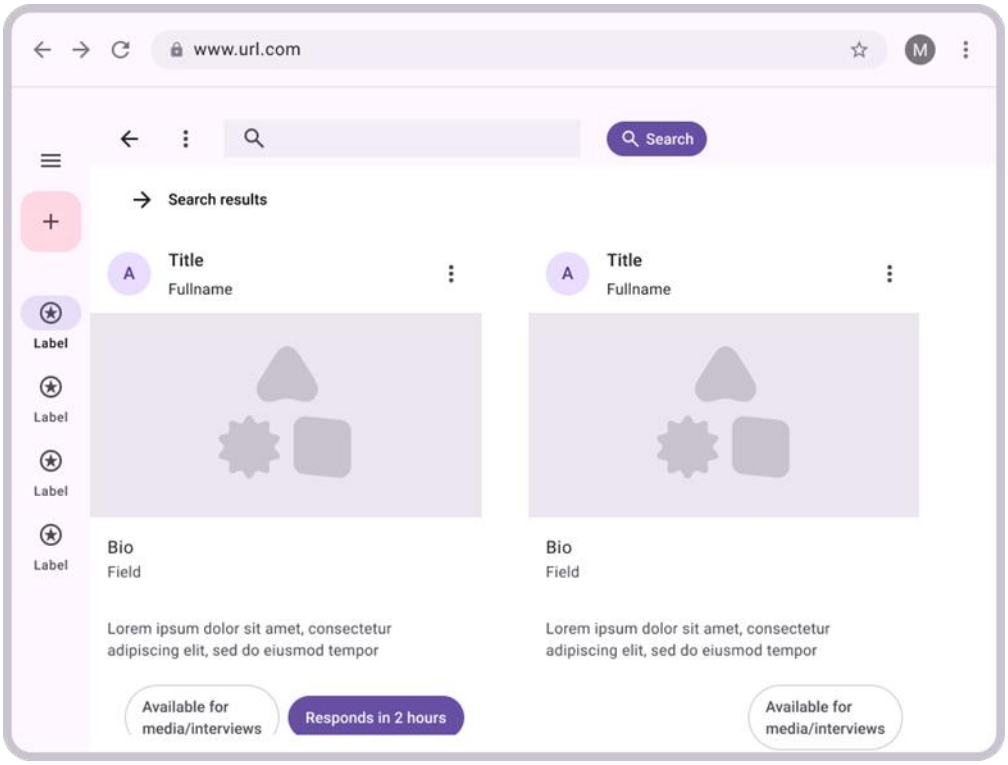


Note. This screen includes a search input field, a suggestion dropdown, and filters such as topics and an age slider to promote visibility of diverse experts.

The Results page (see Figure 9) displayed expert profile cards. Each card included the expert's name, photo, area of expertise, and a short description. To make the interface more informative, the cards featured indicators such as "Available for interviews" or "Responds in 2 hours". These were used to explore how experts' responsiveness and availability might be communicated. Each card also included a menu represented by three dots, intended to open options like "Save", "Hide from search", or other future functions.

Figure 9

Results page prototype showing expert profile cards



Note. Each card includes indicators like availability and response time to support efficient decision-making.

The Compare view (see Appendix J) appeared under a separate menu tab called "Saved". It allowed users to view selected expert profiles side-by-side. The cards remained visually consistent with the results page but were arranged to help users choose between options. The goal was to support decision-making by letting users eliminate less relevant profiles one by one until the most suitable expert remained.

The Profile page (see Appendix K) was shown when a user clicked on a search result. It expanded on the content shown in the results card, including full name, extended bio (with a "Read more" option), and detailed category sections. One such category, titled "Experience",

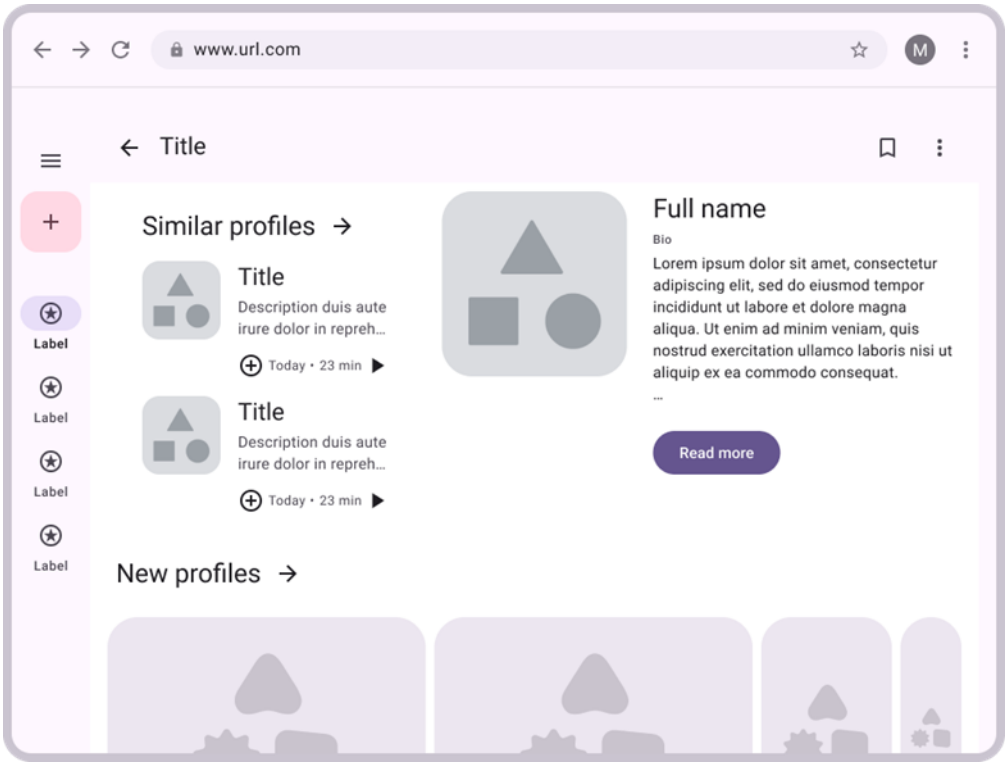
was included to initiate a discussion about what kind of expert information users find most helpful.

The Suggestions page (see Appendix L) displayed a list of similar profiles alongside the selected expert. These were shown in a side menu, each with a photo, title, and brief description. This layout was used to test how related experts could be presented to users during their search journey.

A variation of the suggestions page "Suggestions with a carousel" (see Figure 10) was designed to test an alternative layout. It included both "Similar profiles" and "New profiles" shown as a slideshow. This allowed participants to reflect on the usefulness of more visual, horizontally scrollable layouts for quick browsing.

