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Exploring Key Competencies for Career Growth in Design

Uncovering Insights through Qualitative Research

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Käyttäjäkokemuksen suunnittelu (UX design) on jatkuvasti kasvava ala, jonka merkitys ja vaikutusvalta kasvaa samalla. Yritykset hakevat ratkaisuja heidän haasteisiin sekä kilpailuetua muotoilun avulla, joka asettaa suuret odotukset ja vaatimukset suunnittelijoihin.

Tämä opinnäytetyö keskittyy ymmärtämään suunnittelijoiden näkemyksiin ja kokemuksiin siitä mitkä ovat kaikista keskeisimpiä taitoja heidän työlle, sekä todeta teemoja ja havaintoja heidän henkilökohtaisista ja ammatillisista haasteita jotka vaikuttavat heidän urakehitykseen. Opinnäytetyö käytti kysely- ja haastattelumenetelmiä keräämään pääasiallisesti laadullista dataa.

Yhteensä 37 suunnittelijaa osallistui tutkimukseen, eri ikäisiä ja eri taustoja omaavia henkilöitä. Lähes joka ikäryhmä oli edustettuna. Osallistujilla oli yleisesti korkeakoulututkinto ja 5-20 vuotta työkokemusta useilta eri toimialoilta.

Tulokset korostivat pehmeiden taitojen, kuten empatian ja kommunikoinnin, tärkeyden ja koettiin että nämä taidot ovat keskeisiä ymmärtämään käyttäjiä, sekä auttamaan tiimejä ja sidosryhmiä löytämään yhteisymmärryksen jaetuista päämääristä. Käyttäjätutkimus, yhteistyö ja iteratiivinen lähestyminen työhön korostuivat myös usein. Organisaatiot usein kokivat haasteita liikkua kohti ihmis- ja muotoilukeskeistä suunnittelutyötä.

On monia mahdollisia keinoja auttaa suunnittelijoita riippumatta heidän kokemustasosta. Joitain tapoja joilla voidaan taklata todettuja haasteita on muun muassa rakentamalla yhteisöjä, tarjoamalla resursseja joilla he voivat oppia haastavia pehmeitä taitoja ja parantamalla ymmärrystä muotoilun luonteesta ja mitä sen onnistunut soveltaminen vaatii.

Avainsanat: käyttäjäkokemus, suunnittelu, laadullinen tutkimus, kysely, haastattelu, käyttäjätutkimus, käyttäjälähtöinen suunnittelu

Abstract

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User experience design is an industry that is continually growing in size and influence. With technical positions rising annually and the demands on product and service quality rising, companies are looking more often to design to help create a competitive advantage.

This thesis focuses on understanding the views of designers on what skills are central to their profession, and to identify themes and insights within personal and professional challenges that affect their career development. A mixed method approach of survey and interview methods were used to gather mostly qualitative data.

A total of 37 participants were involved, with a variety of backgrounds, with almost every age group represented. Participants generally had a diploma from higher education and 5-20 years of experience across a variety of industries.

Results emphasised the importance of soft skills like empathy and communication, as they were seen as central for understanding users and aligning teams and stakeholders to shared goals. User research, collaboration and iteration were frequently emphasised. Organisations often struggled with UX maturity and enabling human-centred approaches to design work.

There are many opportunities to help designers of all experience levels by building communities, providing them with resources to learn challenging soft skills and raising awareness for what successful application of design requires in practice are some of the potential ways of addressing the needs of designers identified in this study.

Keywords:	user experience, design, qualitative research, survey,
	interview, user research, human-centred design

The originality of this thesis has been checked using Turnitin Originality Check service.

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Glossary

Agile: Agile is an ideology and often applied as a methodology of project management that specifically caters to software development. In Agile, requirements and solutions are iterated collaboratively by the production team. It emphasises adaptive planning, early delivery, and continual improvement (Agile Alliance n.d.).

Business design: Business design is applying design methodologies, design mindset, business tools to solve and business challenges in a user-centric way (Faljic n.d.).

Coding, software development and programming: This refers to the process of creating instructions for computers using programming languages to create digital services and products, such as websites and apps.

Customer experience (CX): This is the product of an interaction between an organization and a customer over the duration of their relationship. This interaction includes a customer's attraction, awareness, discovery, cultivation, advocacy, and purchase and use of a service. Whereas user experience design often is concerned with the digital aspect of a service, customer experience encompasses all aspects of a customers experience with a brand (Gibbons 2021).

Design Thinking (DT): A non-linear, iterative process that teams use to understand users, challenge assumptions, redefine problems and create solutions to prototype and test with people. It involves five stages: Empathize, Define, Ideologize, Prototype, and Test (Siang 2021).

Design Systems (DS): A collection of standards, components, and principles along with the tools that designers and developers use to create consistent user experiences. Often this involves having digital assets representing the building blocks of services that are represented in various tools, such as having one version that exists in design software and another version that exists in code, upkept to be in sync by the product team (Fessenden 2021).

Empathy: In the context of design, empathy refers to the ability of designers to understand and share the feelings of users. It is a critical skill for designers as it allows them to create products that meet users' needs and expectations.

Facilitation: In the context of design, facilitation refers to the process of helping individuals come together to build a common understanding or to collect ideas from a group. This can be helping a team identify and create consensus on their common objectives or leading a user research session (Krause et al. 2020).

Hard skills: These are specific abilities that can be defined and measured, such as using design software, conducting research, or applying business principles (Krause et al. 2020).

Information architecture (IA): The design of informational structures for services and products, such as websites and apps. It focuses on making information accessible and user-friendly to serve users' needs.

Interaction Design (IxD): A wide field that encompasses the design of interaction between users and digital products and services (Siang 2021).

User interface (UI) design: the designing of interfaces in software or digital devices, focusing on the visual appearance of the product or service (Smiley 2021).

User experience (UX) design: UX design focuses on crafting holistic user experiences optimized for target users' needs across platforms and touchpoints. It entails research-driven information architecture and interaction design more broadly than just visual layouts (Gibbons 2021).

Service Design (SD): Service design takes a more business and user research approach to applying design principles, focusing often more on how an

experience can be created by the organisation they work in, rather than executing the user-facing work (Gibbons 2021).

Soft skills: Soft skills are harder to quantify skills, such as communication, empathy, teamwork abilities, or problem-solving skills. In the context of design, soft skills might include the ability to understand user needs, collaborate with other team members, or adapt to changing project requirements (Krause et al. 2020).

Stakeholder: Stakeholders represent a person, group or organisation that has interest or concern in an organization. Stakeholders can affect or be affected by the organization's actions, objectives and policies. In the context of design, stakeholders could be anyone from the end user, to the business owner, to the developer coding the project.

1 Introduction

This thesis was borne out of my interest in design and a desire to help younger designers succeed in their careers.

The purpose of this thesis is to use research methods to investigate and understand important skills designers should focus on to be successful in their careers, and to use that information to create a poster to synthesise that information into a clear format that can be easily understood and shared.

Originally the intent was to create a learning resource for participants and investigate how various modes of learning can be impactful, but with advice from my instructor I narrowed down my scope to focus on building an understanding of what are the essential skills for young designers to be proficient in, and produce a shareable infographic based on the key findings.

The hypothesis of this thesis is that there are many skills beyond the hard skills of applying design into practice that are essential for designers to advance in their careers (Krause et al. 2020; MacDonald et al. 2022), information that more senior designers would have and acknowledge. The driving research question of this thesis is whether there are essential skills to be considered for younger designers, whether there is consensus on what these skills are and would it be possible to condense this information into a shareable format.

1.1 Background

I have been a product designer for over a decade and have spent many years teaching design, as well as arranging events. I have held keynotes on the history and current state of UI and UX design, created courses on design and worked with many companies and organisations. I'm personally interested in creating approachable and effective educational design material that aid individuals and teams to become measurably more effective in their abilities, whether it is from learning a new tool or adopting a new methodology for collaboration.

During my experience of teaching junior designers and non-designers (such as developers and project managers), there is a clear focus and desire to learn hard skills, i.e. how to make end results that are aesthetically pleasing. There are common misconceptions, such as that the more senior the designer the less user testing they do. The reality is often, in fact, the opposite: the more experienced and effective the designer, the more they involve end-users in their design process, often meaning they work in or help create a work environment with a higher-than-average UX maturity (Pernice et al. 2021).

