CHALMERS
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From Engagement to Reflection: Exploring Slow Design in Social Media Interfaces

Designing and Evaluating Interfaces through Slow Design Principles

Master's thesis in Computer science and engineering

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Abstract

This research explores how Slow Design principles can be applied to the design of social media interfaces in order to support more mindful interaction and user self-reflection. Current platforms are largely driven by engagement metrics such as likes, comments, and algorithmic recommendations, which often reinforce habitual use and reduce opportunities for meaningful interaction. To address this issue, a constructive design research approach was adopted, combining a literature review, qualitative interviews, and thematic analysis to identify challenges in existing social media use and opportunities for alternative design directions.

Based on these insights, a set of design requirements was developed and used to guide the redesign of an Instagram prototype. The prototype included several features inspired by Slow Design principles: Behind This (Reveal) to surface hidden context behind posts, reflection (Reflect) to encourage personal journaling, a pause screen (Engage) to disrupt habitual scrolling, and a reflection streak (Evolve) to support long-term awareness of personal growth. These features were implemented in a semi-functional prototype and evaluated with participants through A/B Testing, and post-test interviews.

Findings indicate that the redesigned features encouraged participants to engage more thoughtfully with content, shift attention away from surface-level interactions, and reflect on their own experiences. While the overall response was positive, limitations were noted regarding convenience, the short-term nature of the evaluation, and the absence of full-scale platform dynamics such as recommendation algorithms.

The study concludes that incorporating Slow Design principles into social media interfaces can provide a viable alternative to engagement-driven design by emphasizing depth, reflection, and participation. The research contributes to the growing discourse on mindful technology design by demonstrating practical applications of Slow Design in a social media context and outlining directions for future work, including the development of a fully functional application and long-term evaluation in real-world settings.

Keywords: Slow Design, social media, mindful interaction, self-reflection, user experience, interaction design, redesign, A/B testing, design principles, digital well-being, Instagram prototype, constructive design research.

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Ambalavan Saravanan, Gothenburg, 2025-09-29

Acronyms

GUI	Graphical User Interface
HCI	Human Computer Interaction
UI	User Interface
UX	User Experience
FOMO	Fear of Missing Out

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1

Introduction

Social media has become a central part of contemporary life, shaping how people communicate, express themselves, and engage with the world. Platforms like Facebook, Instagram, TikTok, and Snapchat are not only tools for interaction but also spaces where individuals form identity, stay connected with others, and consume information. They enable creative self-expression, community building, and access to real-time global events. For many, especially younger generations, social media offers a sense of belonging and a way to maintain relationships, even across distance.

In addition to personal connection, social media platforms have also demonstrated their utility across domains such as education, activism, and public awareness. During global movements and crises, social media has served as a powerful channel for marginalized voices, helping to mobilize support and spread information rapidly. Educational content, skill-sharing communities, and platforms for creative output allow users to learn, grow, and contribute meaningfully to public discourse. For small businesses, artists, and content creators, social media offers a low-barrier entry point for reaching audiences and building livelihoods. Features like live streaming, collaborative content, and algorithmically matched interest groups further enhance users ability to participate in global dialogues and discover new ideas.

However, alongside these positive experiences, research has also raised concerns about the psychological and behavioral impact of prolonged use. Studies in the field of Human-Computer Interaction (HCI) and digital mental health have explored how design choices such as infinite scrolling, algorithmic content delivery, and notification systems may contribute to compulsive usage, distraction, and reduced well-being [1][2]. These design patterns, often referred to as persuasive or attention-capturing design, are built to maximize engagement but can lead to unintended consequences for user behavior and emotional health.

In parallel, behavioral studies have documented how social media habits form around boredom, procrastination, and emotional triggers, often leading to passive scrolling and social comparison [3][2]. Adolescents and young adults, in particular, report mixed feelings finding connection and inspiration on social media while also experiencing distraction, stress, and reduced self-esteem when confronted with curated and idealized portrayals of others' lives [4][5].

Meta-analyses by Goldberg et al. and Linardon et al. [6][7] show that mindfulness-based interventions delivered through digital platforms can significantly reduce symp-

toms of anxiety and depression, suggesting that the way digital systems are designed plays a crucial role in shaping mental outcomes. Meanwhile, qualitative studies such as those by Bae et al. and Chen [8][9] demonstrate how reflective design features like journaling, delayed posting, and intention prompts can encourage more meaningful and self-aware interaction online.

These mixed outcomes suggest that the problem is not social media itself, but the way it is designed and used. Rather than relying solely on external solutions like screen time limits or digital detoxes, researchers and designers have begun to explore more sustainable approaches grounded in reflection and intentionality. This includes the field of Slow Design, which emphasizes thoughtful interaction, emotional resonance, and long-term value over instant gratification [10][11]. This research builds on that direction. It explores how social media can be redesigned to support well-being and self-reflection within everyday use. Instead of creating an entirely new platform, the project takes Instagram a widely used and highly influential platform as a case study and redesigned its core features using Slow Design principles. The goal is not to eliminate social media use but to improve its quality: encouraging users to pause, reflect, and engage more deliberately. By shifting the experience away from impulsive consumption toward mindful interaction, this research contributes to ongoing discussions about ethical, human-centered technology and healthier digital habits.

1.1 Problem Statement

To identify the problems in mainstream social media platforms, this research began with user interviews and a survey. The goal was to understand why users engage with social media, what keeps them spending extended time on these platforms, and what they expect from them. Several recurring issues emerged: habitual checking of apps even without new content, using social media to cope with boredom or escape emotions, feelings of exclusion, and frequent social comparison.

The most impactful problem identified was the tendency of users to constantly view others lives on social media and compare themselves with the curated content they see. This is largely driven by algorithmic content tailored to individual interests, which encourages passive consumption and an external focus rather than self-reflection. While some platform features promote connection, many reinforce validation-seeking and upward social comparison, which can negatively affect mental well-being.

Platforms like TikTok and Instagram use advanced algorithms to maximize engagement by continuously adapting content based on user behavior. These personalized, immersive experiences often lead to compulsive use, where users lose track of time and develop addictive habits [12].

As shown by both qualitative and quantitative findings, users are rarely given opportunities to engage with their own life in a reflective or intentional way while using social media. This research highlights the need to support such reflectionnot by limiting features or removing algorithmic content, but by embedding reflective practices into the design itself. Although algorithm-driven content contributes to

compulsive usage, many users also appreciate personalized recommendations that align with their interests. Rather than eliminating these features, the goal is to shift the quality of engagement toward more mindful, self-aware interaction, while preserving the core experiences users value.

1.2 Research Question

This research investigates how social media platforms can be reimagined to foster mindfulness through self-reflection, using Slow Design as a guiding framework. The goal is to identify interaction patterns and design elements that shift user behavior from passive content consumption toward intentional, reflective engagement. By doing so, the study explores how alternative design strategies can support users in becoming more aware of their digital habits and emotional responses.

Based on insights from surveys, and qualitative interviews, the research aims to define a set of requirements for integrating reflection-based features into an existing social media experience. These learnings lay the foundation for a redesigned prototype of Instagram modified to support reflective interaction while preserving the familiarity of a popular platform. The prototype serves both as a practical design exploration and as a tool for evaluating the impact of Slow Design principles on user experience.

A central focus of the research is to understand how reflection can be naturally embedded in everyday digital interactions and how users respond to such interventions. Ethical implications, user autonomy, and the potential for healthier digital behavior are also considered throughout the design process.

The study is guided by the following research question:

QR. How does a Slow Design-based social media platform differ from traditional engagement-driven platforms in terms of user experience, particularly in supporting mindful interaction and self-reflection?

Designing the prototype is a key part of this project, aiming to illustrate and test how reflection-based interaction design can enhance user well-being without removing core features like algorithmic content. While existing platforms emphasize continuous engagement through algorithmic delivery, this research explores how these same algorithms can coexist with more mindful, user-centered experiences. Rather than eliminating personalized feeds, the focus is on modifying surrounding design elements to support presence, meaning, and personal connection within digital spaces.

1.3 Delimitations

This project focuses on reimagining the user experience of social media through the integration of reflection-based interaction, guided by the principles of Slow Design. While platforms such as TikTok and Instagram are referenced throughout the theoretical framework due to their prevalence and relevance, the design intervention

is applied specifically to Instagrams interface for illustrative and evaluative purposes. The outcome of this project is a semi-functional design prototype developed in Figma, aimed at visualizing and testing interaction concepts. Full application development or back-end implementation, such as modifying content recommendation algorithms or building server infrastructure is beyond the scope of this study. Consequently, no coded or deployable application is produced.

The project emphasizes individual user experience and personal digital well-being. Therefore, it does not address the needs of commercial users, influencers, advertisers, or platform moderators. Additionally, it does not explore the business models or monetization strategies of social media platforms, focusing solely on interaction design and ethical UX considerations. While the design aims to reduce overstimulation and encourage reflection, psychological impacts such as long-term behavioral change or clinical outcomes are not measured. The prototype will be evaluated using qualitative usability testing and interviews, and not through large-scale longitudinal studies or biometric assessments.

Finally, the study is limited to visual and interaction design within the scope of Human-Computer Interaction (HCI) and User Experience (UX). Broader policy-level or organizational interventions, such as data privacy frameworks or regulatory changes, are outside the boundaries of this research.

2

Background

This chapter provides relevant contextual information about the research topic and the broader environment in which it is situated. It begins with a reflection on what social media is and how its meaning and role can differ between individuals. Following this, an overview of the global rise of social media is presented, highlighting usage statistics and emerging trends. The chapter then explores both the positive contributions of social media platforms to human connection, communication, and creativity, as well as the growing concerns regarding their psychological and behavioral impact. To address these issues, a dedicated section introduces the research area, focusing on how principles of Slow Design and reflective interaction can reshape social media experiences. The chapter concludes with a discussion of ethical considerations related to participant involvement and data handling.

2.1 What is Social Media?

From my perspective, social media should primarily exist to connect people, enable communication, and allow them to share their own content while engaging with the views of others. Ideally, it would be a space for genuine socializing and meeting new people, free from algorithmic manipulation and advertisements. However, in reality, social media has evolved into much more than just a set of online platforms. It has become a space where people create, share, and respond to content in ways that significantly shape everyday life.

The original idea of connecting and exchanging information online has been present since the early days of the internet. What made social media transformative was the point at which platforms became accessible to anyone, not only those with technical expertise. This shift empowered ordinary users to move from being passive consumers of information to active participants who could publish their own stories, opinions, and experiences.

Today, social media is often associated with well-known platforms such as Instagram, Facebook, Snapchat, or Twitter, but it extends far beyond these. It includes forums, blogs, wikis, video-sharing sites, and many other services that facilitate interaction and user-generated content. In this sense, social media is not defined by a single tool but by the broader principle of enabling social interaction online.

The meaning of social media differs for every individual there is no one-size-fits-all

definition. For me, social media represents a double-edged medium. On one side, it connects people, amplifies voices, and fosters communities, giving individuals the power to influence opinions and even drive social change. On the other side, it can also contribute to distraction, pressure, and digital fatigue. Understanding social media, therefore, is not only about recognizing the platforms themselves but also about reflecting on their influence on how people live, interact, and perceive themselves and others.

2.2 The Rise of Social Media: Statistics and Trends

As of January 2025, there are 5.24 billion social media users worldwide, accounting for 63.9% of the global population. Over the past year, the number of social media users has increased by 206 million, reflecting an annual growth rate of 4.1% equivalent to approximately 6.5% new users every second. On average, individuals engage with 6.8% different social media platforms each month and spend about 2 hours and 21 minutes daily on these platforms. This means that approximately 14% of an individual's waking hours are dedicated to social media. Furthermore, a total of 16 social media platforms now report at least 500 million active users. Among them, Facebook has 3.07 billion monthly active users, YouTube has a potential advertising reach of 2.53 billion users, and WhatsApp has at least 2 billion monthly active users. Instagram also has 2 billion monthly active users, while TikTok can potentially reach 1.59 billion adults over the age of 18 each month. Snapchat follows with 850 million monthly active users [13]. These statistics highlight the pervasive role of social media in our lives. However, they also underscore the need to critically examine how these platforms are designed and how they influence user behavior.

2.3 The Positive Potential of Social Media

Social media refers to a group of internet based platforms that allow individuals to create, share, and interact with content and one another in real time [14]. These platforms are grounded in Web 2.0 technologies, which emphasize user participation, collaboration, and dynamic content over static consumption [15]. Social media includes a wide variety of services from social networking sites like Facebook and Instagram to content sharing platforms like YouTube and TikTok, as well as microblogging services such as Twitter.

Since its emergence, social media has brought about numerous positive transformations in how people communicate, learn, and form communities. At its core, social media fosters human connection, enabling users to maintain relationships across distances, reconnect with old friends, and form new connections around shared interests [16]. During periods of physical separation, such as the COVID-19 pandemic, these platforms played a vital role in preserving social ties and supporting mental well-being [17].

From a Human-Computer Interaction (HCI) and User Experience (UX) perspective, social media platforms are designed to offer intuitive interfaces that facilitate ease of

use, real-time interaction, and emotional engagement [18]. Features such as liking, commenting, and sharing foster a sense of immediacy and reciprocity, making digital communication feel more responsive [19]. Visual storytelling tools like Instagram Stories or TikTok videos allow users to express themselves creatively and share moments from their daily lives with minimal effort.

Social media has also become an important tool for self-expression and identity formation, particularly among adolescents and young adults [20]. These platforms give users the ability to craft digital personas, showcase achievements, explore interests, and receive social feedback activities that are especially meaningful during developmental phases of identity exploration.

Beyond personal use, social media has empowered civic engagement and social movements. Hashtag activism and user-generated campaigns have brought awareness to issues like climate change and others, demonstrating how digital spaces can amplify marginalized voices and mobilize global communities [21]. These platforms provide an accessible medium for people to participate in discussions, share perspectives, and advocate for change without traditional gatekeepers.

Furthermore, social media platforms have proven to be valuable for education and knowledge sharing. Platforms like YouTube, LinkedIn, and Reddit host millions of educational communities and tutorials across a wide range of subjects, making learning more accessible and engaging [22]. For professionals, platforms like LinkedIn serve as spaces for career development, networking, and skills-building, while creative communities on Instagram or Behance offer avenues for artists and designers to showcase their portfolios and gain feedback. Small businesses, entrepreneurs, and creators have also benefited from social medias ability to enable visibility, branding, and community-building. The affordability and reach of these platforms allow independent creators to connect directly with niche audiences, build loyal followings, and generate income through digital channels [23].

When social media designed and used with intention, has immense potential to enhance social connection, creative expression, learning, and participatory culture. As this research explores the psychological impacts and challenges associated with engagement-driven design, it is equally important to recognize and preserve the positive human-centered experiences that these platforms can support.

2.4 The Problem: Social Media Design and Its Psychological Impact

These social medias offer many advantages, making human life faster and easier, but are they considering the psychological impact on users? Are people able to be mindful while interacting with them? Many social media platforms contribute to addiction and have negative side effects that impact users well-being [24]. While these platforms enable connectivity and information sharing, they are also designed to maximize engagement through features such as infinite scrolling, algorithmic recommendations, and dopamine-driven notifications. These engagement-boosting mech-

anisms contribute to digital fatigue, compulsive use, reduced attention spans, and mental health concerns. Some researchers argue that technological advances, including social media, activate the brain's dopaminergic pathways artificially, similar to addictive substances [25]. Some even compare social media to a digital drug, suggesting that features such as likes, messages, and short-form videos provide instant gratification, reinforcing compulsive usage patterns. The validation from these interactions can create a feedback loop, encouraging frequent engagement and prolonged screen time. From a sociological perspective, studies also indicate that many users feel they spend more time on social media than they intend, often exceeding their own planned usage, which raises concerns about self-regulation and digital well-being.

The article "The Social Dilemma: Social Media and Your Mental Health" from McLean Hospital examines the complex relationship between social media use and mental health, highlighting both the psychological mechanisms that make these platforms engaging and the potential negative consequences of excessive use. Social media platforms are designed to activate the brain's reward center by releasing dopamine, a neurotransmitter associated with pleasure. This reinforcement encourages repeated engagement, similar to the mechanics of a slot machine, where the unpredictability of rewards keeps users returning. This design can lead to addictive behaviours, increasing the risk of anxiety, depression, and physical health issues [26].

The UC Davis Health article delves into the intricate relationship between social media and mental health, emphasizing both the potential risks and strategies for fostering a healthier digital environment. It acknowledges that social media has become an integral part of modern life, offering numerous benefits such as staying connected with loved ones, accessing information, and engaging in online communities. However, it also underscores the growing concerns regarding its adverse effects on mental well-being, particularly among younger users who spend significant amounts of time on these platforms [27].

One of the primary concerns addressed in the article is the link between social media use and increased rates of anxiety and depression. The instant gratification culture fostered by likes, shares, and comments can create a cycle of validation-seeking behavior, where individuals become overly reliant on external approval. When users do not receive the expected engagement, feelings of inadequacy, self-doubt, and low self-esteem can emerge. Additionally, the addictive nature of social media platforms, designed to keep users engaged for extended periods, can lead to compulsive usage patterns, interfering with daily routines, academic performance, and overall productivity.

The article also discusses how social media distorts self-image by promoting unrealistic beauty standards. Filters, photo editing tools, and the tendency to showcase only the most idealized moments contribute to a culture of comparison. Many individuals, particularly teenagers and young adults, may feel pressure to conform to these unattainable standards, resulting in body dissatisfaction, disordered eating behaviors, and a diminished sense of self-worth. The rise of influencer culture further exacerbates this issue, as audiences often fail to recognize that what they see online

is a curated, highly selective representation of reality.

One of the most significant psychological impacts of social media today is FOMO (Fear of Missing Out). When users engage passively on social media, they do not actively communicate with others; instead, they mindlessly view others' profiles, which can lead to upward social comparison and the fear of missing out [28]. Individuals with high FOMO experience anxiety, low self-esteem, depressive symptoms, negative physical symptoms, and feelings of inadequacy, all of which are linked to increased social media engagement [29][30]. This issue becomes particularly problematic when individuals begin to perceive others as socially superior, leading to a negative emotional response known as upward comparison [31]. Particularly TikTok and Instagram, employ sophisticated artificial intelligence algorithms to capture user attention and maximize engagement. TikTok and Instagram recommendation system continuously refines content based on user behavior such as liked videos, watch duration, and interaction patterns delivering a highly personalized and immersive experience [4]. While this design creates a compelling and engaging environment, it also fosters compulsive usage patterns, where users often lose track of time, leading to addictive behaviors.

TikTok and Instagram addiction is concerning for several reasons. First, TikTok and Instagram are two of the fastest-growing social media platforms, surpassing many predecessors in both user numbers and engagement intensity. Second, their algorithm-driven content delivery systems are among the most advanced, enhancing user participation while also reinforcing addictive consumption patterns. Unlike traditional social media, where users actively search for content, TikToks "For You" page and Instagrams home and Reels pages create endless loops of passive content consumption. This increases the risk of problematic use, where users experience time distortion, compulsive scrolling, and reduced self-awareness [12].

Rafael A. Calvo and Dorian Peters, in their book Positive Computing, stated: Despite major advancements and an incredible proliferation of devices, there is no evidence our modern tools have made us psychologically healthier or happier today than we were 20 years ago [32]. Additionally, Calvo and Peters raise an important question in their book: If a technology doesnt improve the well-being of individuals, society, or the planet, should it exist?

2.5 Research Area

Rather than questioning whether technology should exist, this research focuses on how social media can be intentionally designed to foster mindfulness through self-reflection. Drawing on the principles of Slow Design, a philosophy rooted in the broader Slow Movement, this study explores how digital platforms can move away from fast, engagement-driven models and toward more thoughtful, emotionally grounded experiences.

Slow Design emphasizes intentionality, emotional depth, and sustainable interaction, offering a valuable framework for rethinking how users engage with social media. By incorporating ideas from both Slow Design and Slow Technology, the research

proposes an alternative approach that encourages users to pause, reflect, and interact with content more meaningfully.

Instead of focusing on restricting screen time, this research highlights the importance of shifting the quality of engagement toward conscious, self-aware interaction. Through the lens of Human-Computer Interaction (HCI) and User Experience (UX) design, it examines how reflection-based features can be embedded into social media interfaces to reduce passive consumption and promote emotional well-being. The goal is to support more intentional, human-centered digital experiences that contribute positively to the user's mental and emotional environment.

2.6 Ethical Considerations

This research involves human-centered design research focusing on the interaction between individuals and social media platforms. As such, ethical responsibility is essential throughout the study, particularly during user research activities such as interviews, surveys, and prototype testing. All methods used for data collection have been designed to respect participant autonomy, protect personal information, and comply with established ethical guidelines for research involving human subjects.

