Usability Evaluation of LinkedIn: A Heuristic and Empirical Analysis of UX/UI Challenges in Professional Networking

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***Abstract*—LinkedIn, a globally dominant professional networking platform, has become an indispensable tool for career advancement, professional development, and industry connection. This research delves into a comprehensive evaluation of LinkedIn's usability, focusing on its user interface (UI) and user experience (UX) design through the lens of established Human-Computer Interaction (HCI) principles. The study aims to uncover usability challenges and propose actionable recommendations to enhance the platform's effectiveness. Employing a multifaceted approach, the research combines the cognitive walkthrough method and empirical usability testing involving a sample of LinkedIn users with the SUS scale method. The analysis covers core platform functionalities such as profile creation, networking, job searching, and professional branding. Key findings from the cognitive walkthrough revealed critical usability issues, including overly restrictive mandatory fields during registration, inefficient skill addition processes, a lack of profile templates, and inconsistent search functionalities. Empirical testing corroborated these findings, with participants experiencing difficulties in registration, skill and language input, search accuracy, connection recommendations, and job posting.**

Keywords—LinkedIn, usability, cognitive walkthrough, empirical testing, user experience, Human-Computer Interaction (HCI)

I. INTRODUCTION

LinkedIn is like a digital hub where professionals gather to network, advance their careers, and share experiences. From job seekers to recruiters, from experienced professionals to students to business owners. Professionals can create digital CVs by filling their profiles with work history, skills, language skills, and achievements. Also, they can quickly communicate with your dream company colleagues, recruiters, and even senior executives, follow them, ask questions, and get more qualitative feedback. On the other side, recruiters search by keyword and browse candidates by experience, location, and education level through advanced filters [1], [2].

The goal of this study is to evaluate the usability of the most popular professional online social platform, LinkedIn. It should be noted that all findings in this study are valid as of December 2023. As LinkedIn is a constantly evolving platform, naturally some of the findings are outdated.

II. METHODOLOGY

A. Cognitive Walkthrough

The cognitive walkthrough technique is widely used to evaluate the learnability and usability of a system from a new user's perspective. This method, originally proposed by Lewis et al. [3], follows a structured approach where usability experts simulate users and assess the system's interface based on predefined tasks. Unlike traditional usability testing, cognitive walkthroughs focus on task flow efficiency and identify potential breakdowns in user interaction.

In this study, the following LinkedIn functionalities were analyzed:

- Registration process
- Profile setup and skill additions
- Job searching mechanisms
- Networking functionalities (e.g., connection requests, recommendations)

Each researcher independently performed these tasks and documented usability challenges encountered. The evaluation incorporated different levels of digital literacy, allowing for a broader understanding of how diverse users interact with LinkedIn's interface. Previous studies have demonstrated that cognitive walkthroughs are effective for evaluating complex UI interactions, particularly in professional networking platforms where user engagement is task-driven [4].

B. Usability Testing

Usability testing is a fundamental UX research method that evaluates a system's effectiveness, efficiency, and user satisfaction through real-user interaction [5]. In a typical usability test, a facilitator instructs participants to complete tasks while observing their behavior, errors, and overall experience. For this research, we employed remote moderated

usability testing, which allows facilitators and participants to interact in different locations via a virtual setup. Studies have shown that remote usability testing provides comparable results to in-person studies while improving accessibility and reducing logistical constraints [6].

Test Setup:

- Facilitator: Guided participants and recorded observations.
- Participants: Represented a diverse group of LinkedIn users (varied experience levels).
- Tasks Evaluated:
  - Searching and applying for jobs
  - Connecting with recruiters and professionals
  - Editing and updating profiles
  - Exploring LinkedIn's search and recommendation features

Remote usability testing has been increasingly adopted for evaluating professional networking and job search platforms, as it enables scalability and real-world scenario testing. Our approach follows industry best practices as outlined by the ISO 9241-11 usability framework, ensuring a structured analysis of LinkedIn's UX challenges [7].