The reality is that professional design work requires much more than the ability to make pleasing layouts, as the reality of product design is one of limited time and resources, technical and legacy issues that limit what is feasible to create, expectations of various stakeholders and personalities and collaboration standards of the organisation, just to name a few factors. Effectively practicing design has a lot to do with skills related to collaborating, conducting research with users, iterating rapidly on proposed solutions and designs, and assisting developers to ensure the end result is aligned with the design specification (Krause 2020).

1.2 Research Objectives

This research has two core objectives: (1) identify key skills professional designers consider to be the most important for their work and (2) understand challenges designers face in their work, skill development and other areas they have identified.

Utilising multiple methods of qualitative research, it was my goal to produce insights that might not occur to most designers.

The goal was to synthesise the main findings into educational material that would benefit the overall design community and reflect on how these insights could inform further research. An additional goal was to produce background material that would help in generating educational materials and services for designers.

The intent was not to create a definitive resource, but rather to identify important and repeating themes that designers experience as crucial. Potentially certain insights could arise that have not been contextualised in the way a reader may be familiar with, and hopefully can help uncover nuances that they hadn't considered before.

1.3 Research Questions

The research questions are open-ended, targeted around uncovering insights from the lives and experiences of the participating designers. The driving root questions are:

- (1) What skills and abilities do designers consider to be the most important for professional success throughout their careers?
- (2) What kind of backgrounds do designers have?
- (3) What are common challenges they face in their work?

The goal of these three questions are to guide me in creating a set of questions that would allow designers to actively recall information that is important for them.

2 Literature review

In this section, I will conduct a thematic literature review to define the key terms pertinent to the study and for analysing the current state of the User Experience (UX) industry. My approach was to find relevant academic and industry resources related to UX designer skill development, whether it is researching their career development or charting the current state of the UX design industry.

This analysis includes an exploration of the skills expected of UX designers and an examination of the educational resources available to foster the development of such skills.



2.1 Defining terms



Terms such as design thinking, user interface (UI) design, user experience (UX) design, service design and product design are ever-present in the design industry, and they can easily be used interchangeably or in a vague manner. I have outlined general definitions for key terms used in this thesis in the Glossary with the intent to establish a clear idea of what is meant when different

concepts are referenced. In product and service design, these various aspects come together to shape the final outcome. Figure 1 offers a representation of the general process of developing digital products or services. Often customer experience, business and service designers are involved in strategy design, whereas service and UX designers and researchers take roles in the research and analysis phases. This could be considered the first phase of creating a service or product, as business and user needs are identified, and solutions are ideated and investigated.

While there are many overlaps (Figure 2), UI designers engage work with a focus more on front-end final layouts and interaction design that a user interacts with, whereas a UX designer tends to focus more on broader investigating and conceptualising of services to create a valuable experience to be specified further, ending their work at the diagramming and wireframing level, or utilizing an existing design system for its components.



Figure 2. Alternative diagram of how different disciplines of design intersect (Smiley 2019)

Service designers take a more business and user research approach, focusing more on how an experience can be created by the organisation they work in (Gibbons 2021). They are also known for bringing different stakeholders together and utilizing design thinking in democratising decision making and collaborating with research and workshop facilitation methods. Many UX design methods exist also in service design, such as user journey mapping and noteand-vote exercises. While many techniques are shared, their focus varies.

Having designers help in defining and researching information to create a usercentric project specification is still often minimised or completely skipped (Brown et al. 2019, MacDonald et al. 2022), and instead designers are often only brought into the design phase, with a relatively static specification of what is expected from them (Krause et al. 2020). This is often due to misconceptions that still exist about what UX means (MacDonald et al. 2022), which is one reason these distinctions are made clear. We will explore UX roles more in the following sections.

2.2 State of UX design industry

The concept of UX design is older than the term, as old as the concept of Human-Computer Interaction (HCI), or design in general. The term was coined by Don Norman, a cognitive scientist, working at Apple in the early 1990's (Nielsen 2017).

The history of UI/UX is tightly linked to engineering and graphic design, from Bell Labs and telephones to Apple and computer interfaces (Nielsen 2017). These practices rely heavily on perceiving systems as logical processes or the application of established rules, from placement of buttons to proportions of typography. Contemporary practices of UX involve a human-first approach, involving research and facilitating workshops (Krause et al. 2022).

With mobile phones becoming so normal that almost every person on the planet owns one (Taylor 2021), there is an ever-increasing demand for businesses to create high-quality experiences with their services and products for them to be competitive.Generally there has been a trend of design-led companies being more successful than traditionally-led companies (Brown 2019) for designers to help create services that are genuinely competitive (Hart 2019, MacDonald et al. 2022; Nielsen 2017).

Large companies such as Apple, Amazon, Google, and later Airbnb and Netflix popularized the idea of creating distinct and valuable solutions using usercentred design methods which also helped grow the industry as a whole (Nielsen 2017). Usability has generally improved for services and design has advanced in the past decade, as practices have become standardised (Moran 2020) and the industry has become more concerned with greater challenges, like sustainability (Adobe Communications Team 2021).

Technical positions are rising annually, according to a report by CompTIA (2023). In the United States the Bureau of Labor Statistics shows an annual growth of 50% in technical job positionings (CompTIA 2023). CNN's report says UX designer jobs are growing 18% year-over-year and is the 14th best job for a person in the United States (CNNMoney 2015). According to Google, there were over 138,000 job openings for UX designers during 2022-2023 (Google 2023).

If organisations want to build compelling user experiences, it is necessary to involve end-users and interact with the people who are or will be using the service. Without involving people in our design process or considering the social design aspects of our design, an organisation is very low in its UX maturity (Pernice et al. 2021).

While UX has become more ubiquitous in business, designers are still often missing from leadership. Positions like CXO (Chief Experience Officer) or CDO (Chief Design Officer) are very rare, which limits the influence of design thinking and a user-centric approach to development teams, limiting the number of resources and impact they can have on the overall organisation (MacDonald et al. 2022).

2.3 UX designer roles and skills

UX designers are often generalists that are able to operate in many phases of product development. What started as a general "UX Designer" role has splintered into more specialized roles like User Researcher, Interaction Designer, Information Architect, and UI Designer. This evolution reflects the industry's growth but also contributes to the ambiguity of career paths. In one survey by the Norman Nielsen Group, 963 UX practitioners responded with 134 unique job titles, ranging from popular titles like UX designer (171 responders) and Product designer (46) to Research consultant (1) and UX engineer (1) (Krause et al. 2020).

UX designers have a wide range of skills they need in order to practice design effectively. According to Norman Nielsen Group's survey, the ten most important skills are prototyping, research skills, project management, selling UX, writing skills, group facilitation, public speaking, visual design, HTML/CSS and data analysis/analytics (Krause et al. 2020). 86% of designers and researchers in the survey stated they do research, only 23% of UX researchers said they had visual skills, compared to 79% of UX designers.

Although there are many UI/UX designers who do not code, there is an increasing demand for designers to understand code. UX engineers bridge the gap between designers and developers, helping translate design layouts into production-ready code that the final service is made into. Sometimes referred to as UX unicorns, very few designers are skilled in all aspects of UX design and front-end development and it is not recommended as a realistic aspiration for most designers (Siang 2021). The concept of what exactly a UX unicorn is keeps changing with time, generally having a wide range of skills that surpass a common designer's repertoire (MacDonald et al. 2022).

There is a lack of a clearly defined career path, as opposed to more traditional professions. Career progression might depend on various factors like personal

interest, skillset, industry needs, and more (Nielsen 2017). There is a big challenge in the industry to create clarity with terms used that has resulted in many terms being used interchangeably, resulting in job descriptions that don't seem to match their titles or even generally being low on specifics on what responsibilities the job would come with. This also makes it difficult for recruiters to operate meaningfully and for teams to scale with purpose (Conrick 2017).





Regardless of its complexity and nebulousness, as we see in Figure 3, the UX industry is growing at a 100-fold rate every year (Nielsen 2017). There is an ever-increasing need for designers who are oriented to the job market, as merely having hard skills is insufficient to be a successful designer (Krause et al. 2020). This is demonstrated industry research, such as a survey by the Interaction Design Foundation of hiring managers in 2022, which showed that there is a large emphasis on skills relate to communication, from collaborating to researching (Figure 4). Only approximately 15% of hiring managers emphasised the importance of proficiency in design tools themselves (Katsurika 2022).





