LinkedIn User Interface Optimization with Design Thinking Methods: Improve user experience and engagement

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ABSTRACT

LinkedIn is one of the world's biggest social networking platforms, used to build connections, exploring career opportunities, and sharing professional insights. Users are increasingly prioritizing simple, effective, and user-friendly design, so improving LinkedIn's user interface is exceptionally imperative. LinkedIn is often perceived as confusing by its users, with many stating that features within the application are difficult to find and navigation is inefficient. This problem can hinder LinkedIn's effectiveness in meeting the professional needs of its users. This research aims to optimize the LinkedIn interface using a design thinking approach. The method involves five stages: empathize, define, ideate, prototype, and test. Design thinking prioritizes user needs, wants, and challenges. The advantage of the design thinking approach is that it becomes a solution, so what is produced is more relevant and effective in solving the real problems of the users. Data was collected through questionnaires to identify the key issues with navigation and ease of use of features on LinkedIn. The results show that the design thinking approach allows the creation of a simpler user interface with more effective navigation and features that are easy to find. The conclusion of this research is that the design thinking method is able to solve interface design problems in the LinkedIn application.

Keywords: Design Thinking, Modern Workplace, LinkedIn, Social Networking Platform, User Interface

1. INTRODUCTION

LinkedIn is one of the world's largest professional social networking platforms [1], widely used to build connections, search for career opportunities, and share professional insights [2]. Despite its important role in the modern workplace, LinkedIn's user interface (UI) is often perceived as confusing by its users. Based on survey results, many users reported that the app's design is not easy to understand, features are difficult to find, and navigation is ineffective. These issues negatively impact the user experience (UX) and hinder LinkedIn's effectiveness in meeting the professional needs of its users. In today's digital age, where users increasingly prioritize simple, effective, and user-friendly design [3], improving LinkedIn's UX is critical. Therefore, an appropriate approach is needed to evaluate and redesign problematic UI elements. This research aims to optimize LinkedIn's interface using a design thinking approach.

This method includes five stages: empathy, problem definition, ideation, prototyping, and testing [4]. With this approach, the design process begins with a deep understanding of user needs and challenges, resulting in a more relevant and functional solution [5]. Through this research, it is hoped to provide a LinkedIn UI redesign solution that not only fixes navigation issues, but also improves the overall user experience.

Design thinking prioritizes user needs, wants, and challenges [6]. The advantage of the design thinking approach is that the resulting solution is more relevant and effective in solving real user problems [7]. The results show that the design thinking approach allows the creation of a simpler UI with more effective navigation and easy-to-find features. This design thinking method was also previously used to design UI/UX mobile applications for men's fashion products at Toko Celcius in Manado City [8].

2. METHOD

This research uses a design thinking approach, which is a method that focuses on a problem by prioritizing the user experience [9]. This method was chosen because of its ability to produce a relevant and innovative solution based on the experience and needs of users [10]. The stages of the Design Thinking method are: Emphasize, Define, Ideate, Prototype, Test [11], the stages of Design Thinking can be seen in FIGURE 1.

FIGURE 1. Figure The Stages of Design Thinking

2.1 RESEARCH STAGES

The process in this research consists of five main stages in design thinking, namely:
- Empathize: This stage aims to understand the problems, needs, and preferences of users through data collection. The data is obtained from the results of the distributed questionnaire. The results of these data are then grouped based on the topic using affinity diagram [12]. This stage was carried out by asking questions to 46 LinkedIn users. The data from the results of this questionnaire is then summarized into pain points. Pain points are problems or difficulties that customers or users experience

when using products, services, or other processes. Pain points can cause inconvenience, dissatisfaction, or obtacles. *Paint point* can be seen in FIGURE 2.