C. System Usability Scale (SUS)

The System Usability Scale (SUS) is a widely recognized questionnaire-based tool designed to measure the perceived usability of a system. Originally developed by Brooke [8], SUS provides a quick and reliable assessment of user satisfaction through a 10-statement survey rated on a five-point Likert scale. This methodology has been extensively validated in Human-Computer Interaction (HCI) studies and is frequently employed to evaluate the usability of web applications, digital platforms, and professional networking systems.

Core Evaluation Criteria in SUS:

- Effectiveness: How well users can achieve their goals using the system.
- Efficiency: The ease of task completion without unnecessary complexity.
- Satisfaction: User perception of system usability and overall experience.

Participants were asked to evaluate their experience with **LinkedIn** by rating the following statements:

1. After my first acquaintance with LinkedIn, I thought that I would use it often.
2. LinkedIn is unnecessarily complicated.
3. LinkedIn is easy to use.
4. You need the support of a technical person to use LinkedIn.
5. Various features are well integrated into LinkedIn.
6. There is too much inconsistency in the LinkedIn system.
7. Most people learn how to use LinkedIn very quickly.
8. LinkedIn is very difficult to use.
9. I feel confident when using LinkedIn, I know what the outcome of each operation will be.
10. A person should learn a lot about LinkedIn before starting to use it.

Each statement was rated on a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Calculation and Interpretation of SUS Scores

The SUS score is computed using a well-established formula, where responses are converted into a standardized usability score ranging from 0 to 100. The average usability benchmark for most digital interfaces falls within the 65-75 range, with scores above 80 indicating excellent usability, while scores below 50 suggest significant usability issues [9].

Why SUS?

- Reliability: SUS is considered one of the most statistically robust usability evaluation tools, even with small sample sizes.
- Versatility: It has been applied to various software applications, mobile interfaces, and online platforms.
- Benchmarking: SUS scores can be compared across studies to identify trends in UI/UX effectiveness.

In this study, the SUS methodology was applied to LinkedIn's core functionalities, including registration [10], profile setup [11], job searching [12], and networking features [13]. The findings provide quantitative insights into the usability strengths and weaknesses of the platform.

III. Usability Testing Procedure and Participant Demographics Prepare

A. Testing Methodology

The usability evaluation of LinkedIn was conducted using remote moderated usability testing, a widely accepted method for assessing user experience (UX) and interface efficiency in digital platforms. Remote usability tests have been demonstrated to provide results comparable to in-person studies, while offering the benefits of cost reduction, accessibility, and scalability.

Facilitator Roles

Three facilitators were responsible for conducting the usability study:

- Tural Aliyev: Introduced participants to the test, provided instructions, and ensured smooth execution of tasks.
- Teymur Mammadov: Analyzed user behavior during testing sessions, reviewed recorded data, and collected qualitative feedback and design improvement suggestions.
- Jeyhun Isazada: Recorded and analyzed quantitative usability metrics, including task completion rates and efficiency scores.

Test Tasks

The usability study included nine structured tasks, covering core LinkedIn functionalities:

1. Searching for a job in Company Y in City X.
2. Finding an HR manager in Company X.
3. Adding language skills to a LinkedIn profile.
4. Adding five new skills to the LinkedIn profile.
5. Finding and applying for jobs using the "Easy Apply" option.
6. Sending a connection request to the CEO of Company X.
7. Joining a LinkedIn group related to a specific professional field.
8. Changing the location setting on the LinkedIn profile to Country X.
9. Sharing a job advertisement on LinkedIn.

Each task was designed to evaluate the usability and efficiency of LinkedIn's key features, based on prior studies in human-computer interaction (HCI) and user experience design.

B. Participant Demographics

A total of 10 participants were recruited for the usability test, ensuring diversity in LinkedIn experience levels, age, and preferred devices. Participants were selected based on convenience sampling, a commonly used method in usability testing studies.