2.4 Evaluating current options of learning skills for UX designers

In Krause et al. (2020), 82% of people working as UX designers had a university degree, with designers commonly having degrees in design-related topics, from graphic design to visual communications. Even if the university degree wasn't specifically in design, many stated that their degree provided relevant skills to their current work (Krause et al. 2020). 35% of people said they had studied a specifically UX-related program in university.

There are many official education programs offered around the world. For the purposes of this thesis, I have explored a small sample from Europe to see what options the educational landscape offers currently. University curriculums differ in content: more traditional institutions like the University of the Arts London emphasizes hard skills (prototyping, visual design, creating portfolios) in their UX design BA (UAL 2022), whereas many others such as Ravensbourne University London, Habour.Space or University of Europe in Germany have many courses based around topics such as communication, soft skills, business design and collaborating with teams included in their Bachelor's programme

(Harbour.Space 2023; Ravensbourne 2022; UE 2022). The formal educational approach is not feasible for many, due to the costs, difficulties in getting accepted, and time commitments a multi-year education requires, without even discussing the challenges for institutions to adapt their offering rapidly enough to keep pace with developments in the industry.

In Krause et al. (2020), 21% of responders said they didn't have any direct education in UX, rather learning from sources shown in Figure 5. Online courses for UI/UX design mostly emphasize hard skills. This might also be due to how much more straightforward it is to teach hard skills on how to practice design within tools we use online, compared to the difficulty of teaching skills that involve more abstract and social skills, such as collaborating or empathising with colleagues.

The courses I evaluated were IxDF's Mobile UX Design, Google's UX Design Professional Certificate and Udemy's UX & Web Design Master Course. All are relatively brief in duration (each consisting of videos and course modules that amount to a few weeks or so of studying). Courses emphasise hard skills, from wireframing to coding, and cover UX research in a point-by-point manner. Skills such as UX strategy and iteration are taught, but seemingly at a high overview level. I didn't have the ability to participate in the courses, but evaluated their curriculums and materials. My conclusion is that the emphasis is greatly on creating outputs by training hard skills, with much less emphasis on soft skills and working within the realities and constraints present in real-world teamwork.



Sources of UX Education for Practitioners Without a UX Degree

Figure 5. Graph of educational sources for designers who don't have a degree in UX design

Many begin by learning UX design through bootcamps, such as those run by Google, CareerFoundry, among others. While individuals who partake in these bootcamps often describe the experience positively (Krause et al. 2020), designers in the industry often heavily criticise them as they create a superficial understanding of complicated concepts, from topics such as iterative design and facilitation to prototyping and UX research. This results in many people with diplomas and portfolios, sometimes called "portfolio farming" (MacDonald et al. 2022), but without sufficient ability to apply themselves in real-world projects, causing difficulty in getting and staying employed (Levitt 2020; MacDonald et al. 2022; Philips 2023).

To tackle this gap between online resources and essential skills, such as design leadership, there has recently emerged mentorship resources like ADPList and Topmate that connect senior designers with young professionals, but considering the scale of the issue this tackles a very small percentage of UX professionals (Wu 2020).

Aside from these paths of gaining knowledge and skills there are many blogs, videos and other materials that UX professionals generally have access to. Since these resources are light in content, it is not unfair to presume these

articles do not do much in terms of developing skills other than to mainly raise awareness and interest. Therefore, I will not spend time trying to comb through large amounts of content related to soft skills in blog articles, instead, I'll just point out that there is content on these themes, but it is not very broad in scope.

One assessment of how the industry is still growing and maturing are annual reports from industry organisations, such as UXCollective's "State of UX". The 2023 report discusses layoffs, a need for greater business design and the value of algorithms making design decisions and evaluating visual trends (Teixeira 2023) and yet does not address topics such as the limited scope of UX research or the business value of bringing users into the design process (Brown et al. 2019). Although learning is mentioned, as the report states "Uncertainty is the only certainty there is" (Teixeira 2023), it is framed mostly in the context of adapting to changes, without noting how difficult it is to find places to learn outside of doing design in the context of work.

Overall, there is an evident gap between educational resources and the daily practice of UX design in organisations. Many resources reviewed failed to even address this gap, or the challenges designers face in learning. Most educational content caters to teaching hard skills and creating outcomes more than on soft skills, such as teamwork and empathy. Although there are new approaches to spreading knowledge, such as mentoring with ADPList or Topmate, there is still an enormous challenge in creating better awareness of the disparities that exist, developing new ways of learning and getting these resources into the lives of designers to utilise.

3 Methodology

In this section I will present how I pursued my research questions by creating a plan for research. To investigate my research questions relating to designers' experiences and opinions, I concentrated on collecting qualitative data through questions that would elicit participants to recall their personal experiences. The goal was to produce information that would be rich to analyse for themes and key insights that could help create guidance for younger designers.

3.1 Research Design

I wanted to generate an opportunity for uncovering insights before completing data collection, so I decided to split my research into two parts: first, a primarily qualitative survey to gather as much data from many participants in a short amount of time, and second, developing a follow-up interview structure to investigate themes and topics that arose from the survey further.

My aspiration was that this approach would allow me to uncover important themes and delve deeper into the complexities of designers' experiences. I would first obtain a wide range of information from many different designers using a survey and focus my interview on what the data suggests after analysis, rather than committing to a certain theme or script structure beforehand.

3.2 Survey Development and Administration

My purpose was to learn how people have become designers, how their skills have developed and how their work is evolving. I wanted to learn about a wide range of topics, the main areas of interest being how they got started, what skills they have acquired, what their work is, what challenges they face and how they are developing, how they are adapting to the current and future needs of their work.

A survey would help me uncover initial themes and patterns with analysis, also enabling me to filter results for quantitative factors, such as age and years of experience. The survey had to be short enough to be engaging. Very few people are willing to sit for extended periods of time filling out online surveys (Wigmore 2022). I wanted to limit the total amount of questions to approximately 20, with five of the questions being a selectable choice from multiple options (like gender), so that the entire survey could be filled within 10-15 minutes.

I eventually settled for a four-category structure for my questions: (1) evaluative, where I establish a baseline by asking about participants' background information, such as age and gender; (2) previous experiences about how they began working as a designer; (3) their current work status; and (4) how they are preparing for the years ahead.

It was important for me that the questions allowed participants to reflect on past experiences, rather than eliciting opinions and hypotheticals. I wanted the questions to be personal, but not too leading. For example, instead of asking "What would you like to be easier in your job?" I phrase it as "What are some repeating challenges in your work life?" I iterated on the final question set for a few rounds, consulting my instructor and peers who were not going to be responding to the survey itself.

I used Google Forms to build the survey, making sure to configure it so that no personally identifiable information (such as e-mails) would be collected unless participants volunteered the information. I made a clear introduction to state that information is gathered with consent and anonymously, and that the survey will be used for my thesis, as well as an open report that will highlight the key findings which will be shared freely on the internet.

At the end of the survey, I give an option for participants to leave their email address and asked what they would like to be contacted about (potential interview to give more information, a link to the thesis and final report, or links to information that could help in their stated learning goals). My hope was that I could gain some good interview contacts who I could follow up about the answers I received from them and others.

My plan for receiving data was to share a link to the form to various design communities on Slack, as well as distributing it on my personal LinkedIn page.

3.3 Interview Process and Participant Selection

When analysing the survey responses, I determined that the best insights would come from experienced designers, as they had provided the most meaningful answers to the survey and also possessed information the younger designers presented in the survey answers. Interviewing designers with extensive professional experience as well as potential leadership experience would allow me to explore topics raised in the survey in more detail, as well as developing a deeper understanding to survey insights from how the interview participants relate to the topics raised.

The final interview structure was completed after the survey phase. The focus of the interviews would concentrate on aspects such as participants' day-to-day work and responsibilities, how they create clarity in difficult situations, views on soft skills and the role of empathy, use of modern design tools like Figma and Miro, and opinions on current educational resources. I critically evaluated the questions to ensure they would be neutral, but conversationally natural, as this content would be read out loud.

The interview process was designed with an emphasis on flexibility to accommodate the varying experiences and insights of the participants and time availability. The structure consists of primary and secondary questions, as well

as potential follow-up questions. The primary questions were essential, while the secondary questions were optional, depending on the available time. This strategy enabled a robust exploration of each participant's insights, even if certain topics elicited less resonant responses. An example of this:

Primary question:

What is a project that you were really proud of or happy with?