No	Pain Point
1	Users feel that there are too many steps to create an account and experience difficulties when trying to log in to their account
2	Users find the LinkedIn application difficult to understand for new users and its features hard to find
3	Users consider that there are too many ads and feeds that are not relevant to their profession
4	Users feel that the design and appearance are still too plain and not trendy
5	Users perceive the interactions on LinkedIn are still limited compared to other social media

FIGURE 2. Figure Pain Point

- Define the problem: The information obtained from the empathy stage is then analyzed to identify each problem. By defining the problem specifically, it is expected to focus on the solution needed and in accordance with user needs. Elements at this stage include How Might We, User Persona, User Journey Maps [13].
- Ideate: This stage is the process of generating creative ideas based on the problems defined in the Define stage. The purpose of this stage is to find different possible solutions to the user problems [14]. The ideation process involves free exploration and selection of the most appropriate ideas to be implemented in the design. In the context of UI/UX design, two important components of the ideation phase are the user flow and the design system [15].
- Prototype: The prototype stage in design thinking is the process of creating an early version of the designed solution [16]. Interface prototypes are created using a design tool such as figma. This prototype serves as a tangible representation of the idea that is developed, evaluated, and refined before full implementation. Full implementation. The goal is to bring it into a form that can be validated through direct interaction with users [17].
- Testing: This is the final phase in the design thinking method, where the prototype that has been created is tested directly by users to evaluate its effectiveness, functionality, and experience [18]. Feedback from this stage is essential to improve and provide solutions to achieve optimal results

3. RESULTS AND DISCUSSION

In this chapter, we will discuss the results of each stage conducted in this research, namely the use of design thinking methods to redesign the LinkedIn application interface. This research process consists of five main stages, namely empathize, define, ideate, prototype, and test. Each of these stages is essential to creating a better solution that meets user needs.

3.1 EMPATHIZE

1). *Affinity diagram* are visual tools used to organize complex information into categories that are easier to understand. This diagram can be used to organize ideas, facts, and opinions. This technique is often used in the early stages of a project or research, especially when dealing with qualitative data and many ideas that need to be organized [19]. This affinity diagram is taken from the problems felt by users of the LinkedIn application and grouped into several categories. The data grouping is divided into 5 problem categories. They are problems related to the application, account creation and login process, features, job search, design and appearance, and advertising. *Affinity Diagram* can be seen in FIGURE 3.

FIGURE 3. Figure Affinity Diagram

3.2 DEFINE THE PROBLEM

1). *How Might We* is one of the ways to turn problem points into questions to change the writer's mindset that every problem must have a solution. How Might We is used to determine which problems are raised to be given a solution [20]. *How Might We* can be seen in FIGURE 4.

No	How Might We
1	Optimizing the procedures for account creation and authentication to enhance user comprehension
2	Designing a UI/UX that enhances usability, particularly for first-time users of the application
3	Improving the ad filtering mechanism to enhance user experience by ensuring that advertisements displayed are both relevant and non-intrusive
4	Enhancing the overall design and appearance of the LinkedIn app to provide a more comfortable experience for all users
5	Developing social interaction functionalities within the LinkedIn platform to improve connectivity and collaboration

FIGURE 4. Figure How Might We

2). *User Persona* is a fictional representation of an ideal user to represent a particular segment or group of users. User personas are created based on user data collected through user research, such as interviews, observations, or surveys [21]. *User Persona* can be seen in FIGURE 5.

FIGURE 5. Figure User Persona

3). *User Journey Maps* contain user journey maps that include all the actions that users can and will perform on the LinkedIn application. The use of User Journey Maps is very effective for knowing the needs of LinkedIn users because User Journey Maps can help identify the key user pain points and solutions that will be made as a form of handling the problems that arise on LinkedIn [22]. *User Journey Maps* consist of *Phases* and *Actions,* where it is explained what activities the user can perform in each phase. *User Journey Maps* can be seen in TABLE 1.

TABLE 1. User Journey maps

Phase	Action
Awareness	– Viewing job advertisements on LinkedIn.
	– Learning that LinkedIn is a platform for career development and networking.
Onboarding	– Creating a new account or signing in with an existing account.
	– Completing a personal profile.
	– Adding initial connections and receiving recommendations.
	– Exploring main features, such as profiles and notifications.
Profile Setup	– Filling out the profile in more detail (e.g., skills, achievements, certifications).
Networking	– Searching for people or groups to build a professional network.
	– Sending or accepting new connection requests.
	– Messaging connections or potential connections to expand the network.
	– Gaining new knowledge from other professionals.
Advocacy	– Recommending LinkedIn to friends or other professionals.
	– Writing testimonials or endorsements for connections.
	– Using LinkedIn as a source of career and industry news.
	– Becoming an influencer or expert in a particular field through LinkedIn.