Participation in interviews and surveys is entirely voluntary and conducted with informed consent. Prior to participation, individuals are provided with clear and accessible information regarding the purpose of the research, the nature of their involvement, the type of data collected, and how their responses will be used. In accordance with standard ethical practices, participants are informed of their right to withdraw from the study at any point without consequence. Where interviews are recorded, participants are asked for explicit consent, and recordings are stored securely and used only for analysis within the scope of this research.

No personally identifiable information will be published. All data collected will be anonymized and handled confidentially. Names, usernames, and any references that could reveal participant identities are excluded from the documentation. This research adheres to the EU General Data Protection Regulation (GDPR) (European Parliament and Council, 2016), which ensures that all personal data is processed lawfully, fairly, and transparently. Additionally, Swedish legislation and guidelines, such as those outlined by the Swedish Ethical Review Authority, are considered in all phases of data collection and processing to protect the privacy and rights of participants. As the research explores reflection in social media use, potentially prompting thoughts about compulsive behaviors, FOMO (Fear of Missing Out), or emotional triggers, participants were informed that they could skip any questions they found uncomfortable. It was also made clear that the study did not ask personal or clinical questions related to mental health the focus remained on users general experiences and perceptions of social media use.

In summary, the ethical considerations in this research focus on voluntary participation, informed consent, data security, privacy protection, and emotional well-being. The project upholds a commitment to respectful and responsible research in line with current European and Swedish ethical standards.

3

Theory

This chapter outlines the theoretical foundation that supports the design direction of this research. It focuses on two key frameworks: Mindfulness and Slow Design. These perspectives provide a lens through which the design of digital experiences particularly in the context of social media can be reconsidered. Mindfulness offers psychological grounding for encouraging presence, awareness, and intentional interaction, while Slow Design presents a philosophical and practical approach to designing systems that promote reflection over instant gratification. Together, these theories shape the researchs approach to creating more thoughtful and balanced user experiences in social media environments.

3.1 Mindfulness

Mindfulness may facilitate more flexible and effective coping strategies. People with high mindfulness are more aware of their internal thoughts, emotions, and behaviors, as well as their external environments [33][34] and they are also less likely to be distracted by anxiety or negative emotions [35][36] and experience less emotional exhaustion [37]. Through these qualities, mindful people may think rationally and clearly, making more accurate appraisals in difficult and stressful situations [38].

Mindfulness is viewed as a state of enhanced attention to and awareness of current experience or present reality [39][40].

Mindfulness is the basic human ability to be fully present, aware of where we are and what were doing, and not overly reactive or overwhelmed by whats going on around us [41]. Mindfulness means maintaining a moment-by-moment awareness of our thoughts, feelings, bodily sensations, and surrounding environment through a gentle, nurturing lens. It also involves acceptance, meaning that we pay attention to our thoughts and feelings without judging them without believing, for instance, that theres a right or wrong way to think or feel in a given moment [42].

Overall, these definitions imply being fully present and aware of the current moment. So This research done to bring mindfulness into the experience of social media users by embedding self-reflection into platform interactions. By applying the principles of Slow Design, the study explores how reflective interactions can encourage users to be more present, aware, and emotionally engaged during their digital experiences.

3.2 Slow Design

Slow Design is a design philosophy that advocates for a deliberate, thoughtful, and reflective approach to product and interaction design. First introduced by Alastair Fuad-Luke, Slow Design emerged as a response to the fast-paced, efficiency-driven culture of modern technology and consumerism [43]. Inspired by the Slow Movement, which began with the Slow Food movement in the late 20th century [44], Slow Design emphasizes quality over speed, fostering sustainable, meaningful, and emotionally engaging experiences.

The core idea behind Slow Design is that design should not merely focus on usability and efficiency but should also promote well-being, mindfulness, and deep engagement. Unlike conventional design approaches that prioritize immediacy, convenience, and passive consumption, Slow Design encourages users to interact with products and digital interfaces in a more intentional and conscious manner. This shift aims to counteract the overstimulation and digital fatigue caused by fast, attention-driven interfaces, particularly in social media environments.

Fuad-Luke outlines six fundamental principles of Slow Design that guide its application in interaction and product design:

Reveal: Slow Design reveals spaces and experiences in everyday life that are often missed or forgotten, including the materials and processes that can easily be overlooked in an artifacts existence or creation.

Expand: Slow Design considers the real and potential expressions of artifacts and environments beyond their perceived functionality, physical attributes and lifespans.

Reflect: Slowly-designed artifacts and environments induce contemplation and reflective consumption.

Engage: Slow Design processes are open source and collaborative, relying on sharing, co-operation and transparency of information so that designs may continue to evolve into the future.

Participate: Slow Design encourages people to become active participants in the design process, embracing ideas of conviviality and exchange to foster social accountability and enhance communities.

Evolve: Slow Design recognizes that richer experiences can emerge from the dynamic maturation of artifacts and environments over time. Looking beyond the needs and circumstances of the present day, Slow Design processes and outcomes become agents of both preservation and transformation.

Slow Design principles can also support deeper emotional engagement and product attachment. One of the key ideas in this philosophy is to intentionally slow down users, encouraging them to pause, reflect, and become more aware of their actions and experiences. The Slow Movement originated as a response to the increasing pace of modern life, where constant speed often leads to stress, overload, and disconnection. Rather than promoting slowness for its own sake, Slow Design encourages doing things at the right pace, creating space for reflection and intentional behavior.

In this research, self reflection was treated as a central strategy for achieving mindfulness in digital interactions. Instead of optimizing the user experience purely for speed or convenience, the design process focused on creating moments that invite users to stop and think about what they are seeing, how it makes them feel, and why they are engaging with it. This approach aligns with the Slow Design philosophy, which is not a fixed method or tool, but a way of thinking that challenges designers to prioritize meaning, awareness, and emotional presence. While the term "slow" is often misunderstood as unproductive or inefficient, Slow Design is about finding the right rhythm that supports both well-being and relevance in everyday life. Designing for reflection within social media requires acknowledging modern user habits while introducing features that gently encourage more mindful and meaningful interaction.

4

Previous Research

This section presents insights from previous research that helped shape the direction of this project. It includes case studies of tangible products and existing applications that demonstrate the application of Slow Design principles in practice.

4.1 Case Studies of Slow Design in Practice

Using the principles from the Slow Design framework, some tangible products have been discovered and evaluated with users. The evaluation process focuses on these six principles. One research study - "Slow Design for Meaningful Interactions" [45] explores how Slow Design principles can be applied to mass-produced products to encourage mindful interaction and foster product attachment. The study specifically focuses on designing an electric fruit juicer, JuicyMo, to evaluate the effectiveness of Slow Design in enhancing user engagement. The researchers redesigned a traditional centrifugal juicer using Slow Design principles to transform the juicing process into an engaging, reflective, and ritualistic experience rather than a purely functional task.

To achieve this, several Slow Design modifications were incorporated into the juicer. Transparent design elements (aligned with the Reveal Principle) gradually expose the internal structure and functionality of the device during operation, enhancing user awareness of the juicing process. Adjustable pulp control (Participate Principle) allows users to customize the fiber content of their juice, fostering active engagement in the experience. Furthermore, pulp reuse encouragement (Expand Principle) prompts users to creatively repurpose leftover pulp, reinforcing sustainability. In terms of physical interaction, the juicer integrates manual user interaction (Engage Principle), requiring users to turn or press a feeding mechanism, thereby increasing their physical involvement. Additionally, the social ritual feature (Ritual Principle) introduces a sharing stone, which splits the juice stream into two portions, encouraging users to share the experience with others. Lastly, a mindful serving process (Reflect Principle) was designed into the juice container, requiring careful handling, prompting users to slow down and focus while pouring.

To assess the effectiveness of these design interventions, the research team conducted a series of user studies. In a home use study, participants were asked to use time-consuming alternatives to their usual appliances, such as stovetop coffee makers instead of automatic machines. Results indicated that when users had more time,

particularly on weekends, they found the slower process more enjoyable and relaxing. In creative sessions and concept development workshops, designers and students were invited to generate ideas based on Slow Design principles. These sessions revealed that participants required concrete examples of Slow Design projects to better understand the abstract principles, leading to the introduction of a new seventh principle, "Ritual," which emphasized the role of daily routines in fostering product attachment.

Further usability testing with JuicyMo was conducted with six participants in a controlled kitchen environment. Users recognized and appreciated key Slow Design principles, particularly Reveal, Reflect, and Participate. However, some principles were more difficult to grasp without additional guidance. While participants responded positively to features that encouraged mindful interaction, they also noted that an excessive slow-down of the process could become frustrating, highlighting the importance of balance in product interaction.

The study concluded that Slow Design can be successfully applied to mass-produced consumer products to enhance user attachment and sustainability. However, balancing slow and fast elements is crucial. While certain aspects of interaction, such as juice preparation, should be slowed down to encourage mindfulness, others, like cleaning and storage, should remain efficient. Additionally, incorporating physical engagement and ritualistic features fosters stronger product attachment, ultimately leading to prolonged product use and reduced waste. The research demonstrates that integrating Slow Design principles into everyday objects can transform them from purely functional tools into meaningful artifacts that encourage reflective and intentional interaction.

Another research - "Giving Form to Temporality: Extending Design Practices and Methodologies for Slow Interaction" [9] explores the application of slow design principles in digital possessions and interactive experiences, focusing on how users engage with their growing digital archives over time. The study introduces several products designed with slow design in mind, each fostering a more reflective and deliberate engagement with digital content. One such product, Mettle, is a slow messaging system that gradually reveals information over time, encouraging anticipation and thoughtful reflection rather than instant communication. Similarly, Crescendo Message follows a similar approach by allowing messages to be unveiled gradually, altering the pace at which digital conversations unfold. Another product, Olly, is a domestic music player that unexpectedly selects and plays songs from a user's past listening history, prompting reflection on past experiences through music. The study also examines Slow Game, a minimalist digital game where users play a version of "Snake" with an extremely delayed movementoccurring just once per dayforcing players to engage with the game on a long-term scale rather than in rapid sessions. Additionally, Chronoscope, a digital photo archive interface, enables users to browse their photos based on temporal metadata, slowing down the process of revisiting past digital memories and encouraging meaningful recollection.

The effectiveness of these slow design principles was evaluated through multiple methods, including home use studies, design workshops, usability testing, and field

deployments. In the home use studies, participants engaged with interactive systems that intentionally slowed down their digital interactions. Users reported that when they had more time, such as during weekends, they found these slower experiences to be enjoyable and conducive to deep reflection. Design workshops involved professionals and researchers exploring slow interaction principles and conceptualizing new ways to integrate temporality into digital experiences. Usability testing was conducted on the Chronoscope interface, where users interacted with their photo archives in a more time-based and reflective manner. The findings indicated that while users appreciated the depth of engagement offered by slow interactions, excessive slow pacing could sometimes become frustrating. Additionally, field deployments of the Olly music player allowed researchers to assess how slow technology influenced long-term interactions with personal music collections.

4.2 Review of Existing Applications

BeReal: BeReal is a social media app that encourages users to engage with their digital interactions more authentically and spontaneously. It sends a notification once per day at a random time, prompting users to take a photo using both front and back cameras within two minutes. This mechanic discourages excessive curation, as users cannot upload pre-edited images or select the "perfect" moment. While BeReal promotes authenticity and mindful social media use, it does not fully align with Slow Design principles. The app still relies on unpredictable notifications to encourage engagement, which can create a sense of urgency rather than slow, intentional interaction. However, it does align with the Reveal principle of Slow Design, as it exposes real-life moments without excessive filtering or preplanning.

One Sec: One Sec is a mindfulness-focused app, but users must manually add it to any app they want to regulate. It functions like a Shortcuts within the Apple ecosystem and is primarily designed to help users break impulsive social media habits. The app introduces a forced delay when opening social media apps, requiring users to take a deep breath before proceeding. This intervention disrupts automatic behaviors, increases awareness of habitual scrolling, and reduces mindless engagement. One Sec strongly aligns with Slow Design principles, particularly Reflect, as it encourages users to contemplate their digital habits before engaging. It also supports the Evolve principle by fostering gradual behavioral change, helping users become more intentional about their social media usage over time.

FutureMe: FutureMe is a platform that allows users to send letters to their future selves or anyone, fostering long-term reflection and introspection. Unlike instant gratification-driven apps, FutureMe promotes deep engagement with personal thoughts and encourages users to set long-term intentions. This approach aligns well with Slow Design, particularly the Expand principle, as it extends the meaning of digital interactions beyond the immediate present. It also supports Reflect, as users engage in self-examination and mindful communication with their future selves. By shifting focus away from instant responses and immediate validation, FutureMe embodies Slow Design ideals in a way that contrasts with traditional social media.

Slowly: Slowly is a pen-pal-style communication app that mimics traditional letter writing by introducing delays in message delivery based on the geographical distance between users. This intentional slowing down of digital conversations fosters deeper, more thoughtful exchanges, discouraging impulsive messaging. Slowly strongly aligns with Slow Design principles, particularly Engage, as it encourages users to be actively involved in their conversations. It also exemplifies Participate, allowing users to build meaningful, deliberate connections rather than engaging in fast-paced, disposable interactions. By removing the expectation of instant replies, Slowly creates a mindful and intentional digital communication experience.

Despite the presence of several apps that promote mindful behaviors such as those focused on deep breathing, or screen time management these are typically standalone tools and not integrated within the social media experience itself. While some social media platforms offer features like usage reminders or time limits, they rarely incorporate self-reflection as a central component of user interaction. Most existing applications emphasize external mindfulness practices and continue to rely on surface-level engagement, which can discourage deeper awareness. Critically, they lack mechanisms that prompt users to pause, process their experiences, or reflect on how content affects them emotionally. This absence of reflective space highlights a significant gap in current digital design. It underscores the need for a social media environment that fosters mindfulness through intentional interactionencouraging users to engage more thoughtfully with content and reconnect with their inner states, behaviors, and intentions.

4.3 A Slow Design Approach to Social Media Engagement

A Slow Design approach to social media encourages users to slow down, be present, and connect more deeply with what they see and share online. Instead of fast-paced scrolling and chasing likes, this approach focuses on helping people reflect, express meaning, and be more aware of their digital behavior. The six principles of Slow Design - Reveal, Expand, Engage, Participate, Evolve, and Reflect originally proposed by Alastair Fuad-Luke [43], provide a conceptual foundation for this experience. These principles guide the development of digital interactions that prioritize intention, meaning, and emotional awareness over efficiency or speed.

Reveal

This principle is about making the hidden stories and emotions behind a post more visible. In most social media today, users only see polished images or short videos, but not the deeper meaning behind them. A Slow Design approach allows users to share what the post means to them why it matters, how they felt, or what moment in life it came from. This helps others see the real human experience behind the content, building empathy and reducing comparison.

Expand

Expand encourages going beyond surface-level sharing. Instead of short captions

or emojis, users can describe personal memories, meaningful people, or life events linked to a post. This creates richer and more thoughtful content that reflects the full context of an experience. It transforms social media from a quick update tool to a space where people can tell stories and document parts of their lives in a meaningful way.

Reflect

Reflection is at the heart of this design. Users are given gentle prompts to pause and think about how a post made them feel or what it reminded them of. They can write these thoughts privately, helping them become more aware of their own emotions and habits. Over time, this builds a personal feed of reflections that users can look back on. It helps turn social media into a space for self-awareness and growth, not just entertainment.

Engage

Slow Design encourages users to engage with content intentionally, not just passively scroll. If someone keeps scrolling for a long time without reflecting, the feed can gently pause and remind them to take a moment. This does not block the experience, but nudges the user to reconnect with their thoughts. This kind of engagement encourages users to stay mindful and prevents getting lost in endless content.

Participate

This principle is about giving users control over their experience. Instead of having algorithms decide what to show, users can shape their own journey by choosing what to share, who to mention, and how to express themselves. They can write about the people in their posts, explain the story behind the image, and choose how they want it to appear. This makes users feel more in charge and turns their interaction into something personal and meaningful.

Evolve

Evolve means supporting slow and thoughtful changes over time. Features like delayed posting or a timer that allows edits for only a short period encourage users to think carefully before sharing. It removes pressure to be perfect or immediate. Over time, users build healthier habits where posting becomes a considered act, not something done for quick validation. This approach helps develop long-lasting, mindful behavior online.

Research from case studies on Slow Design shows that applying its principles in social media and other digital contexts can help users shift their focus from quick, automatic scrolling to more thoughtful and reflective experiences. When users are given space to pause and consider what they are seeing, they become more aware of their emotions and digital habits. Studies such as Odom et al [11] and Rauch [46] demonstrate how features that invite reflection like surfacing personal context or slowing down interactions can lead to more meaningful digital engagement. However, these studies also highlight the need for balance: when interactions become too slow or overly disruptive, users may experience frustration or disengage. This suggests that reflection does not require removing speed entirely or eliminating content

feeds, but rather designing subtle interventions that encourage intentional use. By supporting moments of pause and introspection, Slow Design offers a way to bring more calm, presence, and personal awareness into everyday digital experiences.

5

Methodology

This chapter outlines the methodology used throughout the project, integrating both theoretical and practice-based approaches. It begins with a foundation in interaction design principles, including concepts such as user experience, usability, and accessibility, to frame how users engage with digital systems. The design process itself is structured around the Double Diamond framework Discover, Define, Develop, and Deliver allowing for iterative, user-centered exploration and refinement.

The Discover phase includes a literature review, semi-structured interviews, and survey research, aimed at identifying user needs and challenges related to social media engagement and digital well-being. In the Define phase, insights from this research are analyzed through thematic analysis to develop a grounded problem definition. The Develop phase focuses on ideation, sketching, sitemap, and prototyping, using both low and high-fidelity methods to explore reflective interaction concepts. Finally, the Deliver phase involves A/B testing evaluation through think-aloud sessions and follow up Interview to assess how well the prototype supports mindful engagement and Slow Design principles.

5.1 Interaction Design

Interaction Design (IxD) refers to the practice of designing interactive digital products, environments, systems, and services with an emphasis on how users engage with them. It involves more than the creation of interfaces; it centers on understanding users goals, behaviors, and contexts in order to craft meaningful and effective interactions [47]. By considering user needs, limitations, and expectations, interaction designers aim to create systems that are intuitive, accessible, and aligned with real-world usage scenarios [48].

The goal of interaction design is to support a seamless flow between human users and technological systems, ensuring usability, satisfaction, and engagement. Effective interaction design requires iterative testing, feedback collection, and refinement to ensure that the final product offers a positive and productive user experience [49]. Interaction design is closely related to the field of Human-Computer Interaction (HCI). While HCI initially focused on optimizing the usability of computing systems, interaction design emerged with a broader vision integrating aesthetic, emotional, and experiential aspects into the design process [18]. Over time, the boundaries between HCI and interaction design have increasingly blurred, with both fields now

addressing similar concerns related to technology use, user needs, and interface innovation.

Interaction design is inherently interdisciplinary, drawing from fields such as cognitive psychology, design theory, computer science, and sociology. It plays a foundational role in the development of systems intended for human use, particularly in the context of interactive digital products.

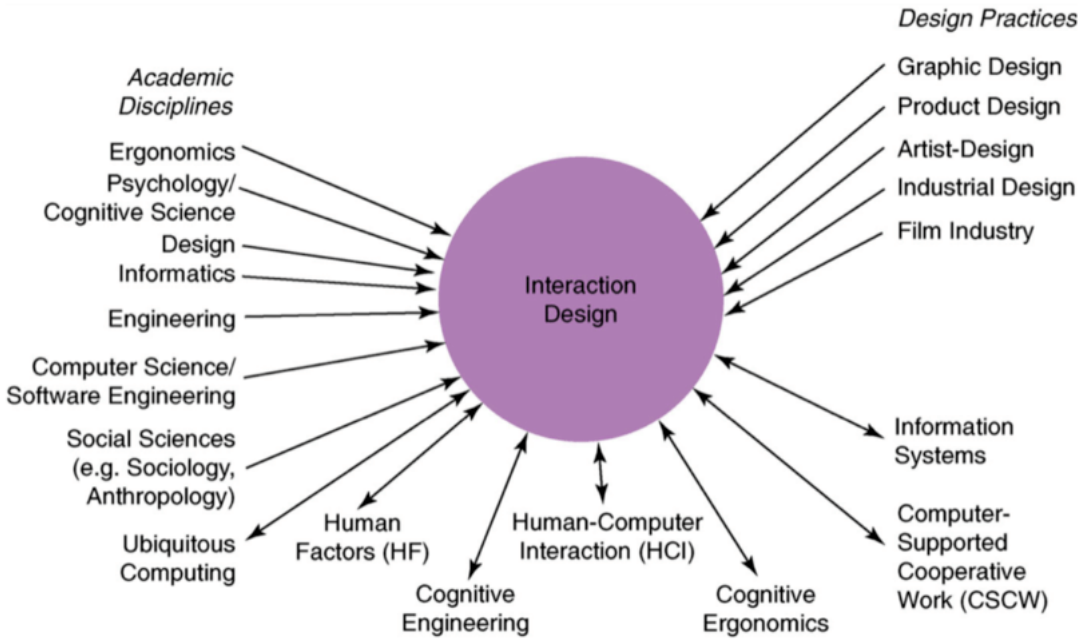


Figure 5.1: Core areas involved with IxD alongside interdisciplinary overlapping fields [47].