Figure 10

Suggestions page with carousel layout



Note. Displays alternative expert profiles using a slideshow interface to support visual browsing and profile comparison.

To test features supporting direct outreach, a Profile with a booking option (see Appendix M) was also presented. This version included a "Book me" button that opened a booking form for scheduling a short introductory meeting with the expert.

Finally, the Booking page (see Appendix N) was shown. It demonstrated a simple interface for selecting a date and time, designed for scheduling a 15-minute conversation. The page included a calendar and clock selection to simulate a streamlined booking experience.

This early prototype was not final, but rather a tool to support co-design and provoke conversation. The structure and content of each page were shaped in part by user feedback, helping identify design directions for future iterations.

4.4.7 Design Thinking

This thesis used a Design Thinking approach to create an expert search interface that fits the real needs of its users. Design Thinking is a flexible and creative way of working that focuses on understanding people, finding the right problems, and testing possible solutions. It was a good match for the user-centered and participatory goals of the thesis.

The process started with understanding the user's perspective. A qualitative interview with a journalism educator gave insights into how experts are found, what tools are used, and what problems users face. This information was analysed and turned into an empathy map to highlight key challenges such as limited access to responsive experts and difficulty judging credibility. Based on this, the needs of different user groups were explored through three personas: a journalism educator, a student, and a working journalist.

Next, ideas for the interface were turned into a simple prototype using Figma. It included eight screens showing different parts of the expert search system. The prototype was shown at the end of the interview to gather feedback, spark discussion, and explore new ideas together. This helped refine the design and made sure it reflected user needs.

4.5 Methods for analysis

4.5.1 Thematic analysis

The interview was analysed using thematic analysis, following the steps described by Braun and Clarke (2006). This method was chosen because it offers a clear and flexible way to organize qualitative data and understand people's experiences.

In this study, a deductive approach was used. This means the analysis was guided by the research questions, previous literature, and survey findings. Some key themes were expected beforehand, such as visibility, credibility, diversity, and media experience. These themes helped focus the analysis, while still leaving room for unexpected insights.

The process began with reading the transcript several times to become familiar with the content. Then, sections of the interview were coded and grouped under relevant themes. These themes were refined to best reflect what the participant said and how it related to the goals of the study.

The analysis focused on how the interviewee described expert selection, challenges in using experts in media, and ideas for improving expert search platforms. Attention was paid to both direct comments and underlying meanings.

Findings from the analysis supported the creation of the empathy map and personas and informed the design decisions presented earlier. This helped ensure that the design responded to real-world needs and challenges.

Quotes from the interview were used to illustrate key points. All quotes were anonymized and explained clearly.

5. Analysis

5.1 Thematic Analysis

The thematic analysis followed a deductive coding framework based on the interview guide and research aims. Six key themes from the data: background, expert search behaviour, defining expertise, bias in representation, platform evaluation, and prototype testing. Each theme includes subthemes that provide a deeper insight into how stakeholders, like journalists, researchers, and student search for experts, what challenges they face, and what expectations they have (see Appendix P).

Theme 1: Background

The expert emphasized the nuanced nature of expertise, distinguishing between independent and dependent experts and recognizing that all experts have particular interests:

> We talk about these different kinds of expert sources, we talk about being independent versus being dependent, we talk about the interests that all experts... have (Appendix O, p. 21).

This shows that expertise varies across individuals and contexts.

Theme 2: Expert Search Behaviour

Stakeholders use different expert search strategies depending on their level of experience. Students often rely on familiar sources due to their limited networks:

> "…they're doing so who are the expert sources they use and sometimes they then use the same, they contact the same experts… Because they don't have a source network... they're students..." (Appendix O, p. 22).

Experienced journalists benefit from established personal or institutional source lists:

> "It's more difficult than when you are working for a media where maybe you have shared source lists, or you have been working for many years and then you have your own source network" (Appendix O, p. 22).

Researchers, by contrast, typically identify experts through scholarly tools and literature:

> "Then I'm searching for who has been doing research in the same field and then I'm reading the research articles." (Appendix O, p. 22).

> "I also use Google Scholar and… Forskningsportal (Research Portal Denmark) and… Royal Danish Library and… I read the literature lists when I found a relevant article, then often I find leads to new articles by reading the literature list and… find relevant supplementary literature and so on…" (Appendix O, p. 22).

While researchers engage deeply with academic sources, students do not:

> "…our students they're not doing research, they're doing journalism. So, it's a different case." (Appendix O, p. 22).

In summary, students tend to reuse the same familiar experts. Journalists with experience rely on curated networks. Researchers engage in literature-based searches using academic platforms.

Theme 3: Defining Expertise

The definition of "expert" varies depending on the context. From a journalistic point of view, expertise is not limited to academic credentials:

> "...from a journalistic point of view. Of course, you need to have a relevant knowledge… maybe you have done relevant research yourself. Maybe you have just read all the relevant research and maybe you're not a researcher, but you have a lot of relevant experience, so there are different ways of getting expertise of course." (Appendix O, p. 21).

Journalists also value accessibility, responsiveness, and communication style:

> "…it's important to get someone who is accessible, someone who picks up the phone, someone who is easy to work with, someone who is not causing too many problems for the journalist, someone who can work with the short deadlines. Someone who's not too

academic when communicating the results. Someone who is maybe a little bit bold." (Appendix O, p. 21).

Experts who go beyond factual summaries and offer interpretations or recommendations are especially valued:

"…maybe a little bit courageous in terms of being willing to not just to say exactly, point by point very factually, what you have researched and found out, but also to evaluate and to say what is going to happen, what is probably going to happen, what caused this event knowing that many things probably caused this event. So, and maybe even they are giving what I call recommendations for actions that could be political recommendations for action, but it could also be personal recommendations for actions for the reader or for the viewer. So, someone who is willing to give a little bit more. And to go on thin ice." (Appendix O, p. 21).

This demonstrates that, for journalists, expertise includes being accessible, relatable, and expressive, not just knowledgeable.

Theme 4: Bias in Representation

Several biases influence expert representation in the media. The expert highlighted institutional, gender, age, disciplinary, and linguistic/national biases. Institutional bias, experts from think tanks or the private sector are overrepresented and may carry organizational agendas:

"...experts from think tanks... represent different agendas... they can be very, very good experts, but still, they represent an agenda, so they might be biassed and maybe they are not..." (Appendix O, p. 23).

"…a lot of experts in Danish media are not employed as researchers at the universities. Many experts are coming from the private sector. Not only think tanks, also private companies, especially from the financial sector, from banks and financial institutions.