Clarifying variation:

What was a project that was positively special to you? What made it special?

Secondary follow-up questions:

What kind of conventions or common processes have you used to ensure a good result?

What advice would you give to someone going into a similar project?

A clear script guided the interviews, but I retained the flexibility to rephrase questions or ask follow-up questions for greater clarity and detail. To protect participant privacy, all interviews were recorded, transcribed, and anonymised. Original video and audio recordings were deleted after transcribing.

Interview participants were initially asked to book a time that would work for them, using contact information from the pool of survey respondents who had more than 10 years of experience. I was able to recruit interview participants who were senior designers, however securing their participation proved challenging due to their professional commitments, and not all those who expressed interest in the survey responded to follow-up contact.

Ultimately, five in-depth interviews were conducted with senior designers, all of whom were women aged 35-55 and based in Europe. This provided a focused

set of information, but also introduces certain demographic limitations and bias risks to the study due to the limited sample size.

3.4 Data collection and analysis

As the research consisted of two parts, data collection was varied: for surveys data was collected using Google Forms and sharing a public link to UX communities in Slack (UXHeI, SDN Finland, Witted) as well as on my personal LinkedIn page. During the course of a month, I received a total of 32 responses. For the interviews, I collected data primarily through Google Meet interviews, except for one interview that was conducted in person.

The survey data analysis was also conducted in two phases: an initial phase where I conducted close reading of the material, creating word clouds of the results, and categorising answers using affinity clustering to gather insights and trends for the survey.

After the data collection was completed, I revisited the results and incorporated insights from the interviews to enrich the analysis. I also analysed the interview data with affinity grouping and close reading to identify insights and analysis (Figure 7). I had also hoped that I would continue to gather more survey responses, but after the initial analysis had been conducted no further submissions were made.

The anonymity of the participants was maintained throughout this process, ensuring that the results could not be traced back to individual participants. I explore the data and its analysis in the next section.

3.5 Reliability and validity of the research design

As a baseline for reliability, I evaluated my research design from three angles proposed by Kirk and Miller that is referred to in Puusniekka and Saaranen-Kauppinen's KvaliMOTV (2009):

- Quixotic reliability: I believed that my selected methods are valid and reliable for my research because I wanted to learn personal information from professional designers and had created questions that are not leading or seeking opinions, but rather recalling their own experiences related to the field they work in.
- Diachronic reliability: The research I conducted has a limited time of relevancy as the UX industry is moving forward quickly. Nielsen Norman Group conducted two UX career surveys within ten years and didn't see fundamental changes to the nature of UX design skills or work, aside from small differences like a 9% increase in designers working on mobile websites compared to the first survey five years prior (Krause et al. 2020). It is likely that the information discovered with this research will also be valid for years to come, although it would be important to repeat the research in some years' time, as well as to periodically reassess the results in alignment with ongoing industry advancements.
- Synchronic reliability: This is the most difficult aspect of reliability to justify, as it relies on my subjective ability to identify conflicting information. My strategy for dealing with this will be to look out for and highlight discrepancies in any conflicting information I will gather, especially as I intend to attempt to make conclusions based on years of work experience, level of education and other quantitative factors.

For the interviews I was prepared to rephrase and follow up with additional questions to help create clarity or additional information as needed.

Although the selection of participants skews to my own network and the Finnish design scene, the upside is that I can be sure that the participants are real UX designer professionals with extensive experience in the industry. A type of impartiality and facilitation are common skills needed in UX (Krause et al. 2020) and it seemed reasonable to expect that the information gathered would be consistent with other participant answers, an issue that would require attention after data collection.

4 Empirical findings

4.1 Overview of Survey Participants' Profiles

The survey garnered answers from designers of varying age groups, gender, years of experience and educational backgrounds (Figure 6). There were almost twice as many answers from females (59.4% - n=21) compared to males (37.5% - n=11). Every age group between 18 and 60 was well represented, with most participants being between 30 and 39 years old (43.8% - n=14).



Figure 6. Pie charts of survey participant age group and gender.

Every responder except for one had either a Bachelor's (n=17) or Master's (n=13) degree, with one participant having only graduated High School, but they were just beginning their designer career and stated that they had only worked one year in the industry.

The majority of participants worked in technology (n=8) and design agencies (n=5), with most working as a part of an in-house design team (n=10) or agency/consultancy (n=9). Most participants had extensive experience in the industry, with a minority (18.8% - n=9) having worked five years or less. Two participants had over 20 years of experience, with 65% (n=21) of responders reporting to have between 5 and 20 years of work experience. The most common experience level was 6-10 years (n=9).

Most commonly, job titles were designer roles such as UX Designer (n=10), UI/Visual Designer (n=5), Service Designer (n=5). There were also Design Lead/Director (n=6), researcher (n=3) and consultant/freelancer titles (n=5). Overall, these represent a fair cross-section of roles present in the UX industry today and align closely with job titles reported in Krause et al.(2020) survey.



4.2 Insights from Survey Responses

Figure 7. Example of affinity grouping and word clouds composed in FigJam

These insights were derived from the survey responses by processing the information with a variety of methods. Two of the visual methods used were (1) color-coding survey responses in Excel for various quantitative attributes, (2) clustering sticky notes with individual answers using affinity grouping (Figure 7) and (3) creating word clouds based on answers. While word clouds were ultimately not very useful due to the explanatory nature of the in-depth answers, overall these visual methods helped identify various themes and patterns, providing a clear focus for me to understand participant's responses and inform my later analysis of the content.

In addition to visual analysis, I also did a thematic analysis to identify patterns. This required a close reading of the content, as often different responders would characterise the same concept (such as a skill like communication) in different ways: a UX Designer would mention how they had challenges justifying design decisions, whereas a Service Designer would mention issues in facilitating organisational alignment to a plan. Both relate to communication, yet their contexts vary significantly.

4.2.1 The importance of soft skills

Several main themes were present in the data. Participants emphasised soft skills, such as the importance of collaboration (n=12), communication skills (n=10) and empathy (n=6), and while topics like visual design (n=9) were the most common hard skills mentioned, non-design skills like business strategy (n=3) and project management (n=2) were also mentioned.

Many participants mentioned issues relating to communicating value or the design process to stakeholders (n=8), getting stakeholder buy-in (n=5) and unrealistic expectations (n=4). On an individual level, the lack of time (n=5) and too many tasks or requests (n=4) were most frequently mentioned. In addition to these, some participants mentioned struggles with imposter syndrome (n=2) and work/life balance (n=2). These are all vital subjects that designers should be educated on, but there aren't many resources available on the present educational market that are specifically created for designers.

Several participants (n=5) discussed how stakeholder management is an important skill that isn't given enough attention and how this also contributes to communication challenges and a gap between building better understanding between designers and stakeholders. Upholding user-centric ways of working is a challenge under tight constraints, with soft skills being the answer for many (n=7) to tackle these challenges and help organisations mature towards a more

UX-centred work culture.

4.2.2 The importance of continuous learning

Continuous learning was seen as essential, with the majority (84.4% - n=27) rating it as highly important. Methods for learning were varied, with the main methods being online course and videos (n=9) and reading books/articles (n=8). The most common way was practice, trial and error and learning with peers (n=13). Valuing mentorship relationships (n=8) and learning communities (n=9) were mentioned by those who had access to or integrated them into their growth. Some participants noted accomplishments like moving from junior to senior role (n=4), transitioning to management (n=3) and establishing new design processes (n=2), which serve as examples of how continual learning manifests in practice for design professionals.

Many participants noted their own growth, from practicing hard skills like prototyping (n=5) to soft skills like facilitation (n=3). Prototyping, Figma and design systems were the most commonly practiced design-related hard skills, whereas the focus of some designers to learn coding/development (n=3) and data skills (n=3) demonstrate how others focus on expanding their technical abilities.

Several designers (n=5) voiced issues in the availability of resources or avenues to continue learning. Two participants noted a lack of a clear career path and mentorship making continual learning difficult, whereas another two participants highlighted difficulties finding time or opportunities for learning at work.