5.1.1 User Experience

User Experience (UX) encompasses the full spectrum of a user's interactions with a product, system, or service. It involves not only how usable and efficient the system is, but also how satisfying, engaging, and emotionally rewarding the experience feels to the user [50]. A positive UX arises when the design aligns closely with the users goals, expectations, and context of use. Notably, a design that performs well in one context may result in a significantly different experience in another, underscoring the importance of situational and user-centered considerations [51].

According to the International Organization for Standardization (ISO 9241-210), user experience is defined as:

A person's perceptions and responses that result from the use and/or anticipated use of a product, system or service [52].

Roto et al.[53] extend this definition by noting that UX is not limited to the actual

interaction phase, but also includes the broader context surrounding the product. They propose four temporal dimensions of UX:

Anticipated UX: the expectations and emotions a user has before interacting with the product. Momentary UX: the feelings and responses during an individual interaction. Episodic UX: the user's evaluation of a distinct usage episode. Cumulative UX: the long-term impression formed from repeated use over time.

These layers highlight that UX is a dynamic and evolving phenomenon shaped by prior experiences, current interactions, and future expectations [53]. Effective UX design, therefore, goes beyond usability alone it requires careful consideration of emotional responses, preferences, values, and the broader human context in which technology is used.

5.1.2 Usability

Usability refers to the ease with which a product, system, or service can be learned and used effectively. It plays a fundamental role in determining the overall quality of the user experience. A system that is difficult to learn or operate will likely result in frustration, reduced satisfaction, and decreased efficiency, regardless of its functional capabilities [54].

The International Organization for Standardization (ISO 9241-11) defines usability as:

The extent to which a system, product or service can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use [55].

Jakob Nielsen [56] identifies five key components that contribute to usability:

Learnability: How easy it is for users to perform basic tasks the first time they encounter the design. Efficiency: How quickly users can complete tasks once they are familiar with the design. Memorability: How easily users can reestablish proficiency after a period of not using the system. Errors: The number, severity, and recoverability of errors encountered by users. Satisfaction: The degree to which the product is pleasant and engaging to use.

These factors collectively influence how well users can interact with a system and achieve their goals without unnecessary cognitive load or frustration. High usability ensures that users are not only able to complete their tasks efficiently but also feel confident and satisfied while doing so.

5.1.3 Accessibility

Accessibility refers to the inclusive design of digital products and services so that they can be used by people of all abilities, including those with visual, auditory, motor, or cognitive impairments [57]. Beyond permanent disabilities, accessibility also supports users in temporary or situational challenges such as navigating a phone with one hand or in a low-light environment. Designing for accessibility ensures that

all individuals can interact with technology equitably and effectively, regardless of their context or ability.

To support accessible design, the World Wide Web Consortium (W3C) established the Web Content Accessibility Guidelines (WCAG), which have become the global standard. These guidelines, although initially developed for websites, are now widely applied across mobile apps and other digital interfaces. WCAG is built on four foundational principles: perceivable, operable, understandable, and robust [58]. These principles help designers ensure that content is easy to find, navigate, and interpret for a broad range of users.

The latest version, WCAG 2.2, was published as an official W3C Recommendation on October 5, 2023. It builds on earlier versions (2.0 and 2.1) by introducing nine new success criteria aimed at improving accessibility for users with cognitive and learning disabilities, individuals with low vision, and those using mobile devices. Key additions address issues such as focus appearance, target size, and accessible authentication. WCAG 2.2 maintains the existing conformance levels A, AA, and AAA and continues to serve as a vital framework for creating inclusive digital experiences [59].

5.2 The Double Diamond

The Double Diamond is a widely recognized user-centered design (UCD) framework, popularized by the British Design Council in 2004. It provides a structured yet flexible approach to creative problem-solving, emphasizing both divergent and convergent thinking across four key phases: Discover, Define, Develop, and Deliver [60]. The first diamond focuses on understanding the problem space, while the second concentrates on developing and delivering solutions. As illustrated in (Figure 5.2), the process is not strictly linear it encourages iteration, reflection, and refinement throughout the design journey.

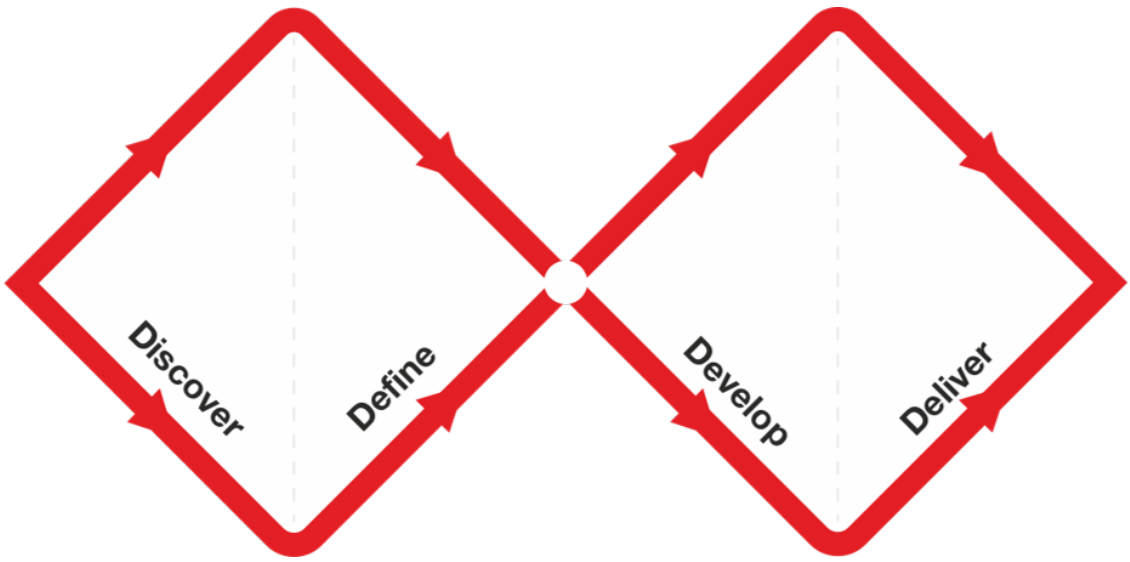


Figure 5.2: The Double Diamond Design Process [60].

While the Double Diamond is a well-established framework, alternative UCD approaches such as the Design Sprint Methodology [61] and Design Thinking [62] also offer effective ways to approach complex challenges. Like the Double Diamond, both emphasize empathy, iterative development, and user involvement. However, they differ in structure. For instance, Design Thinking and the Design Sprint often treat ideation and prototyping as separate, explicitly defined stages, whereas the Double Diamond integrates these within the Develop phase. The Design Sprint also introduces an additional Decide phase, where teams evaluate and select the most promising idea before moving into prototyping.

The Double Diamond framework was chosen for this research due to its strong alignment with the goals of user-centered and iterative design. Since the aim of this research is to explore how reflective practices can be embedded into social media interaction, a structured yet flexible process was needed to both understand user behavior and test alternative design strategies. The Double Diamond supports divergent thinking to explore problems broadly and convergent thinking to refine solutions. It also encourages continuous feedback and iteration, which fits well with the reflective and user-driven nature of this project. Compared to other design methods, such as Design Thinking or Design Sprints, the Double Diamond offers a clear structure that allows for deep exploration in the early phases and practical evaluation in the later stages, making it an appropriate fit for both academic research and design experimentation.

5.2.1 Discover

The Discover phase focuses on building a deep and accurate understanding of the problem context, rather than relying on assumptions. This involves collecting relevant information and insights through research and engaging with individuals directly affected by the issue. By grounding the process in real-world experiences and needs, this phase lays a solid foundation for the rest of the project and helps ensure that future decisions are informed and effective.

Literature Review

In this research, the literature review serves as a foundational component for exploring how interaction design, mindfulness, and Slow Design principles can be applied to social media to foster more reflective and meaningful user experiences. Literature reviews are an essential part of academic inquiry, offering a structured synthesis of previous research to inform the direction of ongoing work [63]. For this project, the review helped identify existing challenges in social media usesuch as compulsive behavior, digital fatigue, and a lack of self-awareness and provided insights into alternative design approaches that prioritize user well-being.

The review was conducted using a combination of keyword-based searches and a systematic snowballing approach, as proposed by Wohlin [64]. The snowballing method involves both backward and forward citation tracking: backward snowballing examines references cited in a paper to identify earlier relevant work, while forward snowballing looks at subsequent research that has cited the original paper. This

iterative process helps uncover a broader range of studies and ensures the inclusion of influential and diverse perspectives.

The initial set of literature was compiled using academic databases such as Google Scholar and IEEE, based on keywords like Slow Design, social media addiction, mindfulness in technology, and user reflection. Care was taken to select peer-reviewed articles, books, and conference papers that represent a variety of disciplines including Human-Computer Interaction (HCI), User Experience (UX) design, psychology, and digital well-being. Selection criteria included relevance to the research question, publication quality, and citation frequency.

The literature review highlighted that while Slow Design has been explored in tangible products and well-being interventions, its application in digital environments especially within social media interfaces remains underdeveloped. It also revealed a gap in how self-reflection is addressed in current digital tools, which often focus on time-restriction features rather than encouraging users to actively process their digital experiences.

By synthesizing insights from prior studies, the literature review informed the conceptual framing of this project, particularly in connecting interaction design practices with psychological concepts like mindfulness. It provided a critical basis for understanding how design can shift digital interaction from passive consumption to intentional engagement.

Interviews

Interviews are a fundamental qualitative research method, widely used in design and human-centered studies to gain deep insights into individuals' thoughts, behaviors, and lived experiences. They allow researchers to move beyond surface-level information and explore participants' subjective perspectives, emotional responses, and contextual interpretations. As noted by Sharp, Rogers, and Preece [47], interviews can be categorized into four main types: unstructured, semi-structured, structured, and group interviews each differing in the level of control exercised by the interviewer.

Unstructured interviews are the most flexible form, often used in the early stages of a project to explore broad themes and gather open-ended responses. This format resembles a natural conversation, where the interviewer allows the discussion to evolve organically based on participants responses. While unstructured interviews require minimal predefined questions, they still demand careful preparation around the general topics to be discussed. Their exploratory nature makes them ideal for uncovering nuanced insights and discovering patterns that might not emerge through more rigid methods. However, they are also time-consuming to conduct and analyze due to the lack of standardization and the volume of narrative data they generate [47].

Structured interviews, in contrast, follow a fixed sequence of questions delivered uniformly to all participants. These interviews are most effective when the research aims are well-defined and specific information is required. Structured formats ensure consistency, improve comparability across responses, and simplify the process of

data analysis. They also tend to be quicker to administer. However, this rigidity can limit the depth of responses, and the formal tone may restrict participants from expressing themselves freely an important consideration when discussing personal or emotionally charged topics such as digital well-being and compulsive social media use.

Semi-structured interviews strike a balance between the two approaches and are frequently used in interaction design and UX research. This format involves a set of predetermined questions or themes, while still allowing room for follow-up questions and flexible exploration of emerging topics. Semi-structured interviews offer the best of both worlds they provide structure and comparability across participants while preserving the opportunity for rich, context-sensitive insights [65]. For this research, which explores reflective interaction in social media through the lens of Slow Design, semi-structured interviews were chosen as the most suitable method. They allowed participants to share their personal experiences of social media use, emotional responses, and opinions about self-reflective design features, while giving the researcher the ability to probe deeper into specific themes as they arose.

Ultimately, the choice of interview format depends on the research phase and objectives. In this project, interviews were instrumental in validating assumptions from the literature review and informing the direction of the design intervention. By engaging with users directly, the research aimed to align the design of reflective interactions not just with theoretical principles, but also with the real behaviors, needs, and preferences of social media users.

5.2.2 Define

The Define phase focuses on transforming the insights gathered during the Discover phase into a clear and manageable problem statement. This step adds deeper context to the challenge and helps identify new opportunities for possible solutions. It involves analyzing and organizing the research data to better understand and frame the core issues at hand.

Thematic Analysis

Thematic analysis is a widely used method in qualitative research for identifying, analyzing, and reporting patternsor themeswithin data. Braun and Clarke [66] define it as a flexible, accessible, and theoretically independent approach that provides a rich, detailed, yet complex account of data. This method is particularly well-suited for research aiming to understand user perspectives and emotional experiences, such as the reflective interactions explored in this research.

Thematic analysis can be carried out using either an inductive (data-driven) or deductive (theory-driven) approach. In an inductive thematic analysis, themes are generated directly from the data without trying to fit it into a pre-existing framework or the researcher's theoretical interest. This bottom-up approach is especially beneficial when exploring new or under-researched areas, such as the integration of Slow Design principles into social media platforms. Conversely, deductive thematic analysis involves using existing theories to guide data interpretation, often resulting

in a more structured and focused analysis [66]. For this research, both approaches were used iteratively drawing on the theoretical lens of Slow Design while allowing new, user-driven insights to emerge during the analysis of interview and survey data.

Braun and Clarke outline a six-step process for conducting thematic analysis:

Familiarisation with the data: The first step involves transcribing audio recordings, reading through transcripts multiple times, and noting initial observations. For this study, this included reviewing participants responses to reflection-based questions about their social media habits and emotional engagement.

Generating initial codes: The second step involves systematically identifying interesting features of the data and labeling them with short, meaningful codes. These codes were applied to segments that revealed user perspectives on social comparison, emotional responses to posts, or the perceived need for reflection within digital interactions.

Searching for themes: Codes were then grouped into broader themes that captured patterns across the dataset. For instance, recurring ideas around scrolling without thinking, desire for authenticity, or pressure to perform became candidate themes reflecting the user experience within conventional social media platforms.

Reviewing themes: At this stage, the themes were refined by comparing them against the entire dataset. Some themes were combined, split, or discarded based on their coherence and relevance. This ensured that the final set of themes accurately represented participants lived experiences and aligned with the research objective of exploring mindful engagement.

Defining and naming themes: The selected themes were then clearly defined and given concise, descriptive names that reflected their underlying meaning. For example, a theme such as "Shifting from Consumption to Reflection" captured participants desire for more meaningful social media interaction.

Producing the report: Finally, the themes were presented in narrative form, supported by compelling data excerpts that illustrate key insights. In the context of this research, these findings informed the design decisions for the proposed reflection-based features and validated the application of Slow Design as a guiding framework.

This systematic analysis provided critical insight into users' emotional and cognitive responses to social media and highlighted opportunities for integrating reflective prompts into digital platforms. By combining theoretical guidance with user-centered data interpretation, thematic analysis played a central role in shaping the reflective interaction model proposed in this research.

5.2.3 Develop

The Develop phase focuses on generating ideas and exploring a wide range of potential solutions to address the defined problem. Much like the Discover phase, it encourages divergent thinking, allowing for creativity and experimentation. This

phase often includes collaboration with others, such as users or stakeholders, to co-create and refine possible design directions.

Sketching

Sketching is an essential method in the early stages of the design process, especially within the fields of Human-Computer Interaction (HCI) and Interaction Design. It involves the freehand creation of visual representations to communicate initial design ideas, focusing on exploring concepts rather than detailing aesthetics or final solutions [67]. In the context of this research, which aims to redesign social media interfaces to support self-reflection and mindful interaction, sketching was a critical tool for visualizing ideas that aligned with the principles of Slow Design.

Sketches serve as both a thinking process and a communication tool. They allow designers to externalize and iterate on abstract ideas quickly, making it easier to share concepts with stakeholders and collaborators. According to Buxton [68], the inherent ambiguity in sketches invites interpretation, which can enhance creativity and broaden design exploration. For this research, sketches were used to propose alternative flows for how users upload, consume, and reflect on social media contentsupporting mindful interaction by slowing down decision-making and encouraging reflection.

Rather than treating sketching as a final deliverable, this research adopted it as a dynamic and reflective activity. The process of sketching helped identify how to embed self-reflective screen and mindful pauses into common user flows such as content consumption or post creation. In doing so, it allowed the integration of Slow Design principles particularly Reflect and Reveal directly into the interface ideation.

Prototyping

Prototyping is a core practice in design research, allowing designers to test, evaluate, and refine ideas in tangible form. Prototypes serve as experimental artifacts that help visualize how a product might function and how users might interact with it [69]. In this research, prototyping was used to explore how slow and mindful interactions could be translated into social media experiences, emphasizing reflection over engagement.

Low-fidelity prototypes such as wireframes were created first to quickly test interface flows and core concepts like the Behind This and Reflect features. These early models helped explore how users would navigate through a social feed without traditional interaction metrics (likes, comments, shares), and instead encounter reflective prompts that ask them to write about their emotional responses to content.

As the design matured, high-fidelity prototypes were developed using Figma to simulate the visual and interactional aspects of the redesigned interface. These interactive mockups were used in user testing sessions to assess the usability and emotional resonance of features aimed at slowing down interaction. High-fidelity prototypes included detailed representations of content creation screens, feed interactions, and private reflection logs. These prototypes allowed for realistic evaluations of how well the design supported Slow Design principles such as Evolve, Expand, and Engage.

By using both low and high-fidelity prototypes, this research was able to iterate on concepts quickly and evaluate user responses effectively. Prototypes were instrumental in shifting the design focus from conventional engagement to personal awareness, helping validate that the proposed social media experience could foster more meaningful and intentional use.

5.2.4 Deliver

The Deliver phase focuses on testing the developed solutions with users to evaluate their effectiveness and identify areas for improvement. This stage involves small-scale testing to detect potential issues, ensuring that the design aligns with user needs and project objectives.

Think Aloud

The think-aloud protocol is a qualitative usability testing method in which participants verbalize their thoughts, actions, and decision-making processes while interacting with a system or performing specific tasks [70]. This technique provides direct insight into the users cognitive experience and reveals where users experience confusion, frustration, or delight. It is commonly used during the evaluation phase of the design process, especially for low- and high-fidelity prototypes.

One of the core advantages of the think-aloud method is its ability to uncover design flaws that may not be visible through observation alone. By articulating their thoughts, users expose the reasoning behind their interactions, helping designers better understand the usability issues from the users perspective [71]. However, some participants may struggle to consistently verbalize their thoughts, especially if the tasks are cognitively demanding or if they are naturally reserved. In such cases, facilitators may need to gently remind users to continue thinking aloud without influencing their responses.

While think-aloud is useful for evaluating overall user experience, Hanington and Martin suggest focusing on specific aspects of the interface or flow during each session to gather more structured and actionable feedback. In the context of this research, think-aloud sessions were used to assess how reflective features and mindful interaction cues were perceived during prototype testing.

Post Semi-Structured Interviews

In this research, post semi-structured interviews were conducted immediately after user testing to gather feedback on participants experiences with the redesigned social media interface. The interviews focused on perceptions of reflection, emotional awareness, and overall user experience, while also leaving room for participants to share personal thoughts beyond the prepared questions. This method ensured that data captured was both systematic and open to the nuances of individual responses.

To ensure quality and reliability, the interview guide was carefully designed to avoid leading or negatively phrased questions, which could bias responses. Drawing from recommendations by Hanington and Martin [71], questions were structured to invite reflection rather than binary yes/no answers, encouraging participants to elaborate

on their reasoning. Probing questions were used when necessary to gain deeper understanding. This approach was particularly valuable in assessing attitudes toward reflection-based features, as participants could explain not only whether they found a feature useful but also why and in what contexts it might support mindful interaction.

6

Process

This chapter outlines the execution of the Double Diamond design process presented in Chapter 4. The first phase involved conducting a literature review, interviewing the target group for this research, and distributing a survey to collect a broader range of data. The second phase included analysing the data from the interviews and surveys, combined with findings from the literature review, to define the project requirements. The third phase consisted of an ideation session involving sketching and creating sitemap. Additionally, a semi-functional prototype was developed. The final phase involved evaluating the prototype with the target group through A/B testing and follow-up interviews.

6.1 Redefining the Scope

The initial scope of this research was to develop a standalone social media platform designed entirely around mindfulness, guided by the principles of Slow Design. The concept involved creating an application from the ground up that would promote self-awareness, intentional interaction, limited content consumption per day, and reduced compulsive usage. These goals were to be achieved through features inspired by the Slow Design philosophy, emphasizing thoughtful engagement, emotional awareness, and a slower, more meaningful digital experience.

However, after conducting interviews and surveys with participants aged between 18 and 35, the primary target group for this research, the direction of the project evolved. Insights from the user studies revealed a common behavioral pattern: although participants spent considerable time on social media, most did not actively post or share content. Instead, their usage was dominated by passive consumption, browsing through others lives without engaging meaningfully or reflecting on their own experiences. Many participants admitted to feeling emotionally drained after extended use, highlighting a deeper issue: the absence of purposeful interaction, people are using social media without much thought or reflection.