They provide so many experts and so do other organisations... they are from social sciences... They have been studying economy, most of them and they also give financial advice." (Appendix O, p. 23).

"...they represent an organisation or they represent a green think tank or whatever or maybe a political liberal think tank. So they get the salary from such a company or organisation so that so that might be, that might imply some biases." (Appendix O, p. 23).

Gender bias, female experts are underrepresented:

"…female experts are less represented in the media compared to how many women in Denmark, female researchers that we have, for instance. So, and also not just in terms of gender, but also in terms of many other aspects." (Appendix O, p. 23).

Age bias, older experts, especially professors, are more frequently cited:

"...young researchers, for instance, are underrepresented. As a journalist, you would often prefer a professor compared to an associate professor compared to a postdoc or PhD student. So even though that maybe the PhD student has the most recent knowledge and the most, has been doing the most recent in depth research in the area in the field that the journalist is investigating. And then… some research points to this fact that professors are preferred. So, there could be an age bias..." (Appendix O, pp. 23-24).

Disciplinary visibility, social sciences dominate media coverage:

"…researchers or experts from social science are very present in Danish media much more than 40-50 years ago or 50 years ago, where maybe experts from the heart sciences and health were more present..." (Appendix O, p. 24).

Linguistic, national bias, Danish journalists prefer Danish-speaking experts due to time and translation constraints:

> "Danish journalists... very rarely choose experts from abroad… because sometimes it's quite difficult for journalists to understand research… the journalist needs to spend more time with the expert needs to spend more time making sure that there's no misunderstanding and needs to translate everything into Danish." (Appendix O, p. 25).

> "…it's time consuming and it's risky and it's difficult." (Appendix O, p. 25).

> "… unless they have very good time and it's a very large, a time consuming project, then they would go for someone who is speaking Danish…" (Appendix O, p. 25).

This theme emphasizes how practical, political, and cultural factors shape who is perceived as an "expert" in media coverage.

Theme 5: Platform Evaluation

Journalists work under time pressure, so they value experts who are easy to contact and willing to speak to the media:

> "...would be beneficial and useful… if you could see is this an expert who is, who would like to talk to journalists, who's willing to talk to journalists, who is responsive… who is experienced." (Appendix O, p. 25).

Filters that show willingness to speak on specific topics were considered helpful:

> "…might also be interesting for journalists to know within this specific field I would like to talk to journalists. But I would not participate with more generic or general topics." (Appendix O, p. 26).

There was also a suggestion to support diverse expert visibility, not just in gender, but in media exposure and career stage:

”…maybe you should have something called “choose an alternative… researcher”, which is not the one who has been 1000 times in the media the last year… maybe young scholars.” (Appendix O, pp. 26-27).

Key takeaways from platform evaluation include prioritizing responsiveness, including expert preferences on topics, and offering alternative expert suggestions beyond the usual names.

Theme 6: Prototype Testing

The expert was sceptical about several proposed features for expert search platforms. Booking system - journalists prefer direct contact (phone/email):

“…as a journalist, you want direct contact… if you have the phone and the e-mail, that’s perfect…” (Appendix O, p. 28).

Hot topics - potentially useful, but actual use is uncertain:

“...I think this makes sense… but I don’t know if it’s being used…” (Appendix O, p. 28).

Age slider - not a good way to address age diversity:

“I don’t fancy the idea of an age slider… but I like the idea that you can look for younger researcher, younger scholars and less media experienced scholars…” (Appendix O, p. 31).

Video introductions - not practical for journalists:

“I think it’s nice to have, but I think it’s definitely not need to have because journalists… they would not sit down and watch videos and… then sometimes, of course they would, but in general I would say no.” (Appendix O, p. 29).

Media and social media activity was regarded as irrelevant for journalistic workflows. The interviewee stated that journalists typically do not investigate experts’ online presence on platforms like LinkedIn or Twitter, as they rely on direct contact:

> "…as a journalist, I would not... read their LinkedIn profile and see what have they been writing on X or Twitter… I would contact the person directly." (Appendix O, p. 30).

Responsiveness indicators, such as "responds within two hours", were also dismissed. The expert emphasized that such real-time data is difficult to maintain and not practically implementable:

> "…"responds in two hours"… who can promise that in general?… No one will update this on a daily basis. So, I don't think that makes sense and not in I don't think it's practically implementable…" (Appendix O, p. 31).

However, some features were seen as valuable or "nice-to-have" for certain stakeholders. Indicators of availability or willingness to be contacted:

> "… available for media interviews within specific areas… that might be helpful and useful, because as a journalist you would prefer not to contact someone who would just reject you…" (Appendix O, p. 31).

> "… as a journalist, it's easier to contact someone who initially has written that I would like to get contacted by journalists. It makes it a little bit easier to make the first move so that might be an idea..." (Appendix O, p. 31).

At the same time, the expert noted that such indicators may discourage researchers if they fear being overwhelmed by media requests:

> "…maybe you would refrain from writing so as a researcher because you are afraid that then you would be contacted by so many journalists…" (Appendix O, p. 31).

Media experience filters:

> "…"the speaker you need for your event"… "the researcher you need for your article"… "the researcher you might need for article but who you don't know". Because… it's a

young… less media experienced researcher. So, maybe you could expand this to include the different." (Appendix O, p. 28).

"...if it's someone who is not, who has not been cited or referenced in the Danish media more than once or twice during the last year, then you know, this is probably a young, inexperienced, media inexperienced researcher, I mean, the person has obviously not been used by the media so far…" (Appendix O, p. 29).

Alternatives to overexposed experts:

"…it's quite nice to suggest someone else that the one that you, the usual suspects…" (Appendix O, p. 29).

"…maybe it would be preferable… to suggest… a couple of experts, alternative experts or… a handful…" (Appendix O, p. 29).

"I think as a journalist you would like to have more than one option. You would like to get maybe 2-3 or four options so that if the first doesn't work or doesn't pick up the phone, then you can quickly access to the next one." (Appendix O, p. 32).

Profile page information is relevant to stakeholders other than journalists, like recruiters, researchers looking for collaborators:

"…this information… has several purposes… it's not just for journalists, it could also be for recruiters, or it could be for someone arranging a conference or would be for fellow or researchers looking for collaborators... So, in that in that sense I think it makes perfect sense to have these profile descriptions and so on. But I don't think that many journalists that they would sit down and read them carefully." (Appendix O, p. 30).

Theme 7: Co-Creation

This theme captures the interviewee's reflections on how platforms could practically support design goals through data sources, filtering mechanisms, and automatic updates. Many co-creation ideas emerged organically in earlier themes, but this section focuses on the backend and data aspects of design.