3.3 IDEASI

1). *User Flow* is the user's steps in using a product to solve a problem. In this study, the user flow is how users of the LinkedIn application enter the main page to edit data in the LinkedIn application [23]. *User Flow* can be seen in FIGURE 6.
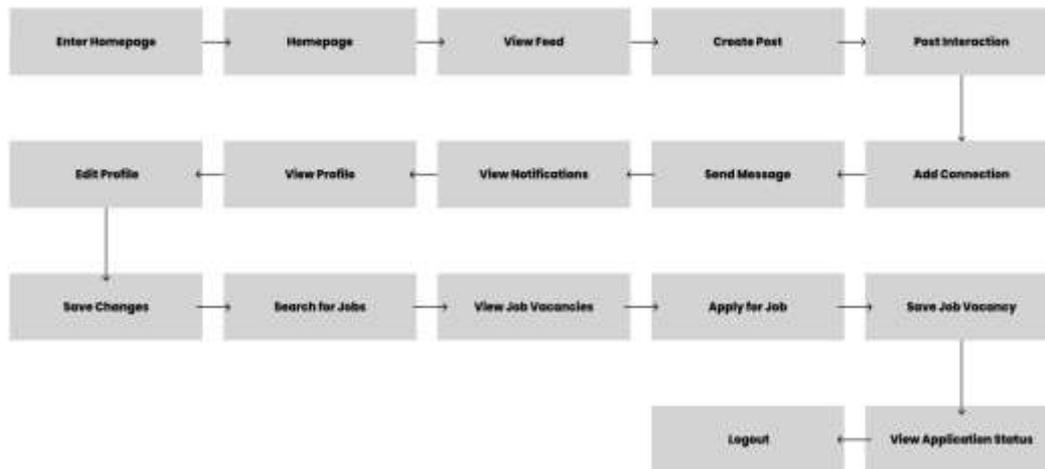

FIGURE 6. Figure User Flow

2). *Design System* is a collection of components that are used repeatedly to maintain quality standards and consistency of design. The design system components used in this research are logo, color, and typography [24]. *Design System* can be seen in FIGURE 7.


FIGURE 7. Figure Design System

In this design, the colors used are the basic colors of black and white, the choice of blue #0072B1 is because it is the signature color of LinkedIn, and blue #87B3F7 as an additional color. The font used is Source Sans, which is a versatile font often used for headlines or professional needs. Source Sans fonts have different weight variations, ranging from thin to semi-thick, and are accompanied by italics. The advantage of Source Sans fonts is the high quality of legibility, which is a consideration to prioritize reading comfort. Source Sans fonts also have features that provide flexibility, making them suitable for use in various media, both print and digital.

3.4 PROTOTYPE

Prototyping model is one of the software development methods by visualizing the interface design and system functionality in general. In the prototyping approach, consumers as system users are more involved and interact with the developer. The purpose of prototyping is to define system requirements by creating a prototype as an initial description of a system to be developed. A prototype is a part of the product that expresses the logic and physical external interface that is represented. [25].

