

ABSTRACT

Title of Thesis: FROM THE “VACUUM CHAMBER”: HOW
PRESCRIPTIVE WORK PROCESSES
CONSTRAIN UX DESIGNERS' DECISION-
MAKING POWER IN CORPORATE
ENVIRONMENTS

Xinyi Hu, Master of Human-Computer
Interaction, College of Information

Thesis Directed By: Dr. M.R. Sauter, College of Information

The study examines the tension between UX designers' holistic approach to design work and the prescriptive processes they encounter within corporate software development environments. Drawing on Franklin's (1998) theoretical framework distinguishing between holistic and prescriptive work processes, the research investigates how UX designers navigate organizational constraints that limit their decision-making authority. It implements ethnographic methods including three months of field observations and 18 semi-structured interviews at Market, a major Chinese e-commerce corporation. The research identifies a disconnection between design education, termed as “Vacuum Chamber”, and the corporate reality where soft skills and navigation of prescriptive processes prove more critical to success. The study further reveals how waterfall-based development methodologies fragment UX work into discrete, specialized tasks that undermine designers' ability to maintain control over the entire user experience. Key

findings demonstrate how organizational hierarchies position UX designers as downstream implementers rather than strategic contributors, reducing them to what participants termed "mockup monkeys" who execute others' wireframes with limited input on fundamental design decisions. This study contributes to understanding how technical-creative work evolves within organizational contexts, offering insights open up the discussion on viewing UX work as technology labor.

FROM THE “VACUUM CHAMBER”: HOW PRESCRIPTIVE WORK PROCESSES
CONSTRAIN UX DESIGNERS' DECISION-MAKING POWER IN CORPORATE
ENVIRONMENTS

by

Xinyi Hu

Thesis submitted to the Faculty of the Graduate School of the
University of Maryland, College Park, in partial fulfillment
of the requirements for the degree of

Master of Human-Computer
Interaction

2025

Advisory Committee:

Professor M.R.Sauter, Chair

Professor Daniel Greene

Professor Alex Leitch

Professor Susannah Paletz

Acknowledgement

First, I would like to express my deepest gratitude to my advisor, Dr. M.R. Sauter, whose patience, guidance, and invaluable suggestions have been instrumental in shaping this research. Your mentorship has challenged me to think more critically and write more clearly throughout this journey. I am profoundly grateful to my committee members, Dr. Daniel Greene, Professor Alex Leitch, and Dr. Susannah Paletz, for their thoughtful feedbacks, encouragement, and support. Your diverse perspectives and expertise have enriched this work.

This thesis would not have been possible without the unwavering support of my family. To my son, still growing in my belly as I completed this work—thank you for being so well-behaved and allowing me to focus during this challenging time. Your presence has been a constant reminder of why this work matters. To my husband and parents who have supported my educational pursuits of master’s degree—your belief in me has made all the difference.

I must also acknowledge my cat, whose constant companionship during long hours of writing provided much-needed mental support and moments of joy. Your purrs and presence beside my keyboard kept me grounded and sane.

Finally, I extend my sincere appreciation to all the participants who generously shared their time, experiences, and insights for this research. Your willingness to engage in honest conversations about your professional challenges has made this study possible.

Table of Contents

Acknowledgement	ii
Table of Contents	iii
1. Introduction	1
2. Literature Review	4
2.1 Self-perception of UX Designers	4
2.2 Organizational Positioning of UX	7
2.3 Prescriptive work	10
3. Research Design	14
3.1 Participant Recruitment and Sampling	14
3.2 Data Collection Procedures and Analytical Approach	15
3.3 The field site	16
3.4 Limitation of Research Design	17
Chapter 1: “The Vacuum Chamber”	19
4.1 Soft skills vs Hard skills	20
4.2 Educational “Vacuum”	23
Chapter 2: Prescriptive UX work	28
5.1 The company culture in Market	28
5.1.1 Company Ethos vs. Culture	30
5.1.2 The Contradictory Expectations	33
5.1.3 Impact on UX Designers	34
5.2 The development processes of UX designers	35
5.2.1 The Waterfall development process in Market	36
5.2.2 Initiation of a UX Project	43
Chapter 3: Collaboration with UX designers	49
6.1 Perceptions of UX Design Value	49
6.1.1 Relationship between Product Designers and UX Designers	51

6.1.2 Duplicating tasks	58
6.2 Product Thinking, Designer Thinking?	60
6.2.1 "Mockup Monkey"	63
7. Conclusion	67
8. Future Discussion	69
Appendix	71
Bibliography	75

1. Introduction

User Experience (UX) design has evolved from a peripheral consideration to one of the key components of digital product development over the past two decades. As organizations increasingly recognize the value of user-centered products, UX designers have positions within corporate structures across industries. However, despite this growing recognition, a fundamental tension exists between how UX designers perceive their professional roles and how organizations integrate UX work into development processes.

This research examines the disconnection between UX designers' holistic design approach and the prescriptive work processes they encounter in corporate software development environments. Drawing on Ursula Franklin's (1998) theoretical framework distinguishing between holistic and prescriptive work, this study investigates how structured development methodologies constrain UX designers' decision-making authority and professional autonomy. The primary research question guiding this investigation is: How does design education prepare UX designers to work and how do prescriptive software development processes in large organizations impact UX designers' decision-making power and professional identity?

Through ethnographic fieldwork conducted over a three-month period at Market, a major Chinese e-commerce corporation, this study documents the lived experiences of UX designers navigating between their holistic design education and the compartmentalized reality of corporate software development. The research combines workplace observations with semi-structured interviews of 18 professionals, including 13 UX designers, 3 product designers, and 2

front-end developers, to provide a comprehensive view of UX designers' self-envision within organizational hierarchies.

This thesis is organized into three chapters that build an argument about UX designers' constrained decision-making power. Chapter 1, "The Vacuum Chamber," examines how design education creates artificially controlled environments that foster holistic work practices but inadequately prepare UX designers for organizational realities. It highlights the contrast between soft skills and hard skills, educational leadership, and corporate management. Chapter 2, "Prescriptive UX Work," analyzes Market's contradictory company culture and Waterfall-based development methodology. It reveals how these organizational realities transform potentially holistic UX practice into prescriptive, compartmentalized tasks while still demanding innovative contributions. Chapter 3, "Collaboration with UX Designers," specifically investigates the tension between UX designers and Product Designers, examining unclear role boundaries, conflicting thinking models, and power imbalances that reduce designers to "mockup monkeys". UX Designers are forced to compromise to meet others' visions. Together, these chapters trace how the disconnection between holistic training and prescriptive organizational structures systematically constrains UX designers' decision-making power.

The study addresses educational gaps in design training by examining how the "vacuum chamber" of design education prepares—or fails to prepare—UX professionals for organizational realities. Additionally, this study contributes to both academic discourse and professional practice by situating current UX work within the division of labor introduced under Braverman's theory (1974). It extends previous research on UX integration in organizational contexts by

applying Franklin's theoretical framework to illuminate the fundamental contradiction between holistic design education and prescriptive corporate practices. As companies continue to invest in UX capabilities while simultaneously implementing prescriptive development methodologies, understanding this contradiction becomes increasingly important for both industry practitioners and educational institutions. This research aims to offer insights into what career realities UX designers might expect and opens up future conversations on the work of UX professionals.

2. Literature Review

The field of User Experience (UX) design has undergone significant growth and evolution over the past two decades. It can be seen in many organizations as a critical component in their product development process. Early handbooks and literature recognized the launch of User Experience Design in the 2000s. Scholars believe that new design paradigms like User-Experience Design have gained wide acceptance due to increasing internet business needs and the shift of design philosophies. This shift in philosophies is framed by the need for rationality and user-centered design principles(Ankerson, 2018). Design has undergone significant transformations in response to changing market needs and technological advances. However, as the discipline has matured, a notable gap has emerged between how UX designers conceptualize their professional identity and how organizations integrate and utilize UX expertise (Gray, 2014; Clemmensen et al., 2021; Getto & Beecher, 2016; Branch et al., 2021). This gap in perception has impacts on workers' satisfaction and decision-making power. This review synthesizes academic research and industry reports to examine to what extent this gap has been recognized in the field. Though many of these studies do not explicitly talk about this topic using the word “perception gap”, they provide evidence that suggests the difficulties of UX designers coming from UX education background into actual careers. Understanding these dynamics is crucial for both UX professionals seeking to position themselves effectively within the development process and for companies aiming to maximize the value of UX.

2.1 Self-perception of UX Designers

Research on the role of UX professionals reveals that UX designers typically want to be identified as a comprehensive job role that encompasses far more than visual or interactive design skills. Gray (2014) conducted a study on the evolution of UX design competencies by administering surveys and interviews on students who had just entered jobs as UX designers. Study participants believed they should require a complex set of competencies that extend beyond technical skills to include business analysis skills, communication abilities, and strategic thinking. This research highlighted how UX designers increasingly see themselves as strategic contributors rather than tactical implementers. This self-perception aligns with what Clemmensen et al. (2021) describe as "organized UX professionalism," which recognizes that UX professionals require a combination of both technical skills and business competencies to be effective. This study, formed by surveying more than 400 UX professionals, highlights the complexities of integrating UX work within organizations. Scholars also point out the challenges faced by professionals in balancing traditional UX practices with organizational demands.

The need for UX professionals to be more comprehensive was evident from the early days of UX use. Scholars have advocated the need for UX professionals to stand up front in the development process. In the CHI 99 conference in 1999, around the time when UX started to form, Don Norman and Janice Rohn, two founding experts in the field of UX, discussed the limitations organizations face in effectively implementing UX principles. The conversation was recorded by scholar Richard Anderson. Both argue that the focus should be on educating decision-makers about the importance of usability early in the product development cycle. They note that marketing often overshadows usability because it is more entrenched in business practices. They also advocate for UX professionals to better communicate how usability can

drive profits. Rohn adds that while executives may not always respect usability insights, effective contributions should be made at various organizational levels to ensure that UX works in every essential step of the product cycle. (Anderson, 2000)

Subsequent literature has shown that the significant contributing factor to this holistic self-perception stems from how current UX designers are educated. Branch et al. (2021) directly compared UX degree curricula with job advertisements and identified significant misalignments. Their analysis of 93 program documents from 34 UX-related degree courses and 50 job postings in the UK revealed that academic programs emphasized theoretical frameworks, research methodologies, and strategic thinking. It finds that academic programs often stress transferable, cognitive, and interpersonal competencies, particularly in the leadership and teamwork domain. Those qualities are different from the practical competencies that companies prioritize, such as prototyping and user research. Getto & Beecher (2016) analyzed UX educational programs and found that academic training often misses comprehensive UX process that positions UX students as “job-ready”. Their research suggests that university programs should focus on preparing students for the job market through practical experience and interdisciplinary integration. Many programs try to mimic the actual product development process but struggle to do so due to limited industry resources. Though academic programs seek to ensure that educational resources are aligned with actual workplace demands, the research recognizes the remaining challenges students may face on entering the workforce. This educational foundation of UX professionals may clash with organizational realities. The challenges are also recognized in the Art and Design education field, where scholars advocate new approaches for HCI and UX education. Hillman et al. (2024) and Yang et al.. (2013) found out how, in the professional industry, UX designers

cannot always present a comprehensive picture of their product and advocate for users effectively. This situation can lead to UX research taking on a secondary, supporting role instead of being a leading force in product development and user advocacy.

2.2 Organizational Positioning of UX

In contrast to UX designers' holistic self-perception, research indicates that organizations often adopt a narrower view of UX tasks. Evidence of this narrow focus can be found in much of the research that tries to integrate UX works in the product development process. Kashfi et al. (2017) examined the integration of UX practices into software development processes and found challenges on UX implementation within organizations. Their research revealed that organizations frequently focus on the more tangible, visual aspects of UX work while undervaluing the strategic and research components that UX professionals consider essential.

Many studies have been done on integrating UX practice into agile software development. Da Silva et al. (2012) recognize the difficulties faced by UX designers due to multi-tasking on different projects at the same time in an agile software development process. Bruun et al. (2018) conducted a case study of UX professionals in agile development environments and found that organizations primarily position UX designers as service providers to development teams rather than as strategic partners. Despite UX designers' self-perception as integral to product strategy, the research shows that UX roles are primarily focused on delivering design solutions rather than being fully integrated as strategic partners throughout the entire agile development process. Other studies argue for a new form of UX practice, Lean UX, to fit the agile process. Lean UX emphasizes quickly creating and testing hypotheses rather than spending

extensive time on detailed documentation and deliverables (Gothelf et al. 2013; Liikkane et al. 2014). However, this approach of Lean UX does not help with UX professionals' lack of strategic decision-making power. Instead, it makes the UX work more repetitively. Recent research by Zaina et al. (2021) specifically notes that agile team members primarily consumed UX information rather than produced it, which can be interpreted as a failure to recognize UX work in the agile process. Their study highlights a breakdown in the communication of UX information, indicating a lack of clarity and engagement with UX discussions.

Industry work reports have also dug into the skills UXD are capable of and the work they are actually performing. In 2019, the Neilson Norman group established the 2nd edition of the UX career report. The research method involved conducting surveys and focus groups in Los Angeles, as well as remote interviews to gather insights on career satisfaction, skills, backgrounds, and job responsibilities in the UX field. In the report, the authors divide the skills UX designers should be capable of into two kinds: practical skills and soft skills. Soft skills, though not specifically imparted by previous educational programs, such as emotional intelligence, strong communication skills, and being team players, are crucial for success. Additionally, practical applications of user research methods, user-centered design, visual design, and understanding design principles are essential hard skills for UX designers. (Rosala et al., 2019) From the survey, holistic work like strategic planning is not included on the list of important everyday tasks to be performed. This is evidence that actual UX design involves repetitive, routine activities that follow established procedures or workflows. Rosala et al. (2019) also report more in-depth insights from focus groups on how other industry workers could switch to the UXD industry easily. The entry level of UXD is not high, and many participants claim it is

easy to find skills from previous jobs that relate to their new job roles at UXD. In the focus groups, UX practitioners come from a variety of backgrounds, with a majority holding a UX degree but also including professionals without traditional UX-related degrees. This suggests that formal UX education is not the only pathway into the field and UX may sometimes be self-taught. UX consulting companies like the Nielsen Norman Group often publish reports that present UX work in a positive light and encourage people to enter the field. However, these reports rarely examine the gap between UX professionals' abilities and their actual work responsibilities. In contrast, academic researchers such as Wong (2021) acknowledge the limitations UX workers face in their roles. Wong's study reveals that UX professionals struggle to implement values-oriented changes within their organizations, forcing them to rely heavily on soft skills rather than their technical UX expertise. His research also highlights that UX designers typically operate from positions of limited organizational power, making it difficult for them to drive meaningful change.