4.2.3 The most important skills for UX designers

Hard skills	Tools	Soft skills
UI/Visual design (9)	Figma (13)	Collaboration (12)
UX design (8)	Adobe XD/CC (12)	Communication (10)
Service design (6)	Miro (7)	Facilitation (8)
Coding/development (5)	Sketch (3)	Openness to the world (7)
Prototyping (5)	Pen and paper (3)	Empathy (6)
User research (5)	Axure (2)	Problem solving (5)
Design theory (5)	LucidChart (2)	Creativity (3)
Business strategy (3)	Mural (2)	Looking for inspiration outside design (3)
Design systems (3)	OmniGraffle (2)	
Information architecture (3)	Visio (2)	
Interaction design (2)	Webflow (2)	
Project management (2)		

Figure 8. Visualisation of most common skills and tools present in survey answers.

In terms of skills necessary to perform their work, a wide range of skills were mentioned (Figure 8). These ranged from hard skills like visual design (n=9) to soft skills like facilitation (n=8). In addition to the skills mentioned, the tools participants noted as important to them were Figma (n=13), Adobe software (n=12), Miro (n=7), Sketch (n=3) and a variety of less-popular tools such as OmmniGraffle and Visio being mentioned by two participants per tool. With the advent of Adobe purchasing Figma and discontinuing development of Adobe XD, it is likely that this response ratio will change in the coming years. These results are consistent with industry surveys, such as the UX Tools 2022 survey results (Bowman and Palmer 2022). It is interesting to note that Webflow, a no-code web development tool, was mentioned by two participants, along with other coding tools such as VS Code, Dreamweaver and Sublime Text being mentioned by individual responders.

The importance of understanding design theory was explicitly highlighted by some responders (n=5), stating that designers should know principles behind concepts like Fitt's Law. This, one responder argued, helps designers understand the reasoning and impact behind design choices. User research

was also highlighted by some participants (n=5) as an important way to build understanding about challenges and applicability of solutions.

Other skills that were noted by several responders included having a general curiosity and openness about the world (n=7), having good problem-solving skills (n=5) and looking outside design for inspiration (n=3). This is another example of how multidisciplinary design is as a profession, as so much outside of the field can help designers grow and become better at their work. This ties in with how several responders (n=5) stated that good design is more about solving business problems through user-centric design rather than creating visually appealing layouts. As one designer put it:

It's not all about pixel perfection. If you don't have a good UX and structure, it doesn't matter how pretty it looks.

For their future goals, responders mainly mentioned seeking to develop specialised expertise (n=5), moving into leadership roles (n=4), improving core design skills (n=4) and focusing on strategy (n=3). Some were unsure or expressed taking a break from learning and career advancement, focusing more on personal wellbeing and balancing work and their personal life (n=2).

For younger designers, participants suggested developing a strong foundation with skills and abilities (n=8), cultivating an attitude of patience and helping (n=6) and pursuing growth opportunities (n=5) like experimenting and doing freelance or passion projects.

4.2.4 Differences in answers based on participants' profiles

Younger participants (18-29, n=7) tended to be early in their careers and focused on developing core design skills, like UI/UX design. They report relying more on course and online learning, concerned with competition and how to stand out in the industry. 30-39 year olds (n=14) reported having more work experience and focusing on specialising and improving specific skills,

challenged with workload, prioritising their time and avoiding burnout. 40-49 year olds (n=8) often reported extensive work experience and more often reported valuing soft skills like empathy and collaboration. Their responsibilities more often include management and strategy, while their focus is on improving high-level and business-related skills. 50-59 year olds (n=3) often had 20+ years of work experience and reported appreciating the fundamentals like processes and listening. They note an evolution towards systemic thinking and provide mentorship to designers who are in earlier phases of their careers.

These differences in age are also reflected in differences between education levels. Participants with Bachelor's degrees (n=17) discussed finding employment through internships and practice, focusing on technical and practical skills and relying on online learning resources and communities. Master's degrees (n=13) participant answers were more appreciative of design theory and psychology, having confidence in their core design skills and looked to improve their soft skills and strategy.

Job titles also had a significant impact on the issues participants answered they had at work. Several UI/UX Designers and Service Designers mentioned challenges with communication (n=8) and getting stakeholder buy-in (n=6), whereas Design Leads more often mentioned workload prioritisation (n=3) and team engagement (n=2). Two researchers mentioned challenges with design maturity in their respective organisations, whereas consultants and freelancers (n=5) discussed issues related to organisational politics (n=3) and red tape (n=2).

4.3 Overview of Interview Participants' Profiles

All interview participants (n=5) were women between the ages of 35-55. They reside in many different countries (Europe and North America) and have

between 8-20 years of design industry experience. Several were design leads or head of design, some were senior product or service designers.

Less emphasis was placed on gathering quantitative data, so there is not as much data to analyse and form profiles with. The most important aspect is that all participants are senior-level designers with extensive experience.

4.4 Analysis of Interview Findings

Every interview participant highlighted the critical role of soft skills like empathy and communication in successful design work. While empathy was mentioned by interviewees even before asked specifically about it, there was no consensus on a single definition for empathy. It ranged from two interviewees defining empathy as the ability to listen, to feel and go beyond the words spoken, to one person felt it is more a tool for understanding and sense-making. The commonality of every description was a focus on understanding other people's experiences and perspectives. Three people mentioned how they consciously began to practice their empathy skills later in their careers, while two others stated that they felt it was an integral part of who they are and their upbringing.

Collaboration and communication were seen as central skills for design, most stating that it is necessary to have strategies for working with stakeholders effectively. All designers interviewed said aligning design work with business goals and metrics was important. They said this occurs in practice through asking questions to better understand challenges, and to understand the expectations of the value they wish to create (n=4). In addition to stakeholders, this applies to the team within which a designer operates as well. This is summarised in this quote:

First and foremost, I think it's really smart to align with tech or engineers because we can imagine beautiful things, but if tech stack is limiting us into proceeding in certain way, then it's better to manage expectations soon and define scope soon. Processes were also seen as crucial, with standards for user research, testing and feedback being highlighted as important by three participants, as well as utilising design thinking, service design, audits, and journey mapping (n=4). Each participant discussed in their own way the importance of bringing people together: from educating colleagues and stakeholders to achieve optimal results to using workshops and techniques like user journey mapping to help stakeholders understand certain issues clearer. One participant mentioned how important it is to repeat agreed-upon objectives regularly and communicate progress to stakeholders at different levels to help educate what design work is in practice. These are issues and skills that are not readily addressed in current practices in design education.

Interviewees discussed feeling pride and a sense of accomplishment from delivering products that are used by millions and winning praise and positive feedback from users. Other themes that were mentioned were achieving fast turnarounds in tight schedules, helping vulnerable groups through collaborative design, and seeing their designs still in use years later. The main factors interviewees identified in achieving good results in projects they were proud of included using human-centred design approaches, facilitating effective collaboration and receiving validation through testing and feedback.

Miscommunication, lack of documentation and clarity are seen as factors that severely harm projects, whereas investing in design and research, actively avoiding unrealistic timelines or late design involvement and ensuring there is trust between team members as factors that help projects succeed. Developing visual artifacts and co-creation were mentioned as helpful activities in creating a common understanding. As one designer stated:

> There should be shared documentation where everyone should have access to and contribute in the end. I think when you have such documentation, then it's really easy to go back and also share knowledge.

Generally the interviews provided perspectives that were consistent with the

data gathered from the survey. Answers were congruent among participants, albeit every interviewee had their own distinct approach to describing what these topics meant to them, and how their experiences shaped them.

Results from the interview reflected many of the themes present in industry literature, as the value of soft skills and the importance of continuous learning are central themes in research from MacDonald et al. (2022) and findings in Norman Nielsen Group's UX Career survey (Krause et al. 2020).

Given more time and resources, it would be highly interesting to conduct more interviews to collect a wider set of data to analyse further.

4.5 Themes and Patterns Emerging from the Data

Both survey and interview data had many similarities and themes. These can be categorised into four main areas: soft skills, hard skills, design facilitation and business. Design facilitation skills refer to the application of hard and soft skills into practice by working with other people, such as stakeholders and colleagues. Business skills are non-design skills that are nonetheless important for designers to be proficient in, such as project management, budgeting and business strategy. These are overlapping categorisations that are deeply interlinked.

The most highlighted area is the importance of soft skills (survey: 84% n=27/32; interview: 100% n=5/5), as well as aligning the team and stakeholders (survey: 38% n=12/32; interview: 80% n=4/5). Interviewees tended to emphasise the importance of team dynamics and trust, whereas survey responses focused more on adaptability, problem solving and open-mindedness.