These findings prompted a significant shift in the scope of the research. Rather than designing an entirely new platform, the decision was made to redesign an existing and widely adopted social media application, Instagram. This choice was supported by both the interview and survey results, which consistently identified Instagram as the most frequently used platform among the target group. The revised aim became to

explore how self-reflection could be encouraged within Instagrams familiar structure using Slow Design principles as a guiding framework.

The updated scope focuses on integrating features that promote introspection, emotional context, and user-defined meaning into the everyday interactions on Instagram. This includes creating reflective moments within the interface that gently interrupt passive scrolling and invite users to think more deeply about what they consume and how they relate to it. The goal is not to reduce speed for its own sake, but to design intentional pauses and touch points that make users more mindful of their digital habits.

This shift allows the project to directly address real-world behaviors and emotional challenges experienced by users, offering an opportunity to improve their well-being without requiring them to adopt an entirely new platform. By embedding Slow Design into a mainstream application, the research demonstrate how existing technologies can be reshaped to support more intentional, balanced, and human-centered digital experiences.

6.2 Literature Review

The literature review for this research was conducted to understand how Slow Design principles, mindfulness, and human-centered interaction approaches have been studied and applied in digital systems, especially within the context of social media. The goal was to identify key design strategies that promote mindfulness, self-reflection, reduce compulsive use, and support digital well-being.

The search for academic and peer-reviewed materials was primarily conducted through Google Scholar and university databases. Keywords included combinations such as:

"slow design" AND "social media", "mindfulness" AND "digital interaction", "slow technology" AND "social media", and "addiction" AND "social media design".

These search terms were iteratively refined to ensure coverage of HCI (Human-Computer Interaction), UX (User Experience), and mental health focused research in relation to technology use. After gathering an initial pool of papers, a manual screening process was carried out to select papers that directly addressed design interventions or psychological outcomes related to digital platforms.

The selection criteria were:

- Include papers that discuss design strategies for reflection, mindfulness, and Slow Design principles.
- Focus on studies related to user behavior on social media or mobile digital platforms.
- Exclude papers that only deal with general internet use without interaction or UX context.

In total, 36 papers were included in the final review. Key themes identified across the literature included:

The psychological effects of algorithmic engagement mechanisms[4].

The potential of mindfulness-based interventions to reduce digital stress [6].

Design case studies applying Slow Design to create reflective and emotionally aware interactions [10][11][72].

The effectiveness of tools like journaling, ripening time, or minimal UIs in promoting conscious interaction [8][9].

Systematic evaluations of social media's influence on mental health and self-perception [73][2].

The reviewed literature not only confirmed the relevance of designing for self-awareness in digital environments but also offered practical inspiration for applying Slow Design principles. These insights helped shape the concept for redesigning social media interactions, shifting from rapid, reactive use to a more contemplative and emotionally engaging experience.

6.3 Semi Structured Interviews

As part of the user research, seven semi structured interviews were conducted with individuals from the primary target group, aged between 18 and 35 who are currently pursuing their master's degrees at Chalmers University. This demographic was chosen not only because of its relevance to the research focus but also due to its heavy involvement in digital platforms and social media usage in daily life. These participants represent a population that is both technologically literate and cognitively mature, making them ideal for reflecting on how social media influences their mental states and behaviors. Additionally, the choice was partly based on convenience, as the participants were easily accessible within the academic environment.

The primary aim of these interviews was to gain a richer understanding of how these users engage with social media platforms on a regular basis, especially focusing on their motivations, patterns of use, emotional experiences, and awareness levels. Furthermore, the interviews explored the perceived impact of social media on their daily routines, productivity, and emotional wellbeing. The conversations also delved into their openness toward alternative design models specifically, features rooted in mindfulness and Slow Design principles that encourage intentional, reflective, and conscious digital engagement.

These interviews served as a foundational step in uncovering authentic user perspectives, identifying pain points in current digital experiences, and evaluating user receptivity to potential design interventions. Rather than relying solely on quantitative data or assumptions from existing literature, this qualitative approach allowed for a nuanced view into how real users experience and navigate the digital landscape. Their insights were crucial not only for validating themes found in literature but also for guiding design decisions later in the project by centering the redesign process around actual user needs, thoughts, and behaviors. This user-centered, empathic

exploration is in line with the human-centered values promoted by Slow Design, making the interview phase essential to the projects methodology.

6.3.1 Procedure

Participants were selected from different fields of study, including some from Interaction Design, to gain insights into design perspectives and how designers view social media. All participants were part of academic networks and student groups. Each participant was an active user of at least one major social media platform, including Instagram, TikTok, YouTube, and Facebook. However, Instagram was consistently identified as the most frequently used and passively consumed platform.

The interviews were conducted one-on-one and in person, depending on the participants availability and location. Each session lasted between 20 and 30 minutes.

A semi-structured interview format was used to allow flexibility in responses while still covering the core areas of interest. The interview guide (see Appendix A) included open-ended questions about social media habits, emotional responses to online content, awareness of usage patterns, and perceptions of design features that might support mindful use. All participants gave informed consent to participate in the study and agreed to the use of anonymized responses in the report. Notes were taken during the interviews, and in cases where consent was given, the audio was recorded for transcription purposes.

The structure and tone of the interviews were designed to encourage honest reflection. While some participants were already aware of their social media behavior, others found that the questions prompted them to think about their habits for the first time in a structured way. This not only provided useful data but also revealed gaps in self-awareness an important aspect of the research topic.

6.3.2 Analysis

Thematic analysis was used to understand the interview data in more detail and find patterns in how participants talked about their social media use. All seven interviews were conducted with masters students between the ages of 18 and 35. Each interview was read carefully, and important points and quotes were extracted. These points were then written on post-it notes and grouped based on similar ideas using a method called affinity diagramming.

To support this process, AI-assisted tool (OpenAI-ChatGPT) were used to help cluster similar codes, rephrase user quotes for clarity where needed, and reflect on possible theme groupings. However, all final decisions regarding theme naming, grouping, and interpretation were made manually by the researcher to ensure contextual accuracy and critical reflection. The AI tool acted as a support to brainstorm and organize insights, not to automate analysis.

This method helped organize the information and highlight common experiences across participants while also revealing subtle differences in how individuals perceive and engage with social media. The grouped ideas were refined into main themes

that capture perspectives on self-control, emotional effects, time spent online, and preferences for healthier digital experiences.

The goal of this analysis was to uncover user needs and desires for more mindful and balanced social media use. These themes grounded directly in participant input informed the design concepts of the project and guided how Slow Design principles were applied to promote digital well-being. Many participants expressed a desire to shift away from passive, habitual scrolling toward more intentional and self-aware interaction.

The following themes were identified and grouped into four overarching categories: Patterns of Use and Loss of Control (Loss of Control and Habitual Use, Triggers and Motivations, Loop of Repetition and Algorithmic Traps), Emotional and Cognitive Impact (Impact on Productivity and Mental Well-being, Emotional Responses to Content, Social Connectedness vs. Isolation), Awareness and Self-Regulation (Attempts at Regulation and Mindful Usage, Self-Awareness and Critical Reflection), and Platform Criticism and Desire for Change (Algorithmic Manipulation and Design Influence, Platform Criticism and Expectations, Rethinking Design for Digital Well-being).

A. Patterns of Use and Loss of Control

Loss of Control and Habitual Use: Participants often described their social media use as habitual or automatic. Opening Instagram or TikTok was sometimes a reflex, triggered by boredom or idle moments, without any clear purpose. Many reflected on the sense of time wasted and the lack of meaningful satisfaction from such use.

Its become part of my routine now even if theres nothing new. Sometimes I realize Ive scrolled for 20 minutes and didnt even enjoy it. (P3)

Triggers and Motivations: External cues like notifications or seeing peers use their phones triggered usage, but more commonly, internal states such as boredom, loneliness, or stress drove participants to open apps. This behavior was often linked to distraction or temporary escape.

Mostly boredom triggers me to open Instagram. I dont want to sit alone with my thoughts I open social media to escape. It helps me unwind and shift my focus for a bit. (P5)

The Loop of Repetition and Algorithmic Traps: Several participants described a repetitive cycle: impulsively opening the app, scrolling, feeling dissatisfied, and then returning again shortly after. Infinite scroll and autoplay features made it difficult to disengage.

I end up seeing the same kind of content repeatedly. Once I start scrolling, its difficult to stop the content just keeps coming. (P1)

B. Emotional and Cognitive Impact

Impact on Productivity and Mental Well-being: Participants consistently emphasized how social media disrupted concentration and productivity. What started

as a quick break often became prolonged use, leaving feelings of guilt, frustration, or anxiety.

Social media has definitely affected my productivity. It distracts me from other important things I need to do. If I come across something negative, it sets a bad tone for the day. (P4)

Emotional Responses to Social Media Content: Content evoked strong emotional reactions, both positive and negative. While funny reels or nostalgic posts lifted moods, curated lifestyles often led to envy or insecurity. The rapid contrast between uplifting and distressing content created mental exhaustion.

Sometimes I laugh at funny content or feel nostalgic. But if I come across something negative, it sets a bad tone for my whole day. (P2)

Social Connectedness vs. Isolation: Although social media allowed users to stay updated with friends, it often felt superficial. Likes and comments gave a sense of contact but rarely replaced deeper connection. Many felt simultaneously connected yet distant.

I feel like I know what people are doing, but I dont feel closer to them. (P6)

C. Awareness and Self-Regulation

Attempts at Regulation and Mindful Usage: Many participants had tried to regulate their usage through app timers, disabling notifications, or temporary detoxes. While these strategies sometimes worked, maintaining them long-term was challenging due to persuasive design features and fear of missing out (FOMO).

I removed all social media apps except Snapchat for almost two years. Ive tried using daily limits, but it doesnt always work. (P7)

Self-Awareness and Critical Reflection: Participants expressed a desire for tools that could make them more aware of their habits. Suggestions included weekly time reports, mood tracking, or reflective Screen. Some noted that even small nudges might help them reflect on why they were using the platform.

Maybe enforce a break after one hour of continuous use. Mandatory reflection points would make users more aware. (P3)

D. Platform Criticism and Desire for Change

Algorithmic Manipulation and Design Influence: Participants were highly aware of how algorithms influenced their behavior, particularly through infinite scroll, autoplay, and content recommendations. While relevant content was appreciated, many described these features as manipulative.

TikToks algorithm shows exactly what I like. The algorithm definitely plays a role in keeping me hooked. (P5)

Platform Criticism and Expectations: Several participants criticized the dominance of vanity metrics such as likes, views, and follower counts. They felt these

fostered validation-seeking rather than authentic sharing, and placed pressure on self-presentation.

Its all about showing off likes and numbers. I dont think they really prioritize user well-being. (P6)

Rethinking Design for Digital Well-being: Many participants suggested that platforms themselves should take responsibility for healthier usage, rather than leaving it to individuals. Proposals included usage timers, reflective screen, and limitations on endless scrolling. Some said they would welcome platforms that prioritized mental health over engagement.

I'd be open to trying a platform that prioritizes mental health over engagement. A platform that promotes more mindful use would be worth trying. (P2)

6.4 Survey

To complement the in-depth insights gathered from interviews, a survey was conducted to reach a broader and more diverse group of participants. While the interview sample size was limited to seven individuals, the survey helped expand the dataset and capture wider patterns in social media behavior. The survey received a total of 30 responses, primarily from participants in India, but also including individuals from Albania, Brazil, Nigeria, Sri Lanka, and Sweden. The participants came from varied educational and cultural backgrounds, allowing for a richer understanding of global social media experiences.

The survey consisted of 33 choice-based questions and one open-ended question. These were divided into three key sections: 1 - the frequency of engaging in various social media activities, 2 - participants feelings and attitudes toward their usage patterns, and 3 - a rough estimation of daily interaction levels. The final open-ended question invited users to suggest new features they would like to see in future social media platforms, offering creative input from real users. The survey was distributed digitally and shared via personal and extended networks to maximize reach. The responses played a crucial role in validating and supporting the themes that emerged from the interviews while also highlighting broader behavioral trends relevant to the design process.

6.4.1 Survey Analysis

The survey responses provided a broader perspective on users social media habits, emotional responses, and interaction patterns. Quantitative data from the 33 choice-based questions was reviewed to identify general trends across the participant group. A majority of respondents reported engaging with social media multiple times a day, with short, frequent sessions being the most common usage pattern. Platforms like Instagram, YouTube, and WhatsApp were used most often, primarily for browsing content, messaging, and watching short videos or posts.

The first section, which focuses on engagement with social media, contains 18 ques-

tions rated on a 10-point frequency scale: (1) Never, (2) Once a month, (3) Several times a month, (4) Once a week, (5) Several times a week, (6) Once a day, (7) Several times a day, (8) Once an hour, (9) Several times an hour, and (10) All the time.

According to the responses, most participants use social media primarily for sending text messages and making or receiving phone calls. Posting content such as photos or videos is relatively rare around 40% reported doing so only once a month, and approximately 36.7% selected "Never." Similar trends were observed for actions like commenting, liking, and sharing posts. In contrast, watching reels or short videos had a higher engagement, with 40% of participants indicating they viewed such content several times a day. The activity with the highest engagement was scrolling through social media without a specific goal 26.7% selected this option as "Several times a day." Visiting social media out of boredom or habit also scored highest in the "Several times a day" range. Browsing other people's profiles was most commonly reported as a once-a-week activity. Most participants reported using social media to stay updated with news and trends or to connect with friends and family. However, a large majority selected "Never" for deleting or uninstalling social media to control their usage. Similarly, the most frequent response for taking a break from social media for mental health reasons was also "Never." Interestingly, many participants selected "All the time" when asked if they browse social media right before going to bed and after waking up.

The second section includes 12 questions based on a 5-point agreement scale: (1) Strongly Disagree, (2) Disagree, (3) Neutral, (4) Agree, and (5) Strongly Agree.

Responses from this section show that participants were mostly Neutral or Agree when it came to comparing themselves with others based on the content they saw on social media. Regarding dependency on social media, 23.3% of participants selected Disagree, Neutral, and Agree respectively, indicating mixed feelings. When asked whether they felt they were wasting time on social media, around 50% selected Strongly Agree. In terms of whether social media makes life more complicated, most responses were Neutral or Agree. Interestingly, when asked whether social media makes people feel more isolated, the highest number of responses was for Strongly Agree. Participants also reported feeling better after taking a break from social media, with a high percentage supporting this statement. Most participants felt that algorithms significantly dictate their social media experience. In contrast, for statements like feeling anxious when not using social media or being unaware of their usage habits, responses were more positive indicating that participants were generally aware of their emotions and conscious of their social media behavior.

The third section consists of 3 questions that focus on specific activities participants engage in on social media such as how many reels or short videos they watch, how many likes or reactions they give to posts or videos, and how many comments they write each day. The response options were: (1) 0, (2) Fewer than 50, (3) More than 50, (4) More than 100, and (5) Im not sure.

The highest number of responses for both watching content and giving reactions fell under Fewer than 50%. In contrast, when it came to commenting, 80% of

participants selected 0, indicating that commenting on posts or videos is very rare among them.

The final question in the survey invited participants to share suggestions or ideas for features they would like to see in future social media platforms. Out of 30 respondents, 10 provided answers. A few participants expressed a desire to limit or eliminate certain features, particularly the reel or short video functions. One respondent specifically suggested the option to disable reels while still being able to use the rest of the platform, reflecting a preference for more control over content formats. Others emphasized putting boundaries on content flow, such as having a finite feed that only displays updates from followed users. This reflects a clear pushback against the infinite scroll design commonly used in modern platforms. Another prominent suggestion involved implementing hard time limits or timers to track and restrict daily usage. Some participants proposed reminders or restrictions after one hour of use, indicating a need for features that support intentional usage rather than passive scrolling.

6.5 Define Requirements

The next step involved synthesizing insights from the interviews, thematic analysis, survey responses, and literature review to establish a clear set of design requirements. These requirements help translate user needs, and expectations into actionable features that align with the goals of promoting reflection and mindful social media use. By outlining what the prototype should include and prioritize, the requirements provide a structured foundation for the design phase and act as a guide for shaping meaningful interactions based on the principles of Slow Design.

Based on the analysis of both the interviews and survey responses, it became clear that many participants experience a loss of control over their social media usage. Social media has become a habitual activity, often triggered by internal states such as boredom, procrastination, or the desire to escape from tasks. Participants reported that while they are aware of how much time they spend on these platforms and even recognize the negative impact on their productivity and well-being, they still find it difficult to stop. Several admitted attempting to reduce their usage but failing to maintain those efforts.

The issue appears to be multi-faceted. Participants acknowledged the influence of algorithmic content in drawing them in, often keeping them engaged far longer than intended. They described this relationship as both enjoyable and overwhelming while they appreciated the entertainment and convenience, the experience sometimes felt emotionally exhausting.

While several themes emerged from the data, one underlying issue stood out as a key driver of many other behaviors: the need for social connectedness. This need often serves as a powerful internal trigger, prompting users to check their social media repeatedly. Participants described social media as a paradoxhelpful in staying updated with friends, yet rarely leading to meaningful connections. Despite

seeing frequent updates or stories from others, many still felt emotionally distant and disconnected.

The interactions likes, emojis, or brief comments were perceived as shallow when compared to deeper, real-life conversations. Moreover, the curated and polished nature of the content often intensified feelings of inadequacy or comparison. Users noted they rarely paused to ask themselves why a particular post made them feel a certain way or what emotional response it triggered. Instead, the content often led to instant judgments or comparisons.

To address this core issue, the research proposes a central requirement: a reflection-based feature that encourages users to shift their attention inward. This feature would provide users with context behind the content they view such as personal stories or emotions attached to a post and give them a space to reflect privately on how it makes them feel. By introducing intentional moments of reflection, users would become more aware of their emotions, values, and digital habits. This change could transform social media into a space not just for consumption and comparison but for deeper understanding, emotional awareness, and mindful interaction.

Thus, the main requirement for the prototype is to support self-awareness through a design that fosters reflection, helping users reconnect with their own life and time rather than constantly comparing themselves to others.

6.6 Ideation

With the requirements identified through user studies from interviews and the survey, the research began its ideation phase. The first step in this phase was sketching, which involved redesigning the existing social media platform Instagram. As mentioned in the redesigning scope, the goal of the research was not to create an entirely new platform but to redesign the existing one so that users would feel familiar with it while incorporating the key changes identified during the research.

The sketching phase was followed by the creation of a site map for the redesigned application, which helped visualize the interaction and navigation structure of the platform.

6.6.1 Sketching

The sketching process was a form of low-fidelity prototyping using pen and paper. During this session, the sketches were kept simple, aiming to generate as many ideas as possible rather than focusing on details or aesthetics. While the sketching session was open to exploring different ideas, it was guided by the requirements based on user needs, which focused on encouraging self-reflection. However, as the requirements lacked specific implementation or design details, considerations for usability and UI best practices were still taken into account during the sketching phase.

The initial step in the sketching process started with the bottom navigation bar of the Instagram application, as the app would not function effectively without it.

The five buttons in the bottom navigation bar are the most important part of the application, providing access to its core features. The idea was to keep these five buttons the same to maintain user familiarity. The main changes in the redesign focused on the screens linked to these buttons. The bottom navigation bar included the Home, Search, Post, Reels, and Profile buttons.

Home Screen

The picture (Figure B.1) shows the sketch of the Home screen. In the current Instagram home screen, random feeds are displayed, including posts from people you do not follow or are not friends with, and each post features like, comment, share, and save icons underneath.

In the redesigned sketch, however, the home screen only shows content posted from 00:00 (midnight) of the current day and exclusively from accounts the user follows or is friends with. This means that at some point, the feed will naturally stop, as there will be no more content to view beyond what these accounts have posted.

Additionally, the redesigned home screen removes the icons for sharing, liking, commenting, and saving. Instead, a single prominent button labeled Behind this will be visible. All other elements of the home screen will remain similar to the original design to maintain user familiarity. The purpose of the Behind this button is to allow viewers to learn about the real stories behind the posts or reels they are viewing.

Search Screen

The picture (Figure B.5) shows the sketch of the Search screen. In the current Instagram search screen, the feed displays a mixed form of posts and reels from any day. Additionally, as soon as the user taps the search button, random content immediately appears. This often acts as a triggering moment for the userthey did not intend to see this content, but it grabs their attention and keeps them engaged in a continuous loop.

The redesigned search screen aims to eliminate this triggering effect. In the new design, the search screen only displays a search bar at the top. Below the bar, users can choose whether they want to view Posts or Reels. A further filter option is available via three dots in the corner, allowing users to select either Random or Todays feed. Importantly, no content is displayed by default; it only appears once the user types in the search bar and applies the filters.

This design minimizes unintentional triggers and helps ensure that users only see content when they deliberately choose to search for it, even if they open the search screen for another reason.