A key suggestion was to leverage existing infrastructure, such as Denmark's Infomedia platform-a media database tracking citations of experts:

> "...we have this resource Infomedia in Denmark and Infomedia is this media database which you can access. I mean you have to pay for it or you have to maybe be affiliated through a university or something like that." (Appendix O, p. 27).

The expert explained that, through Infomedia, platforms could show how often a researcher is mentioned in the media, making it possible to measure their media visibility:

> "…through Infomedia, then you can count how many citations and references are to specific sources… Maybe you could have attached to this list to each expert. Then you can have… How many citations or references through the last 1, 2, 3 years?" (Appendix O, p. 27).

This visibility data could enable platforms to balance media-savvy experts and emerging voices, offering choice and diversity to journalists:

> "…Because then… you have the option to choose someone who is very a media savvy, but also… to choose someone who's maybe a younger scholar, younger researcher who is not." (Appendix O, p. 27).

Finally, the expert imagined a dynamic system where media exposure metrics are automatically updated:

> "…maybe you can program it so these databases they connect it on a daily basis automatically and update." (Appendix O, p. 27).

These reflections indicate a collaborative spirit, emphasizing that an expert platform should integrate existing data, respond to real use cases, and remain flexible to serve journalists, researchers, and institutions alike.

Summary

The interview revealed seven key themes that help understand how journalists, students, and researchers search for experts, what challenges they face, and what they expect from an expert search platform.

1. Background

Expertise is not neutral. Experts can be independent or tied to organizations, and all have particular interests that shape their perspectives.

2. Expert Search Behaviour

Students tend to reuse the same experts due to limited networks. Experienced journalists rely on personal or shared institutional lists. Researchers use literature databases and academic tools. These different groups have distinct search habits.

3. Defining Expertise

Journalists define expertise broadly. It includes not just academic knowledge but also accessibility, media-friendliness, and a willingness to interpret or make recommendations. Experts who communicate clearly and respond quickly are especially valued.

4. Bias in Representation

Biases shape who appears as an expert in the media. These include institutional (e.g., think tanks and private sector), gender, age, discipline, and language/nationality biases. Danish-speaking, older male experts from social sciences are more visible, while younger, female, or non-Danish-speaking researchers are often overlooked.

5. Platform Evaluation

Journalists prefer platforms that help them quickly identify relevant, responsive, and media-friendly experts. Filters showing willingness to speak, experience level, and topic preferences were seen as helpful. There was also support for highlighting lesser-known or younger researchers to avoid always featuring the same experts.

6. Prototype Testing

Some features, like a booking system, video introductions, or responsiveness timers, were seen as unnecessary or impractical for journalists. However, features that show availability, topic preferences, or media experience could be useful, especially if they don’t overwhelm researchers with requests.

7. Co-Creation

The interviewee suggested connecting the platform to existing systems like Infomedia to automatically show how often experts are cited in the media. This could help balance visibility between well-known and lesser-known experts. The platform should support different users by drawing on real data, offering flexible filters, and updating automatically.

Overall, these themes reveal the complexity of expert search and the importance of designing platforms that balance accessibility, diversity, and practical usability. The analysis shows that while traditional criteria like academic credentials matter, factors like responsiveness,

media experience, and bias awareness are equally crucial. The insights gained here informed the design recommendations and prototype development mentioned in previous chapters.

6. Results

6.1 Survey results

This section presents the results from a survey with 13 respondents.

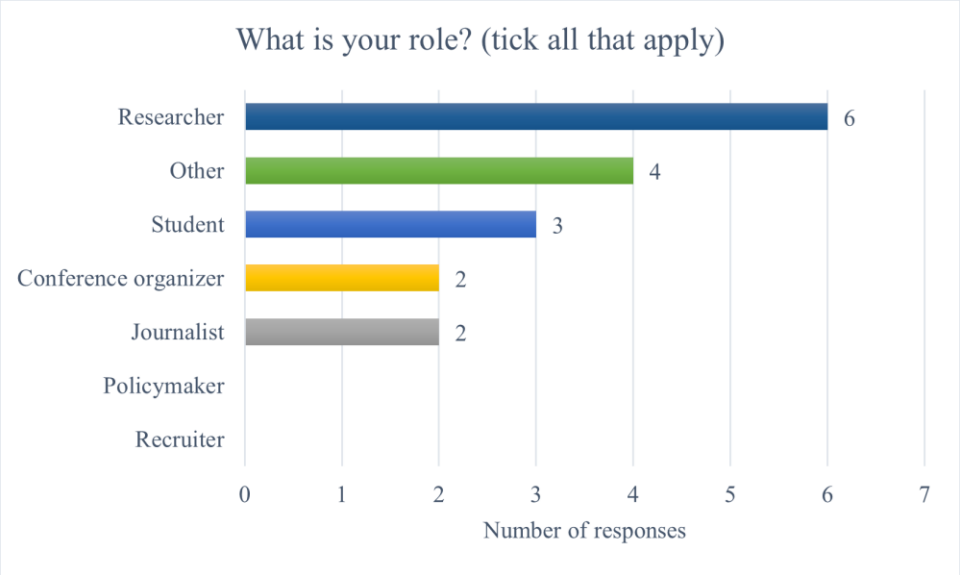
Respondent Roles and Frequency of Expert Search

Respondents represented diverse backgrounds, including students, journalists, researchers, policymakers, conference organizers and other expert seekers. Multiple roles were allowed, and many respondents identified with more than one.

The most common role was researcher (6 respondents), followed by "other" (4), and student (3). "Other" roles included executive assistant/HR, associate professor, teacher (associate professor at DMJX), and entrepreneur (see Figure 11).

Figure 11

Distribution of Participants' Roles



Note. Participants could select multiple roles. Bars indicate the number of participants who selected each option. N = 13.

When asked about the frequency of expert searching, the responses were evenly split across weekly, monthly, and a few times a year, each selected by four respondents (see Figure 12).

Figure 12

Self-Reported Frequency of Expert Search Activity

Note. Responses: Weekly (N = 4), Monthly (N = 4), A few times a year (N = 4), Rarely (N = 1).

N = 13.