High Fidelity is a visualization that is close to a product that will be manufactured. At this stage, the author creates a design that is complete with colors, text, buttons, and prototypes [26]. Figma is a software design tool commonly used for designing, sketching, and prototyping the interface design of a website display or mobile application [27]. The LinkedIn redesign prototype created using Figma consists of 15 pages, including the login page, email login page, password input page, LinkedIn join and sign up page, home page, people and network connections page, learn page, jobs and job opportunities page, post page, profile page, chat page, and notification page. Protyping with figma can be seen in FIGURE 8.
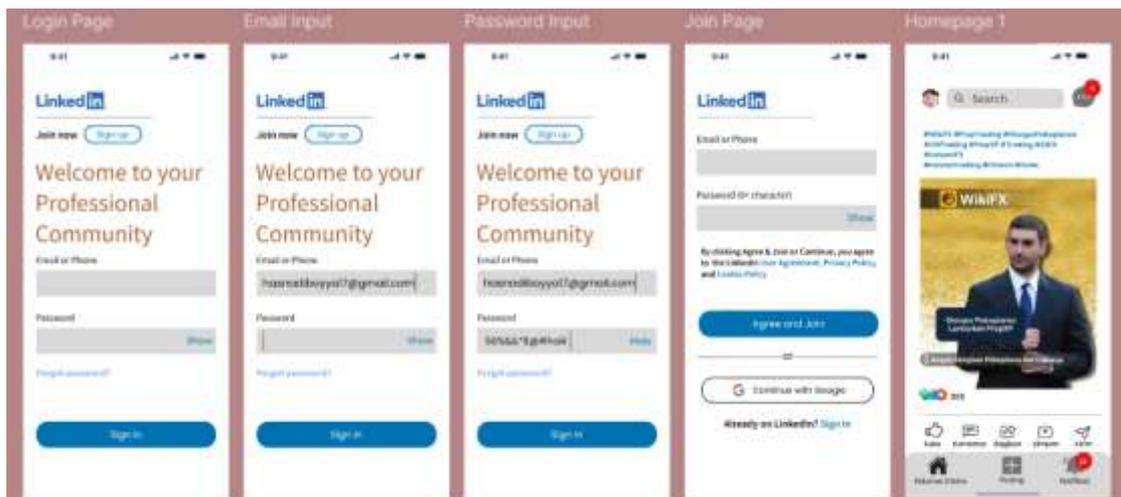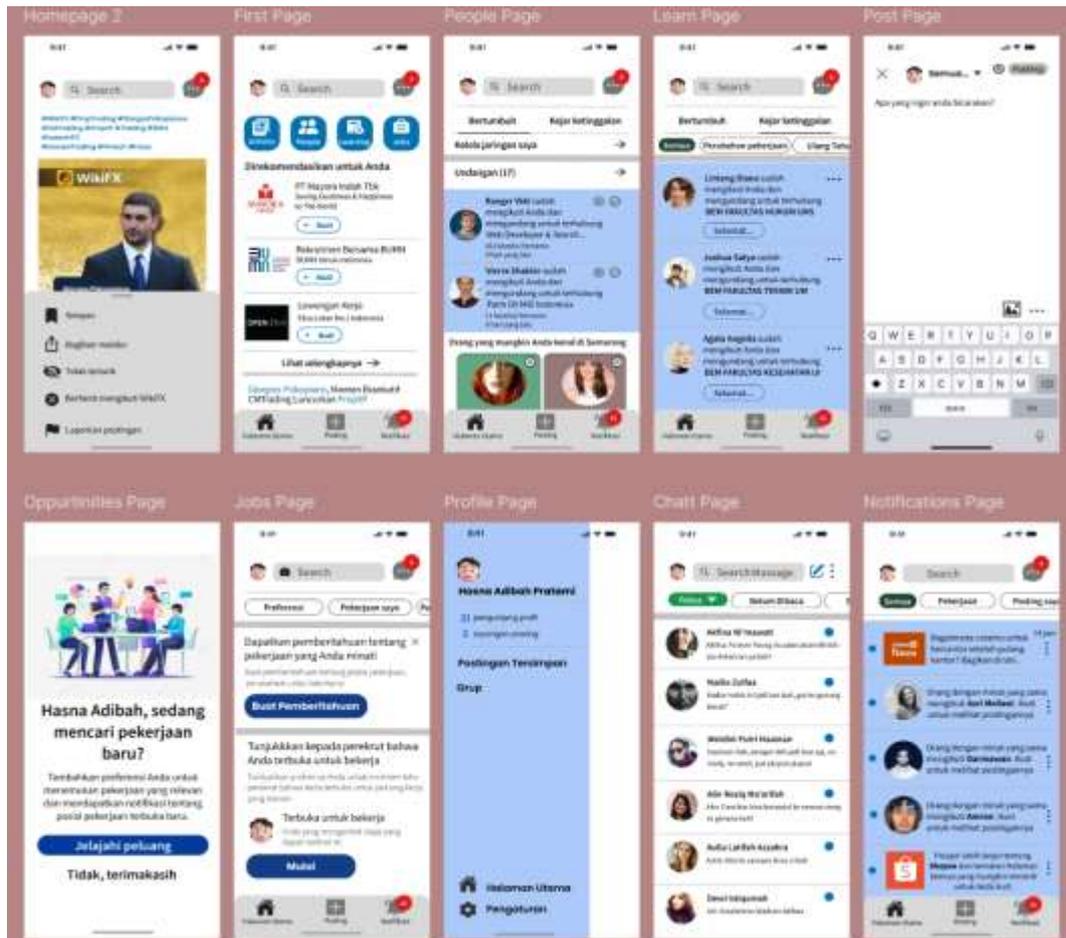
FIGURE 8. Figure Prototype High Fidelity with Figma

3.5 TESTING

This testing stage is carried out by means of usability testing using the Single Ease Question method with a scale rating of 1-7. Single Ease Question is a testing method used to measure the ease and comfort felt by users after trying out a prototype design created using Figma. The scale im *Single Ease Question* can be seen in FIGURE 9.