Post screen

The picture (Figure B.3) shows the sketch of the Post screen. In the current Instagram post screen, users can add details such as the post name, music, location, caption, tagging someone, and other extra options.

In the redesigned sketch, the post name, music, and location options remain the same, but instead of captions, tagging, and other existing options, four new buttons

are introduced to encourage users to tell the story behind the content they are posting. This allows viewers to understand the real story behind the content, helping reduce feelings of comparison and other negative effects.

The four new buttons in this screen are Memories, Mention, Moment, and Ripening Time:

Memories: Users can write a story about the post they are sharing (200 - 300 words) to give context and meaning behind the content.

Mention: Works like the current tagging feature but allows users to also write about the people they tag, explaining their connection or role when the photo or content was created.

Moment: Users can describe when and in which phase of their life the photo or content was taken, offering additional context.

Ripening Time: Users can select a specific amount of time before the content is published. During this period, they can make changes if needed. Once the timer ends, the content is posted automatically, and further edits are not allowed.

Each of these options will also include privacy controls, allowing users to decide whether to keep the information private for personal use or share it with all followers or friends.

Reels Screen

The picture (Figure B.1) shows the sketch of the Reels screen. This redesigned screen functions similarly to the redesigned Home screen. Here, the reels or short videos will be displayed, but there will be no options for liking, sharing, commenting, or saving. Instead, the only available option will be the prominent Behind This button.

Profile screen

The picture (Figure B.4) shows the sketch of the Profile screen. Most of the existing options and functions remain the same in this screen. The new additions include a timer in the corner of the screen to display the ripening time for posts. In the settings, users can set a limit on the number of posts or content they want to view in a day. They can also see how many posts or reels they have watched and how many pieces of content they have posted or created.

These features were added because users wanted to know how much time they are spending on the content they view. Additionally, it shows the exact amount of time spent watching videos, including the number of reels watched and the total time spent in minutes and hours.

6.6.2 Sitemap

Following the creation of sketches, a sitemap was developed to visually represent the information structure and organisation within the redesigned Instagram application (Figure C.1). While the application is not complex, the sitemap helped clarify the navigation hierarchy, contributing to a better user experience.

The sitemap includes the following main screens: Home, Search, Post, Reels, and Profile. Each screen contains specific features reflecting the redesign goals. For example, the Home and Reels screens introduce the Behind This button to replace traditional engagement icons, while the Search screen adds filters to avoid unintentional content triggers. The Post screen includes four new storytelling options Memories, Mention, Moment, and Ripening Time and the Profile screen adds usage insights and daily viewing limits.

This structured overview provided a clear foundation for the subsequent prototyping and usability evaluation stages.

6.7 Semi Functional Prototype

The next step was to apply the ideas from the ideation phase to create a semi-functional prototype. This section provides a high-level overview of the prototyping process rather than an exhaustive description of every detail in the final prototype. The aim at this stage was to create an interactive model that could demonstrate how the proposed design changes might address the research goals, while remaining flexible for iteration during evaluation.

The prototype falls between low-fidelity and high-fidelity, thus it is considered mid-fidelity. It is an interactive representation of the initial sketches but lacks the refined detail required for a high-fidelity implementation. The prototype was developed in Figma and took approximately one week to complete. The transition from sketches to a semi-functional prototype was efficient due to the significant amount of time previously dedicated to forming requirements and refining concepts through discussion.

During the prototyping stage, further discussions were held to ensure alignment with the core research objective encouraging users to reflect on themselves rather than engaging in constant social comparison. From these discussions, it was decided that the semi-functional prototype would focus on three primary screens: the Home, Post, and Profile screens. These were identified as the most critical areas to achieve the research goals, as they directly influence how users consume, create, and track their interaction with content.

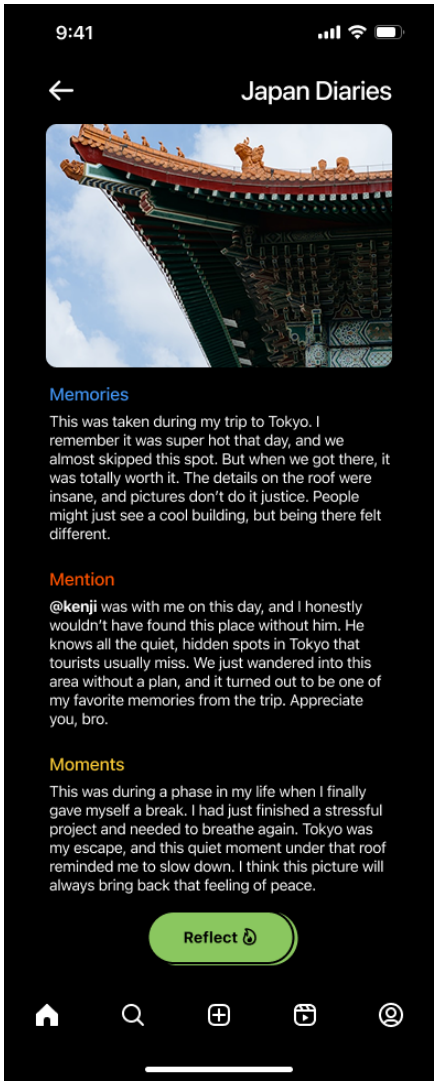
During this stage, further discussions were held to refine the flow of interaction within the chosen three screens. This included decisions about how reflection Screen would appear, how users would create posts without public metrics such as likes, and how the Profile view could act as a personal reflection space rather than a performance space. Based on these discussions, it was also decided to introduce an additional feature the Pause screen. This feature appears at intervals while the user is scrolling, temporarily stopping the feed and prompting them to write a short reflection about a post they have seen since the last pause point. Users can select any post viewed during that interval, rather than only the one currently in view. The intention behind this feature is to disrupt passive consumption, encouraging the viewer to actively engage with content that resonated with them emotionally or cognitively before continuing. The Home screen prototype included the redesigned

feed logic, which only displays content posted from midnight of the current day and exclusively from accounts the user follows. Posts are shown without the ability to like, comment, or share, and instead include a single Behind This button that reveals the story behind the post when tapped.

The Post screen prototype incorporated the four new storytelling options Memories, Mention, Moment, and Ripening Time allowing users to provide richer context for their content while giving them control over whether to make these details public or keep them private.

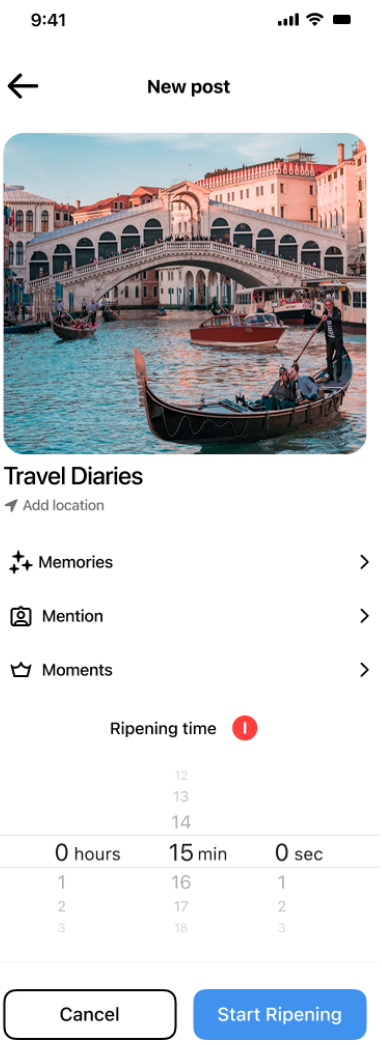
The Profile screen was adapted to function as a self-awareness dashboard, displaying statistics such as the number of posts or reels viewed and other relevant features. One important addition was the Streak Reflection feature, which allows users to revisit the posts they have reflected on. Any time a user writes something about a post whether prompted by the Pause screen or chosen voluntarily that post is saved in a dedicated reflection feed within the Profile screen. This feed is presented in a format similar to the Home page, enabling users to look back on their reflections over time and track their ongoing engagement with meaningful content.

(a) Home Screen - The Home Screen presents a simplified feed layout where likes, comments, and shares are removed. A new element, the Behind This button, is placed below each post, providing access to additional layers of context.

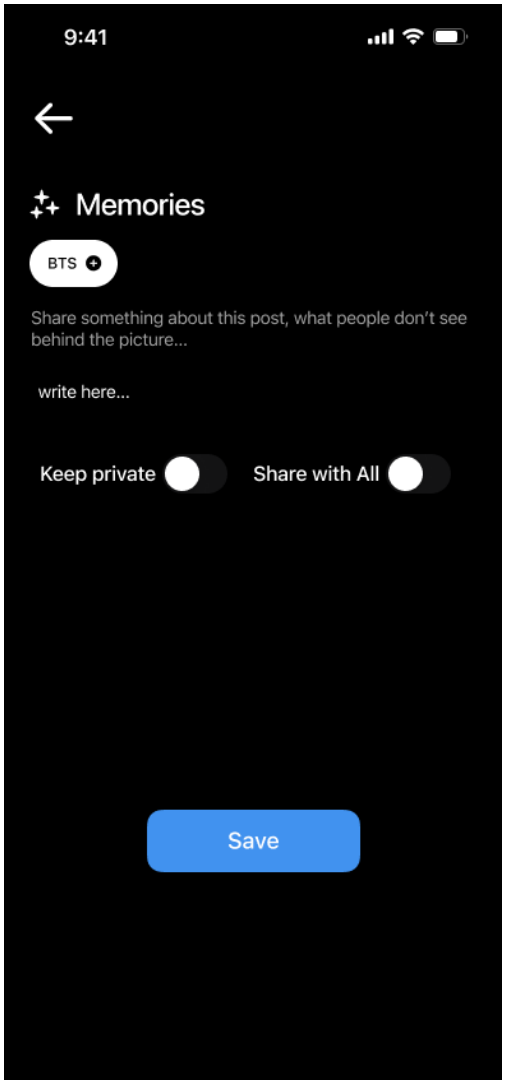


(b) Behind this Screen - The Behind This Screen displays extended content linked to a post, structured into sections such as Memories, Mentions, and Moments. At the bottom, a Reflect button is included, leading to the reflection feature within the prototype.

Figure 6.1: illustrates the Home Screen with the added Behind This button (a) and the Behind This Screen (b) with contextual details and the Reflect option.

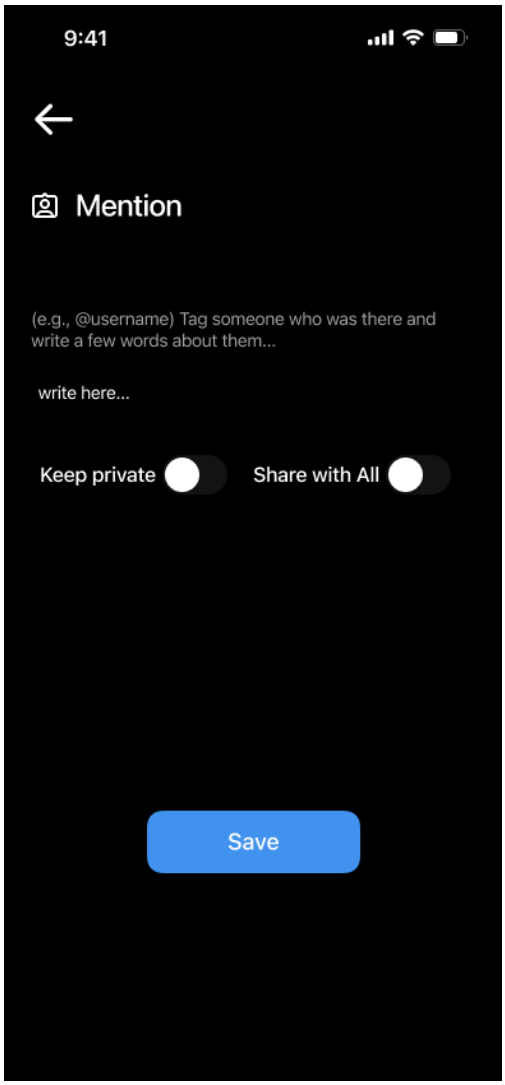


(a) Post Screen The Post Screen introduces new options for adding context to shared content. Alongside the image, users can include details through categories such as Memories, Mentions, and Moments. A Ripening Time feature is also integrated, allowing posts to be delayed before becoming visible, emphasizing a slower and more intentional sharing process.

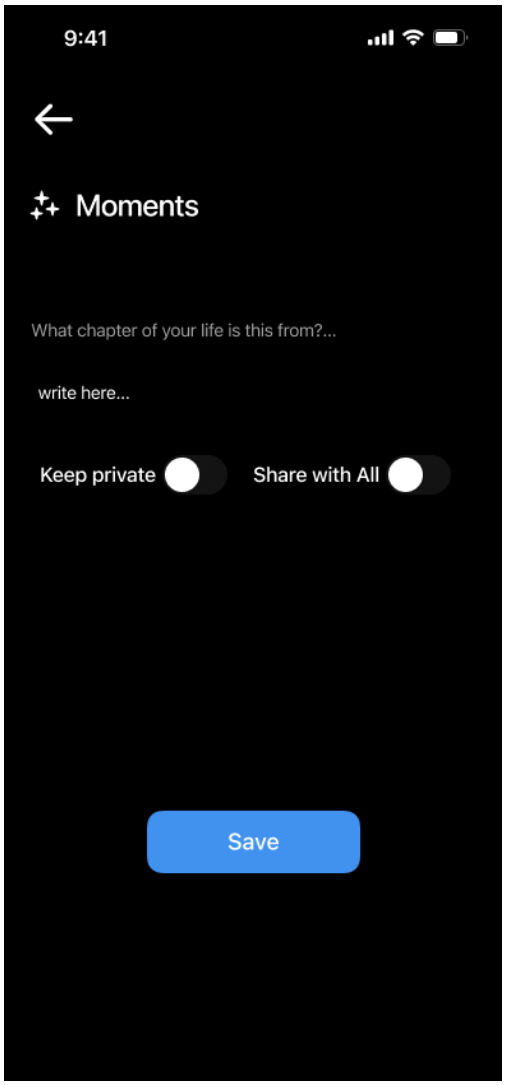


(b) Memories View - The Memories View provides a dedicated space to add narrative or background information about the post. It includes a text field for writing and options to either Keep Private or Share with All. A Save button is placed at the bottom for storing the input.

Figure 6.2: illustrates the Post Screen with contextual options and ripening time (a) and the Memories View for adding narrative details (b).

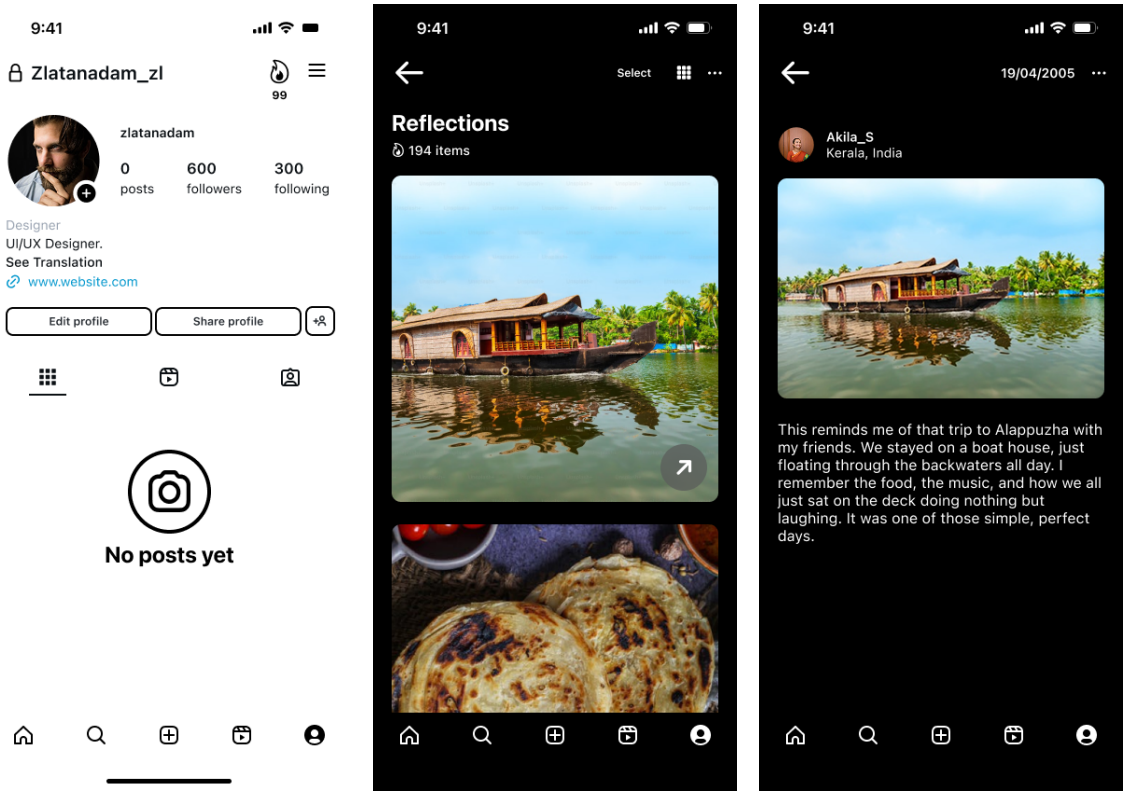


(c) Mention View - The Mention View enables the addition of people connected to a post. It provides a text field where names or tags can be included along with short descriptions. Options are available to either Keep Private or Share with All, with a Save button for storing the entry.



(d) Moments View - The Moments View allows contextualizing a post within a broader life experience. A prompt asks, What chapter of your life is this from? followed by a text field for input. As with other sections, privacy options (Keep Private or Share with All) and a Save button are provided.

Figure 6.2: shows the Post Screen with the Mention View for tagging and describing connections (c) and the Moments View for linking posts to personal life chapters (d).

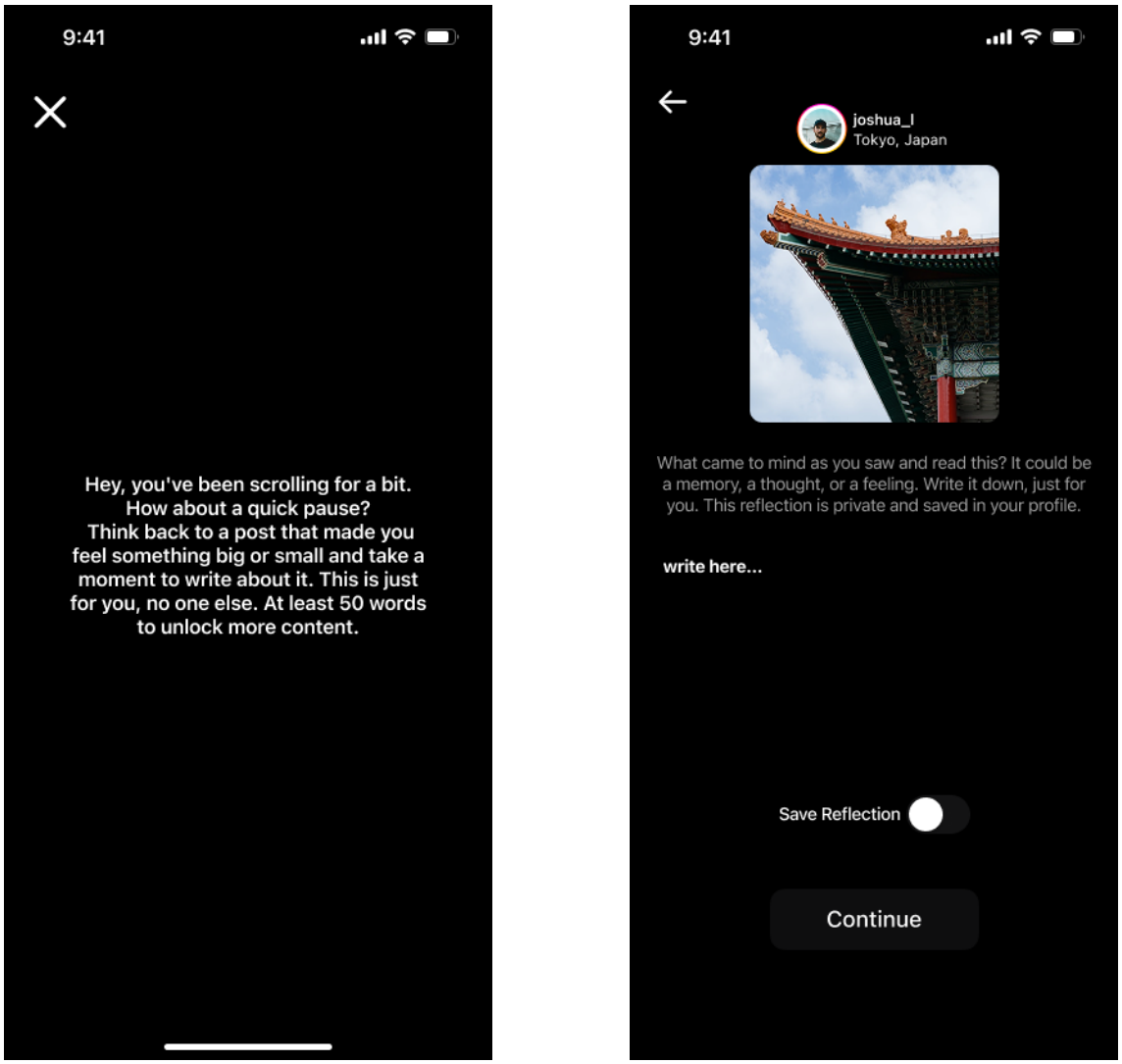


(a) Profile Screen - The Profile Screen presents the users account details, such as bio, follower and following counts, and profile options. A new icon for reflections is added, providing direct access to the users saved reflective entries while keeping the layout familiar to Instagram.