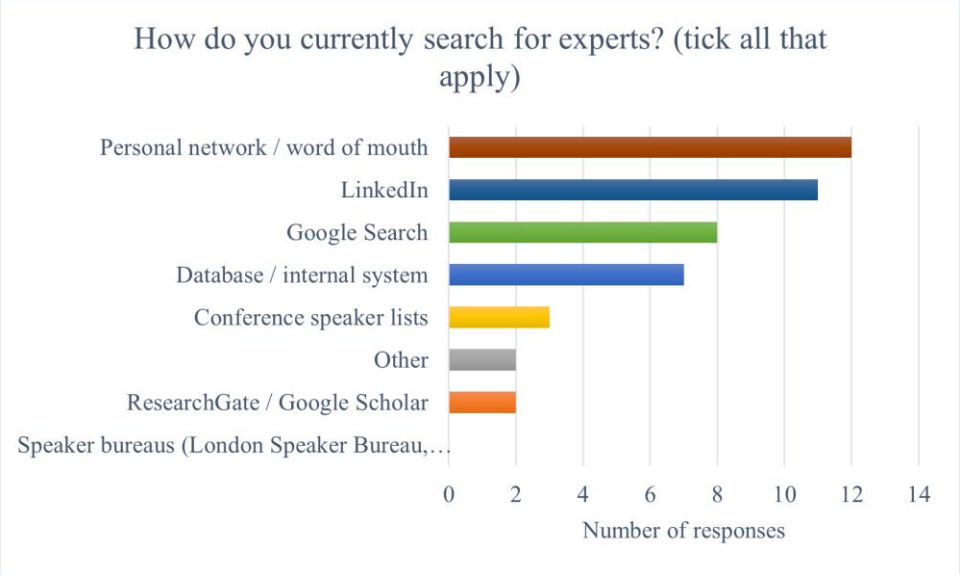
Current Expert Search Methods

Participants could select multiple methods. The most used were (see Figure 13):

- Personal network / word of mouth (27%)
- LinkedIn (24%)
- Google Search (18%)
- Database / internal system (16%)

Figure 13

Current methods used to search for experts



Note. Bars indicate the number of participants who selected each method, N=13.

Less frequently mentioned were conference speaker lists and ResearchGate/Google Scholar.

Two respondents selected "Other" and mentioned JobIndex and literature lists in academic papers.

Criteria for Selecting Experts

Respondents emphasized industry experience and academic credentials as the most important selection criteria:

- Industry experience (54%)
- Academic credentials (31%)

Two respondents added open-text answers:

- "General cognitive ability, job knowledge, and personality"
- "It's a balance [of multiple factors]"

Challenges in Finding Experts

Ten open-ended responses highlighted several recurring challenges (see Table 2):

- Accessibility of experts
- Diversity (gender, age)
- Expertise validation
- Limited networks

- Platform usability
- Expert profile expectations

Table 2

Survey thematic analysis

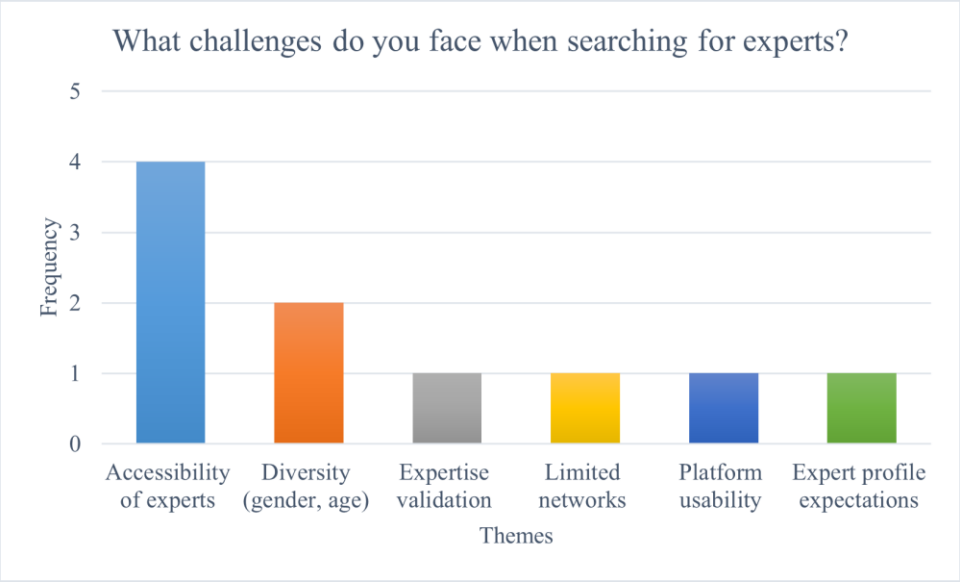
Survey extract	Theme	Count
"Hard to find contact information, like emails or telephone numbers, that are up-to-date and reachable.", "Finding the experienced expert and getting their time schedule.", "time, availability", "Experts' lack of time or missing of communication channels."	Accessibility of experts	4
"Few women.", "It's a problem that we don't hear much from the younger experts. I know they want to tell us about their knowledge but really don't know how."	Diversity (gender, age)	2
"...hard to validate if the expert is truly reputable in the field."	Expertise validation	1
"Network not wide enough."	Limited networks	1
"Difficult to get an overview."	Platform usability	1
"...cognitive ability, personality and understanding of the job matter more than work experience and education."	Expert profile expectations	1

Note. Themes identified from survey responses and their frequency.

Data from Table 2 was translated into bar chart in Figure 14.

Figure 14

Challenges in finding experts categorized by themes



Note. Bars indicate how many participants mentioned each theme during the interview (N=10).

Themes were derived through thematic coding of qualitative data.

Usefulness of Filters and Features

Respondents rated the following filters and features in Table 3 on a 1-5 scale (1 = Not useful, 5 = Very useful):

Table 3

Filters and features average rating

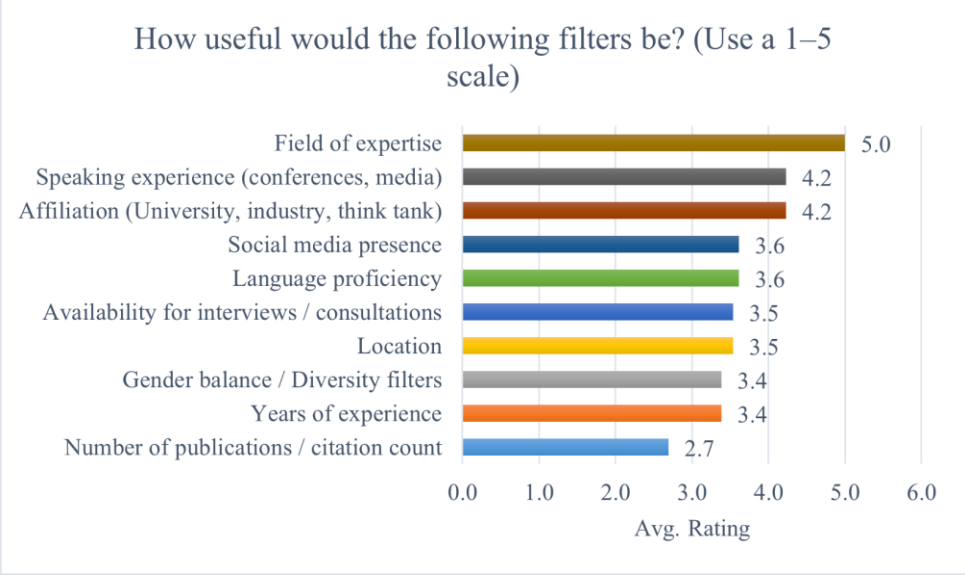
Filter/Feature	Avg. Rating (1-5)
Field of expertise	5.0
Speaking experience (conferences, media)	4.2
Affiliation (University, industry, think tank)	4.2
Social media presence	3.6
Language proficiency	3.6
Availability for interviews / consultations	3.5
Location	3.5