Routine tasks also result in blurry boundaries on the scope of responsibilities. Inal et al. (2020) conducted a survey study on UX professionals' work practices across multiple countries and found several challenges between how UX designers define their scope of responsibility and how organizations structure them. Many UX professionals describe a lack of understanding and knowledge about UX within their organizations. These weaknesses hinder the effective integration of UX practices into organizational processes. This might lead to unclear perceptions of other stakeholders in the development process about the tasks UX workers could do. Pernice (2021) reports on how Project Managers (PM) and UX view UX tasks differently. Pernice (2021) also shows how UX job responsibilities are not recognized by other collaborators. The

overlapping of tasks between PMs and UX designers leads to conflicts for decision-making power. For example, the report shows how PM thinks user research could be done by PMs easily. By contrast, UX designers think PMs are not professional enough to deliver the true user needs and user cases. Explicitly, they argue over PMs and UX designers' job competence, implicitly, the disagreement between them shows the dispute over the ownership and decision-making authority. Moreover, such discussion shows a common failure to understand what UX designers can do within those organizations. Inal et al. (2020) and Pernice (2021) find problems in the scope of responsibilities of UX work in organizations, which could be viewed as a result of the repetitive work UX designers are asked to perform.

2.3 Prescriptive work

While existing literature has identified the perception gap between UX designers and organizations through mostly quantitative approaches, there remains a need for a deeper, contextually-rich examination of how this misalignment is manifest in day-to-day organizational practices. My ethnographic study addresses this gap by employing qualitative methodology to observe and analyze the lived experiences of UX designers within their organizational context over a three-month period. This study is uniquely situated within a theoretical framework drawn from Franklin's (1998) book, *The Real World of Technology*, which distinguishes between holistic and prescriptive work processes. Franklin characterizes holistic processes as those in which a single craftsperson maintains control and oversight of an entire process from conception to completion—akin to traditional craftsmanship. In contrast, prescriptive processes divide work into discrete, routine tasks focused on efficient execution and production of tangible outputs.

This conceptual framework provides a powerful lens through which to examine the tension between UX designers' self-perception and organizational positioning. The existing literature suggests that UX designers typically conceive of their role through a holistic paradigm—seeing themselves as craftspeople who should shepherd the user experience across the entire product lifecycle (Gray, 2014; Getto & Beecher, 2016; etc). Yet organizations often position UX work within a prescriptive paradigm—dividing it into deliverables and specialized tasks integrated into development workflows (Bruun et al., 2018; Kashfi et al., 2019; etc). Seeing the actual UX tasks as prescriptive means the control over work moves to the organization, which will eventually inhibit the decision-making power of UX designers.

This study can be further contextualized within the historical evolution of technical labor in computing fields. Prescriptive work in the software development process could be viewed as the division of labour. Developing from a Marxist Labour process theory, Braverman (1974) argues that workers lose their professional skill sets by performing repetitive and narrowly defined roles, which limit workers' ability to develop their skills and diminish the meaningfulness derived from their work. Building on this school of thought, Kraft (1979) and Loseke et al. (1979) documented how programming work became increasingly streamlined and routinized as computing technology advanced, leading to systematic deskilling and the establishment of specialized roles. Their research revealed that despite computer workers' education and technical capabilities, many experienced diminishing control over their work processes (Loseke et al., 1979). In more recent research, Cohn (2009) discusses the process of agile software development and how it embraces an iterative and incremental collaboration where documentation of work is always in flux. More than analyzing the traditional development

process, Cherubini (2007) finds that the labor-intensive nature of converting work sketches into permanent formats could lead to a lack of documentation for design decisions made during development. Shestakofsky (2017) discovered the interplay between software automation and the workforce that human labor that is constantly relied upon, even when software companies are progressing towards automated algorithms. This reveals how repetitive human forces are continuously performed in organizations and how the development of worker skill sets, like documenting to accumulate work experience, is ignored. These research efforts, even though focused on software developers, parallel the tension between organizational attempts to routinize UX work and contradict any holistic, craft-oriented working modes.

This study detects the patterns in how designers attempt to maintain holistic oversight while working within prescriptive organizational structures. My research examines the tension between UX designers' holistic thinking and the prescriptive work processes they encounter in corporate software development environments. By investigating how these structured processes constrain UX designers' decision-making authority, I aim to illuminate the fundamental contradiction between how designers are trained to approach problems comprehensively and how their work is compartmentalized within organizational hierarchies. The attempt echoes the historical patterns documented by Kraft (1979) and the contemporary challenges identified by Cherubini (2007) and Cohn (2009). This approach connects the specific domain of UX design to broader questions about the decision-making power of technical work in contemporary organizations. Ultimately, I hope this research can provide new insights into where the decision-making powers of UX work should actually lie. The results of this research may also be

important for higher education programs related to User Experience design and to students aspiring to pursue a future UX career path.

3. Research Design

This qualitative investigation employs ethnographic methods to examine the prescriptive working processes and decision-making authority of UX designers within organizational contexts. I chose to place the research in the company that I worked for for two years as a UX Designer. The study was conducted during Summer 2024 and incorporated multiple data collection approaches: three days of systematic workplace observations, 18 semi-structured interviews with follow-up sessions, and a focused case study examining a typical collaboration between Product Designers and UX designers. Semi-structured interviews are employed with open-ended questions (Appendix a). All participants were required to read the consent form so that they could agree to its terms before they discussed their professional career. (Appendix b) This methodological triangulation provides a comprehensive dataset for thematic analysis and identification of emergent patterns related to UX designers' professional experiences.

3.1 Participant Recruitment and Sampling

Participants were recruited through professional networks established from my prior work collaborations. The sample comprised 18 professionals: 13 UX designers, 3 Product Designers, and 2 Front-end Developers. This purposive sampling strategy intentionally included key stakeholders from the product development process to provide multiple perspectives on UX designers' work and positioning. All participants met predetermined eligibility criteria, including a minimum of one year of employment at Market and involvement in at least one major project. This ensures that there was sufficient organizational context and the participants had sufficient professional experience to inform the research questions.

3.2 Data Collection Procedures and Analytical Approach

Interviews were conducted in a combination of on-site (n=11) and virtual (n=7) settings. The semi-structured interview protocol explored participants' professional or education backgrounds, typical work processes, organizational positions, and collaborative challenges. All interviews were audio-recorded with permission and transcribed verbatim for analysis.

Observational fieldwork was conducted over three consecutive days at Market's visitor building during Summer 2024. Observations included following two UX designers throughout their daily work routines and documenting the spatial organization, interpersonal dynamics, and work practices within the design environment. Detailed field notes captured both descriptive observations and reflective insights about organizational culture, power dynamics, and decision-making processes. The case study component provided an in-depth examination of a collaborative project between Product Designers and UX designers, offering a focused lens on cross-functional interactions and potential areas of role misalignment or tension.

Thematic analysis was employed to systematically identify patterns across the dataset. The analytical process involved iterative coding, category development, and theme identification to explain the primary factors influencing UX designers' decision-making and prescriptive work experiences. Particular attention was paid to instances of consistency or inconsistency between designers' professional self-perception and their organizational positioning. There was follow-up with select participants to validate interpretations and enhance the trustworthiness of findings.

To protect the privacy of participants and their career paths, several measures have been undertaken in this study. The actual company name and participants' names are anonymous. Information about the company name is also hidden in the bibliography and citations. Moreover, since the study took place in China, most of the original data and quotes are in Mandarin. To ensure the accuracy of translation and data coding, I employed the translation service *the WordPoint* to proofread all the translations. All direct translations were gathered in a file and sent to the translation service. (appendix c) The service provided me a certification of translation accuracy (appendix d) to ensure the originality and correctness of the original data translated in this paper.

3.3 The field site

The research took place in a company I will call *Market*, a multinational e-commerce technology company based in China. I chose *Market* because I worked there as a UX designer for two years after my undergraduate studies before I began this research. As one of the most significant e-commerce corporations in the world, *Market* was an ideal field site to conduct research on specific job roles. My research aim was to elucidate the prescriptive work process of UX designers and their decision-making power in a software development process. It is my hope that this effort will lead to discussions about how UX designers holistic thinking mode is in conflict with their actual prescriptive work requirements.

As previously mentioned, those factors are strongly related to the software development process and collaboration mode of the company. Thus I chose Market as the field site for two reasons. Firstly, I am familiar with their working process, and secondly, as a former worker in

Market, I am well-connected to UX designers there. It is important to note that as a Chinese e-commerce company, cultural issues and local politics are strong factors that could impact the field site and interviewees. Scholars believe that cultural issues are the paramount impediments influencing the Chinese e-commerce market, and that companies must tailor their approaches to align with Chinese cultural values and preferences in order to seize opportunities in this expanding market. (Bin, 2001; Efendioglu, 2004) Thus in the following study, cultural elements of Market will be explained occasionally for clarity and as evidences of holistic and prescriptive work inconsistency. Knowing how a worker at Market is measured as successful will be shown to be helpful in understanding the role of User Experience Design in the decision-making process.

3.4 Limitation of Research Design

This study has several methodological limitations that should be considered when interpreting its findings. As a former UX designer at Market who worked there for two years before pursuing academic research, my position as an investigator will offer insider knowledge. My role in the field site was a former worker who came to visit her colleagues. The research was conducted during a brief three-month field study in Summer 2024, providing only a snapshot of organizational dynamics rather than longitudinal insights. In this ethnographic study, I immersed myself by partial participation: engaging in most after-work activities while remaining an observer for most of the time. Access to workplaces was also restricted: observations were limited to the visitor building. I was unable to attend any official meetings, product reviews, or collaborative sessions where power dynamics would be most visible. During interviews, participants could not discuss sensitive details of specific projects due to confidentiality

agreements. Additionally, the study focuses on one Chinese e-commerce corporation, which may limit the adaption of findings to other cultural contexts, or organizational structures with different approaches to UX integration.

Chapter 1: “The Vacuum Chamber”

Before we get into UX work in Market, it is important to consider how UX designers were previously trained in a holistic setting before joining Market. This chapter explores the profound disconnect between design education and professional practice through the metaphor of a "vacuum chamber." As UX designers transit from “vacuum” academic settings to the corporate environment, they encounter a jarring shift from holistic educational approaches to prescriptive work processes. Understanding this gap is essential to answering our research question about how prescriptive software development processes impact UX designers' decision-making power and professional identity. By examining the educational preparation of UX designers, we can better understand why designers in a certain training mode struggle to assert their expertise within fragmented development processes, as described in later chapters. This analysis provides the background context for the decision-making constraints UX designers face. It reveals how their professional identities become compromised in organizations that value specialized execution over comprehensive designer thinking.

I employ the metaphor of a "vacuum chamber" to examine how design education programs create artificially controlled environments that foster holistic work practices but fail to prepare UX designers for the complex organizational realities they face at Market. Soft skills and navigating prescriptive processes prove more critical to success than the comprehensive hard skills and leadership abilities developed in academic settings.

— — —

The word “vacuum chamber” was brought to my attention when I was having dinner with several of my former colleagues. As we were discussing my HCI masters program and what projects each of us did at school, the word “vacuum” was used by a junior designer to describe his design school. Upon further consideration, I identified several ways in which “vacuum” is a good metaphor for the educational UX courses. The vacuum chamber as a metaphor for design education highlights how schools create artificially controlled environments that, while useful for learning, differ significantly from professional reality. In academic settings, students work on independent projects in a holistic manner employing personal craftsmanship—conceptualizing, researching, designing, and implementing from start to finish. Like vacuum chambers that remove air and external variables to create controlled testing conditions, studio projects and some design challenges sometimes eliminate organizational constraints, stakeholder demands, and cross-functional dependencies that characterize real-world design work. A vacuum chamber and a real-world environment emphasize different kinds of skills.

4.1 Soft skills vs Hard skills

Evidence can be found in the major tasks UX designers perform. Most of my participants claimed that they spend 50% of their daily work time on communication. This communication includes meetings, coordination with colleagues, and discussions, mostly with Product Designers and developers, on project requirements. According to Cimatti (2016), soft skills encompass interpersonal competencies such as teamwork, communication, and social aptitude. These communication tasks performed by the UX designers fall under the category of soft skills.

From my working experience and data collection, I found that UX designers who have better soft skills usually have a more successful collaboration on projects with other stakeholders. Those who use less friendly tones tend to spend more time on communicating ideas. Compared to those in other job roles, UX designers are expected to be more “friendly to work with.” Yuri and Kelly, two of my previous colleagues, transferred from working as UX Designers to working as Product Designers in their third year at Market. Both of them told me how they felt wronged but unable to speak up when they were UX designers. But when they transferred to become Product Designers, they got to speak more assertively during meetings and in communications because they got to be in charge of their projects. The difference in workflow and ownership between UX designers and Product Designers will be explained in later Chapters. Similarly, front-end developers claimed that they were not very concerned about having to adopt a certain tone in communications to address other groups’ concerns.