(b) Reflection List Screen - The Reflection List displays all saved reflections in a grid-like feed. Each entry is shown as a thumbnail, enabling users to browse and revisit their past reflections over time.

(c) Reflection Single Post Screen - The Reflection Single Post expands an individual reflection entry, combining the original media with the users written reflection. This screen provides space to review and reconnect with the thoughts, emotions, or memories linked to a specific post.

Figure 6.3: Prototype of Profile Screen showing the Profile view (a), Reflection List (b), and Reflection Single Post (c).



(a) Pause Screen - The Pause Screen introduces an interruption in the continuous scrolling flow, prompting users to stop and reflect. After extended activity, this screen appears with a message encouraging users to recall a meaningful post and write about it. To continue browsing, users must write at least 50 words, ensuring a moment of reflection before returning to the feed.

(b) Reflection Screen This screen allows users to write a private reflection based on a post they viewed. It prompts emotional awareness by asking what came to mind, and offers a toggle to save the reflection to the users profile. This feature supports mindful interaction and self-awareness without any social validation.

Figure 6.4: Prototypes of Pause Screen (a) and Reflection Screen (b).

Overall, the semi-functional prototype provided a realistic yet adaptable environment for evaluating the redesigned Instagram experience. Its focus on key reflective interactions ensured that subsequent usability testing could directly assess whether the new features encouraged mindful usage, reduced comparison, and supported the broader goals of the research.

6.8 Evaluation

The evaluation phase involved testing the semi-functional prototype through three methods: A/B testing, think-aloud sessions, and a Post Semi-Structured Interviews. A total of seven participants were recruited, the same individuals who had previously taken part in the semi-structured interviews. In total, seven evaluation sessions were conducted in person.

The decision to involve the same participants as in the interviews was intentional, as it allowed the research to capture how their thoughts and actions differed when interacting with the new prototype compared to their earlier reflections. This continuity provided valuable insights into whether the redesigned features effectively addressed the problem raised during the interviews and also helped to assess how the six Slow Design principles were applied within the prototype.

Before each session began, participants were asked to provide consent for audio recording to support later analysis. Each session started with A/B testing, where participants completed predefined tasks within the prototype and compared them with a standard Instagram interface. This was followed by a think-aloud session, during which participants verbalized their thoughts in real time. Finally, a short interview was administered to evaluate whether the applications central ideaencouraging reflection and reducing comparison was successfully conveyed and to gather feedback on its perceived usefulness.

A/B testing offered insights into the prototypes usability and practicality, while the interview provided a broader perspective on participants ethical and experiential reflections.

6.8.1 A/B Testing

The first part of the evaluation consisted of A/B testing combined with a think-aloud approach. The purpose of these methods was to compare the redesigned prototype with the standard Instagram interface. The goal was to observe differences in how participants engaged with the two versions, particularly in terms of reflection, interaction flow, and attention to content. This approach helped reveal whether the prototype encouraged more mindful usage compared to the conventional design.

A/B testing is commonly used in interaction design to compare different design alternatives under controlled conditions, providing insights into which design better supports user needs and behaviors[74]. When combined with think-aloud methods, it allows researchers not only to measure task performance but also to access participants reasoning and emotional responses during the interaction[75].

Procedure

The evaluation sessions began with a short introduction to the purpose of the study, after which participants were reminded of their consent to participate and to be recorded. To avoid bias, no detailed explanation of the prototypes functionality was provided beforehand, allowing the study to assess its overall learnability and clarity

without prior training.

Participants were first asked to interact with the standard Instagram interface, followed by the redesigned prototype as part of the A/B testing. They were instructed to complete three core tasks: browsing the feed (Home screen), creating a post (Post screen), Reflection writing (Pause screen) and exploring the profile view (Profile screen). During these tasks, participants were encouraged to verbalize their thoughts following the think-aloud method, enabling the researcher to capture their reasoning, impressions, and any difficulties encountered.

All sessions were conducted in person, which made it possible to observe participants reactions and body language alongside their verbal reflections. This approach aligns with previous findings that in-person testing tends to reveal more nuanced usability issues compared to remote methods, particularly when evaluating subtle aspects of user engagement[76][77]. At the end of each session, a short questionnaire was administered to capture participants overall impressions of the prototype, its usefulness, and whether it successfully conveyed the intended goal of fostering reflection and mindful interaction.

6.8.2 Post Semi-Structured Interviews

After the A/B testing, interviews were conducted with the same participants and used solely for qualitative purposes, focusing on open-ended questions that encouraged participants to reflect on their experiences in detail. Unlike quantitative surveys, which rely on scales or rankings, this approach prioritized depth over breadth, aiming to capture participants personal perspectives and reasoning in their own words.

The questions were designed to complement the A/B testing and the Slow Design principles by gathering richer insights into participants perceptions of the redesigned features. In particular, participants were asked to reflect on how the interface supported mindful interaction, emotional awareness, and personal reflection compared to conventional social media. To ensure clarity and reliability, questions were phrased in simple and accessible language, avoiding negative or leading wording, as recommended by Hanington and Martin [71].

Additionally, the interview included questions on the six principles of Slow Design, originally outlined by Strauss and Fuad-Luke[43]. These principles reveal, expand, reflect, engage, participate, and evolve provided a guiding framework for evaluating whether and how the modified app embodied the values of Slow Design in practice. This approach allowed participants to connect their experiences with the broader design philosophy underpinning the prototype, offering valuable insights into its potential impact.

Procedure

Before the interview began, participants were informed that they were not required to share any personal or sensitive experiences, as the study did not seek to collect or handle such data. Instead, they were encouraged to keep their answers general

and focused on their experience with the prototype. The questions were qualitative and open-ended to encourage reflection and capture participants perspectives on the potential use, impact, and value of the redesigned social media application.

All questions were conducted in English, as participants were comfortable with the language.

Interview Questions

1. What are your thoughts on the Behind This feature did it help you notice or understand more meaning or context behind posts compared to the standard version?

2. What are your thoughts on how the redesigned app may have changed or expanded your understanding of what social media can be used for beyond entertainment or quick interactions?

3. What are your thoughts on the reflection Screen, such as journaling or saving reflections how did they influence the way you engaged with the content?

4. What are your thoughts on how engaged you felt when using the redesigned app compared to the standard version?

5. What are your thoughts on the new posting options like Memories, Moments, and Mentions did they give you more freedom to share meaningful content?

6. What are your thoughts on how your relationship with the redesigned app might change or evolve if you used it regularly over time?

7. What are your thoughts on how the redesigned features affected your emotional awareness while using the app? Can you describe a moment when you felt this shift?

8. What are your thoughts on whether the redesigned prototype supported more mindful and intentional social media use compared to the standard version?

7

Result

This chapter presents the findings from the A/B testing and the Post Semi-Structured Interviews. The aim is to describe how participants experienced the redesigned prototype through both observed behavior and feedback. The results are organized into two parts: overarching themes identified from A/B testing and think-aloud observations, followed by detailed responses to the questions.

7.1 Findings from the A/B Testing

The analysis began with transcribing the think-aloud comments and reviewing the interview responses collected from participants during the evaluation sessions. To organize the data, affinity diagramming was carried out digitally, grouping feedback into clusters of related observations. This process helped identify overarching themes that reflected participants experiences and perceptions of the prototype. The main themes that emerged were: Navigation and Layout, Behind this and Reflection feature, Pause screen, and Design Elements

Navigation and Layout

Overall, participants reported that the prototype was easy to navigate, with most screens being straightforward and uncluttered. Four out of seven participants appreciated the simplified feed, which removed likes, shares, and comments. They felt this made the experience less distracting, as the screen displayed only the photos and the username. They also noted that it was very easy to use since the main feed, where they spent most of their time, was not drastically different from the standard Instagram interface. The only suggestion for the home screen was that the Behind This button should be larger. Currently placed in the bottom corner of each post, participants recommended extending it across the full width at the bottom of every post for better visibility and accessibility.

In the post creation screen, three participants expressed similar views. The interface felt familiar because most of the features resembled those of standard Instagram, making navigation intuitive. When exploring the modified features Memories, Mention, Moments, and Ripening Time participants were curious and pleasantly surprised. They quickly understood these features once they interacted with them and appreciated the pop-up explanation for Ripening Time, which helped them grasp its purpose immediately. However, some initial confusion arose around options such

as Keep Private and Share with All. Despite this, participants found the guiding text for Memories, Mention, and Moments helpful in clarifying their purpose during post creation.

On the profile screen, all seven participants found the layout clear and familiar, as it closely resembled the standard Instagram profile. The addition of the new reflection feed icon a fire streak symbol with a number below was well received. Once participants clicked it, they understood its meaning and purpose immediately, recognizing it as a way to access their streak reflections.

Behind this and Reflection feature

On the home screen, four participants quickly understood the purpose of the Behind This button. They recognized that it revealed the story behind the post they were viewing and felt that this gave the post more depth and value compared to what standard Instagram typically presents. Participants expressed that accessing these stories helped them better understand the context and meaning behind the shared content.

When participants encountered the Reflect button within the Behind This screen, they were curious and somewhat excited to try it out. four out of seven participants described the reflection feature as feeling more like journaling than a typical social media interaction. While exploring the reflection screen, participants wrote in the text field but hesitated when they reached the Save Reflection option. All seven participants verbalized their thoughts aloud, questioning the purpose of saving a reflection. This moment was both exciting and slightly confusing for them. However, once they saw the streak feature in the profile screen, they understood its purpose.

Pause screen

During testing, participants first encounters with the pause screen highlighted both curiosity and hesitation. When the screen appeared, three participants paused in silence before verbalizing surprise, noting that it interrupted the familiar rhythm of Instagram scrolling. All seven participants described it as an unexpected but interesting break in the interaction flow, while four out of seven participants questioned its placement and frequency, suggesting it might feel intrusive if triggered too often.

The requirement to write at least 50 words before unlocking more content generated mixed reactions. three participants viewed it as a powerful nudge to slow down and reflect, appreciating how it encouraged deeper engagement with posts that had resonated with them. Others, however, expressed frustration, feeling that being forced to write could become restrictive over time.

Overall, observations revealed that the pause screen was effective in disrupting automatic scrolling and prompting reflection, but its long-term acceptance would likely depend on giving users more autonomy in how and when the feature is triggered.

Design Elements

All Participants described the apps design as clean, simple, and calming, which they felt supported its reflective purpose. The uncluttered layout was seen as a clear

contrast to the busy look of regular social media, helping them slow down and focus more intentionally. Three out of seven participants noted that the absence of likes, comments, and shares shifted their attention to the content itself instead of social approval, which they usually associate with Instagram.

At the same time, four participants felt that without these familiar social features, the interface looked a bit empty at first. While they later understood this was intentional, they suggested adding subtle elements to keep users engaged without breaking the mindful atmosphere. Examples included small animations when saving a reflection, or using progress markers to celebrate personal use without creating competition.

Feedback also touched on icons and navigation. Four participants said that while new icons like the reflection button and Behind This made sense after some use, they were not immediately clear. They recommended adding short tips or a quick walkthrough the first time someone uses the app to explain what the symbols mean.

Overall, the design was praised for being simple and purposeful. The key takeaway was that adding small motivational touches and clearer visual cues could improve usability and engagement while still keeping the interface mindful and approachable.

7.2 Findings from the Post Semi-Structured Interviews

To analyse the data, participants verbal responses were transcribed from the recordings. The answers were then coded to identify similarities and differences across participants. Positive and negative viewpoints were highlighted to distinguish supportive from critical perspectives. Rather than deriving broader themes, the analysis was structured around the individual questions, since each represented a focused area of inquiry. This allowed participants reflections to be directly linked to the evaluation of the redesigned prototype and its alignment with Slow Design principles. The summarized findings for each question are presented below.

Reveal: Perceptions of the Behind This Feature

All seven participants acknowledged that the Behind This feature added a new layer of meaning to posts, though their reactions varied in terms of perceived value and long-term usefulness. Several participants highlighted that it encouraged them to consider the intention or personal story behind a post, which they felt was often missing in conventional social media feeds. One participant noted, *'It felt like a small window into what really matters to someone, instead of just what they want to show.'*

Four described how the feature changed their way of scrolling, prompting them to pause and reflect rather than consume content passively. For example, one participant said, *'I started looking for the story instead of just the picture, and it made me think about the post differently.'* Another remarked that it helped them see posts as more genuine and less performative compared to standard feeds.

At the same time, not everyone found the feature equally impactful. Three participants explained that while they appreciated the possibility to read deeper context, they would not always choose to engage with it unless the post already resonated with them. As one put it, *'If the post itself does not catch my attention, I probably wouldnt bother clicking to see more.'* Two participants also expressed concern that users might not always provide meaningful reflections, which could risk making the feature feel redundant over time.

Overall, the Behind This button was generally perceived as a positive addition that shifted attention from surface-level interaction toward more thoughtful engagement. Participants felt it distinguished the prototype from the standard Instagram feed, where the meaning of posts is usually inferred through likes, captions, or hashtags rather than reflective storytelling. *'It gave me a better sense of why the person shared the post, not just what they shared,'* one participant explained.

However, three participants stressed the importance of balance. They suggested that the Behind This feature should remain optional, allowing users to decide when they wanted to explore more context rather than being nudged every time. As one participant described, *'Its nice when I want to know more, but I wouldnt want to be forced into it all the time.'*

In summary, the Behind This feature was valued for enhancing awareness and encouraging reflection, though its success was seen as dependent on user willingness to contribute meaningful content and on the feature being used selectively rather than uniformly.

Expand: Broadening the Purpose of Social Media

Four participants felt that the redesigned app broadened their perspective on what social media could be used for, moving beyond entertainment and habitual scrolling. They described the reflective features as introducing a more purposeful dimension, prompting them to think about how digital platforms might support personal growth or self-awareness. Those four participants appreciated that the design shifted focus from quick consumption to mindful engagement.

One participant explained, *'Normally, social media is just to kill time, but here I actually felt like I was using it for myself, to think about my own experiences.'* Another added, *'It shows that social media does not always have to be about likes or followers. It can be about slowing down and reflecting.'*

At the same time, not all responses were entirely positive. Two participants questioned whether people would realistically use social media for reflection in everyday life, expressing doubt about whether the concept would remain engaging in the long term. As one participant put it, *'Its interesting now, but I wonder if I would still take the time to write after a week or two.'* Another commented, *'I don't know if people really want their social media to feel like homework.'*

Despite these reservations, the overall response indicated that the prototype successfully challenged participants assumptions about social media. By creating moments for pause and reflection, it opened up the idea that platforms can be designed to en-

courage more meaningful and mindful interactions rather than simply accelerating endless scrolling.

Reflect: Experiences with the Reflection Screen

The reflection Screen, such as journaling and saving reflections, had a notable impact on how participants engaged with the content. Three participants explained that these features encouraged them to pause and think more deeply about their experiences, rather than scrolling passively as they might on conventional social media platforms. The act of writing, in particular, was described as transforming momentary impressions into more meaningful reflections, making users feel that their interactions carried more weight.

Three participants emphasized that journaling gave them a sense of ownership over their thoughts and emotions. They described the process of writing as a way to slow down and link content with personal meaning, which helped them become more aware of their feelings. One participant remarked, *'When I write something down, it feel like I was connecting the post to my own life, instead of just consuming it and moving on.'*This sense of continuity was reinforced by the ability to save reflections, which allowed participants to revisit earlier entries and observe changes in their perspectives over time. For some, this feature resembled a private diary that was seamlessly integrated into their social media use.

At the same time, the Reflection Screen were not universally welcomed. Three participants pointed out that the requirement to reflect could occasionally feel burdensome, especially when they did not feel motivated to write. They mentioned that while the Screen encouraged thoughtful engagement, the effort involved might deter them during moments of casual use. As one participant put it, *'It made me think more, but sometimes I just didn't have the energy to write, so I skip it.'* This highlights the tension between encouraging mindful interaction and maintaining ease of use, a challenge that the apps reflective design must balance carefully.

Overall, the reflection screen were regarded as central to the apps identity. They provided a meaningful counterpoint to the rapid, surface-level engagement that characterizes mainstream platforms. By prompting users to record their thoughts, the app successfully shifted attention from immediate gratification to more intentional reflection, even if some participants felt the practice required too much effort to sustain consistently.

Engage: Depth of Engagement Compared to Standard Platforms

When comparing their engagement with the redesigned app to the standard version, six participants described a shift from passive use to more active and intentional interaction. Rather than simply scrolling through content, they felt that the redesigned app prompted them to stop, consider, and interact in ways that required more focus. This was seen as a form of deeper engagement, where users were not only consuming but also reflecting on the meaning of what they encountered.

Four out of seven participants noted that the Behind This feature and reflection screen played a key role in fostering this sense of involvement. They reported feeling

more connected to the content and more aware of their own reactions. One participant explained, *'I wasnt just liking or skipping posts I felt I was part of the story and had to respond in a more thoughtful way.'* This suggests that engagement in the redesigned app was less about quick actions and more about sustained attention.

However, this form of engagement also came with challenges. Two participants remarked that while the app made them think more deeply, it sometimes required a level of energy and focus they did not always have. In these moments, they admitted that they might prefer the lighter, more effortless engagement of traditional social media. As one participant noted, *'It was more engaging, yes, but sometimes I just wanted something easy and fun, not something that made me stop and think.'*

Overall, participants described the redesigned app as fostering a different type of engagement: one that was slower, more mindful, and more reflective, but also potentially more demanding. This highlights a central trade-off of reflective design while it can lead to richer and more meaningful interactions, it risks alienating users who are accustomed to fast-paced, low-effort engagement.

Participate: Posting with Memories, Moments, and Mentions

Five out of seven Participants generally welcomed the new posting options, noting that they opened up alternative ways of framing and sharing content compared to traditional captions or hashtags. Many felt that categories such as Memories or Moments encouraged them to think more carefully about what they were posting, making the act feel more intentional and less performative. One participant commented, *'When I chose Memories, it felt like I was writing something for myself rather than for an audience. It was more personal, almost like documenting a diary entry.'*

Others highlighted that Mentions provided a gentler and more reflective way of acknowledging people in posts, without the pressure of tagging in the usual social media sense. A participant explained, *'I liked that Mentions wasnt about tagging someone publicly but about remembering them in the context of the post. It made it feel warmer, more meaningful.'*

However, not all participants were convinced of the value of these options. Two participants found them somewhat confusing at first, questioning how they differed from each other and whether they would use them consistently. As one person expressed, *'I wasnt sure when to choose Moments or Memories. It felt a bit abstract, and I worried I might just end up picking randomly after a while.'*

Overall, the new posting options were seen as a promising way to move away from superficial posting habits and toward more thoughtful sharing. Yet, participants emphasized that their long-term usefulness would depend on clear distinctions between the categories and whether users felt motivated to take the extra step of reflecting when posting.

Evolve: Anticipated Long-Term Use

Four out of seven Participants speculated that continued use of the redesigned app could gradually reshape their relationship with social media, shifting it from being

primarily entertainment-driven toward becoming a space for reflection and personal growth. Several participants felt that the apps reflective features could build stronger habits of self-awareness. One participant noted, *'If I used this every day, I think Id start to notice my own feelings more often, not just online but in general life. It might become a habit, like brushing your teeth, where reflection just feels natural.'*

Others anticipated that the experience might reduce the sense of comparison and performance pressure often associated with social platforms. A participant explained, *'Normally I scroll and feel like I have to measure up to others, but here the focus felt different. Over time, I could see it might help me stop comparing myself so much and instead focus on what matters to me personally.'*

At the same time, Five out of seven participants raised concerns about whether the reflective routines would be sustainable in the long run. A few questioned whether they would always have the time or energy to write meaningful reflections. One participant admitted, *'At first it feels fresh and interesting, but I wonder if Id keep up with the writing when life gets busy. It might feel like an extra task rather than something enjoyable.'* Another added, *'Id need some kind of gentle encouragement, like streaks or reminders, to really stick with it long-term.'*

Overall, the responses suggested that the redesigned app has potential to create deeper, more meaningful digital habits if used regularly, but that its long-term adoption would depend on how well it balances reflection with accessibility. While participants were optimistic about developing a more mindful relationship with social media through such features, they also stressed that consistent engagement would require subtle motivation without turning reflective practices into a habit.