Gender balance / Diversity filters	3.4
Years of experience	3.4
Number of publications / citation count	2.7

The data from Table 3 was translated into clustered bar chart in Figure 15.

Figure 15

Average usefulness ratings of expert filters



Note. Participants rated each filter on a 5-point Likert scale ranging from 1 = Not useful to 5 = Very useful. Bars represent mean ratings for each filter (N=13).

Additional filters and features mentioned in open responses included personality test result and cognitive ability, and availability.

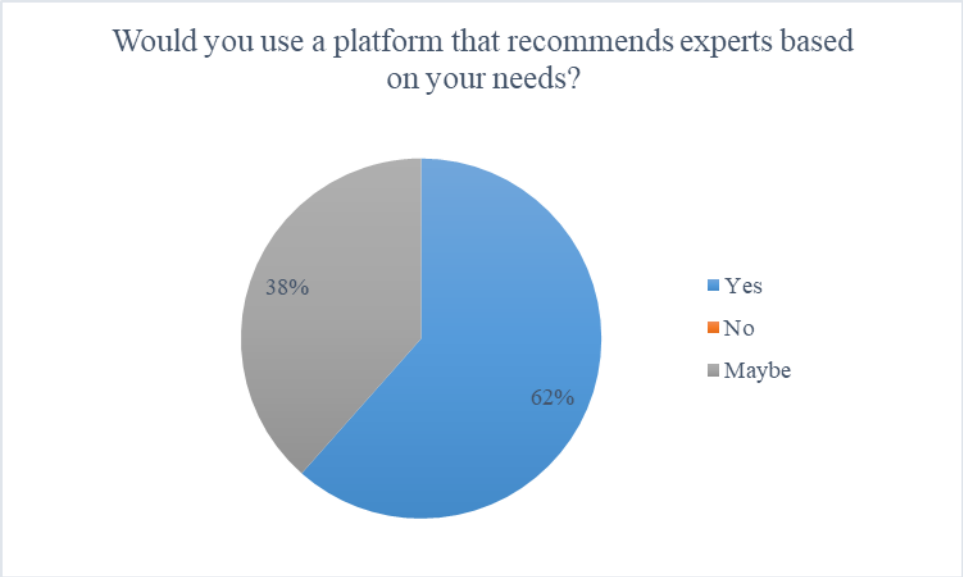
Preferences for an Expert Search Platform

When asked whether they would use a platform that recommends experts based on their needs (see Figure 16):

- Yes (62%)
- Maybe (38%)
- No (0%)

Figure 16

Willingness to use an expert search platform



Note. Responses: Yes (N=8), Maybe (N=5), No (N=0). N=13.

In response to "What are the three most important things the system should do?", top 3 themes included (see Table 4):

- Reliable contact and scheduling options
- Availability and willingness to engage
- Filtering

Table 4

Survey thematic analysis

Survey extract	Theme	Count
"Getting reliable contact information or at least a contact that would help get a more direct contact of that person", "Give Contact Information", "Make the contacting, communication and scheduling easy", "make connections easy and safe",	Reliable contact and scheduling options	5

“Allow me to connect to available experts with a single click, so: direct connection with expert”		
“show Availability”, “their availability”, “willingness to join the research”, “clear listed availability for e.g. project proposals”	Availability and willingness to engage	4
“Help filter out experts by their field of expertise (usually the more specific, the better)”, “Filter”, “Good search functions after field of expertise”, “Filter”	Filtering	4
“Inform me about their expert knowledge, their ambitions and their passion.”, “Review whether the person has undergone tests recently, the results of these tests, and which tests.”, “be linked to academic profiles and journals”	Rich expert profiles	3
“Suggest some expert who has field experience”, “Give me several relevant experts that I can choose from.”	Relevant expert suggestions	2
“a lot of experts”, “have all university experts in Denmark”	Broad expert coverage	2
“easily navigable”	Ease of navigation	1
“up to date”	Up to date information	1
“Could help search for multiple fields of expertise to see if anyone has overlapping topics (example: sustainability AND entrepreneurship, or sustainability AND research). Because sometimes a discussion in a conference requires	Search across multiple fields	1

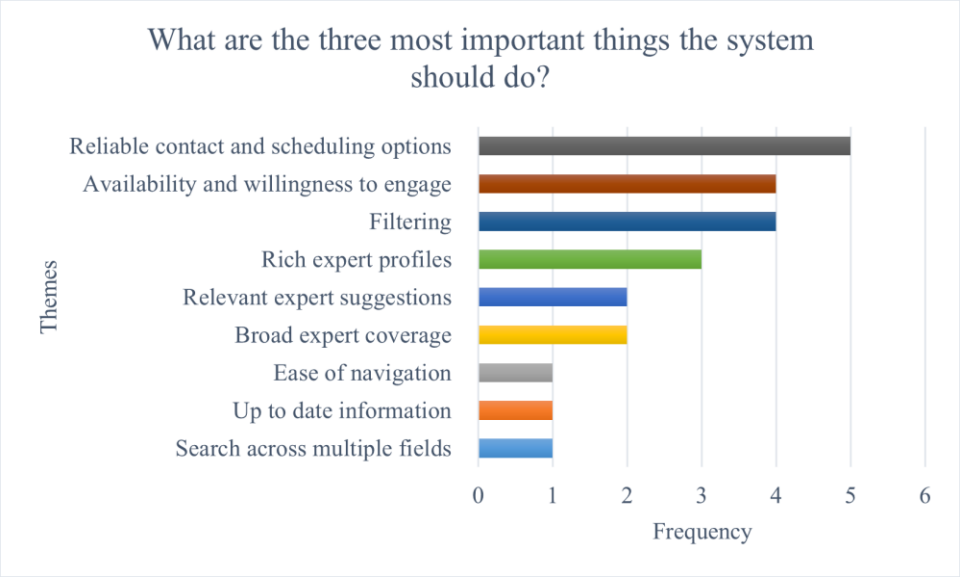
knowledge of the same topic, but from different perspectives - from a scientist, politician and business person, for example.”		