In contrast, all the junior UX designers discussed how they tried to convey the needs of other stakeholders by being more “gentle and appealing to their interests.” When I had just entered Market, my supervisor spent a day advising me on how to communicate with other teams. He first took me to meet all the future collaborators, then told me their working habits and tones in private so that I would not fight with them during communications. I remember his advice: “everyone [on the] team has different interests - our KPI¹ are different, when you are trying to ask them for collaboration, be sure to appeal to their interests.” This is the first lesson I took in Market after my graduation from design school, yet I was not initially certain whether

¹ KPI: key performance indicator, a quantifiable measure of work performance under a specific goal or objective.

UX developers had all learned the same lesson when they entered Market. My research showed that other UX designers in Market all had the same experience of trying to be nice so that the project teams would respect us and have a greater tendency to agree on the UX projects we might want to initiate. Soft skills can be seen as one of the most important competences of UX designers in the prescriptive working environment in Market.

On the other hand, designers gain more hard skills in the “vacuum chambers” schools build for them. Hard skills include all the technical abilities related to specific tasks. (Cimatti, 2016) Theoretical frameworks, research methodologies, and strategic designer thinking are mostly being emphasized in design programs for UX students. (Branch et al. 2021) Six of my interviewees had a degree in Industrial Design, 2 in Human-centered Design, and 2 in Computer Science. Though those degrees have different names, they all focus on practicing design processes and design technical skills. When I asked my interviewees about their favorite projects at school, they all expressed their confidence and excitement about projects they were able to conduct either solely or with teammates. Most importantly, they could tell me about the projects from head to toe: why the project was conducted, the social environment of the project, its user groups, and their step-by-step activities. Design programs gave them the time and environment to work holistically as academic students.

However, when I asked them about the current projects they were working on in Market, not many of them could talk about the whole process system or why some decisions were made. Senior designers had an easier time telling me the details and their understandings, but most (4 out of 5) of the Junior designers were less responsive. They discussed the tasks they were

currently doing, but failed to talk about why the project was conducted in a particular way or what the project is overall attempting to accomplish. Holistic working habits failed when they moved from a “vacuum” environment to the complex development process.

4.2 Educational “Vacuum”

The educational "vacuum" tries to serve an important purpose: allowing students to develop comprehensive skills and understand the entire design process. Just as vacuum chambers let scientists observe phenomena in isolation, this controlled environment lets students see cause-effect relationships between their decisions and outcomes. However, many of my interviewees who were capable of doing comprehensive Designer Thinking² failed to be successful in Market. When design graduates enter industry and discover that they are responsible for only a fraction of the design process within complex organizational ecosystems, the transition can be jarring. All 5 junior designers complained about how work was different from what was depicted at school.

The other major relevant difference I observed is the one between management and leadership. All junior UX designers had the experience of leading a project at school and working in teams, but they found their school experience to be very different from actual task management at work. In fact, in almost every design portfolio I reviewed in Market, design students would list at least one project that they led. This matches what Branch et al. (2021) found: that academic design programs often stress transferable, cognitive, and interpersonal

² I deliberately use the term "Designer Thinking" rather than "Design Thinking" in this analysis. While Design Thinking has become a formalized, business-oriented methodology practiced by various professionals beyond designers, Designer Thinking refers specifically to the approaches and professional habits cultivated through design education and practice. This concept will be explained in details later.

competencies, particularly in the leadership and teamwork domains. However, those academic teamwork and leadership skills are different from what they is expected at work.

Here is an example of how teamwork and collaboration are performed in a “vacuum” educational setting. In Spring 2024 I was able to make a 3-day observation on a Design Makeathon held by my design school. I observed a team of 3, William, Amber and Michael. Through this process I found major differences between leadership in school and management at work in terms of teamwork. Though the leadership of William in the group is obvious, it differs from the actual management role at work:

— — —

Amber talked to me in private: *"William is the eldest among the three of us, so I instinctively trust him to do what's next."* Different from a normal software development process where there is an obvious authority, like managers who control the workflow, William's leadership is displayed not through direct demands but by his representing their group. During the final presentation, William served as the main presenter, cueing Amber and Michael as needed for their contributions. He demonstrated his self-described strengths of being "resourceful" and skilled at "presenting" when he answered judges' questions by drawing on personal experiences and asking thoughtful follow-up questions.

When they were working, William exhibited assertiveness in guiding the team's design process, by teaching them *"usually what a design process looks like"*. However, William's behavior was in my view more “leadership” than “management” because he did

not place strict controls over the pace, methods, or conditions of work. He was supportive of significant decision-making by Amber and Michael even if he didn't think those decisions were necessary. For example, Michael applied his expertise in immersive technologies to create an avatar for the project. Although William thought it was not required, he still encouraged Michael to show off his technique. This division of roles reflected the team's adaptability and collaborative approach, fostering skill development for all members within a short timeframe, which is the "power of conceptual thought" according to Braverman (1974).

As the project neared completion, Amber and Michael felt confident in using design tools, enabling them to interchange roles seamlessly and blur the boundaries of task division. Unlike in a regular workplace with a set authority that divides projects into fragments of tasks, this team working process of team allowed them to engage in different kinds of tasks over time. So instead of limited skill development due to limited access to the whole process (Braverman, 1974), all three of them learned something new in a short period.

— — —

This example shows that teams naturally divide tasks, but in a vacuum environment, team members work more democratically as there is no solid organizational hierarchy. When I talked about this Makeathon with my interviewees, they recalled similar experiences when they were in school. The "leadership" ability looks appealing but in fact it is different from what management

or the organizational hierarchy actually looks like at work, which will be explained in later Chapters. The “vacuum chamber” put designers in a training model that might not be applicable in a professional setting.

— — —

During recruitment season, senior designers and Design team leaders in Market each need to view at least 6-8 portfolios and interview 3-4 design graduates. Despite the match of projects and education backgrounds, the completeness of the projects and the designer thinking displayed are the most important criteria in portfolio viewing. Hard skills can be examined directly from the portfolios. In interviews, students are examined for their communication abilities in conveying their design abilities and concepts. Soft skills are being tested in this round.

Joe, a UX design team leader, had been recruiting design graduates for over 3 years. He indicated that sometimes he felt bad because some students who have great design skills might not be able to fit the working environment in Market, because of lower confidence in soft skills. He and other interviewers valued internship experiences in companies over the actual projects in their portfolios.

Chloe, a Product Designer Team leader who had been a UX design team leader previously, had experience recruiting both UX designers and Product Designers. She thought a good candidate should be able to orally express and convince interviewers about their personal insights into projects rather than merely explaining how the project was built.

Vacuum chambers test materials and components under idealized conditions to understand their fundamental properties before they face real-world applications. Similarly, design education tends to test students' capabilities in idealized projects before they encounter the messy realities of stakeholder politics, budget constraints, and organizational hierarchies. Yet students need to be aware of the significant characteristics of the prescriptive work and organizational hierarchies, and how they are different from the holistic work they were performing at school. “Vacuum” design programs help students build up necessary hard skills. But soft skills are things they will need to build on their own in their work environments.

The "vacuum chamber" of design education, while effectively teaching holistic design processes and technical skills, sometimes fails to prepare UX designers for the organizational realities they encounter in corporate environments. The evidence presented in this chapter—from the primacy of soft skills over technical abilities to the stark contrast between educational leadership and corporate management—supports the argument that UX designers' holistic training creates expectations fundamentally misaligned with professional realities. This misalignment impacts their decision-making power in two critical ways: first, designers enter corporate environments unprepared for the communication demands and stakeholder negotiations necessary to influence decisions; second, they lack the organizational literacy to effectively navigate hierarchical structures that inherently limit their autonomy. The next chapter will discuss the prescriptive working reality in Market. We will see how the holistically-trained designers are transformed into compartmentalized executors.

Chapter 2: Prescriptive UX work

This chapter will explain two major factors resulting in the prescriptive work flow and the compartmentalization of UX tasks in Market. First, I explore Market's inconsistent company culture, which simultaneously promotes aggressive team unity through a "battle" rhetoric while celebrating individualistic "knight-errant" accomplishments, creating fundamental tensions for UX designers. Second, I examine Market's Waterfall-based development methodology, which systematically constrains designers' decision-making authority through rigid processes and specialized task allocation. The possibility of designers to successfully make a holistic attempt is also discussed in this chapter. Together, these organizational forces transform potentially holistic UX practice into prescriptive work processes that limit designers' autonomy and creative contributions. It reveals the compromises UX designers have to make no matter how comprehensively they are trained.

5.1 The company culture in Market

This section examines how Market's unique yet inconsistent company culture—simultaneously promoting aggressive team unity through "battle" rhetoric while celebrating individualistic "knight-errant" accomplishments—creates fundamental stress and peer pressure for UX designers who find themselves trapped between prescriptive work processes and expectations of holistic, autonomous contributions.

— — —

The Summer of 2024 was the first time I walked into the visitor building of Market as an outsider. I started to examine some things I had not noticed the previous two years. At the visitor building, there were multiple buses bringing high school students and entrepreneur business partners for visits. Some groups of students were dressed in the same color—orange yellow, the main color of Market and were led by a guide describing to the history of Market. The guest building is hardly a playground for these visitors, but rather it is more an exhibition about the grand history of Market's success and all of its social influence.

The exhibition, like a pop-up show, tries to tell visitors everything about Market on the first floor. Orange ornaments, pictures, and company cultural decorations are distributed throughout. The exhibition is an advertisement for Market, aimed at convincing visitors that Market is a promising company, while deliberately leaving out all the controversies it has been struggling with for the last 20 years. All the installations have meanings, each part of an intentional story about the history and future vision of Market. One portion on the floor is specifically dedicated to showcasing all the charities and social works Market has accomplished. Here is the vibe Market is offering its visitors: we are a company that has gained success and reputation, and most importantly, we heed our social responsibility to help others succeed.

This is hardly the best place to have fun—there are limited casual or decorative ornaments to see on the first floor. The building has two cafes where individuals, mostly workers, come and get coffee for work. If a visitor walks up to the second floor of the

building, there are meeting rooms and a dining hall. Those meeting rooms are open to public, but if there is a meeting inside, visitors cannot go in.

The “Battle” Mentality

The atmosphere changes severely on the second floor as workers are rushing to each meeting room with their laptops and talking into their phones about work. Even greetings are quick with just nodding and saying hi. Approaching those meeting rooms, one word constantly shows up: 战役 "Battle."

The visitor building holds the largest meeting rooms. Each meeting room shows the titles of the day's meetings. In some large meeting rooms, particular meetings are labeled "Battles." This exaggerated and aggressive word is used to indicate how significant this project will be and to make an important launch.

Why use the word Battle? Going back to the first floor, there is a small exhibition showing all the yearly uniforms, which are called 战袍, directly translated as "Battle Armor." Workers are required to wear these uniforms every year during sales periods to show their resolve and unity. The uniforms are lined up on a white wall, with pictures of workers wearing them. Other exhibitions also describe some significant moments or projects in the history of Market as "Battles." Using this word to substitute for “projects” can be traced back to the company culture and ethos of Market.

5.1.1 Company Ethos vs. Culture

The uniqueness of Market is its company culture and ethos. There are major differences between a firm's ethos and company culture. The "ethos of the firm" refers to the guiding beliefs

and principles shaping its mission and objectives that the founders instilled in the company. The ethos encompasses the moral and ethical framework, emphasizing values such as fairness, community, and social responsibility (Dellheim, 1987), within which a company operates.

In the 2019 official work report of Market, the ethos was refined with the identification of 6 core company values in its efforts to keep up with the digital market and consumer needs. According to that report, those values are incorporated into the criteria for employee evaluation from hiring to remuneration to promotion, to make sure all employees "stay on course towards achieving Market's vision and mission." Given the company's current scale, a well-defined value system is used to empower employees throughout various divisions, departments, and locations to work cohesively while maintaining alignment. The vision, as Market's founder claimed when the company was established, is to "make it easy to do business anywhere." The ethos of Market is ambitious and aggressive, as the founder and associates see themselves as pioneers of Chinese e-commerce who need to lead the way.

In fact,], it is rare to find other companies that so closely tie value assessment to compensation, even though many may claim to value their corporate values (Ifeng, 2007). Market has a distinctive evaluation system: 50% is based on performance assessment, while the other 50% is scored based on employee's company value assessment. This strong emphasis on ethos results in the internal "aggressive" company culture of Market and explains why the word "Battle" is constantly used to show the resolve and unity of the workers.

Company culture consists of a set of beliefs, values, and practices that are established by a firm, and it can be assessed by examining how principles are embodied in practice, particularly regarding labor policy and the treatment of employees (Dellheim, 1987). Company culture is the

"invisible power" that impacts workers' everyday interactions. Though not written in official documents, the "knight-errant" 武侠 culture is hugely adapted in Market. The knight errant, emerging during the Warring States period amidst societal chaos, embodied ideals of altruism, justice, and individual freedom, often engaging in acts of rebellion against corrupt authority to assist the oppressed. Rather than being official warriors, these individuals acted on personal moral codes, prioritizing friendship and honor over familial loyalty or legal constraints (Liu, 1960).

At the time when Market was listed (on what/where?), the founder claimed that Market's core competitive advantage is its corporate culture and shared values (Ifeng, 2007). In Market, each employee has to have a "code name" used instead of their actual name, mimicking how Knights-errant in their stories used code names instead of their real names. Wang (2019), a reporter, praised this aspect of company culture because he thought using code names like knights errant could empower employees' freedom of speech to challenge supervisors or team leaders by directly using their code names. This use of code names and the use of the alternative word "Battle" to describe a project demonstrates how Market's company culture is trying to redefine established terms and put a more aggressive spin on them.

Having a strong company culture for managing workers is not unique to Market. Many field studies have already highlighted the importance of a coherent company culture in [assessing? motivating?] worker performance. Gunaraja (2014), Ahmad (2020), and Khan et al. (2024) found that a strong corporate culture characterized by shared values and principles significantly influences employees' performance and overall well-being. They highlight that employees who feel connected to their organization's culture demonstrate increased creativity

and commitment, which in turn fosters overall organizational effectiveness. Market has effectively utilized this impact of shared culture. Asking employees to use terms only available in Market is a way to enhance the coherent identity of employees as being proud group of "knights" waging Market's "battles."