Emotional Awareness in the Redesigned App

Participants suggested that the redesigned features might have heightened their emotional awareness compared to the standard version. Four out of seven participants felt that the app seemed to slow down interactions just enough to make them more conscious of their feelings. One participant noted, *'Normally when Im scrolling, I dont even realize how much a post affects me. With the reflection screen, I felt I might notice emotions like nostalgia more clearly, which I wouldnt usually pay attention to.'* This possibility of pausing and acknowledging emotions was often described as refreshing and somewhat unusual compared to their typical social media use.

The Behind This button was seen as a feature that could encourage deeper engagement with posts. By revealing personal stories behind images, three participants felt it might help them recognize more meaning and be more aware of their own reactions. As one explained, *'When I saw the story behind the post, I thought it could make me realize theres more to it than just a picture. That might help me reflect on why I react the way I do.'*

The journaling feature also appeared to encourage introspection. Two participants mentioned that the 50-word reflection prompt could push them to articulate feelings that might otherwise go unnoticed. One participant commented, *'At first it felt like homework, but I think if I had to write, I might actually work through how I felt about a post. It could surprise me how much I notice once I put it into words.'* Another

pointed out that saving reflections might turn fleeting reactions into something more lasting: *'Usually feelings come and go when scrolling, but saving them could make me revisit and realize I felt more strongly than I thought.'*

That said, three out of seven participants speculated that increased emotional awareness could also feel uncomfortable. For example, one remarked, *'If a post makes me feel jealous, writing about it might make me notice that feeling more, which isnt always pleasant.'* Others noted that if used too often, the emphasis on emotions might become overwhelming: *'Its good to notice how you feel, but if I had to do it constantly, it might get heavy.'*

Overall, four participants indicated that the redesigned features might amplify emotional awareness by encouraging them to pause, articulate, and revisit their feelings in ways traditional social media does not. While this was largely seen as a potential benefit, three out of seven participants also felt it could create discomfort if overemphasized.

Overall Support for Mindful and Intentional Use

Six out of seven Participants generally felt that the redesigned prototype might encourage a more deliberate way of interacting with content compared to conventional platforms. Instead of quickly scrolling through posts, the features seemed to invite users to pause, reflect, and engage more thoughtfully. One participant noted, *'It didnt feel like something I would just skim through. I might actually stop and think about why a post was shared or how it related to me.'*

Three out of seven participants highlighted that the removal of likes, comments, and other typical engagement metrics could reduce the sense of competition and performance pressure. Without those familiar signals, interactions might shift away from external validation and toward personal meaning. As one expressed, *'Because there were no likes or shares, I felt less concerned about what others would think. It might make me more honest with myself.'*

The reflection Screen were also described as a unique addition that could push users toward intentional use. For three out of seven participants, these Screen might act as a gentle reminder to slow down and pay attention to their emotions rather than simply absorbing information. A participant explained, *'Usually I dont notice how content affects me, but being asked to reflect made me more aware. I might even take that habit outside the app.'*

At the same time, not all participants were convinced that this approach would always work in practice. Two out of seven mentioned that mindfulness features could feel disruptive if they appeared too often or required too much effort. One participant shared, *'It was good to stop and think once, but if I had to do it every time, I might lose patience. Social media is still something I want to enjoy, not just reflect on.'*

There was also some hesitation around whether people would consistently adopt the reflective behaviors encouraged by the app. While the design clearly pointed users in that direction, three participants felt that habits built on years of quick scrolling

might be hard to change. As one said, *'It might make me pause in the short term, but I dont know if Id keep doing it over time. Old habits come back fast.'*

Overall, all participants suggested that the prototype could support more mindful and intentional use by shifting attention away from speed and performance, and toward reflection and emotional awareness. However, they also stressed the importance of balance: while slowing down might feel refreshing and meaningful, too much interruption or forced reflection could risk making the app feel heavy or demanding. The consensus was that the design offered a strong starting point for fostering mindfulness, but its long-term success would depend on how seamlessly reflection could be integrated into everyday use without overshadowing enjoyment.

8

Discussion

This chapter discusses the outcomes of the study in relation to the design process, Slow Design principles, and the evaluation of the prototype. It begins by reflecting on the design journey using the Double Diamond framework, highlighting how each stage shaped the development of the prototype. The chapter then examines how the final design embodied the six Slow Design principles through specific features, connecting these insights to related work on mindful interaction and digital well-being. Following this, the discussion revisits the central research question to evaluate how the redesigned prototype differed from traditional engagement-driven platforms in supporting reflection and more intentional use. The limitations of the study are then considered, including the scale of user testing, time constraints, and the fidelity of the prototype, alongside a discussion of the generalisability of the findings. Finally, the chapter outlines directions for future work, focusing on the development of a fully functional application, longer-term evaluations, and the potential integration of Slow Design features into mainstream digital platforms.

8.1 Reflecting on the Design Process

Using the Double Diamond design framework gave me a clear structure for navigating the redesign of Instagram through a Slow Design perspective. What I appreciated about this approach was how it allowed me to move between divergence and convergence at different stages. From my point of view, this balance between creativity and refinement was crucial it gave me the freedom to explore ideas while also keeping me grounded in the projects goals.

In the discovery phase, I focused on understanding the challenges of existing social media platforms, particularly their engagement-driven nature and the effect this has on user well-being. I personally found the literature review and interviews especially revealing. They helped me see patterns such as habitual use, emotional fatigue, and loss of control more clearly than I expected. What stood out to me most was that participants were already aware of their own social media engagement, how they perceived it, and how it shaped their perspective. They expressed both criticism of current platforms and a desire for something different. This confirmed my belief that there is genuine space for redesigning social media in a more mindful direction.

During the definition phase, I synthesized these insights into design requirements guided by the six principles of Slow Design. For me, this was the turning point of

the project the moment where research insights began to translate into actionable design goals. I realized that if I wanted to support mindful interaction, I had to deliberately move away from metrics like likes and shares, and instead create space for reflection and meaning. This felt both challenging and motivating, because it meant questioning some of the most ingrained features of traditional social media.

The development phase was where I could experiment and play with ideas through sketching, wireframing, and prototyping. Personally, I found this stage the most engaging, as it allowed me to see abstract concepts gradually take shape as concrete features. Features such as Behind This, the reflection screen, and the pause screen evolved as I iterated on feedback. What I found most interesting was how these features became not just solutions, but also tools for exploring what alternative social media experiences might look like. This reinforced the value of constructive design research, which I experienced firsthand as a way of learning through making.

Finally, in the delivery phase, I tested the prototype through A/B testing and post semi-structured interviews. What I found here was both validating and humbling: participants appreciated many of the reflective qualities I aimed for, but they also pointed out areas where the design could be improved and highlighted possibilities where the design might succeed or fall short. For me, this showed that mindful interaction is not a fixed outcome but an ongoing negotiation between design intentions and user practices. During the A/B testing, I also realized that I could have approached the evaluation differently. I tested all seven participants by first comparing the standard Instagram interface and then the redesigned app. In hindsight, I think it would have been useful to vary the format, for example, testing the first four participants with one sequence and the remaining three with another to see if the order influenced their responses.

Looking back, I feel that the iterative nature of the Double Diamond framework, combined with the explorative approach of constructive design research, supported continuous learning throughout the project. Each phase gave me new insights and challenged some of my assumptions. In the end, the process did not just produce a prototype; it also shaped my own understanding of how design can open up possibilities for more mindful social media interactions.

8.2 Reflecting on the Final Design Through Slow Design Principles

The redesigned prototype illustrated how the six Slow Design principles Reveal, Expand, Reflect, Engage, Participate, and Evolve can be applied to reimagine social media interactions. By integrating these principles into interface features, the design aimed to slow down habitual use and encourage more mindful and reflective engagement. The evaluation findings showed that participants experienced several of these principles during their interaction with the prototype, even though they did not explicitly name them. This section discusses how each principle was embodied in the final design, connecting the findings to existing literature on Slow Design and mindful interaction.

Behind This (Inspired by Reveal Principle)

The Behind This button replaced likes and comments with access to hidden context, personal stories, and memories behind posts. This design shifted attention away from surface-level metrics toward the meaning of content. Participants reported that posts felt more than just pictures, as the feature encouraged them to notice intentions and details that are often invisible on traditional platforms. This resonates with Grosse-Hering et al [45], who argue that revealing hidden layers of a product or experience can deepen attachment and foster reflection. In this way, the principle of Reveal was effectively translated into social media interaction.

Post Screen (Inspired by the Expand Principle)

The Post Screen was designed to go beyond the immediate image or video by allowing users to add contextual categories such as Memories, Mentions, and Moments. Participants noted that this additional framing gave posts a broader narrative dimension, expanding how they understood what was being shared. Prior research in HCI highlights that expanding perspective is central to Slow Design, as it situates individual experiences within a wider context [78]. The evaluation showed that this principle helped shift focus from quick consumption to more intentional sharing.

Reflection Screen (Inspired by the Reflect Principle)

The Reflection Page provided a private space for users to write about what a post made them think or feel. Participants described it as similar to journaling and suggested it might prompt deeper engagement compared to passive scrolling. Reflection as a design principle has been widely explored in interaction design, where practices like digital journaling are linked to increased self-awareness and well-being [79]. The evaluation indicates that even short-term exposure to reflection Screen could open new possibilities for mindful social media use, aligning with these findings.

Pause Screen (Inspired by the Engage Principle)

The Pause Screen interrupted continuous scrolling and required users to write at least 50 words before resuming. Participants noted that this feature might help them become more aware of their usage patterns and engage more deliberately. While some described it as unexpected, they also acknowledged its potential to disrupt automatic behavior. This aligns with prior studies on nudging in HCI, where subtle interruptions are used to increase awareness of habit. The prototype therefore illustrates how Engage can be translated into features that reframe social media use as more conscious and balanced.

Post and Reflection Screens (Inspired by the Participate Principle)

Participation was supported in multiple ways: adding personal context to posts through Memories or Moments, sharing stories via Behind This, and writing reflections in response to content. These features shifted users from passive consumption to active contribution, which participants felt might create a stronger sense of involvement. The idea of co-creating meaning reflects findings from Blevis et al. [80], who note that participation fosters attachment by involving users in shaping the experience. In this way, the prototype broadened participation beyond posting images

toward building a more thoughtful social space.

Reflection Streak in Profile View (Inspired by the Evolve Principle)

The Reflection Streak on the profile page allowed users to revisit their saved reflections in a feed-like format. This feature encouraged users to track their thoughts and feelings over time, creating opportunities for gradual personal growth. Although the evaluation was limited to a single session, participants noted that such a feature might help them recognize patterns in their reflections if used regularly. The principle of Evolve connects closely to research on habit formation and self-tracking, where accumulated records support long-term self-awareness [81]. While only partially realized in this study, the concept highlights how Slow Design can extend beyond single interactions into ongoing digital practices.

Broader Reflection on Slow Design

An important reflection concerns the notion of Slow Design itself. The term slow often carries negative associations in society, linked to inefficiency or reduced productivity. However, within design, the meaning is not about unnecessary delay but about encouraging interaction at the right pace. In this context, it could be more accurately described as design for mindfulness and reflection, emphasizing awareness, participation, and depth over speed or surface engagement.

Taken together, the prototype demonstrated that the six Slow Design principles can be meaningfully applied to digital platforms traditionally driven by speed and engagement metrics. Even within short-term testing, participants noted moments where the design slowed them down, prompted reflection, or expanded the meaning of posts. This suggests that Slow Design can provide a valuable framework for rethinking social media in ways that align with calls for digital well-being [82].

At the same time, this research reinforces insights from Hallnäs and Redström [78], who emphasize that slowing down must happen at the right moments to feel meaningful rather than obstructive. Participants indicated that while features like the Pause Screen and Reflection Screen encouraged mindful interaction, their long-term success would depend on balancing reflection with ease of use. Thus, the findings add to prior work by showing how Slow Design principles can be embedded in social media interfaces, while also highlighting the importance of careful timing and integration into everyday practices.

8.3 Answering the Research Question

At this point, I will revisit the research question proposed in this research:

How does a Slow Design-based social media platform differ from traditional engagement-driven platforms in terms of user experience, particularly in supporting mindful interaction and self-reflection?

The evaluation highlighted that the principles of Reveal, Expand, Reflect, Engage, Participate, and Evolve were all present to varying degrees during user testing. From my perspective, what was most striking was how quickly participants grasped the

idea behind features such as Behind This. For me, this confirmed that even small design changes can shift attention away from surface-level scrolling and toward more meaningful engagement. I see this as evidence that users are open to designs that encourage them to pause, as long as the experience feels natural and not forced.

Another key takeaway for me was the reflection screen. I noticed that while some participants initially hesitated, most eventually recognized the value of writing down their thoughts. To me, this revealed both the strength and challenge of reflective interaction: it can deepen user experience, but it also demands more effort than what people are used to on traditional platforms. My interpretation is that this tension is exactly what Slow Design is about making room for slower, more thoughtful interactions, even if it feels unfamiliar at first.

I also found it interesting that features such as Memories, Mentions, and Moments gave participants new ways to frame their content. In my view, this shows that users are willing to move beyond conventional likes and captions when they are offered meaningful alternatives. It reinforced my belief that social media does not always need to rely on external validation; instead, it can encourage users to find personal meaning in what they share.

The reflection streak feature stood out to me as well. Personally, I see it as a small but powerful way to show users that their reflections can build over time. It reminded me of how habits form: not by a single interaction, but through repeated, meaningful actions. For me, this connects directly to the principle of Evolve, suggesting that mindful use of social media could become a natural practice if supported in the right way.

In conclusion, I believe the evaluation demonstrated that applying Slow Design principles can genuinely reshape how users interact with social media. For me, the main insight is that mindful interaction is not only possible but also welcomed by users, as long as the balance between reflection and usability is carefully maintained. This process has reinforced my view that design can play a critical role in shifting digital experiences from distraction and performance toward self-awareness and reflection.

8.4 Limitations of Scope

This section discusses the main limitations encountered during the research process. The constraints relate primarily to the scale of user testing, the time available for development and evaluation, and the fidelity of the prototype. These factors inevitably shaped the scope, depth, and outcomes of the study, and they must be considered when interpreting the findings.

8.4.1 Duration of Use in Testing

The evaluation was carried out with a relatively small number of participants, and each participant interacted with the prototype only once. This limited scope restricted the ability to fully explore how the features might influence long-term engagement, reflection habits, or the ways in which user behavior could evolve over

repeated use. Slow Design principles are intended to unfold gradually, encouraging users to build reflective practices over time rather than immediately. However, due to the one-time testing setup, the responses gathered reflected first impressions and speculative insights rather than lived experiences of sustained use. While participants provided valuable feedback on how they thought the features might affect them, these reflections remain hypothetical. As a result, the findings should be seen as an early indication of the potential of the design, rather than a definitive assessment of its long-term effectiveness.

8.4.2 Time Constraints

As with most masters thesis projects, the research was conducted within a limited academic timeframe. This meant that while the prototype was successfully tested with users, opportunities for further iterations and broader recruitment were restricted. The focus was therefore placed on conducting one full evaluation cycle within the available time, with additional refinements and long-term testing suggested as future work.

8.4.3 Prototype Fidelity

Another limitation relates to the fidelity of the prototype. The version tested with participants was designed to demonstrate the conceptual features of the redesign, rather than to function as a fully developed social media platform. Several interactions were simplified, and others had to be simulated during testing. For instance, elements such as continuous scrolling feeds, algorithmic recommendation systems, and real-time notifications all central features of existing social media platforms were deliberately excluded. While this made it possible to focus on the Slow Design principles embedded in the prototype, it also meant that participants were not able to experience how these features would interact with the broader, more complex dynamics of a live platform. Consequently, their responses may have been shaped by the abstract and simplified nature of the prototype, rather than by a fully realistic social media environment.

8.5 Generalisability

The redesigned prototype in this project was specifically developed to explore how Slow Design principles could be applied to a social media context in order to encourage mindful interaction and reflection. Its features, such as Behind This, reflection screen, and reflection streaks, were tailored to test how users might move away from fast, engagement-driven behaviors toward more thoughtful practices. As such, the design was primarily assessed in the context of a simplified social media environment and with a limited group of participants.

While the evaluation demonstrated that the principles of Slow Design can be meaningfully translated into interface features, it remains unclear how these features would scale in larger, real-world platforms. Current social media ecosystems are

shaped by complex dynamics such as recommendation algorithms, advertising models, and network effects, none of which were implemented in the prototype. This means that while the concepts tested showed promise, their effectiveness may differ significantly in live, large-scale contexts where users interact over longer periods and under commercial or algorithmic influences.

Nevertheless, the findings are not restricted solely to the tested prototype. The design concepts such as surfacing hidden context, encouraging reflective writing, and supporting long-term self-awareness are general enough to be adapted in other platforms that aim to promote digital well-being. They could, for instance, be integrated into educational applications, mindfulness tools, or even professional collaboration platforms where reflection and deeper engagement are desirable outcomes. At the same time, certain aspects of the design, such as the reflection streak feature, may be more specific to social media environments and would need adaptation to be useful in other settings.

The evaluation of generalisability is also limited by the short-term and small-scale testing carried out in this study. Since Slow Design principles emphasize long-term reflection and gradual change, future studies would be needed to examine how these features function when used over extended periods and by a more diverse user base. In this way, the study offers an initial demonstration of generalisable design concepts, while highlighting the need for further research to validate and refine them in broader contexts.

8.6 Future Work

This research explored how Slow Design principles can be embedded into a social media platform to support mindful interaction and self-reflection. While the redesigned prototype demonstrated promising outcomes, several avenues remain for future work.

A key next step is the development of a fully functional application, moving beyond a semi-functional prototype. Building a real app would allow for deployment in natural settings, enabling researchers to observe how users interact with Slow Design features in their everyday lives. Such an implementation would provide more authentic insights into long-term engagement, usability challenges, and the sustainability of reflective practices over time.

Future studies should also involve long-term evaluations with a larger and more diverse participant group. Since principles like Evolve depend on accumulated reflections, extended use is essential to capture their full effect. Broader participation would also help understand how different demographics and cultural contexts influence engagement with mindful design.

Findings from the user evaluation also highlight important directions for refinement. Participants appreciated features such as Behind This and reflection screen, but some suggested clearer guidance for writing reflections and more flexibility in how they could engage. These insights point to the need for improved on boarding and

scaffolding of reflective practices in future versions of the application. Additionally, some participants noted that while the features encouraged slowing down, the process should remain optional and adaptable to individual usage patterns, reinforcing the importance of balancing mindfulness with convenience.

Exploring varied modalities of reflection such as voice notes, images, or guided prompts could offer new ways to support mindfulness and make reflection more accessible to different user preferences.

Another important direction is investigating how Slow Design features might be integrated into existing mainstream platforms, where they could reach wider audiences. However, future research must address how such features could coexist with engagement-driven algorithms without losing their reflective value.

Ultimately, future work should focus on striking the balance between meaningful reflection and everyday usability. A fully developed application, tested in real-world contexts and informed by user feedback, will be critical to ensuring that slowing down supports mindfulness while remaining practical and appealing for sustained use.

9

Conclusion

This research has examined how Slow Design principles can inform the redesign of a social media platform to foster more mindful interaction and opportunities for self-reflection. Unlike traditional engagement-driven platforms that focus on maximizing attention and rapid content consumption, the redesigned prototype explored features that invited users to pause, reflect, and consider meaning beyond surface-level interactions. Through a combination of literature insights, design exploration, and user evaluation, this research contributes to understanding how principles such as Reveal, Expand, Reflect, Participate, Engage, and Evolve can be embedded into digital products.

The evaluation highlighted that while participants did not directly identify the Slow Design principles, their experiences indicated that these principles were implicitly at work in the prototype. Features like Behind This embodied Reveal by uncovering hidden context, while reflection screen and streaks supported Reflect and Evolve by encouraging users to look back on their thoughts and observe changes over time. Importantly, the findings showed that mindful interaction does not require dramatic changes to existing social media conventions; instead, carefully designed features can shift user attention from fast-paced consumption toward deeper engagement.

At the same time, the study underscored the need to balance reflective interaction with the demands of everyday digital life. Participants expressed willingness to spend additional time engaging with features that felt meaningful, but they also emphasized that excessive friction could discourage continued use. This aligns with the broader insight that slowness must be carefully timed: slowing down users at the right moments can strengthen attachment and enhance product value, but slowing them down indiscriminately risks creating frustration.