All interview participants discussed the importance of impact, autonomy, and the ability to design with a human-centred approach for personal satisfaction.

Survey responses discussed more on how important they saw general creativity and problem-solving (28% - n=9) to be as motivators for their work.

For tools, Figma and Miro were the most commonly mentioned (survey 63% - n=20; interview 100% - n=5) and were regarded as great additions to designers' toolset. They enable faster and better work to be done, allowing remote teams to collaborate in real time on the same file. The toolkit aspect of designers' work is something that isn't as readily addressed in research literature, but in industry publications collaborative tools such as Figma and Miro are disproportionately represented, as they are the industry leaders (Bowman and Parker 2022).

25% (n=8) of survey participants highlighted the importance of facilitation skills and 19% (n=6) mentioned how they use workshops and co-creation tools such as Miro regularly in their work. When interviewees were specifically asked about their approach to facilitation in workshops and co-designing, participants validated that it is an integral part of their work and offered various considerations to ensure efficiency: having a clear structure for the workshop with an explicit agenda, setting clearly defined goals, mindfully selecting choice people to participate and prepping them beforehand, as well as incorporating fun and humour to make the activities engaging. As one participant said:

I try to make it fun. So good structure, but also fun and sprinkle Easter eggs. [I]f people have an open mind, if they're having fun, they're gonna do better work.

Most interviewed were in design leadership positions managing teams, whereas in surveys this was more commonly a career goal (25% - n=8) that few (16% - n=5) had yet achieved. Interviewees saw that leadership skills helped facilitate clarity, build on vision, and help teams execute strategy. Communication and trust were seen as essential skills for team leadership, requiring continuous messaging of goals, priorities, and updates to educate team members and align understanding.

Both sets of participants were positive about the abundant availability of online educational material (survey 72% - n=23; interview 80% - n=4), but the lack of time is an issue some highlighted (survey 9% - n=3; interview 40% - n=2). Interviewees spoke about combining online learning with in-person learning as well as learning with the help of mentors and communities and the value of learning through teamwork.

In the survey, 16% (n=5) of participants noted the importance and challenge of effectively collaborating with developers. Several interviewees also discussed how important they see aligning work with engineering, finding methods of work that are suitable for both and highlighting the necessity of having a designer involved throughout the project even after initial design specifications have been completed.

Rather than discuss pursuing aesthetics or artistic vision, designers of all experience levels discussed the importance of processes and solving challenges. Whereas younger designers focused on following structured processes for learning and improving their design thinking and agile methods, utilising templates and frameworks to guide their work. Senior designers mentioned the importance and challenges with adapting various processes to different project types.

4.6 Limitations

There were a few limitations to this study. The first was the small number of interviewees (n=5), which resulted from the limited availability of senior designers. This may affect the general applicability of the findings.

Additionally, the sampling method, which drew heavily from my own network and certain online communities, may introduce some biases. The potential impact of these limitations on the findings is discussed in the subsequent sections.

4.7 Reliability and validity of the implementation

To ensure the reliability and validity of the research, several measures were implemented. During interviews, I asked specifically worded and open questions, I was careful not to lead the conversation other than following the interview framework. The research questions were clear, and I was prepared to rephrase and follow up with additional questions for more clarity or information as needed.

As most fields were optional in the survey, some data especially towards the end was less populated, for example while every participant answered how many years of work experience they had (n=32), only 22 participants answered what skills they had most recently learned, limiting the sample size further. No demographic data was collected either, which is a limiting factor to analysing subgroup differences further.

My decision to restrict the number of questions in the survey and enforcing any grouping of answers, for example by asking to list design and non-design skills, could have revealed more skills less directly related to design work, such as project management or business strategy, which were limitedly present in survey data but more mentioned by interview participants. Whether this is due to seniority or merely because of the survey questions is something worth investigating further.

While the data of this research aligns closely to other literature, a deeper comparison could further enhance the reliability and validity of the data. Triangulating results with other datasets could help validate the findings further.

5 Creating Resources for Career Development

The research provided many valuable insights concerning designers' perspectives. My goal was to use the information I gathered to generate educational content for designers. In this section I will outline the steps I went through to plan and execute visual artifacts to synthesise the findings into formats that could enlighten and guide designers meaningfully.

5.1 Planning the material

The main results from the data that I wanted to highlight were (1) skills designers felt were important and (2) the importance of learning. I felt that an infographic-inspired poster would be an excellent medium to communicate (1) and (2), as they both are about the survey and its results. I wanted to highlight skills like design facilitation and business, talk about how participants got started in design, their views on learning and habits of practice, as well as what skills they have been working on recently. I used the four area categorisation mentioned in the thematic analysis of the result data as the foundation for my visualisation:



Figure 8. Original idea for visualising core research findings

The core insight I wanted to message was a practical framing of the skills a senior designer needs: hard skills that deliver results and center around business, soft skills that allow them to create clarity and facilitation skills that allow them to communicate and collaborate, as well as empathise with people in a professional capacity. I researched various methods of visualising this and eventually settled on the idea of creating a Venn diagram that shows how these skills overlap and relate to one another (Figure 8).

5.2 Design Process for Final Resources

The internet is full of infographics and visually impressive posters. My intent was to create clarity, so for my purposes it was important to primarily create a well-structured page that allows its message to be easily interpreted. This involves a lot of decisions that are based on theory and practical experience, I will try to identify and address the primary methods and considerations as I describe my process.



Figure 9. Initial poster layout concepts in Figma

To create clarity, an important gestalt principle is clear visual hierarchy. I wanted to have the Venn diagram in the centre of the design, captivating the viewer and enticing them to look closer. I began by drafting different layouts in Figma that incorporated the diagram in the centre. Ultimately I was deciding between two models as shown in Figure 9: one where there is a clearer demarcation of sections and a division between hard and soft skills (left) and a more open design (right). I ultimately settled on the right design because it had more negative space and would allow for more data points to be highlighted. I continued by defining the areas I wanted to populate with various insights, and found quotes from interviews that would poignantly illustrate the value of the skill mentioned.

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SENIOR DESIGNERS SHARE THEIR EXPERIENCES
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Data collected in late 2022

Insights from experienced designers show us that there is more to design work than merely making beautiful pixels. Every interviewee stressed the vital role of soft skills, particularly effective empathy and collaboration



Figure 10. Work-in-progress poster with various type sizes

I needed to keep text as short as possible, as that would allow me to use larger type sizes, fit more information as needed and have space between elements to maintain legibility. I worked initially solely in basic shapes and greyscale to make it easier to focus on structure more than style (Figure 10). I limited myself to one font (Jost) which I chose for its good legibility and contemporary humanist form. The ability to use repeatable components and build rules-based designs with Auto Layout is a great time saver that also allows me to quickly explore layout options and iterate my design.



Figure 11. Venn diagram illustration generated with Midjourney

Once I was satisfied with the content and had shown it to some people for their feedback, I proceeded to design the final visual presentation of it. I had recently redesigned my own website and had chosen a dark purple to be my base brand color. I wanted to keep the white background of the design, not only for legibility but also to make it easier to print. I used Midjourney to create some inspirational colours and blends for Venn diagrams to be inspired from (Figure 11). I wanted to create a soft pastel feel to the design that would give it a sense of elegance to balance the gravitas of the statistical data it was presenting.



Figure 12. Checking contrast for legibility with the Stark plugin in Figma

It is important to consider legibility and accessibility when designing visual layouts. Once I had worked on applying colour and style to the poster, I verified contrast ratios based on WCAG 2.1 guidelines (Figure 12) and ensured that text

would be legible even in small sizes. I did this by printing the poster on A4's for evaluation, applying blur filters and viewing the poster on different devices. Although the poster had small text when viewed on a mobile phone, the main insights with the Venn diagram were distinguishable and navigating the poster with pinching, zooming and swiping proved to be straightforward for people I showed it to.

The final poster is included as Appendix 3.

5.3 Additional Ideas for Generating Educational Resources

Although a poster can be an impactful resource to help understand what skills a designer should focus on, it is very limited in its capacity to influence the development of the skills it highlights. Insights from this research could help inform:

- Online courses teaching designers key skills that are often neglected, like communication, collaboration, and expectation management.
- Online materials could also help non-designers understand the value and importance of design work.
- Mentorship programs centred on guiding young designers to navigate challenges between design and business, designers and stakeholders.
- Canvases and process templates that could target common issues in work, such as setting clear goals, creating, and maintaining team alignment and engagement.