5.1.2 The Contradictory Expectations

However, this company culture brings inconsistencies in the expectations placed on employees. Though it might seem that a prescriptive work process would be the most suitable for a team with the same purpose fighting together to gain a sense of team honor, many examples and company stories show how Market simultaneously promotes independent and goal-oriented working habits like those of the "knight-errant."

When I had my initial one-week training session in Market, one example perfectly illustrated this admiration for the "knight-errant" spirit in the individual employee: around 2014, there was a "battle" that aimed to launch a brand new project quicker than competitors. The project team met obstacles. One Product Designer team leader stood up and led his team in redesigning the previous work plans. After their day and night efforts, they finally made the project succeed. He was praised as the "hero" of this project that saved the "battle." There are also some popular internal stories about workers who showed leadership skills in their jobs. One well-known case was of the developer who found a significant yet unrecognizable code error on line 37 of the code book with just one look. Almost all developers in Market know this story and they are expected to see that employee as a role model. In a 2019 talk, the founder praised employees' proactive work ability by implying that all the employees who worked more than 10 years in Market could start a business anywhere by themselves (Liu, 2020). The company culture

is sending the workers a dual message: be a team player when Market needs them to be, but also be a worker that has well-rounded proactive working abilities. Following the typical prescriptive work process can only fulfill the first part yet that requirement makes it hard to take full control of a project to meet the expectation of being a well-rounded worker. This inconsistency leads to an uncomfortable work process for UX designers in Market.

5.1.3 Impact on UX Designers

UX designers in this particular setting are working under the same conflicting expectations of being both independent workers who can work proactively and team players in the development process. I heard the phrase "*I will be very anxious if I don't have any work to do in Market*" and similar phrases several times during my interviews and casual chats. Workers' concerns about "no work to do" stem mainly from two issues: either they are assigned fewer tasks in projects, or they find out they cannot initiate any individual projects on their own—or worse, both. From their point of view, having many tasks to accomplish means they are important as team members in the development process. Simultaneously, being able to initiate and take charge of a project shows their unique work ability and value.

All my interviewees shared the belief that workers with more workload are more essential to the company and less likely to get laid off during layoff seasons. Consequently, it is common to see UX designers trying to proactively find more tasks they can do beyond their assigned work. Among my conversations with the UX designers, 10 out of 13 designers noted "*proactively examine current systems and find UX problems to be solved*" as their second or third

major task during work. Interestingly, similar tasks are not found in the daily work of Product Designers and front-end developers.

The anxiety caused by "不饱和" "unfulfilled-ness" was more common among UX designers (than...?) because much of their work was usually just one part of the larger development process, requiring support from other stakeholders. For example, if a UX designer finds a UX problem in the current system, they will need help from developers to change it through coding. If UX designers try to initiate a major UX project, they will need to ask the Product Designers to examine it from a profit perspective to see if they approve it. Thus, UX designers struggle with the pressure of demonstrating their irreplaceable value. No matter how Market tries to encourage the freedom to pursue individual work abilities, the built-in prescriptive work process makes it difficult for UX designers to meet this expectation.

This "knight-errant" culture seems to encourage broad individual work abilities, but in reality, the upstream and downstream roles in a software development process build hierarchies in the decision-making process. The next section examines the development process in Market and the role of UX designers, showing how prescriptive work fails to meet UX designers' expectations and why holistic UX practices are not applicable in large corporations like Market.

5.2 The development processes of UX designers

This section analyzes Market's software development processes, revealing how its predominantly Waterfall-based methodology subjects UX designers to prescriptive work. The

prescriptive tasks fundamentally limit UX designers' decision-making power even as UX designers have unfulfilled expectations for holistic, proactive contributions.

5.2.1 The Waterfall development process in Market

Understanding the development methodology employed by an organization is essential for revealing how UX designers' work is structured and constrained. In Market, the predominant development process directly shapes the decision-making power of UX designers and determines the boundaries within which they must operate. By examining the Waterfall-based methodology that governs project workflows, we can identify how prescriptive work processes are institutionalized and how they fundamentally limit UX designers' ability to practice holistic design. This analysis provides concrete evidence of the disconnect between designers' holistic training and the fragmented reality they encounter, illuminating why UX designers struggle to maintain professional autonomy despite their comprehensive skills. Waterfall serves as the primary tool by which which organizational control puts systemic constraints on UX designers' decision-making power.

During my investigation, I found that UX designers in Market follow two major sets of work processes. The first work process follows a regular software development methodology that shapes their daily work activities and decision-making capabilities. [Figure 1] Market has developed its own software development process which has clearly inherited some characteristics from the Waterfall model, as evidenced in several ways. There are recognizable

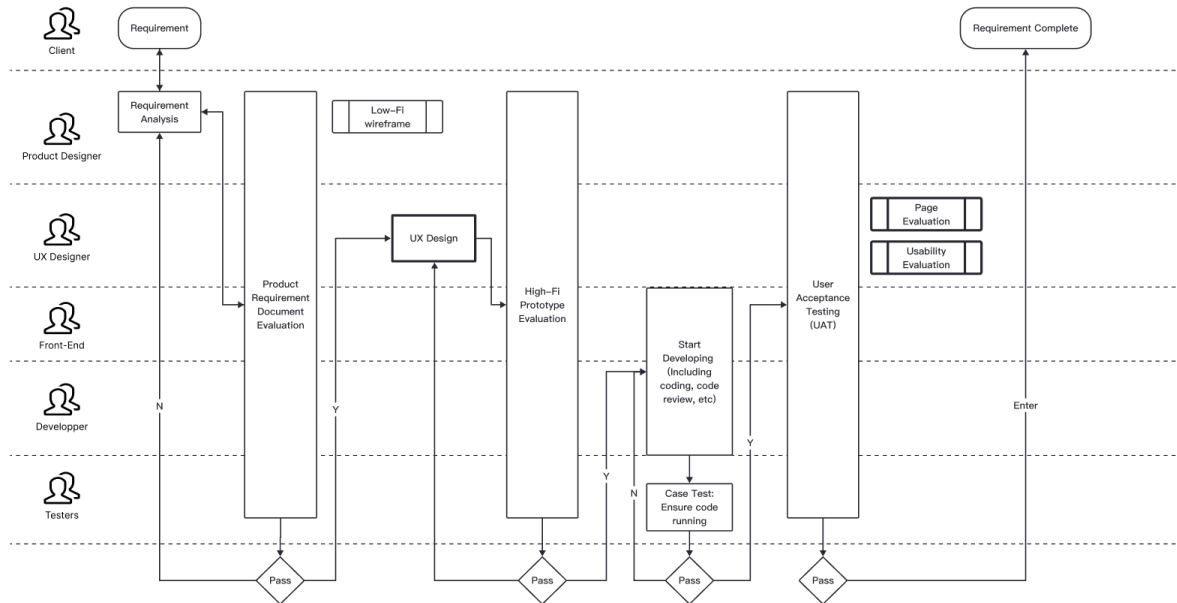


Figure 1: A regular development process in Market

Waterfall elements including linear workflow, clear role separation with minimal overlap, formal documentation requirements, and structured handoffs between specialized teams (Royce, 1987; Petersen et al., 2009; Bassil, 2012). Unlike Agile methodologies which, according to the Agile Manifesto (2001), feature short iterative cycles, continuous feedback loops, and collaborative cross-functional work, Market's process compartmentalizes responsibilities and follows a predetermined path. This fundamental difference creates a vastly different working environment for UX designers.

While this process follows Waterfall's sequential structure, it does incorporate some hybrid variants that aren't typical of pure Waterfall methodology. First, project owners can decide which teams should join. Sometimes the UX Designers team will be skipped if the owners,

mostly Product Designers, think it is not necessary that they be involved. These cases will be explained more specifically in Chapter 3.

Another difference that impacts UX designers is the parallel involvement of UX Designers alongside Product Designers rather than a strictly sequential handoff. This can be seen in how the progression from low-fidelity wireframe to high-fidelity prototype is broken into two steps performed by two different job roles. Compared to the typical Waterfall approach, Market's development process also includes more user-centered testing phases by having both UAT (User Acceptance Testing) and separate usability evaluations by UX designers. This represents a departure from the traditional Waterfall approach which, as Laplante et al. (2004) and Balaji et al. (2012) have found, typically has more rigid boundaries between requirements, design, implementation, verification, and maintenance, with minimal user testing until the very end.

Despite these adaptations, Market's process remains fundamentally sequential and still maintains Waterfall's critical limitations. Most notably, it positions major usability evaluation late in the cycle when changes would be costly to implement. Additionally, a formal approval by team members in each role must be obtained before moving forward.

During my time working at Market and in my summer observations, I noticed that each role in the process needs to click "通过" "Pass" in the internal project management system for the project to move forward and be documented. The project management page shows the intended duration, collaborating teams, and the current stage of the process. Those who initiated the project, usually the Product Designers, need to close the project on time to meet the deadlines during every Quarter. This structure emphasizes the rigid boundaries between each stage of the

process and how a project is divided into fragmented tasks. All these elements confirm that UX designers operate within a predominantly Waterfall-based structure.

The Impact of Waterfall on UX Designers' Work

The negative effects of the Waterfall model on workers have been documented for more than a decade. In 2009, Peterson et al. conducted a case study to examine the Waterfall Model's effectiveness in large-scale environments and its impact on workers' decision-making. According to their study, the Waterfall model can narrow the competence focus of team members. Clear task boundaries mean that knowledge is not well distributed, and team members may not recognize their own strengths.

Additionally, the structure of the Waterfall model can create barriers to effective communication between different individual and teams, leading to potential misunderstandings and coordination problems. Earlier in 2005, Nerur et al. also found that a strict life cycle like Waterfall may inhibit flexibility and collaboration among team members. This can limit the ability of workers to contribute creatively and discourage shared learning and responsibility.

Waterfall is not an ideal structure for helping workers enhance their individual skills. However, there are reasons why corporations like Market still use the Waterfall structure. In the comparative study of Waterfall and Agile development processes, Andrei et al. (2019) found that Waterfall allows for better allocation of time and resources since each phase has a fixed period allocated. This predictability can be advantageous for projects with strict deadlines. Laplante & Neill (2004) conducted a comprehensive examination of Waterfall and concluded that this structure can be beneficial for projects where sequential tasks and milestones provide a reliable

roadmap, making project progress easier to manage and communicate. Furthermore, they identified the historical precedent of using Waterfall as a factor in its continued use. Companies often have established ways of working that rely on the Waterfall model, making it easier to continue using something familiar rather than introduce new methodologies that may require retraining or significant process changes. This explains why companies like Market continue to rely on an internal project management system to record project milestones and document progress.

Prescriptive Work and its Constraints on UX Designers

The concept of prescriptive work by Franklin (1989) aligns perfectly with the Waterfall methodology employed in Market's development process. The Waterfall approach embodies prescriptive work by fragmenting product creation into strictly defined, sequential stages where specific roles perform predetermined tasks according to established rules. Each team member (Product Designer, UX Designer, Developer, Tester) operates within clearly determined boundaries. They are responsible only for their specialized portion of the process rather than maintaining control over the entire product journey. The formal "Pass" between each phase enforces this prescriptive nature by requiring standardized outputs that meet predetermined criteria before work can proceed to the next specialized group.

During my field study, I observed that each participant is involved in an average of 3 projects simultaneously, focusing only on their assigned parts of the work. In peak times, 2 UX designers reported juggling 5 projects at once. Managing different requirements across multiple projects limits time available to explore and understand user needs and potential uses for each project. Instead, they rely heavily on what the Product Designers tell them about the different

users and requirements. For all the UX designers I interviewed, this prescriptive structure severely limits their ability to work holistically with the user experience. They enter the process after requirements are already defined and must create designs within constraints established by others. This compartmentalized approach also impacts how UX designers' contributions are evaluated, as their work is seen as just one isolated part rather than being integrated throughout the product lifecycle.

The fragmentation of UX work within Market's development process can also be understood through Braverman's (1974) labor process theory, which argues that the division of labor systematically de-skills workers and diminishes their autonomy. According to Braverman, when complex work is broken into discrete and specialized tasks, workers lose both the comprehensive knowledge of the entire production process and the decision-making authority associated with it. This theory illuminates how Market's Waterfall methodology transfers control from UX designers to upstream roles by converting holistic design work into a series of prescribed tasks with predetermined inputs and outputs. For UX designers, this manifests as de-skilling as they repeatedly perform narrow aspects of design rather than engaging with the full spectrum on user experience. Many Junior UX designers have come to me complaining that they did not feel like they learned anything about design after they started working. Instead, they just learned “*how to work in Market.*” The “Pass” requirements between phases represent what Braverman would identify as limited design decision-making, replacing designers’ judgment with standardized criteria. Contrasting this with the model in which designers are trained helps explain why UX designers experience not only frustration but also a genuine loss of professional capability and decision-making power within prescriptive development processes.

The Challenge of Demonstrating Value

The constraints of prescriptive work create significant challenges for UX designers trying to demonstrate their value. In my observations, nine UX designers claimed they were having a hard time showing the value of their UX work in terms of departmental profit metrics. Kelly, a previous Junior Designer who joined Market 3 years ago, expressed her concerns about the value of her work: *"UX designers can only perform a small fraction of a project within certain fixed points determined by others. At this stage, any decisions you make, any work you do, or your designs will not have much impact on the overall commercial performance."* This frustration led her to request a transfer to become a Product Designer so that her work could be evaluated using more objective business metrics.

The situation is similar for UX designers with longer working experience at Market. Joe, who had been a UX designer at Market for 7 years, was a UX team leader for 2 years before he got laid off. When we discussed how his work was evaluated over the years, he expressed great disappointment about the difficulty of demonstrating his team's value due to the prescriptive nature of UX work at Market. *"Managers who have no design background cannot understand the necessity of design work, as we cannot be evaluated directly against business metrics; UX design is seen as only a part of the necessary work process"* Joe explained. Though he acknowledged that departmental budget cuts were the official reason for his layoff, he believes the general undervaluation of UX work made him an easier target compared to other team leaders.