Note. Themes identified from survey responses and their frequency.

The data from Table 4 was translated into clustered bar chart in Figure 17.

Figure 17

Participant-identified priorities for system functionality, based on the most frequently mentioned features



Note. Bars indicate how many participants mentioned each theme during the interview (N=13).

Themes were derived through thematic coding of qualitative data.

Preferred Expert Profile Contents

Preferred expert’s profile contents included (see Table 5):

- Academic and professional background
- Area of expertise
- Accessible contact information
- Availability

Table 5

Survey thematic analysis

Survey extract	Theme	Count
"teaching experience", "experience (what side of the field they know best)", "Experience", "Work/research experience", "Their background", "their work experience", "More than just the CV. More person - less CV.", "cv"	Academic and professional background	8
"Research area, projects", "Field of expertise", "expertise", "field of expertise- what Can she talk about", "Field, title, research publications, seniority, university"	Area of expertise	5
"contact info", "Direct Phone no", "contact details"	Accessible contact information	3
"availability", "Their availability", "availability for projects"	Availability	3
"All the filters that you mentioned.", "mainly those you've already suggested"	Filters already mentioned	2
"language"	Language	1
"Maybe a general section about the specific expert"	Profile summary or overview	1

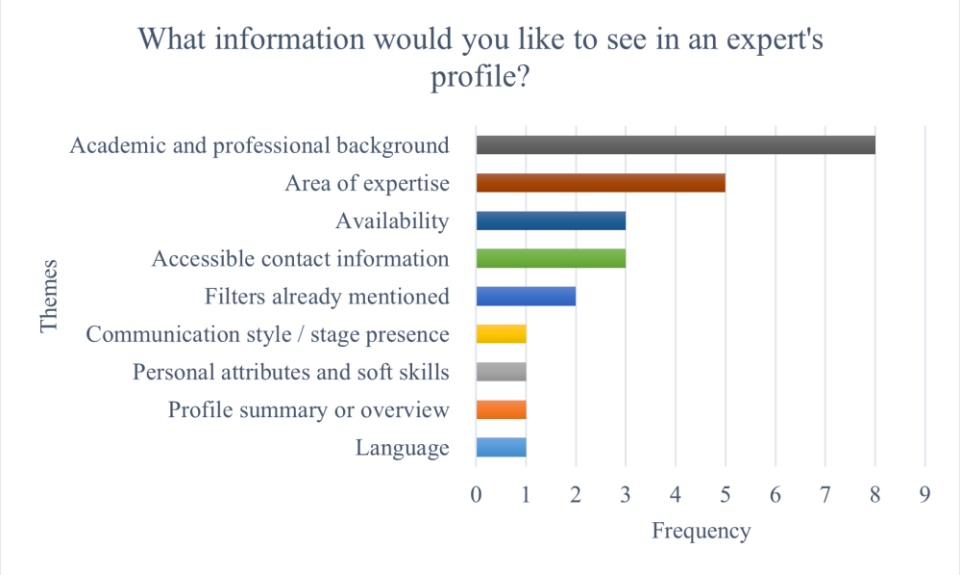
“personality skills (like do you like the outdoors, reading, knitting, etc. to see if we could be a good match to work together)”	Personal attributes and soft skills	1
“It would be awesome if there could be a clip of them speaking to see if they have good stage presence”	Communication style / stage presence	1

Note. Themes identified from survey responses and their frequency.

The data from Table 5 was translated into clustered bar chart in Figure 18.

Figure 18

Participant-identified desired profile information, based on the most frequently mentioned content



Note. Bars indicate how many participants mentioned each theme during the interview (N=13).

Themes were derived through thematic coding of qualitative data.

Ways of Verifying Credibility

To verify credibility, participants mentioned (see Table 6):

- Academic publications and profiles
- LinkedIn
- Organizational affiliation
- Network-based verification

- University affiliation
- Media presence / public visibility
- General / mixed sources

Table 6

Survey thematic analysis

Survey extract	Theme	Count
"Google Scholar", "Search for publications (if it's a researcher)", "Academic journals", "Publications, citations, affiliations (independent or employed in think tanks, in organisations etc.).", "Checks their publications and career"	Academic publications and profiles	5
"LinkedIn", "LinkedIn profile", "their linked in profile", "their profile on LinkedIn",	LinkedIn	4
"look for the credibility of the organization they are part and check for any confirmation they are actually part of it (like a staff portal)", "their Company", "workplace profiles"	Organizational affiliation	3
"network", "someone's word of mouth", "I talk to them and estimate if they talk nonsense or make sense"	Network-based verification	3
"their university webpage", "Check their profile on university webpage"	University affiliation	2
"check for media activity about a business, press releases and such (if it's a business person)",	Media presence / public visibility	2

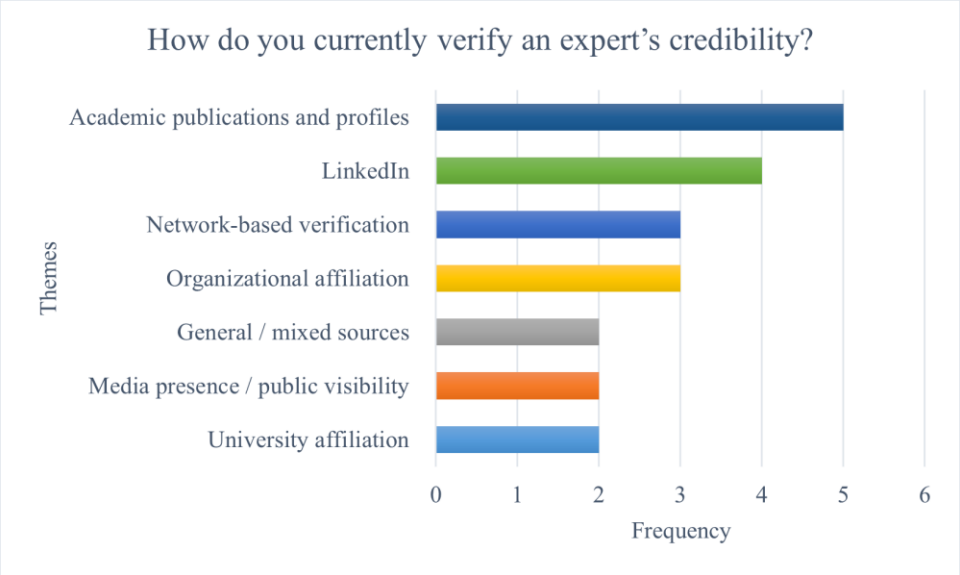
"...as described in the media, including social media..."		
"broad source assessment", "Evidence based recruitment"	General / mixed sources	2

Note. Themes identified from survey responses and their frequency.