It is my hope that these insights and themes find their way into more content generally within the design community to better address the issues that create genuine impact in the lives of designers in their work.

6 Discussion

This research focused on understanding designers' skills and experiences to complement and expand on the information available in previous industry reports and research articles. While the number of participants was relatively small for surveys (n=32) and interviews (n=5), the data aligns with and expands upon many topics and themes noted in industry literature.

The wide range of backgrounds and work experiences of participants creates a clear message that soft skills such as communication, empathy and curiosity are crucial to the profession, as well as how central the role of continuous learning is in the UX design profession. Hard skills, such as prototyping, research and visual design are of course necessary, but alone not sufficient to create a prosperous and effective career in UX design.

Designers felt that a wide range of skills are necessary for the profession, and that even if their respective educational or prior work backgrounds were not from UX design, they helped inform their design work, whether it is an informed understanding of human behaviour from psychology or sociology degrees, or creativity and visual skills from fine arts or work as a graphic designer. These different backgrounds imply how impactful it can be to have several designers working together as a team, as it is unlikely their backgrounds are similar.

Many of the skills that are central to effective design work aren't currently taught or readily discussed in current educational materials. While design leadership and project management are course topics present in some of the university programs reviewed for this thesis, it is difficult to find resources, such as online courses, that I or the research participants have been able to find. As these are central and vital skills to working effectively as a designer, it seems that these non-design skills should be given more attention by the industry.

In an improved situation there would be closer integration of theoretical learning and practical experience. While many participants were positive about the growth of online educational materials, based on the data, it appears that most professionals report not having the time to pursue these avenues, or lack a clear idea what materials to dedicate their time into, due to the abundance of material and topics. The more senior the participant, the less they felt there were materials to correspond to their areas of interest. The value of learning with a community or a mentor was often highlighted, which show the value of new initiatives like ADPList in connecting senior designers with younger professionals.

UX is becoming more ubiquitous in business and everyday life, but it is debatable whether the industry is growing in maturity to meet the rising needs and challenges. All signs point towards the fact that an increasing amount of skills and responsibilities are embedding themselves into UX design, from AI and coding to project management and leadership. It is important for the industry to find ways of helping younger designers navigate the complexities of these issues and to ensure they do not burn out by learning how to manage stress and regulate their recovery sufficiently (Burey and Tulshyan 2021). The wider implications of feeling overburdened by the challenges of their work or a sense of not being valued can be detrimental to the success and development of a UX design career.

While these topics have gained more awareness and there are more resources available to designers, these are still areas that are seeking solutions. Such as with imposter syndrome, normalising emphasising good mental health, allowing people to take time for self-care, sharing challenges with peers and fostering psychological safety are some of the methods that have proven to be effective in tackling the issue while improving overall work performance (Burey and Tulshyan 2021).

Generally, the more human-involved the solution is, whether to improving design work with workshops or research, or developing their skills with peer work and mentorship, the more appreciated and positive it is felt. The more static and removed from human interaction, such as filling Excel sheets for work or learning through reading material, the less appreciated and applicable it is considered by participants.

Compared to Norman Nielsen Group's report on UX careers (Krause et al. 2020), my research has more mid-career designs. There are many similarities in emphasising the role of soft skills and learning, having a wide range of backgrounds and job titles. Participants in my research however discuss more the value of tools, such as Figma and Miro, the value of cross-disciplinary skills and figuring out a work-life balance as responsibilities and challenges increase with experience, as well as their aspirations to move to more senior roles. Like many of the materials related to UX careers, the NNGroup report focuses mainly on junior designers who are starting out. Their report spent much more time planning and researching their data and has much more detail in terms of participant backgrounds, whereas my research focused more on gathering qualitative free-form answers based on participant experiences.

MacDonald et al.(2022) also centres on providing insight for younger designers, however their data was sourced from experienced designers. While they also emphasise the importance of soft skills and the improvements to tools, their research emphasises the value of foundational design skills more than facilitation and stakeholder management. It argues for academic programs as a solution to gaps between designer needs and current solutions, whereas the data from my research points to a desire for mentorships and options for learning skills in a non-formal setting. This is perhaps also a sign of the difference in approach by academic research and approaches valued by design professionals.

Processes and collaboration seem to be two avenues for tackling many of the issues in the design industry. One approach to combining these into a practical framework in recent years has been Design Operations, or DesignOps for short (Kaplan 2019), which provides a framework for standardising and democratising

design processes wider into an organisation, from asking questions such as how the team works together, to ways of working together to establish shared processes, to centralising information with documentation. While not specifically mentioned by participants, I believe it is a concrete way of tackling many of the challenges mentioned by participants.

One additional model that has recently arisen is the idea of cohort-based learning (CBL), especially in the context of learning through training at organisations, where groups learn together rather than as individuals, often led by a facilitator. Finnish startup MinnaLearn (n.d.) has developed a version of this where they teach people to become certified facilitators who then assist in implementing their courses on topics as varied as DEI fundamentals, how to have difficult conversations, to the elements of AI for business (MinnaLearn n.d.).

The impact designers have created with their work, especially when they get to exercise human-centred design with end-users and collaborate with stakeholders, is impressive. Many designers told stories of going above and beyond to help a project succeed, with many examples of how their work raised awareness, helped teams focus and successfully create value for users and businesses. In interviews designers discuss how they used shoestring budgets and demanding time schedules to produce events that empower minorities, creating new flagpole features for industry-leading platforms and creating government services to help citizens get support stranded in other countries when the pandemic hit:

One of the most proud [projects I've been involved in] was developed for [country's government]. It was right at the beginning of COVID. When COVID really started to hit, a lot of [country] citizens got stranded abroad [...] and their flights got cancelled [repeatedly].

So a lot of [citizens] were in quite a dire situation where they couldn't get back, but they were starting to run out of money because they had spent all the money on buying other flights, which [they would get back but months later].

So some [...] didn't know where to stay, landed even on the streets. We had really awful situations. So the [government] decided to offer a free loan to those

people.

What we did is we designed the service around the loan application. Obviously whenever you offer money or any kind of something free, there is a lot of fraud around. It's not an easy service to do, but it was obviously very important to give people access to some funds that they could [use to] survive until they could fly back. [It was] a dire situation that just, it had to go super fast.

Usually government projects [...] take quite long because you've got so many policies and [...] departments that are involved. [...] Everyone was pulling together and we turned this entire service around in about two weeks from the very beginning to launching it.

We developed a form builder that [people who do not know how to code to] prototype with it and we did a lot of testing of the actual prototype with it, but then it's also already written in code.

That allowed us to just turn this around really, really fast and it was quite a success.

The fact that even very senior designers found time to share their knowledge voluntarily for no benefit to themselves is an encouraging sign. We should find ways to respectfully engage that interest to yield more insights that can help a wider range of people.

I believe conducting more surveys and interviews, with a wider range of participants and revised set of questions concerning their backgrounds, would create even more insight into how the industry is developing and what challenges designers are facing. New themes, such as learning with peers and having mentorship options, might be more prominent with a wider sample size.

The design industry is continuing to evolve rapidly, even during this research there have been many new developments. New tools, such as Framer and Dora allow quick and code-free access to people to create animated building of websites. There are also new technologies such as generative AI and Apple's spatial glasses with its visionOS, which have added new layers of complexity to our profession. It only highlights the need for continual research and analysis to understand the current situation and how to tackle issues designers are facing even more, and how important it is for educators and senior designers to create resources that help assist designers develop where it matters most.

7 Conclusion

This research aimed to learn about the professional and educational experiences and current realities of designers in the industry. By utilising survey and interview methods and recruiting a total of 37 participants, a wide range of experiences and insights were gathered relating to commonly regarded essential skills, work experiences and shared challenges involved in the work life of designers. While the sample size was relatively small, there was a strong congruence in participant answers.

People who participated in the research created a balanced representation of the UX design industry. The main demographic were females aged between 30 and 39 who had at minimum a Bachelor's degree. Most worked in the tech sector or at an agency, commonly being a UI/UX designer or a design lead/director. The experience level was also varied, with the majority of survey respondents having five or more years of experience, whereas interview participants had mainly been designers for ten or more years.

Soft skills such as communication, collaboration and adaptability were centrally valued and universally viewed as critical to the work of a designer. Being able to understand users, facilitate teamwork and clarify complicated concepts and decisions into understandable information for various stakeholders are examples of what these skills enable designers to do. The importance of aligning design work with business goals is an ongoing challenge that these skills also help tackle.