Another critical limitation is that usability evaluation is positioned as a discrete, late-stage task rather than an ongoing consideration throughout the development process. When I

asked UX designers about their primary responsibilities and metrics during the process, the most common answer was "*how accurately the front-end coders can render the high-fidelity prototype*" During the examination stage of the development process, UX designers focus mainly on page element details like colors, font sizes, and icons. These visual issues can be quickly addressed by front-end coders within the project timeframe. However, more substantial user experience issues require oversight from all stakeholders since UX designers aren't solely responsible for the entire case development. The inflexibility toward changes presents another significant challenge. Late testing processes mean that faults and quality issues accumulate and are only discovered after full implementation. This delay makes it difficult and expensive to fix problems, particularly those related to architectural decisions (Peterson et al., 2009).

The late positioning of usability evaluation severely undermines UX designers' ability to drive meaningful changes beyond small visual modifications. This creates a power dynamic where UX recommendations can be easily dismissed as "too late" or "too expensive" to implement. Many UX designers in this setting, including me, have experienced the frustration of identifying UX problems during testing when it is too late to address them. We then must wait for another development cycle to solve the problems we have identified. This situation significantly diminishes UX designers' authority to advocate for changes based on user needs that become apparent during development. In this environment, UX designers lack the decision-making power necessary to ensure positive user experience outcomes across the entire product development lifecycle.

5.2.2 Initiation of a UX Project

As I have previously mentioned, UX designers in Market must navigate dual expectations: following the regular development process for their assigned work while also working proactively to demonstrate their unique value and abilities. This tension has led to the emergence of a second development pathway that represents UX designers' attempts to transcend their prescribed roles despite the challenges of Market's organizational culture. [Figure 2]

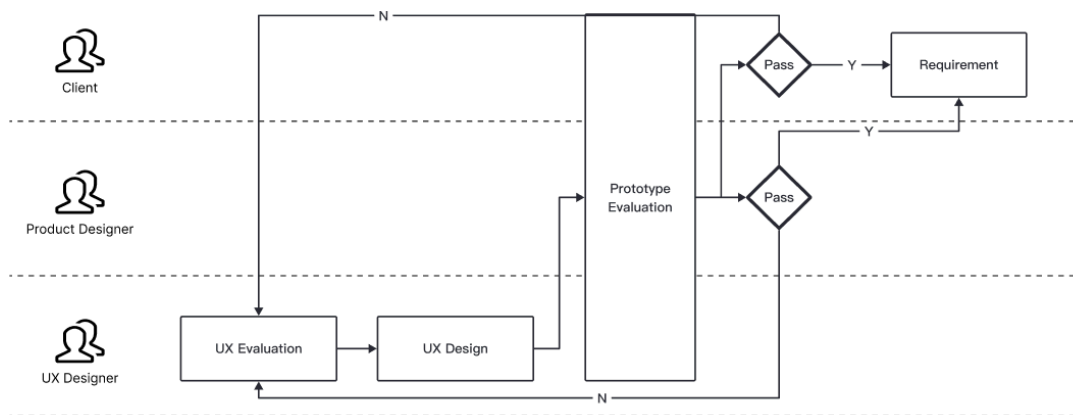


Figure 2: Development process for UX designers to initiate a project

To showcase their unique abilities, ambitious UX designers try to find ways to prove their value by initiating projects that address specific problems from a user experience perspective. During my research, I encountered several success stories, though they were relatively rare and primarily associated with senior designers. Senior designers who have been at Market for more than 5 years could all describe projects they had either initiated themselves or that their team leaders had championed. These projects stand as proud accomplishments in their careers and represent rare opportunities for holistic UX practice within Market's structure.

Joe shared how he launched a project to build a design system for a new department shortly after joining Market. At that time, he had just transferred to a new design team where development projects were still being defined. He recognized the opportunity to propose building a design system similar to Salesforce Lightning or Google Material Design to create guidelines for designers and establish a more efficient development process. After discussing the idea with his leader, he developed a comprehensive proposal that included successful examples from external markets, an introduction to design systems, and his vision for implementation. Armed with this documentation, he successfully convinced leaders from other teams, including Product Designers and developers, that this was a meaningful and profitable project they should build together. Eventually, the department head approved the plan and allocated sufficient resources. The design team leader assigned several colleagues to work with Joe, and through numerous UX-led meetings, collaborations, and discussions, they delivered the first draft of a usable design system within a year. Following this success, Joe was promoted to design team leader.

This wasn't the first time I had heard this story. When Joe was my team leader, he frequently recalled this experience whenever I attempted to initiate UX-oriented projects and encountered difficulties. The challenges faced by me and other Junior Designers typically fell into two categories: either there wasn't enough funding available, or other stakeholders didn't consider our proposals worthwhile. Joe believes the key to success is convincing other stakeholders that *"this project will bring equal value to everyone involved."* However, his design system case proved difficult to replicate, even for Joe himself. During his tenure as UX design team leader, one of his major challenges was that UX designers typically lack the authority to allocate budget or define requirements. UX-led projects usually require convincing Product Designers or clients to secure funding. Joe's design system needed approval from all

stakeholders, with the department head's approval being particularly crucial. A nod from a design team leader rarely gives UX designers sufficient decision-making power to launch a new project. In my conversations with Junior UX designers who had been at Market for around three years, none had successfully initiated a project similar to Joe's. Even Joe himself hadn't been able to replicate this experience before his layoff.

Another success story came from Ro, who had been at Market for 10 years since graduating. She and her colleagues initiated a project to create a CSAT (Customer Satisfaction Score) Dashboard that could monitor user experience performance across [departmental systems] [departments?]. Their project received funding because they convinced clients that the Dashboard would help them better understand users and ultimately increase profits. In this rare case, UX designers took the lead while other stakeholders stood by awaiting their assignments. Ro was also promoted following this project's success.

However, this was also the only project in which Ro experienced being the primary decision-maker. As she and her colleagues recalled, in typical development processes, "*Product designers act as intermediaries. They receive the first-hand requirements and have already made a layer of decisions, including judgments about users and whether UX designer involvement is needed.*" Opportunities to proactively lead a UX-oriented project are rare.

A Partial Holistic Approach

This second process could be viewed as a holistic approach, though not completely. In projects like those led by Joe and Ro, UX teams exercised comprehensive control over the entire

process from conception to completion. They could make decisions based on their judgment and determine which stakeholders should be involved.

However, due to the clear traditional organizational hierarchy and the need for external funding approval, this process cannot be considered fully holistic. In large corporations like Market, truly holistic work processes are uncommon due to the scale and complexity of operations. This explains why most UX designers I interviewed had not shared experiences similar to Joe's or Ro's. Instead, the majority spend time "*proactively examining current systems and finding UX problems to be solved*" in their daily work. Either they struggle to conceptualize projects that could be led solely by UX designers, or the design problems they identify are too small to warrant a formal project. Many Junior designers are familiar with the second process from hearing about previous success stories but have never had the opportunity to put it into practice. The inability to lead a UX-focused project is frequently classified by them as a reason for missed promotions or concerns about potential layoffs.

Compared to the first development process that follows Waterfall variations, this second process is more aligned with holistic principles for UX designers. It fosters the growth of comprehensive skills and knowledge rather than the specialized, narrow expertise developed in the prescriptive work process. However, the opportunities to realize this skill development are rare. Large organizations inevitably incorporate prescriptive elements, and UX designers' decision-making power remains limited even within this alternative pathway.

— — —

This expectation of exercising holistic control over design processes stems directly from UX designers' educational backgrounds in what I've characterized as "vacuum chamber"

environments. As discussed in the chapter 1, design education programs cultivate a comprehensive approach to problem-solving where students maintain oversight of projects from conception to completion. When UX designers enter corporate environments like Market, they bring with them mental models formed in educational settings where they developed independent projects, made autonomous decisions, and witnessed direct cause-effect relationships between their choices and outcomes. This educational conditioning creates a powerful expectation that professional practice should involve similar levels of autonomy and comprehensive involvement. However, Market's development process presents a contrast to this expectation, creating a fundamental tension between designers' professional identity as holistic problem-solvers and the compartmentalized reality they encounter.

Through the examination of both the standard development methodology and the rare instances of UX-led projects, we have seen how prescriptive work processes fundamentally conflict with the holistic approach UX designers learn in educational settings. The fragmentation of design work into discrete tasks, the positioning of UX designers downstream from key product decisions, the late-stage nature of usability evaluation, and the difficulty of initiating UX projects all contribute to a working environment where UX expertise is compartmentalized rather than integrated throughout the product lifecycle. This directly supports my central argument that the disconnect between educational preparation and prescriptive corporate reality creates a profound tension for UX designers, undermining their decision-making authority. As UX designers attempt to navigate between their comprehensive training and the narrow confines of their prescribed roles, they are not only undervalued on product contributions but also deskilled as their holistic work habits remain unused. The resulting frustration and career pivots observed among participants reflect the unsustainable nature of this conflict.

Chapter 3: Collaboration with UX designers

This chapter examines the fundamental tension between UX designers and Product Designers at Market. The tension reveals how organizational hierarchies and conflicting thinking models create a decision-making power imbalance. UX designers might be reduced to "mockup monkeys" implementing others' visions rather than true problem-solvers. UX designers with designer thinking capabilities might have enabled more holistic approaches to user experience only if they were not constrained by organizational hierarchy.

6.1 Perceptions of UX Design Value

During my field study, I found that it was difficult for non-UX designers to evaluate the importance of UX work within a process. I specifically interviewed individuals in two job roles that constantly collaborate with UX designers: Product Designers, upstream; and Front-end developers, downstream. Surprisingly, all the 5 interviewees have the similar answer to "*why does Market need UX designers?*" They agreed that "*Market's designer role is an imitation of overseas internet companies' workflows. In the early days, overseas companies began to have aesthetic requirements, and Market automatically inherited this position and role.*" From their perspective, the impact of UX design on the development process of a product is unclear.

When I was working as a UX designer, I found that front-end coders usually have some background knowledge on some UX terms, like "journey map," "user flow," "user satisfaction," etc. Some front-end coders told me they took additional UX-related courses or read books about interaction design to enhance their skills on understanding page design better. To some extent,

front-end coders need to work coherently with UX designers to achieve some goals regarding maintaining the usage of pages.

However, front-end coders also think sometimes they can take care of some basic design requirements. During my interviews, both front-end coders claim that "*After designers established a standardization (in this case like a design system), there are not many requirements for new designs. In some specific scenarios, front-end development and design can be merged into a single position, as some pages are highly standardized.*" I also found out that sometimes Product Designers would ask the front-end coders directly to change some parts of a page without consulting UX designers. Though UX designers are in charge of the page design, Product designers have the power to decide which team should be involved in this revision based on their analyses. Front-end coders, in those scenarios, will incorporate the revisions as long as they think the changes could be made with standardized design elements but without UX designers' involvement. Thus UX designers might be excluded from some page design revisions.

The same opinions were expressed by the Product Designers. All the Product Designers I interviewed thought they had a sense of what User Experience is and how UX Design works. In general, they believed that some projects can provide great User Experiences without the involvement of UX designers because they also had competencies in user interviews and user flow design. The one thing at which UX designers offer greater competence and experience is visual design. But since Product Designers are the upstream decision-making role, their opinions are more influential than those of the front-end coders. This brings up the third important factor in the decision-making power of UX designers: the ownership of pages and the role of Product Designers.

Product Designer in Market

In a regular development process at Market, Product Designers (Product Designer) are in the upstream role being the first to handle new requirements. Though they are called "Designers" in their job titles, design background is not a requirement in their job description or performance evaluation. Product Designer in Market is equivalent to the role of Project Manager (PM) in a common software development process.

There has been a question on why they are [deliberately][specifically] called "Designers", but Market has never really explained this in any official document. According to my interviews with Product Designers, they believed they are called Product Designers instead of PMs because they are required to have greater project analysis capabilities than management abilities.

According to the recruitment websites and job descriptions, a Product Designer in Market is responsible for defining new product strategies, gathering initial requirements, and setting the direction for product development, which happens at the beginning of the product lifecycle, before development teams start working on specific features.

6.1.1 Relationship between Product Designers and UX Designers

In my data collection, I found that the relationships between Product Designers and UX Designers in Market help explain why UX Designers have a relatively lower decision-making authority in the product development process and highlights unclear task boundaries and different ways of thinking. The disagreements between UXD and Product Designer collaborators are inevitable in Market. In the summer of 2024 I got to meet again with two of my previous UX colleagues in the design team: Bob, who is still working as a UX designer; and Yuri, who

transferred to be a Product Designer in early 2024 because of a department change. At the time we met, they had just finished working on the same project as the Product Designers and the UX designers.

An Example of Conflicting Perspectives

This case study examines a revealing conflict between a Product Designer (Yuri) and a UX Designer (Bob) over the redesign of a dashboard page at Market. Their disagreement centered on a seemingly minor design decision—whether to place two features in an overflow menu—but actually represents a fundamental tension in how different roles interpret user needs and make design decisions. Yuri, the Product Designer, advocated for hiding less important features in an overflow menu to simplify the interface, claiming this approach better served users by reducing cognitive load. Bob, the UX Designer, rejected this proposal, arguing it would complicate the user flow and require developing a non-standard component that wasn't justified by major use case. Both of them claimed to be advocating for users yet they arrived at opposing solutions based on their different interpretations of user needs and their professional responsibilities.

— — —

Before I left Market, Yuri and I had the same manager and Yuri was still working for her at that time. We met in the office building during dinner break, caught up on recent changes in the departments, and shared some gossip. Then I told him about this project I'm working on, in which he agreed to participate.