FIGURE 9. Figure The scale in Single Ease Question

TABLE 2.
Results of SEQ calculation

| SEQ | Respondents' SEQ Scores | | | | | | | | | | Score |
	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	
T1	7	6	7	7	7	7	7	6	7	7	6,8
T2	6	6	7	6	6	7	6	6	6	6	6,2
T3	5	5	6	7	7	6	7	6	6	6	6,1
T4	7	7	7	6	7	7	7	7	7	7	6,9
T5	5	6	7	6	6	6	6	6	7	7	6,2
T6	6	6	6	6	7	6	6	6	6	7	6,2
T7	6	4	7	7	5	7	6	6	7	6	6,1
T8	7	7	7	7	7	7	7	7	7	7	7,0
T9	7	7	5	6	7	7	7	7	7	7	6,7
T10	6	6	7	7	6	6	7	7	6	6	6,4
Score Results											6,46

Description:
T=Task (questions about the given test)
R=Respondent (LinkedIn user taking the test)

Respondents' SEQ Score refers to the individual rating assigned by each respondent to the SEQ item upon completing a task. Each respondent provides a single numerical value per task. This score serves as an indicator of the users' subjective perception regarding the level of ease in performing a particular process or feature.

SEQ scores are essential in usability evaluation because they provide a direct and quantifiable measure of the perceived task difficulty. Higher scores indicate that users find the task easier to complete, while lower scores suggest potential usability issues. By analyzing SEQ results across multiple tasks, researchers can identify which parts of the system are intuitive and which require improvement, thereby guiding design decisions and enhancing the overall user experience.
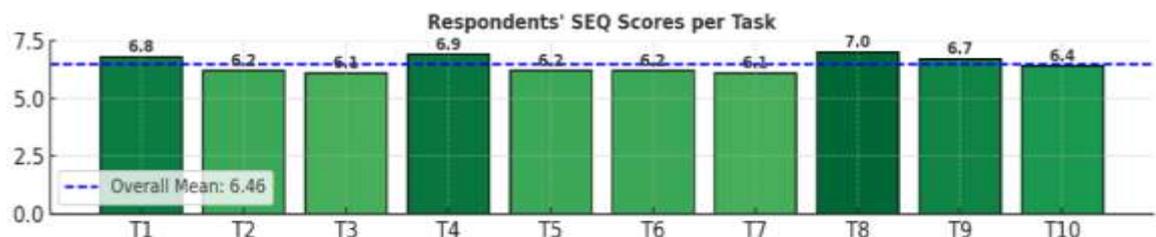

FIGURE 10. Figure Respondents Single Ease Question Score

1) Calculating the Mean SEQ Score
   This is used to determine the general perception of respondents.
   Example: $(6 + 5 + 7) / 3 = 6.0$
2) Examining Score Distribution
   Identifying how many respondents answered "easy" (6–7), "neutral" (4), or "difficult" (1–3).
3) Comparing Across Tasks or Features
   For instance, whether users find it easier to log in compared to locating a specific feature

4. CONCLUSION

Based on the results of the five stages of design thinking, which include empathize, define, ideate, prototype, and test, it can be concluded that this approach is very effective in creating solutions that are relevant to the needs of LinkedIn users. With a deep understanding of user problems through the empathy and problem definition phases, proper ideation, and prototypes that are tested live, the resulting solutions are able to significantly improve the user experience. While testing revealed some areas for improvement, the systematic process followed during the prototyping and testing phases ensured that the design was accessible, effective, and met LinkedIn's user expectations. This research contributes to the field of Human-Computer Interaction by applying Design Thinking to improve user experience in LinkedIn's interface.

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Hasna Adibah Pratamil, Saifur Rohman Cholil
LinkedIn User Interface Optimization with Design Thinking Methods: Improve user
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