Hard skills, such as prototyping, wireframing, and visual design, are also central to participants' answers. Some view these skills as easier or more obvious to attain and improve compared to soft skills. The more experience a designer had, the more likely they were to discuss consciously evaluating and practicing skills, such as empathy and collaboration.

Applied practices like user research, iteration and testing are viewed by many to be an intersection of hard and soft skills that help designers succeed and create impact. Organisations where designers are employed all struggle with allocating necessary resources for research and creating realistic timetables. Workshops, visual artifacts, clarifying goals together and educating colleagues help create a shared understanding of the role and requirements of design.

Designers view their work as one that necessitates continuous learning. While junior designers more often mention online learning and self-practice, experienced designers mentioned mentorships, communities and learning with colleagues. Finding time and materials are struggles that are shared by many participants. Participants noted that there are not many courses or ready educational content for dealing with more advanced topics, such as better stakeholder communication or expectation management.

Participants reported gaining deep satisfaction and a sense of accomplishment from being able to work in a human-centric approach within a collaborative environment where there is trust, autonomy and respect between colleagues and organisational levels. These are often challenges, as designers often report feeling side-lined or brought into processes too late to be able to create quality work, making it extremely difficult to deliver the desired impact.

The research was limited in scope and further data gathering would be advisable to build a deeper understanding of differences that various experiences and backgrounds can have on how designers view their work. Better understanding of regional differences would be beneficial, and that data was not collected for this research. Another aspect that was not explored in the research was how designers view the role of end-users in their work.

A poster (Appendix 3) was designed to synthesise the main findings of the research that attempts to visualise the central insights borne from the data, mainly that being a good designer requires both hard and soft skills, as well as

the acumen to apply design theory into practice and to balance it with business interests.

The implications of these results show how broad the skillset and roles a designer has in a project and the prevalence of challenges that can inhibit effective work. Organisational initiatives, targeted educational materials, and design templates for processes are some examples of methods that could potentially address these challenges. Concepts like DesignOps (Design Operations) and cohort-based learning (CBL) led by facilitators within organisations are two expressions of the methods rising in the industry, but not specifically mentioned by name by participants in the research.

The design industry is evolving at an ever-increasing rate, and with the rise of automation and AI it is ever important for designers to have good skills in interfacing with people during their work. Experienced designers lean into these practices only more with time, desiring user research and iterative collaboration over the preference of younger designers to emphasise self-learning and achieving technical prowess.

There is ample opportunity for the design industry as well as for the educational sector to adapt their practices to better serve younger designers by giving them opportunities to practice relevant soft skills as often as possible, as well as providing targeted resources for more experienced designers who are tackling more complicated situations. While technology develops and the tools change, ultimately designers will always grapple with reducing the friction between peoples' needs and reality, and the only way to truly understand a challenge or the implications of our solutions is to build our user experience with the users themselves.

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Appendices

Appendix 1: Interview questions and text

Purpose

Learn how people have become designers, how their skills have developed and how their work is evolving. To deeepen understanding of needs of designers in order to create ways to teach those things.

First create the survey, then interviews to have deeper questions

Intro

Dear Participants, I am inviting you to participate in this research by completing the following survey. The aim of this research is to investigate how designers developed into their careers and what they see as the most important skills for today and the near future.

The following questionnaire will require approximately 5-15 minutes to complete, depending on how you answer. You are under no obligations to answer any question you are not comfortable with. Thank you for taking the time in helping, it will greatly assist me in creating a report on what designers consider important. The data collected is anonymous and will be used for my thesis as well as a open report that will highlight the key findings and will be shared freely to the internet.

Sincerely, Vitali Gusatinsky Final Year Student for Master's in Digital Media Metropolia University of Applied Sciences Helsinki, Finland

Questions

- Evaluative
 - What is your age?
 - What is your gender?
 - What is your level of education?
- Previous
 - How many years have you worked as a designer?
 - What did you feel you needed to learn before you could start working in design?
 - How did you start working in design?
 - How important is continuing to learn as you work as a designer? (1-5)
 - How do you keep learning?
 - o What skill/ability have you learned most recently?
 - How did you learn the skill, what helped you the most?
- Current
 - How would you describe your areas of responsibility, what kind of work do you do?
 - What are some repeating challenges in your work life?
 - What are your most useful skills you have as a designer? What makes them important?
 - What tools do you primarily use in your design work?
- Future
 - What design advice would you give a younger self? What would you do different?
 - o What skills are you focused on developing currently? Why them?
 - How do you see your work evolving in the next five years?
- Conclusion
 - What thoughts has this survey generated?
 - Anything else you'd like to share?
 - I am looking to interview a few people about their answers, leave your email if you'd like to hear from me

Appendix 2: interview questions

Message to invitees

Hello,

My name is Vitali Gusatinsky. A few months ago you answered a survey about your experiences as a designer in the industry.

First of all, thank you for answering - I received a lot of insightful answers from very experienced designers that has helped me better understand what kind of skills and resources senior designers value.

I would love to discuss the results of the survey and ask some follow-up questions one on one if you have time in the coming weeks. You can schedule a reservation that works for you <u>from this link</u>. If you're unable to that is totally fine, I would only ask that you could let me know so I can ask others in your stead.

Once again, thank you for your time and input to the survey. I will be sure to send a report on the research in any case once it's done. All the best.

Vitali Gusatinsky

[personal email]

P.S. In case the link isn't clickable, here is the URL to the booking page: [Link to Calendly]

Intro speech

Hello and thank you for joining me today. A few months ago, you took part in a survey about your experiences as a designer in the industry. Your answers, along with those of other experienced designers, have given me valuable insights into the skills and resources that senior designers value.

So, thank you once again for your participation in the survey and for joining me today. Today, I would like to review some of these findings and ask you some follow-up questions.

I'll record the interview for transcribing but will delete the file after and keep written answers anonymous.

Do you have any questions before we begin?

First, tell me about your work.

Work life

- Describe your day-to-day work
 - What is your title? What kind of projects do you work on? What are your responsibilities?
- What has excited you recently with design?
 - Any topic, method, tool or service that you've been diving into?

Working with clients

- Having clear business goals/plans
 - How clear are business goals/metrics when you start a project?
 - Does your work involve coaching/helping clients with their business plans before starting the actual design process?
 - What are common strategies you employ to align your work with business needs?
- Creating clarity
 - What kind of questions are important for you to ask clients?
 - What are some miscommunications/misunderstandings that have negatively impacted your projects?

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Soft skills

- Insight into survey answers
 - Many people who answered the survey emphasized soft skills, like empathy and communication. What role do these types of skills play in your work?
 - How has your perception of these skills evolved over time, how has their role changed for you through your design career?
- Creating common definitions
 - What does empathy mean to you?
 - How would you define it?
- Understanding humans
 - How do you approach facilitation in workshops and co-designing?
 - What kind of biases or limitations do you keep in mind often?

Experiences

- What is a project that you were really proud of or happy with? Participant is reminded they can be as general as they want to be with their answers.
 - What made it special for you?
 - What kind of conventions or common processes have you used to ensure a good result?
 - What advice would you give to someone going into a similar project?
- What is a project where you weren't happy with your work?
 - What caused you to feel that way?
 - Later did you think of some processes or actions that could have improved the work/situation?
 - What advice would you give to someone dealing with a similar situation?
- What kind of things separate a good project from a potentially risky project?
- Do you use Figma and Miro/Mural?
 - How have these open design tools affected your work?
 - How could these types of tools evolve to make your work even better?

Desired resources

• What do you think of the state of online material for learning and practicing design?

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- Do you think there is ample material (tutorials, courses, templates, resources, etc.) for designers today?
- Compared to 10-15 years ago, how would you describe the change?
- What has been the most positive change for you personally?
- What do you think is missing, what would you wish you could have access to?

Final thoughts

• Anything else that comes to mind?

Thank you for participating! I will stop recording now. I will send you copy of final report. Email me if you have any questions or comments.

Appendix 3: Final poster design

SENIOR DESIGNERS SHARE THEIR EXPERIENCES

Data collected in late 2022

Insights from experienced designers show us that there is more to design work than merely making beautiful pixels. Every senior participant stressed the vital role of soft skills, particularly effective empathy and collaboration