I interviewed him and got many inspiring insights on the different perspectives of Product Designers and UX Designers. It was actually he who brought up the above argument he had had with Bob over that particular requirement. He tried to use this as an example to show me why UX designers in some particular settings may be unsuccessful in advocating for user perspectives, with the result that they may lose some of their credibility during collaborations. For the purpose of protecting their identity privacy and legal terms, I will not get into the specific details of the work project.

The requirement was to redesign a visual page on a dashboard to show merchants'

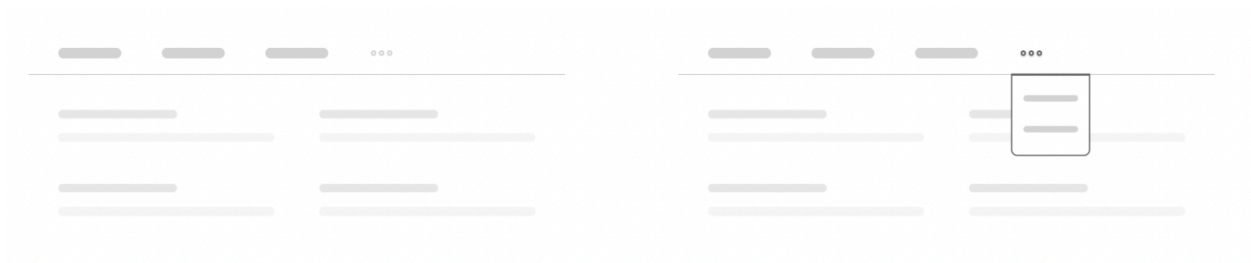


Figure 3: Yuri's Wireframe Design - Tab with an Overflow Menu

performance on sales, delivery and profits. Yuri was the Product Designer who was given the responsibility of redesigning and adding 5 features on that page. After considering the requirement, he produced a Product Requirement Document (PRD) and delivered it to the UX designer, Bob.

This was when they had differing opinions on how to visually show specific features to the users. In the PRD, Yuri drew the wireframe of that page and asked Bob to draw a high-fidelity prototype for developers to view and code upon - a typical Market development process. They had a disagreement over the design of the navigation tab for those five features. In Yuri's initial wireframe design, he wanted to put the last 2 features

into an Overflow Menu so that the first 3 features could be prioritized. [Figure 3] But according to him, this design was rejected by Bob because it did not follow the guidelines for their design system.

"When Bob was working on revising the page, there were some features that I thought most users wouldn't need, and I wanted him to hide them, but Bob was quite insistent. He felt it wouldn't comply with design guidelines, but I felt he wasn't standing with the users' perspectives and was instead just following his "so-called" design system." Yuri said, *"In this situation, I actually hoped that as a designer, he could think from the merchant's perspective, in this case the user's perspective, about how to simplify task completion. But in reality, he sometimes wasn't thinking from this angle and was instead focused on following design guidelines."*

Yuri's argument was that when implementing projects, UX designers should prioritize user needs rather than simply following design guidelines. When dealing with specific page features, they need to evaluate the feature's actual value to users. For non-core features, consideration should be given to hiding them or presenting them in a more streamlined way to reduce users' cognitive load. And in this case, he believed that Bob lost that user perspective, and when doing so as a UX designer, he lost some credibility. He concluded his point by using this example to show sometimes designers may be constrained by a project's limited background input, with the result, sometimes, that the final implementation doesn't quite align with users' expectations.

When I asked Yuri about the ideal collaboration between Product Designer and UX designers, he said: *"Through observing user feedback and behavior, designs can be*

better adjusted to align with users' habits. UX designers and Product Designer need to work together to find solutions that both adhere to design principles and meet user needs." Though Yuri did not specifically talk about what he wanted Bob to do exactly in this project, it is pretty clear that he wanted Bob to follow his wireframe design and draw a high-fidelity prototype out of it.

Since Yuri was a UX designer previously, I asked him what he might do if he were the UX designers in this case, and he said: *"I think it depends on the UX designers - I personally prefer to break away from the design guidelines. I believe that if the guideline can't properly solve the user's problem, I would break them."*

The Other Perspective

I have a closer relationship with Bob [than with Yuri?]. Other than as colleagues we had greater personal connections as friends; we sometimes socialized together. His interview was first and I did follow-ups about his opinions on this disagreement afterward. One day when I was back at the field site, I had coffee during Bob's lunch break and brought up this argument. He told me that it was hard to explain with only words, so we went to the guest meeting room and had a quick mock-up drawing session to recapture their disagreement.

Bob started the conversation by showing me a larger set of current design problems on the dashboard, not only on that particular page. His presentation revealed the unclear logic in the original page design, particularly regarding issues involving multi-level page structures, inconsistent function naming, and poor user interaction experience. There are confusing wordings like 'store-wide shipping time', as well as the lack of

coherence and consistency in page design that he thought would make it difficult for users to understand.

He tried to foreshadow the idea that "this dashboard was full of user experience problems when I got the requirement" before we got to talk about the specific argument. By that he tried to emphasize his understanding of user experience and his ability to identify key user experience problems on existing systems.

Then when we got to the specific argument, he first stated that "following the design guidelines" was not why he denied the wireframe design. He argued that Yuri's wireframe design was an "*overly specialized design that might affect general usability*" in that complicated the user flow by adding that Overflow Menu. Bob needed to consider the cost-effectiveness of coding the Overflow Menu on the Tabs because this was not a built design component in the design system. If he and the developers needed to develop a new design component, he would have preferred that it be reusable in future pages. Thus he preferred using Tabs directly to divide the information. [Figure 4]

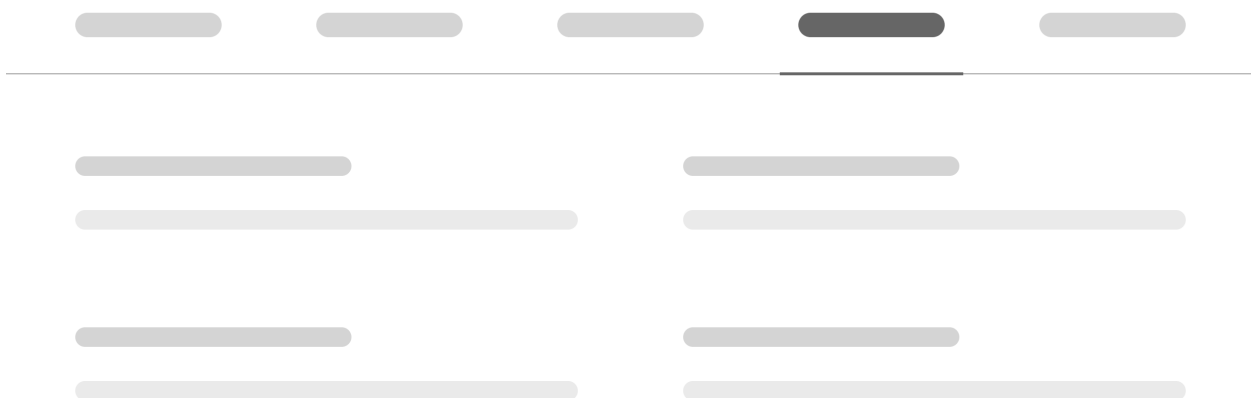


Figure 4: Bob's Design - Tab

For all of those reasons, Bob did not think adding the Overflow Menu to the Tab was a necessary decision. Bob showed me how he "used the Overflow Menu correctly" on other pages. He tried to prove that "he knows this design trick and is able to use it," but he thought this trick should not be used in that specific case because it would complicate user flow. Bob also offered the view that design should be approached from the user's perspective, understanding user behaviors and needs.

It is interesting for me to see that both of them talked about user needs in their decision making, but turned out to have different solutions for the same requirement. Their fight seems to be over the specific Tab function but indeed is a fight over their thinking processes on "user needs" and "user experience". This brought up the unclear boundaries between Product designers and UX designers in the development progress.

— — —

This conflict illustrates the deeper tensions that arise from unclear boundaries between Product and UX design roles at Market. The disagreement reveals how individuals in each role believe they should own different aspects of user advocacy. Product Designers like Yuri see themselves as strategic interpreters of user needs who should make fundamental decisions about feature priority and visibility. UX Designers like Bob view themselves as guardians of holistic user experience who balance system-wide consistency and long-term usability. The fact that both were convinced they were advocating for users-- yet reached opposite conclusions-- demonstrates how professional identities influence decision-making. Most significantly, this case exposes the power imbalance in their working relationship—despite Bob's technical expertise, Yuri's upstream position ultimately gave him greater decision-making authority, forcing Bob to

compromise. This is an example of how Market's organizational hierarchy influences UX designers' work.

6.1.2 Duplicating tasks

Transferring roles from UX Designer to Product Designer is very common in Market. As previously mentioned, Kelly asked for a transfer from UX designer to Product Designer. When I met her again during summer, she had been a Product Designer for almost a year. She told me that transferring from UX Designer to Product Designer was hard because she needed to learn so much more about business metrics and underline logics to make the transition, and she claimed the new skills were much harder to learn than designer competencies like prototyping at school. More specifically, she now needed to know how profits in Market [are calculated?/evaluated? rewarded?], and how projects help earn GMV (Gross Merchandise Value), and so forth. Another fact that added stress was she to the requirement that she be in charge of a project and assign work to other teams. Like all Product Designers, she obtained first-hand requirements from the clients, analyzed them in a matter of days, then designed a solution and gather a team. "Being in charge" was new to her because previously as a UX designer, she had not had much chance to do so. Though she was tired and stressed from working overtime from weekdays to weekends, she indicated to me her relief that she was "finally getting some real work to do." The "real work", according to her, referred to the work that would directly impact the overall profit of the department of which she was now head.

Having worked with Kelly for the previous two years, I remembered how we always gathered and complained about how Product Designers ignore UX Designers on some projects. As I brought up this topic again, she changed her mind completely. Now Kelly will also skip UX

designer on some requirements as long as she thinks they can be easily solved by front-end coders using standardized elements. She now thought it was not worth the time from a cost-effective perspective. to communicate with the UX designer about small changes Also, being a Product Designer who had a UX background, she believed she had enough user experience perspective. So sometimes she would make UX decisions directly when she was outlining the wireframes. Not only the unclear boundary between Product Designer and UX designer, but also the general underestimation on UX work makes this happen.

To find out more about transferring from UX designer to Product designer, I recalled a conversation with Chloe, a Product Design team leader who had been in Market for 20 years. She was the longest-tenured employee in Market that I know. When she entered Market, she was a UX designer, and she decided to transfer to Product Designer in her seventh year. As she remembered, she had had this same issue with Kelly the year she transferred. Her team had just finished building up a core product and all she had left to do was to take care of some small requirements, revising some visual details and iterating some new functions. When they were in the "battle" of launching the new product, UX designers had many things to do: building up pages from scratch, getting the design system down, designing the whole user flow, etc. During that time, she never felt the "unfulfilled-ness" in work or thought about transferring. Then after the product became settled, she had to constantly take requirements from the Product Designers and do tasks that were repetitive and duplicative. She felt underestimated and then one day she thought "maybe I could do what the Product Designers are doing."

We were having this conversation because she was convincing me to transfer into her Product Designer team. She believed that transferring from being a UX designer to a Product

designer was easier than other transitions because the two job roles already have so much in common: they both need to consider users, their work involves designing to meet requirements, and Product Designers need to draw wireframes or sometimes even low-fidelity prototypes to make UX decisions directly. Compared to UX Designers, Product Designers have more decision-making power about the structure of requirements that would yield solid results for company profits. Product Designers have more authority than UX designers to speak up and decide how a project goes. Chloe had been in Market for her entire career life and had survived several rounds of layoffs.

Though her words did not persuade me as I was then looking for an academic path, I recalled this conversation as a piece of evidence of why UX designers were losing confidence in Market. Their decision-making power and ability to make a difference are not only constrained by their downstream role under Product Designers, but also undervalued as evidenced by the tasks that Product Designers sometimes take away from them. How Product Designers and UX designers collaborate in reality offers a signal of how blurry ownership of tasks has often/ sometimes lead to unclear boundaries. The opinions of Yuri, Kelly and Chloe show how those duplicate tasks and imbalanced power structure in Market are pushing UX designers away to become Product Designers.

6.2 Product Thinking, Designer Thinking?

"Thinking as a Designer" was brought up several times in my conversations with other UX designers. Product thinking was mentioned several times by Product Designers. These different approaches are the thought models they separately follow when they are making

decisions during work. Product Thinking is not a highly discussed topic in academia but is frequently discussed in software development handbooks and podcasts.

When I visited Market's bookstore, I saw several Product Designer/PM handbooks displaying in the best seller section. From those I picked one of the most popular handbooks, "Everyone is a Product Manager," written by a Product Designer called Jie Su who had been in Market for more than 18 years. The author includes many of his own experiences and thoughts during his work in Market and how he became a professional Product Designer. Though the book does not specifically use the term Product Thinking to describe his decision making progress, Su includes many step-to-step procedures illustrating how Product Designers in Market cooperate with other stakeholders and solve problems.

In Chapter 4 he used the word "规划师", which directly translates as "Planner", to describe a Product Designer, but in this case, "Product Strategist" fits better. From his viewpoint, Product Designers as Product strategists focus more on 'structured thinking,' ensuring the product is useful and meets certain user needs, making the product go 'from 0 to 1.' Then UX Developers focus more on 'visual expression,' ensuring that the product is usable and intuitive for users. Not sure how this handbook had influenced the Product Designers in Market, my interviewees, including Yuri, Kelly and Chloe, agreed on this division of work and saw product thinking as "structured thinking" that fundamentally established the strategy and scope of a project. In their view, UXD should properly come next after Product Design work to make the "Visual articulation".