From this work, it can be concluded that Slow Design principles can indeed be interpreted and applied within the context of mass digital platforms, expanding their relevance beyond traditional product design. When applied with sensitivity to user needs and contexts, they have the potential to reshape digital interactions in ways that strengthen attachment, improve well-being, and challenge the engagement-maximization models that dominate social media. However, achieving this requires detailed user-centered research into patterns of use, identifying where slowing down adds value without undermining convenience.

The contribution of this research lies in demonstrating that Slow Design can serve not

only as an inspirational framework but also as a practical design lens for rethinking digital platforms. The prototype provided early indications that these principles can lead to new forms of interaction, fostering reflection and self-awareness in a domain typically driven by speed and instant gratification. Future work should extend this exploration through long-term studies with larger participant groups, as well as the development of a fully functional application to validate how these principles perform in real-world use.

In essence, this study shows that slowing people down in digital environments is not about reducing efficiency but about creating moments of meaning. By carefully applying Slow Design principles, designers can offer users space to reflect and reconnect, thereby shaping technologies that not only capture attention but also enrich it.

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A

Semi Structured Interview Questions

1. 1. What social media platforms do you use the most, and why do you prefer them?
2. 2. Can you describe your typical social media routine? How often do you use social media daily?
3. 3. How would you describe your level of control over your social media usage?
4. 4. What motivates you to use social media?
5. 5. Have you ever felt that social media has impacted your daily routine or productivity?
6. 6. Have you ever taken a break or completely stopped using a particular platform? What led to that decision?
7. 7. Do you think social media influences your mood, or mental well-being? If yes, in what way?
8. 8. Have you ever experienced FOMO (Fear of Missing Out) due to social media content? How does it affect you?
9. 9. Can you describe a time when you were using social media and lost track of time? What do you think contributed to that experience?
10. 10. What triggers you to open social media? (e.g., notifications, boredom, habit)
11. 11. Have you ever tried reducing your social media usage? If so, what strategies have worked or not worked for you?
12. 12. Do you feel a strong urge to check your social media apps frequently, even when you know there's nothing new?
13. 13. Have you ever been distracted from important tasks because of social media?
14. 14. Do you think social media platforms prioritize user well-being?
15. 15. Have you ever felt manipulated by social media design choices?ů

16. 16. If you could change one aspect of social media design to make it more mindful, what would it be?
17. 17. Do you think social media should have built-in features that encourage breaks?
18. 18. What do you think about the idea of time-delayed content or limited scrolling?
19. 19. How do you feel about introducing mandatory reflection points (such as asking users if they want to continue after a certain amount of scrolling)?
20. 20. How do you think users could have more control over their social media experience?
21. 21. Would you be open to trying a platform that actively discourages excessive use in favor of mindful interaction?
22. 22. Any additional thoughts on how social media could be improved to support digital well-being?

B

Prototype Sketches

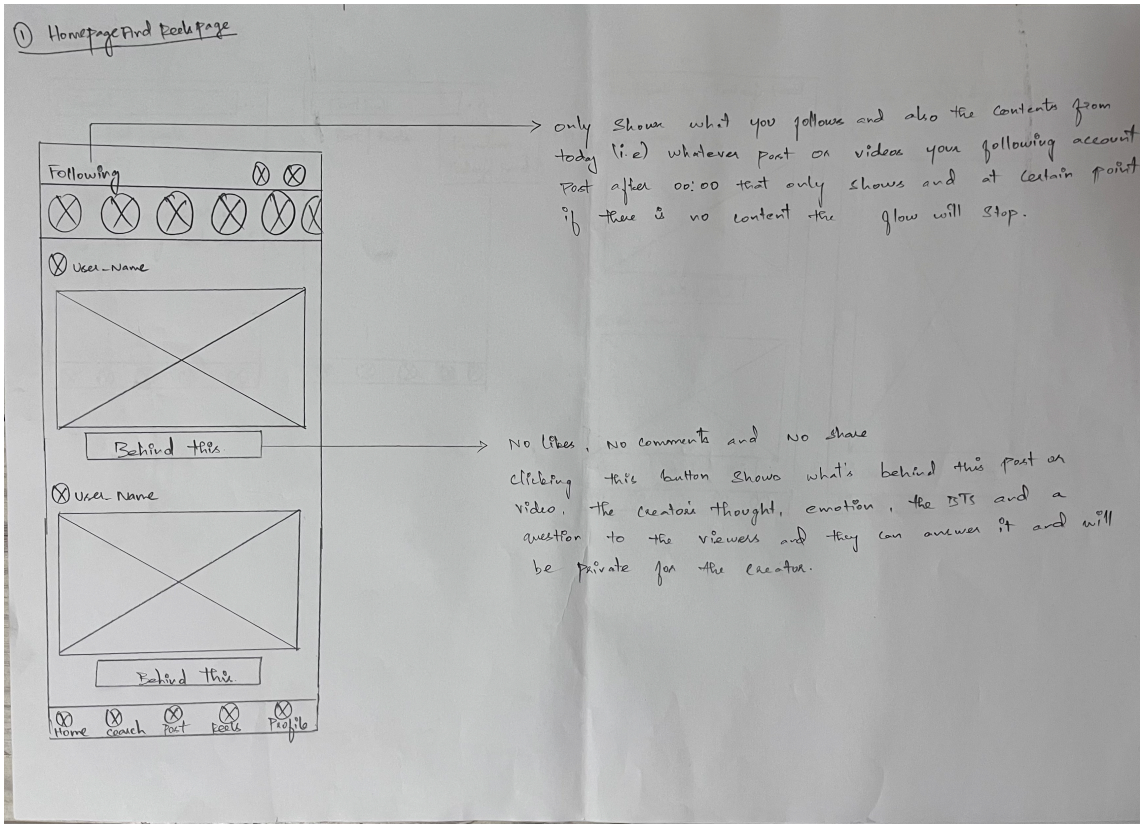

Figure B.1: Sketch of the Home Screen of the prototype

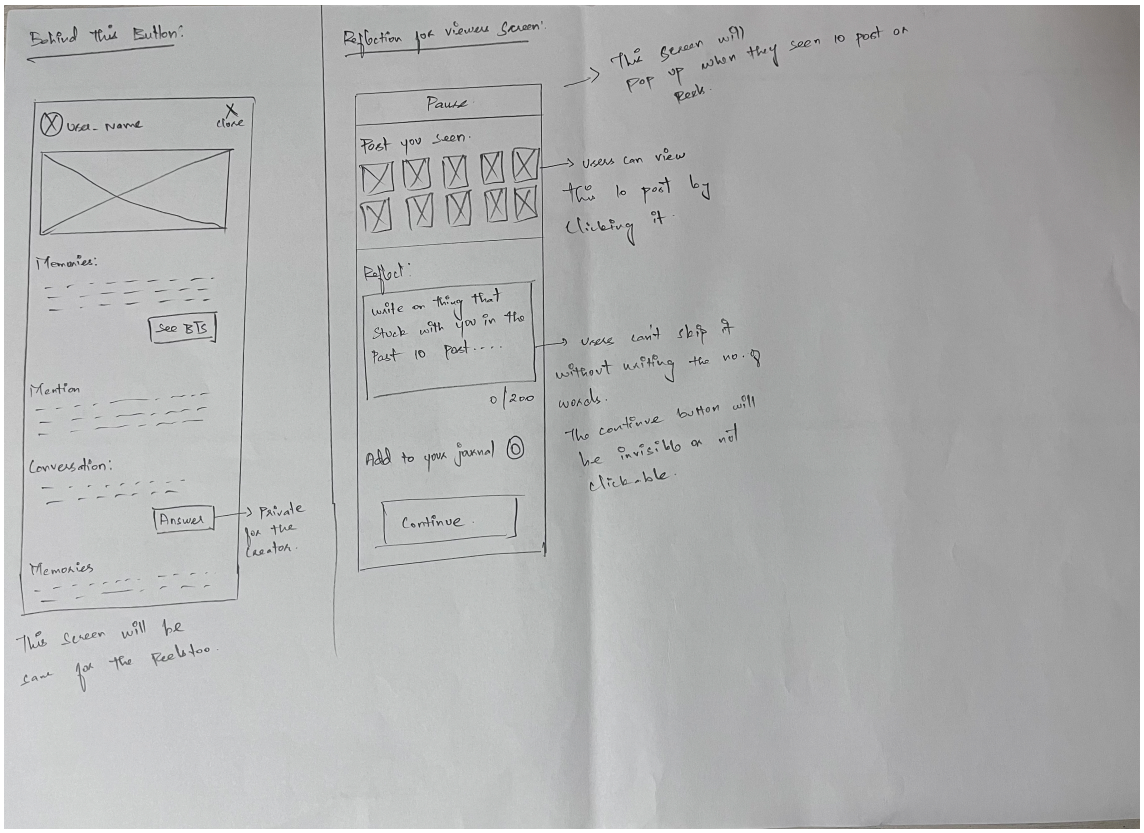

Figure B.2: Sketches of the Behind This and Reflection Screens

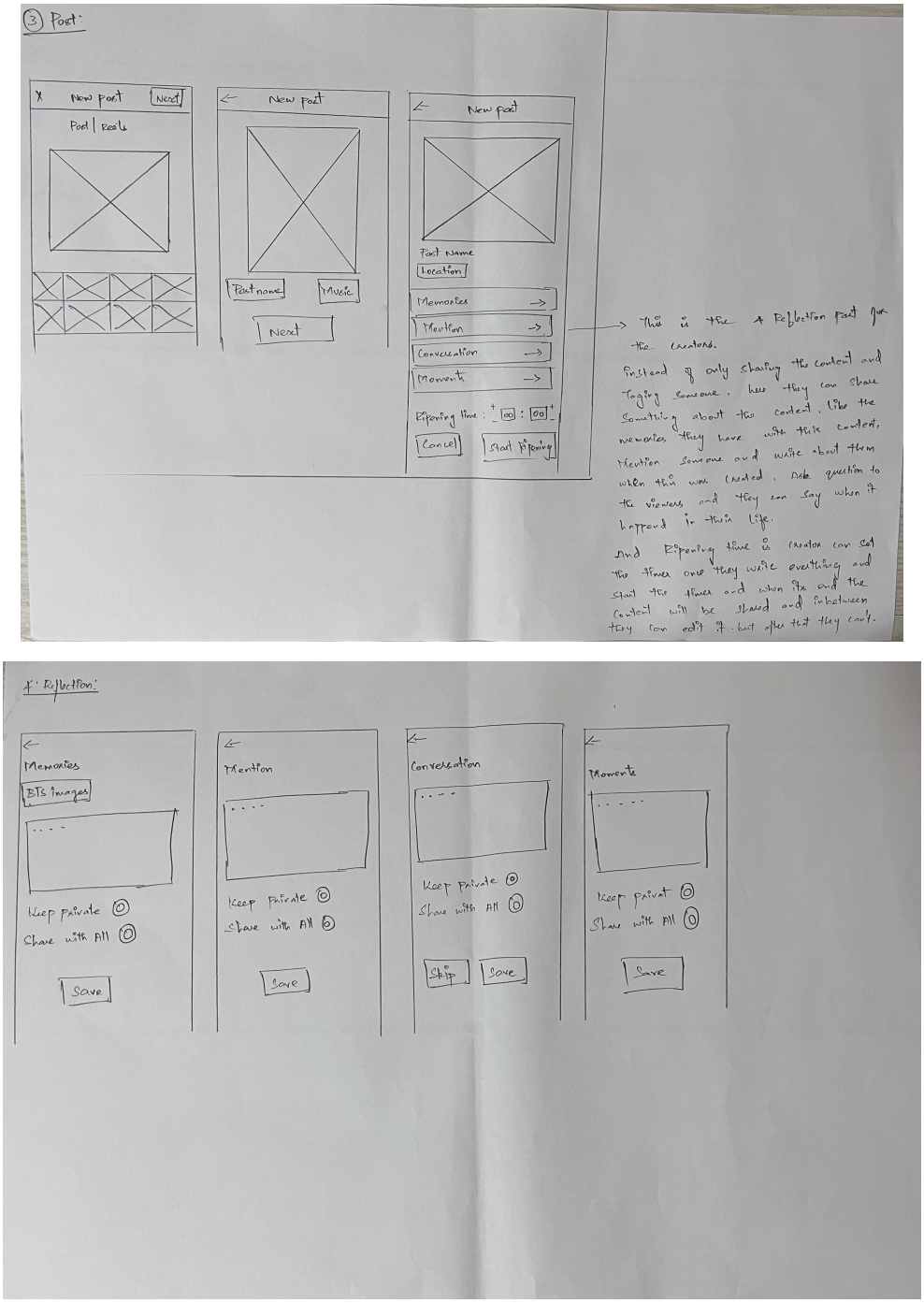

Figure B.3: Sketches of the Post Screens

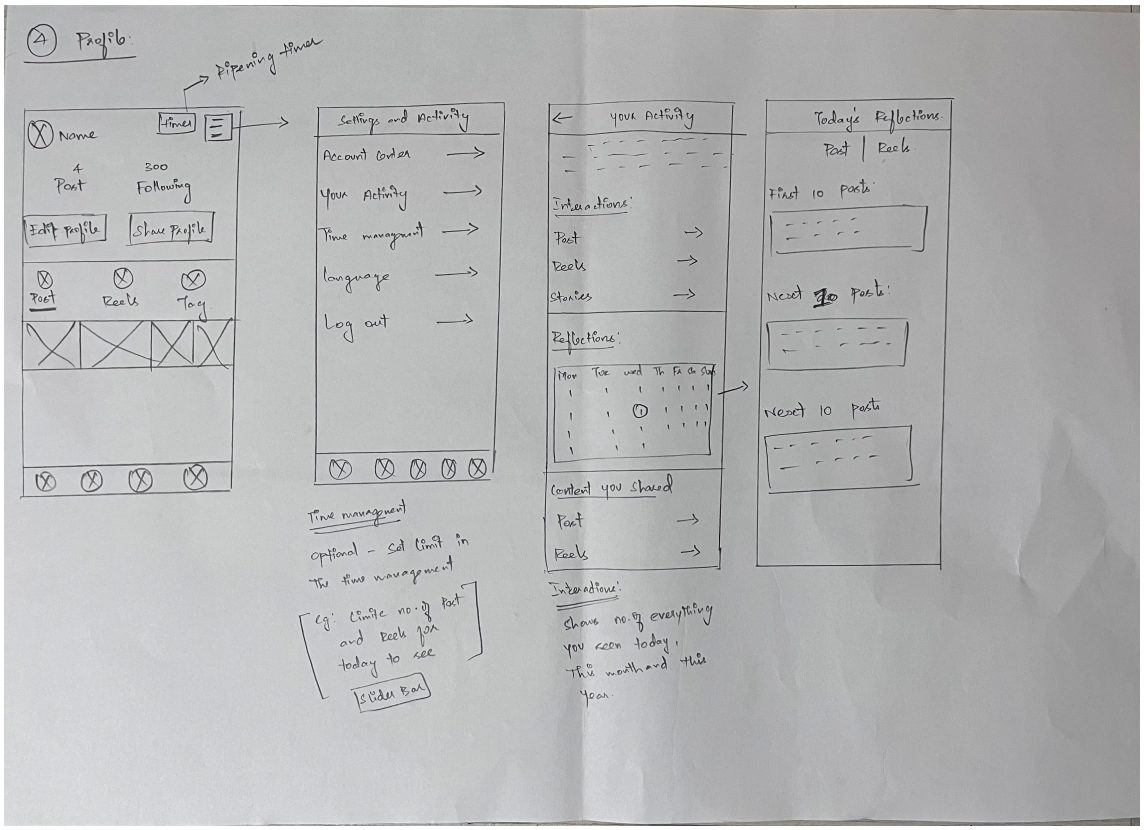

Figure B.4: Sketch of the Profile Screen

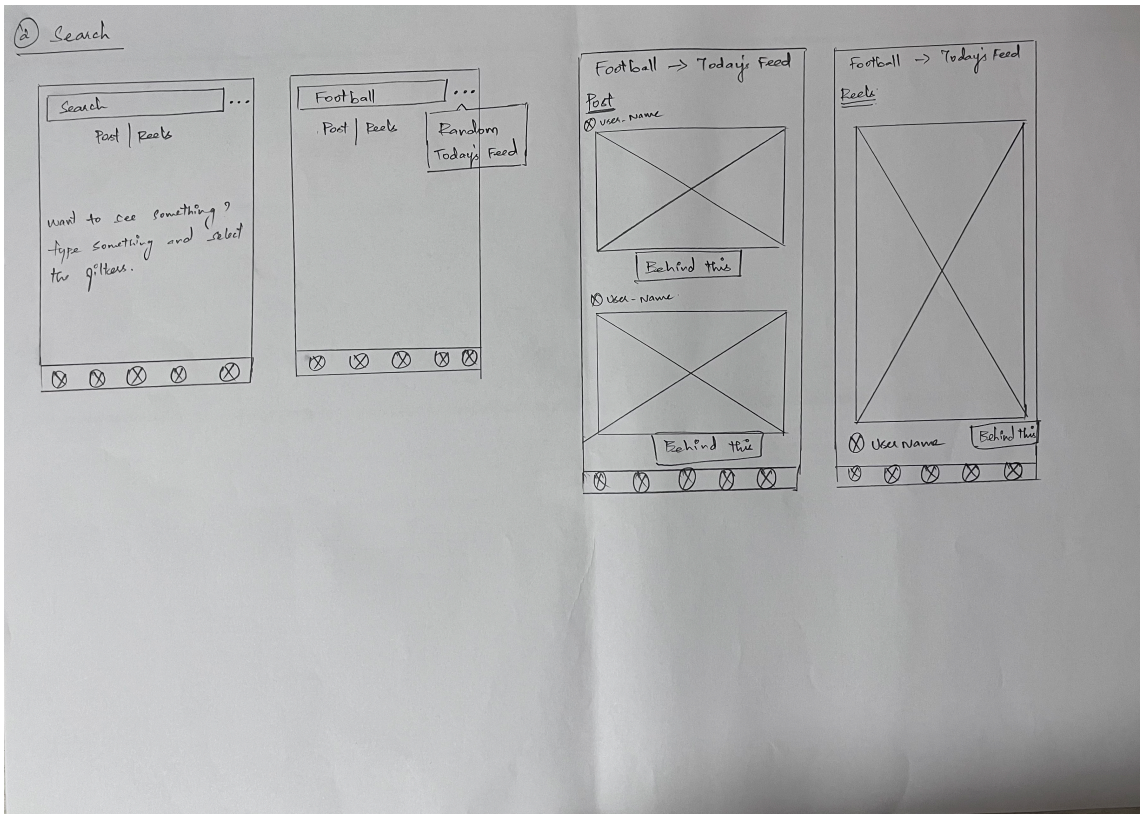

Figure B.5: Sketch of the Search Screen

C

Sitemap

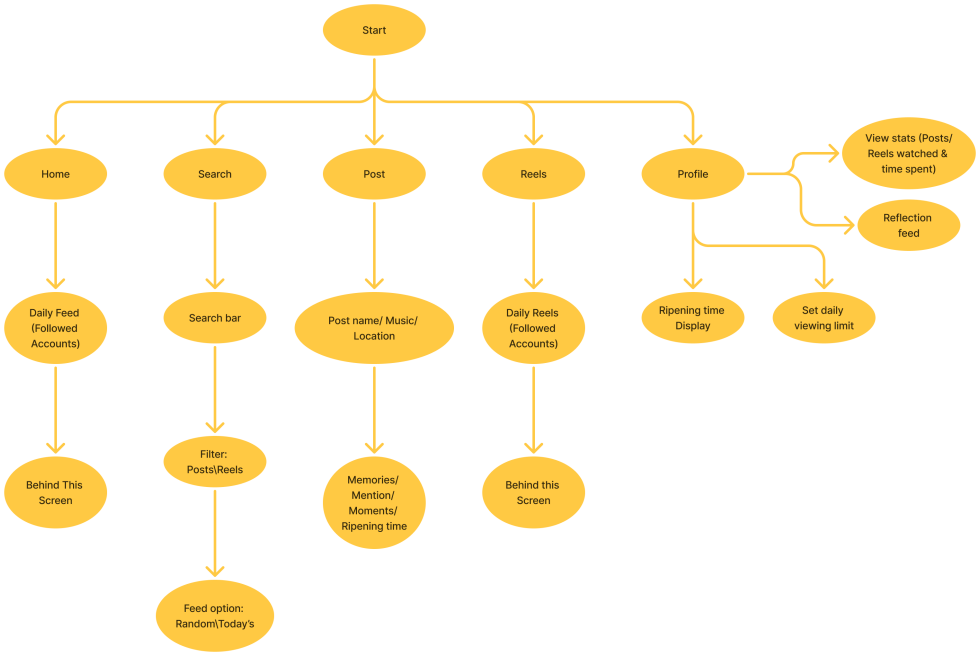

Figure C.1: Sitemap of the prototype.