The data from Table 6 was translated into clustered bar chart in Figure 19.

Figure 19

Participant-identified approaches to verifying an expert's credibility, based on the most frequently mentioned strategies



Note. Bars indicate how many participants mentioned each theme during the interview (N=13).

Themes were derived through thematic coding of qualitative data.

Interview Willingness

Two respondents agreed to follow-up interviews and shared their contact information.

Summary

The survey responses highlight a strong need for centralized, searchable, and user-friendly expert platforms. Participants valued filters based on expertise, availability, and credibility, and expressed frustration with the limited visibility of women and younger experts. These findings underscore the importance of designing expert search interfaces that balance

structured profile data with more human-centered features, like personality, presence, and ease of contact.

7. Discussion

This project aimed to explore how expert search platforms can be redesigned to support fair and diverse representation of expertise. The research questions guided both the literature review and the empirical study, and the findings can now be discussed in relation to each.

RQ1: How do existing expert platforms represent and validate expertise, and what biases exist in their systems?

The review of current platforms showed that many systems use self-reported information, which can raise concerns about credibility and validation. Some platforms rely heavily on publication databases or media appearances, which tend to amplify already visible experts. Bias is often built into the ranking and filtering systems, even if unintentionally. Which experts are shown can be influenced by their gender, language, and the reputation of their institution.

RQ2: How can an interface be designed to improve the fair and transparent representation of expertise?

The interface can support fairness by making diversity filters more visible. These filters could include gender, location, and field of expertise. This encourages users to explore a wider group of experts, not just the most cited or well-known ones. Making these filters easy to find and use can help bring attention to experts who are often overlooked.

Transparency can be improved by showing users how the experts in the search results are selected or ranked. For example, the interface can explain if the expert appears at the top because of high citation numbers, recent media coverage, or positive user feedback. Giving users control over sorting options helps them understand and trust the system.

The research also showed that relying too much on citation metrics can reinforce existing biases. Many important experts may not have high citation counts, especially those who work in practice, teaching, or new fields. The interface should show other types of expertise, not just academic publications. Visual elements like badges or tags could highlight different forms of experience.

It may also help to suggest alternative experts. such as “you may also consider”, who are similar in topic but more diverse in background. These suggestions could be grouped by expertise or other categories, encouraging users to consider more than the usual names. Showing a mix of experts and offering clear explanations of why they are recommended can support both fairness and transparency.

These ideas aim to improve how expert search platforms work by supporting equal visibility, helping users make informed choices, and encouraging more diverse expert use.

RQ3: What filtering, ranking, and visualization mechanisms can support diverse expert discovery?

Participants suggested filters such as gender, language, and geographical location. They also wanted to see experts sorted in different ways-not just by how often they appear in media. Visualization tools like radar diagrams or timelines could help represent less visible types of

expertise. Making filters easily accessible is important, as shown in Appendix B, where the placement of a gender filter influenced whether users noticed it at all.

RQ4: How do different stakeholders search for expertise, and what are their needs?

Different groups such as journalists, students, and researchers have different goals. Journalists often need quick access to trustworthy and media-friendly experts. Students and researchers may want collaborators or mentors. Stakeholders prefer experts who are accessible, speak the local language, and are willing to engage with the public. Availability, language skills, and clarity in communication were common needs across groups.

RQ5: How can expertise visualization highlight diversity and propose alternative experts?

By showing profiles in non-hierarchical ways, such as clusters or categories, the interface can challenge dominant narratives about who is considered an expert. Adding suggestions for "you may also consider" based on topic similarity or diversity goals can encourage broader exploration. Visualizations can make invisible patterns more visible-for example, showing the diversity of quoted sources in a news piece.

Impact of Sample Size on Findings

This study involved a small number of participants, which is typical in qualitative research focused on exploratory design. A larger sample might have added more variety in perspectives, potentially revealing additional user needs or expert seeker roles. However, qualitative research values depth over breadth. As Bryman (2012) explains, in-depth insights can be lost when the number of participants becomes too large. In future studies, it may be helpful to combine qualitative interviews with surveys or analytics to support more generalizable insights while retaining a strong understanding of user needs.

8. Conclusion

This thesis explored how expert search platforms can better support fair, transparent, and diverse representation of expertise. Through literature review, competitor analysis, and user research, several key issues were identified-particularly around biases in existing systems and challenges users face when searching for experts.

Stakeholders who responded were open to helping improve expert discovery platforms. The findings suggest that design changes in filtering, visual representation, and validation processes can make a significant difference in how experts are found and represented. The topic clearly resonated with participants, especially those working in journalism or research, where finding the right voice is crucial.

The project also showed how interface decisions, such as where to place a filter, can shape user behaviour. As seen in the LinkedIn discussion about the AAU Ekspertlister (see Appendix B), design choices have real-world consequences on visibility and representation.

On a personal level, working on this project shifted my understanding of how subtle design decisions affect who gets heard. Promoting a broader and more inclusive set of expert voices is not only fair, it also benefits public knowledge by adding new perspectives to the conversation.

9. Limitations and Future Work

This study was limited by the small number of user participants, which restricted the diversity of perspectives. Recruiting participants proved difficult, especially given how busy stakeholders such as journalists and researchers are. Future research would benefit from long-term collaborations with key user groups such as journalists, students, researchers, policymakers, and conference organizers. Institutions like universities or unions could help mediate access.

The most successful method for outreach in this study was direct messaging through LinkedIn or email. The highest survey engagement came from a LinkedIn post, and the most meaningful email conversations were with members of DMJX (The Danish School of Media and Journalism). This may be because they are both users of expert search systems and experts themselves. Their role involves finding, quoting, and collaborating with subject-matter experts in different ways. This dual perspective makes them especially relevant participants.

Denmark has a relatively small and connected expert-seeking community, which can both support and limit outreach. Many professionals know each other, making personal networks and recommendations an important part of expert discovery.

Hertzum's (2022) study focused on journalists, but many of the needs identified apply across expert-seeking groups. This thesis only scratched the surface of how such systems can be redesigned. In future work, developers and researchers could test working prototypes usability with more users, experiment with different ranking algorithms, and explore the ethical implications of various design choices.

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