Product thinking asks "Should we build this?" while designers asks "How should we build this?" I deliberately do not use the term "Design thinking" to describe how designers make

decisions in Market. “Design Thinking” has a more business-oriented meaning in academia and in western industry and can apply more broadly than to UX designers alone. It might be confusing to bring this term to describe what designers are thinking and the tasks they are performing in Market. Thus I am using phrases like "thinking as a designer" or "designer thinking" in my following statements. According to many of my interviewees, “designer thinking” is a human-centered approach to problem-solving that they have been practicing through their “vacuum” design education and careers. All the UXDs I encountered had no problem understanding users' experiences and pain points through their observation and engagement. Indeed, they spent lots of time complaining to me how the current system is so non-user friendly, and they could quickly identify core problems. Their working habits match the key stages of empathizing and defining in a design process.

Some UXDs express their frustration with how the current development process held them from exploring creative possibilities and quick prototypes to refine solutions, which are key steps in design thinking. UX Designers in Market lost this step for bargaining power to support their decision making. The argument of Yuri and Bob is an example. By the end of their disagreement, Bob had stepped back and compromised with Yuri's idea. He had the idea that he could prove to Yuri and other stakeholders that he was correct by showing them the user activities on the page after the project was launched. If Bob had been allowed to follow the designer thinking process, and use quick prototypes and conduct user tests to see which design fit better, he could have made a more rational argument with proven user statistics. Unfortunately, this was not a common practice in most development processes at Market because of the urgent need for project launching. As previously mentioned, the set development process in Market does not allow UX Designers to conduct user tests using prototypes. After a Product Designer

has produced a client-proved strategy on what to make, the time for articulating design details shrinks.

Three months after the interview, when I asked Bob if he had succeeded, his reply did not surprise me: " *The clients asked me to focus on new projects and do not think it would be necessary to go back on that requirement.*" The designer thinking is an example of how UX designers wish to work holistically. The thinking model provides a flexible framework in which designers exercise considerable judgments, adapting methods to suit the specific context rather than following standardized procedures.

The process of designer thinking emphasizes direct engagement with users and contexts, providing immediate feedback that informs ongoing decision-making. Moreover, UX designers want to be able to modify their approach based on emerging insights, allowing the design process to evolve in response to what they learn. The iterative nature—moving between divergent and convergent thinking—mirrors the holistic approach where workers continuously refine their approach. However, the designer thinking mode, combined with the holistic working habits designers were trained in in the “vacuum chamber”, is not practical in Market.

6.2.1 "Mockup Monkey"

Bob firmly stated that "*This (designer thinking) is what distinguishes a '线框仔' 'mockup monkey' from a real designer. A 'mockup monkey' just copies things exactly as they're told, doing whatever they're told to do, while a real designer has genuine designer thinking and actually solves problems.*"

"线框仔" straightforwardly translates as "wireframe dude", but I believe in this case "mockup monkey" is a more suitable way to interpret it. Software developers sometimes use terms like "code monkey" for programmers who just write code without understanding the bigger picture. "Mockup Monkey" reflects the criticism that these designers are merely executing predefined layouts rather than contributing strategic design insights or considering user needs.

In Market, UX Designers always use the word "Mockup Monkey" as self-mockery. It represents UX designers' internalized awareness of their lower decision-making authority within Market's organizational hierarchy. The term reflects Market's power dynamics: that Product Designers make many design decisions and UX designers just implement them, and then the work transfers from design experts to the upstream role. The "monkey" metaphor reflects how prescriptive processes reduce skilled knowledge workers to performers of predetermined tasks, precisely what Braverman (1974) identified as deskilling in professional labor. In Bob's view, a UX Designer who simply makes a prototype directly out of the wireframe from a Product Designer is a "Mockup Monkey" who is not doing his/her job as a designer.

In an ideal designer thinking process, a UX Designer will be in charge of both wireframe design and high-fidelity prototyping. In the 2019 Norman and Neilson report on User Experience Career, wireframe design and prototyping are counted together as the most common activities of UX Designers. Without the ability to decide the wireframe, UX Designers constantly are pit in the position of arguing with Product Designers on prototype ownership, just as Yuri and Bob did. From Product Designer's viewpoint, UX Designers should either make a prototype when they deliver a wireframe that they think works, or UX Designers should convince the Product Designers that they have a better design solution. Either way, UX Designers need more time to

communicate their design suggestions. It was truly difficult for many of my interviewees to confidently say that the "*fine design is determined and led by UXD.*" In many ways they found their decision-making power largely influenced by other factors, mostly business objectives, organizational hierarchy, and the development process.

Su stated in his book that "*The Product Designer needs to clearly express the business objectives for each project and can provide their own suggestions for page layout, but the final design is determined and led by UXD.*" (Su, 2014, p185) This explains how different Product Designers and UX Designers understand users. Product Designers view users from a business angle, whereas UX Designers view users from actual user experience. In an ideal collaboration, both roles will contribute to make an integral user perspective. But the development process leads to problems like the ones Yuri and Bob met. Yuri, as the Product Designer, had full access to user input and could make decisions upon that information. Meanwhile Bob received second-hand information about users and could not provide convincing arguments based on his limited user data and thus needed to compromise. Though UX designers would like to perform holistic review in their projects as they did prior to coming to the company, the prescriptive approach in Market prevents them from doing so.

In my study, many stakeholders, including Product Designers, did not fully understand what UXDs thought their job responsibilities should be. Four out of five Product Designers I interviewed thought UXDs should join in the conversation only when there is was need on prototype and page design, even including Yuri and Kelly, who transferred from UX Designers to Product Designers.

Self-deprecating language like “Mockup Monkey” is more than casual workplace jargon. When designers themselves adopt terminology that diminishes their professional contributions, it reflects the internalization of hierarchical values that prioritize business metrics. During the field study, I also found a loss of work satisfaction among UX Designers as evidenced by how they constantly expressed their concerns about getting laid off (?) and the difficulties they had in showing their value as designers. Their downstream roles hide their ability to make decisions based on user needs. UX Designers seemed frustrated by their f inadequate recognition by clients and other stakeholders for their work . Moreover, five just-graduated UX Designers complained to me about their losing some skills in design and user experience research because they "*hardly had the time to practice*". The unclear task boundary and the fragmentation of tasks led to deskilling, which is a bad sign for UX Designers' personal development.

Joe and Ro, senior UX designers who worked in Market for more than 5 years, are both now trying to find "the second growth curve" of their career. Joe is taking MBA lessons so that he can find a job as a project manager in the future in case he gets laid off as a UX designer again, and Ro is working on her own podcast channel. Both potential career changes would result in their leaving the profession of UX design. The inadequacy of the decision-making power of UX Designers might not be solved just by "advocating" that Product Designers and UX Designers work together. UX Designers need general recognition from the organization and chances to work holistically outside of the prescriptive development process.

7. Conclusion

This research reveals a fundamental conflict between how UX designers are trained and how they are expected to work in corporate settings like Market. The "vacuum chamber" of design education cultivates holistic designers who expect to maintain control and influence throughout the entire design process, while organizational realities compartmentalize their work into narrowly defined tasks in hierarchical structures. Franklin's framework of holistic versus prescriptive work provides critical insight into why this tension persists. Design education operates on holistic principles, teaching students to approach problems comprehensively and exercise judgment throughout the design process. In contrast, the Waterfall-based methodology in companies like Market encourages prescriptive work by fragmenting processes into strictly defined, sequential stages. UX Designers are part of the process performing predetermined tasks. This transformation of design work from craft to process represents what Franklin identified as a fundamental shift in how knowledge and control are distributed. This research also extends Braverman's labor process theory by demonstrating how deskilling can occur in creative knowledge work. The study reveals that despite the growing recognition of UX design's importance, organizations often regard UX designers as downstream practitioners rather than strategic contributors. The compartmentalization of UX design tasks and separation of wireframes exemplifies how the division of labor systematically transfers design control from practitioners to others in the organizational hierarchy.

Moreover, three key themes emerged from this research. First, the inconsistent organizational culture at Market simultaneously promotes aggressive team unity while also

celebrating proactive accomplishments, creating impossible expectations for UX designers. Second, the prescriptive development process only allows UX designers to enter after requirements are already defined and before usability evaluations can meaningfully impact product direction. The work process severely limits their ability to make influential decisions. Third, unclear role boundaries between Product Designers and UX Designers create persistent tensions, with upstream Product Designers often having greater decision-making authority. These findings demonstrate how prescriptive work processes undermine UX designers' professional autonomy in several ways. Designers' ability to advocate for user needs is constrained by limited access to users and late-stage input when changes would be costly. They also suggest that meaningful improvement requires more than better communication or integration strategies—it demands fundamental reconsideration of the development methodologies and educational preparation to create environments where holistic UX practice can genuinely flourish.

This research matters because it moves beyond simplistic explanations of how UX can integrate better into companies in previous studies. It reveals the deeper structural factors that constrain UX designers' decision-making power. By connecting personal experiences of frustration to broader theories of labor and work organization, we can better understand why organizational recognition of UX Designers has not been sufficiently valued in organizations. The findings suggest that truly empowering UX designers requires more than advocacy for the value of design. It might need rethinking on how design work is organized and integrated within development processes.

8. Future Discussion

Looking forward, this research has important implications for both educational institutions and organizations. Design education programs might need to incorporate more collaborative, constraint-driven projects that better simulate real-world conditions, preparing students' expectation on the organizational realities. Additionally, greater emphasis should be placed on developing the soft skills necessary to navigate corporate environments while advocating for user needs.

For organizations, this research highlights the untapped potential of UX expertise. By reconsidering how UX designers are integrated into development processes, companies might be able to benefit from their holistic perspective throughout the product lifecycle. This might involve earlier involvement in requirement definition, greater autonomy in design decisions, or dedicated pathways for UX-initiated projects. The intent of this study is to open up the conversation on employee satisfaction and the autonomy of UX Designers in large cooperations. Early studies have focused on examining technology labor under constraints and this study brings the job roles of creative labor like UX designers under the same considerations. More research from a labor perspective should be encouraged on this topic.

Future research could explore how UX designers develop coping strategies to maintain professional integrity within prescriptive environments. The study considered a few successful cases where an organization had effectively integrated holistic UX approaches into structured development processes, but more comprehensive research is needed. In conclusion, while UX

design has secured a place in corporate development processes, a significant gap remains between the holistic approach designers aspire to practice and the prescriptive reality they encounter. Whether this gap could be bridged by reformation of organizational hierarchies or education formats needs future examination.

Appendix

Project: Discover the decision-making power of UI/UX designers in the development process in tech companies

Conductor: Xinyi Hu

Time:

Participant:

Interview Questions

Topic 1: Participant's entry to the field

Q1: When did you enter this industry and how? How long have you been in this position?

Q2: When did you enter this company?

Q3: What was your field of study before you came?

Follow-up questions may apply.

Topic 2: Working progress

Q1: How many colleagues are there on your team?

Q2: Could you briefly describe the development process of the product you are working on?

Q3: Could you describe a working typical day for you?

Q4: What are your major tasks?

Q5: How would you describe your main goal working in your position?

Follow-up questions may apply.

Topic 3: The tools

Q1: What are the tools you are using now?

Q2: How long per day you will be using this tool?

Q3: How long did it take to learn this tool? Do you think learning this tool needs any professional training?

Q4: How do you think this tool helped your work?

Follow-up questions may apply.

Topic 4: General conclusion

Q1: Is your current work different than what you thought when you entered the field? If so, how?

Q2: What do you think of the role of UI/UXD in your company?

Q3: Will you recommend graduated students to be a UI/UXD in a tech company like yours?

Follow-up questions may apply.

Appendix a: Interview questions

CONSENT TO PARTICIPATE	
Project Title	Discover the decision-making power of UI/UX designers in the development process in tech companies
Purpose of the Study	<i>This research is being conducted by Xinyi Hu at the University of Maryland, College Park. We are inviting you to participate in this research project because you have experience in working in tech companies and have certain interactions with UI/UXD. The purpose of this research project is to study the role of UI/UXD in software development process.</i>
Procedures	<i>The procedures involve interviews, with questions separated into different topics and follow-up questions.</i>
Potential Risks and Discomforts	<i>There may be some risks from participating in this research study which may trigger some of your emotional memories.</i>
Potential Benefits	<i>There are no direct benefits from participating in this research. However, possible benefits include your insights into the general studies. We hope that, in the future, other people might benefit from this study through improved understanding of the role of UI/UXD in software development process. This will help future students and workers who want to pursue this career.</i>
Confidentiality	<i>Any potential loss of confidentiality will be minimized by limited access to the scripts. Only my advisor, the translator and I will view them.</i> <i>If we write a report or article about this research project, your identity will be protected to the maximum extent possible. Your information may be shared with representatives of the University of Maryland, College Park or governmental authorities if you or someone else is in danger or if we are required to do so by law.</i>
Right to Withdraw and Questions	<i>Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.</i> <i>If you decide to stop taking part in the study, if you have questions, concerns, or complaints, or if you need to report an injury related to the research, please contact the investigator:</i> Xinyi Hu xhu04@umd.edu +1 2029246134

Participant Rights	<i>If you have questions about your rights as a research participant or wish to report a research-related injury, please contact:</i> University of Maryland College Park Institutional Review Board Office 1204 Marie Mount Hall College Park, Maryland, 20742 E-mail: irb@umd.edu Telephone: 301-405-0678 <i>For more information regarding participant rights, please visit:</i> https://research.umd.edu/research-resources/research-compliance/institutional-review-board-irb/research-participants <i>This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.</i>	
Statement of Consent	<i>Your signature indicates that you are at least 18 years of age; you have read this consent form or have had it read to you; your questions have been answered to your satisfaction and you voluntarily agree to participate in this research study. You will receive a copy of this signed consent form.</i> <i>If you agree to participate, please sign your name below.</i>	
Signature and Date	NAME OF PARTICIPANT (Please Print)	
	SIGNATURE OF PARTICIPANT	
	DATE	

Appendix b: Consent Form

- “Battles” Original Text 战役
- “It would be very anxious if one doesn’t have any work to do in the market.”
Original Text “在Market没有活是一件会让很焦虑的事情”
- “unsaturation” Original Text 不饱和
- “can only determine the restoration degree of the front-end coders”. Original Text
“只能决定前端的还原度”
- “Market’s designer role is an imitation of overseas internet companies’ workflows. In the early days, overseas companies began to have aesthetic requirements, and Alibaba automatically inherited this position and role.” Original Text “[Market]设计出现是因为效仿海外互联网企业的工作流程，早期海外开始有美学要求，阿里默认继承了这个岗位的”
- “After standardization, designers no longer need a lot of manpower to create new designs. In some specific scenarios, front-end development and design can be merged into a single position, as some pages are highly standardized.” Original Text “设计师出了标准化之后，不太需要很多来进新的设计了。在特定场景下前端+设计可以合并一个岗位，有些页很标准化。”
- “When B was working on the redesign of the time-efficiency workbench, there were things that I thought most users wouldn’t need, and I wanted him to hide them, but B was quite persistent. He felt it wouldn’t comply with design guidelines, but I felt he wasn’t considering the users’ perspectives and was instead just following his “so-called” design guidelines. In this situation, I actually hoped that as a designer, he could think from the clients’ or users’ perspective, about how to streamline task completion. But in reality, he sometimes probably wasn’t thinking from this angle, and was instead focused on following design guidelines.” Original Text: “B在做那个时效工作台改版的时候，有些就是我会认为说有些部分用户不需要的东西，我会希望他能收起来，但是B会较坚持。他觉得这个不符合设计的规范，就是我觉得他没有他站在这个商家的角度去打联系，是遵守他的那个所谓设计的规范。这个事情上，我觉得是就是我希望他能他就是设计师是能够站在商家的角度，或者是站在所谓那个用户的角度上去想这件事情，就怎么样能够更简化他的任务的完成。但是实际上他有的时候可能没有站在这个角度去想，是在一些规范的遵守或者是什么上的度上”
- “This is what distinguishes a ‘mockup monkey’ from a real designer. A ‘mockup monkey’ just do whatever they’re told to do, while a real designer has genuine designer thinking and actually solves problems.” Original Text: “这就是线框仔跟设计师的区域。线框仔就是说我照搬，我把你说什么我做什么，设计师才有真正的design thinking才是真的solve a problem.”
- “Product designers act as intermediaries. They got the first-hand requirements.

- Somedecisions were already made, including decisions about users and whether UX designer involvement is needed.” Chances to proactively lead a UX orientated project is “rare and seldom.” Original Text “产品在中间传话，他们已经做过一层决策了，其中包含对用户的决策和是否需要UX介入”
- “UX designers can only contribute a small fraction to a project within a context determined by others. At this stage, any decisions you make, any work you do, or anything you design will not have much impact on the overall commercial relationship.” Original Text “UX只能在别给你确定的某节点中发挥点点功能，拿这个时候的任何决定、你的任何工作、你的设计不会对整个商业关系有多大的影响”
 - “Managers cannot understand the necessity of design work, as it cannot be linked directly to business or KPIs; and design itself can hardly be measured with business indicators.” Original Text “领导法理解设计作的必要性，因为我们无法直接与商业或者业务指标挂钩；设计本也很难商业指标去衡量

Appendix c: Original Text

CERTIFICATION OF TRANSLATION ACCURACY

Translation of

Original Quotes
(containing 2 pages)

for Xinyi Hu,

from Chinese into English (US)

We, TWP Translations Limited (operating under the brand name THEWORDPOINT, www.thewordpoint.com), a professional translation services company having no relation to the client, hereby certify that the translation of the above-mentioned document was not translated for a family member, friend, or business associate, and that it was translated by experienced and qualified professional translators, and that, in our best judgment, the translated text truly reflects the content, meaning, and style of the original text and constitutes in every respect a correct and true translation of the original document.

This is to certify the correctness of the translation only. We do not guarantee that the original document is a genuine document, or that the statements contained in the original document are true. Further, TWP Translations Limited assumes no liability for the way in which the translation is used by the customer or any third party, including end users of the translation. We also confirm that the translation process of the above document was carried out in accordance with the GDPR and the high standards of confidentiality specified in the Terms of Use and Privacy Policy.

A copy of the translation is attached to this certification.

Dated: April 01, 2025



Christakis Christodoulou
Managing Director



TWP Translations Limited
Zinas Nte Tyras, 16, KARANTOKIS BUILDING,
3rd floor, office 6, 1065, NICOSIA
CYPRUS
www.thewordpoint.com

Appendix d: Certification of Translation Accuracy

Bibliography

Ahmad, S. (2020). The corporate culture and employees' performance: an overview. *Journal of Management and Science*, 10(3), 1-6.

[Market]. (2019, September 10). [Market] unveils six new company values for the digital era- [Market]集團. Alibaba.com. <https://www.alibabagroup.com/en-US/document-1491212036011458560>

Anderson, R. (2000). Organizational limits to HCI: Conversations with Don Norman and Janice Rohn. *Interactions*, 7(3), 36-60.

Andrei, B. A., Casu-Pop, A. C., Gheorghe, S. C., & Boiangiu, C. A. (2019). A study on using waterfall and agile methods in software project management. *Journal of Information Systems & Operations Management*, 125-135.

Ankerson, M. S. (2018). Dot-com design: The rise of a usable, social, commercial web (Critical Cultural Communication No. 15). NYU Press.

Balaji, S., & Murugaiyan, M. S. (2012). Waterfall vs. V-Model vs. Agile: A comparative study on SDLC. *International Journal of Information Technology and Business Management*, 2(1), 26-30.

Bassil, Y. (2012). A simulation model for the waterfall software development life cycle. arXiv preprint arXiv:1205.6904.

Bin, Q., Chen, S. J., & Sun, S. Q. (2003). Cultural differences in e-commerce: A comparison between the US and China. *Journal of Global Information Management (JGIM)*, 11(2), 48-55.

Branch, J., Parker, C. J., & Evans, M. (2021). Do user experience (UX) design courses meet industry's needs? Analysing UX degrees and job adverts. *The design journal*, 24(4), 631-652.

Braverman, H. (1974). *Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century*. Monthly Review Press.

Bruun, A., Larusdottir, M. K., Nielsen, L., Nielsen, P. A., & Persson, J. S. (2018, September). The role of UX professionals in agile development: a case study from industry. In *Proceedings of the 10th Nordic Conference on Human-Computer Interaction* (pp. 352-363).

Chapman, L., & Plewes, S. (2014). A UX maturity model: effective introduction of UX into organizations. In *Design, User Experience, and Usability. User Experience Design Practice: Third International Conference, DUXU 2014, Held as Part of HCI International 2014, Heraklion, Crete, Greece, June 22-27, 2014, Proceedings, Part IV 3* (pp. 12-22). Springer International Publishing.

Cherubini, M., Venolia, G., DeLine, R., & Ko, A. J. (2007). Let's go to the whiteboard: How and why software developers use drawings. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '07)* (pp. 557-566). Association for Computing Machinery.

- Cimatti, B. (2016). Definition, development, assessment of soft skills and their role for the quality of organizations and enterprises. *International Journal for quality research*, 10(1), 97.
- Clemmensen, T., Iivari, N., Rajanen, D., & Sivaji, A. (2021, May). "Organized UX Professionalism"—An Empirical Study and Conceptual Tool for Scrutinizing UX Work of the Future. In *IFIP Working Conference on Human Work Interaction Design* (pp. 34-65). Cham: Springer International Publishing.
- Cohn, M. L., Sim, S. E., & Lee, C. P. (2009). What counts as software process? Negotiating the boundary of software work through artifacts and conversation. *Computer Supported Cooperative Work*, 18(5), 401-443.
- Currie, T. A. (2019). Du Pont turns 150: Corporate culture as public culture. *Enterprise & Society*, 20(2), 445-474.
- Dellheim, C. (1987). The creation of a company culture: Cadburys, 1861-1931. *The American historical review*, 92(1), 13-44.
- Denison, D. R. (1984). Bringing corporate culture to the bottom line. *Organizational dynamics*, 13(2), 5-22.
- Efendioglu, A. M., & Yip, V. F. (2004). Chinese culture and e-commerce: an exploratory study. *Interacting with computers*, 16(1), 45-62.
- Farrell, S., & Nielsen, J. (2017). *User Experience Careers: What a Career in UX Looks Like Today*. Nielsen Norman Group.
- Franklin, U. M., & Enterprises, C. (1989). *The real world of technology*. Montréal ; Toronto : CBC Enterprises.
- 财经_凤凰网. (2007, November 26). 实地探秘弥漫着"武侠"气息的[Market]. https://finance.ifeng.com/news/history/people/200711/1126_4471_311311.shtml
- Getto, G., & Beecher, F. (2016). Toward a model of UX education: Training UX designers within the academy. *IEEE Transactions on Professional Communication*, 59(2), 153-164.
- Gothelf, J., & Seiden, J. (2013). *Lean UX: Applying lean principles to improve user experience*. O'Reilly Media.
- Gray, C. M. (2014). Evolution of design competence in UX practice. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (pp. 1645-1654).
- Gunaraja, T. M. (2014). Organizational corporate culture on employee performance. *IOSR Journal of Business and Management (IOSR-JBM)*, 16(11), 38-42.
- Hillman, S., Pang, C., Jain, S., Neustaedter, C., Kaye, J., Rizvi, A. H., McDonald, D. W., Wu, Q., & MacDonald, C. M. (2024). Beyond theory: A UX outcomes casebook for HCI education. In

Extended Abstracts of the CHI Conference on Human Factors in Computing Systems (CHI EA '24) (pp. 1-3). Association for Computing Machinery. <https://doi.org/10.1145/3613905.3643980>

Inal, Y., Clemmensen, T., Rajanen, D., Iivari, N., Rizvanoglu, K., & Sivaji, A. (2020). Positive developments but challenges still ahead: a survey study on UX professionals' work practices.

Kashfi, P., Feldt, R., & Nilsson, A. (2019). Integrating UX principles and practices into software development organizations: A case study of influencing events. *Journal of Systems and Software*, 154, 37-58.

Kashfi, P., Nilsson, A., & Feldt, R. (2017). Integrating User eXperience practices into software development processes: implications of the UX characteristics. *PeerJ Computer Science*, 3, e130.

Khan, M. A. S. H., Minhaj, S. M., & Mohammad Athar Ali, M. A. H. (2024). To explore the impact of corporate culture and leadership behaviour on work performance, mental health and job satisfaction of employees: An empirical study. *Journal of Infrastructure, Policy and Development*, 8(1).

Kotter, J. P. (2008). *Corporate culture and performance*. Simon and Schuster.

Kraft, Philip. (1979). "The routinizing of computer programming." *Sociology of Work and Occupations* 6(2): 139-155.

Laplane, P. A., & Neill, C. J. (2004). The Demise of the Waterfall Model Is Imminent, and Other Urban Myths: Rumors of the demise of the Waterfall Life-cycle Model are greatly exaggerated. *Queue*, 1(10), 10-15.

Liikkanen, L. (2014). Lean UX: the next generation of user-centered agile development? In *Proceedings of the 8th Nordic Conference on Human-Computer Interaction: Fun, Fast, Foundational (NordiCHI '14)*. Association for Computing Machinery, New York, NY, USA, 1095–1100.

Liu, J. J. (1960). The Knight Errant in Chinese Literature: A Lecture Delivered on January 23, 1961. *Journal of the Hong Kong Branch of the Royal Asiatic Society*, 30-41.

Loseke, D. R., & Sonquist, J. A. (1979). The Computer Worker in the Labor Force: New Occupations and Old Problems. *Sociology of Work and Occupations*, 6(2), 156-183. <https://doi.org/10.1177/009392857962003>

Nerur, S., Mahapatra, R., & Mangalaraj, G. (2005). Challenges of migrating to agile methodologies. *Communications of the ACM*, 48(5), 72-78.

Pernice, K., & Budiu, R. (2021). PM and UX Have Markedly Different Views of Their Job Responsibilities. Retrieved from: <https://www.nngroup.com/articles/pm-ux-different-views-of-responsibilities/>

Petersen, K., Wohlin, C., & Baca, D. (2009). The waterfall model in large-scale development. In Product-Focused Software Process Improvement: 10th International Conference, PROFES 2009, Oulu, Finland, June 15-17, 2009. Proceedings 10 (pp. 386-400). Springer Berlin Heidelberg.

Rosala, M., & Krause, R. (2019). User Experience Careers. Nielsen Norman Group. Retrieved from <https://www.nngroup.com/reports/user-experience-careers>

Royce, W. W. (1987, March). Managing the development of large software systems: concepts and techniques. In Proceedings of the 9th international conference on Software Engineering (pp. 328-338).

Sadri, G., & Lees, B. (2001). Developing corporate culture as a competitive advantage. Journal of management Development, 20(10), 853-859.

Sathe, V. (1983). Implications of corporate culture: A manager's guide to action. Organizational dynamics, 12(2), 5-23.

Shestakofsky, B. (2017). Working algorithms: Software automation and the future of work. Work and Occupations, 44(4), 376-423.

Su, J. (2014). *Everyone is a product manager* (Commemorative Edition) [Paperback]. 电子工业出版社.

王学良. (2019, February 22). [Market]的江湖味道. 新中化. <https://www.sinochem.com/zhjt/xzh19ndyq/19yqsy/19yqdt/2023/12/11183039275524947968.html>

Wong, R. Y. (2021). Tactics of Soft Resistance in User Experience Professionals' Values Work. Proceedings of the ACM Human-Computer Interaction, 5(CSCW2), Article 355.

杨焕, & 陈星海. (2013). 从交互设计师职业发展探寻高校建设交互设计专业之路 [Exploring the path of interaction design major construction in universities from the perspective of interaction designer career development]. Art Education.

Zaina, L. A., Sharp, H., & Barroca, L. (2021). UX information in the daily work of an agile team: A distributed cognition analysis. International journal of human-computer studies, 147, 102574.