Table 1 summarizes participant characteristics, including:

- A (Age): Participant's age in years.
- B (Experience): Duration of LinkedIn usage.
- C (User Level): Self-reported proficiency in LinkedIn.
- D (Device Used): Preferred device for accessing LinkedIn.
- E (Usage Frequency): How often the participant uses LinkedIn.

TABLE I. TABLE 1: USER PROFILES

User	A	B	C	D	E
	Age	***Experience***	***User Level***	***Device***	***Frequency***
1	19	1 year	Intermediate	Mobile	Several times a week
2	19	2 years	Intermediate	Desktop	Several times a week
3	19	1+ year	Intermediate	Desktop	Several times a day
4	21	3+ years	Advanced	Mobile	Several times a day
5	17	A few months	Beginner	Mobile	Seldomly
6	43	14 years	Intermediate	Desktop	Several times a day
7	19	A few months	Beginner	Desktop	Seldomly
8	19	A few weeks	Beginner	Mobile	Seldomly
9	44	13 years	Intermediate	Desktop	Several times a day
10	19	2 years	Beginner	Mobile	Several times a week

This diverse sample allowed for analysis of usability differences across age groups and experience levels, addressing potential usability challenges faced by new, intermediate, and advanced users.

C. Test Environment and Data Collection

The usability test was conducted in a remote setting using the Zoom platform, following best practices in remote UX research methodologies. Participants were instructed to:

- Share their screens, voices, and facial expressions for behavioral analysis.
- Perform the assigned tasks independently, without external assistance.
- Provide verbal feedback on their experience using LinkedIn's interface.

The usability evaluation was based on the ISO 9241-11 usability framework, which defines usability as:

"The extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency, and satisfaction in a specified context of use".

To quantify usability performance, three key metrics were recorded:

1. Effectiveness: Percentage of successfully completed tasks.
2. Efficiency: Time taken to complete each task (measured in seconds).
3. Satisfaction: User ratings on a 10-point Likert scale after completing each task.

Additionally, qualitative feedback was gathered to identify common usability issues and user recommendations for improving LinkedIn's UI/UX design.

IV. FINDINGS AND ANALYSIS

This section presents the findings from both the Cognitive Walkthrough and Usability Testing, highlighting key usability challenges observed in LinkedIn's registration, profile setup, job searching, and networking functionalities.

A. Results of Cognitive Walkthrough

The Cognitive Walkthrough method was used to assess LinkedIn's interface by simulating the experience of a new user performing common tasks. The walkthrough identified several usability challenges, primarily affecting registration, profile setup, and job search features.

A) Registration Issues

- Mandatory "Most Recent Company" Field:
    - New users without prior work experience are forced to enter fake company names, leading to an inaccurate representation of their professional background.

- This issue creates unnecessary cognitive load and increases task abandonment rates, as observed in prior research on form usability in professional networking platforms.

B) Profile Setup Challenges

- **Inefficient Skill Addition Process:**
  - Users must add skills one at a time, making profile setup time-consuming and frustrating, especially for professionals with diverse expertise.
  - Studies on input efficiency in online profiles suggest that bulk input options significantly improve user satisfaction and completion rates.
- **Misplaced Language Addition Feature:**
  - The "Add Language" function is located under "Additional Sections" instead of a more intuitive location within "Core Profile" settings.
  - As a result, users frequently add language skills to the wrong section (e.g., under "Skills"), impacting profile accuracy and discoverability.
  - Prior UX studies indicate that poor information architecture often leads to misclassification errors and incorrect user behavior.

C) Job Searching Inefficiencies

- **Irrelevant Search Results:**
  - The job search algorithm often returns unrelated results instead of displaying a "No results found" message when no exact match exists.
  - Example: Searching for an "Android Developer" job in Azerbaijan may yield results for Web Development or AI roles instead.
  - Previous research on search engine usability suggests that misleading search results negatively impact trust and user retention.

D) Networking Evaluation

- **No Major Issues Identified:**
  - Unlike registration, profile setup, and job search, LinkedIn's networking features performed well, with no major usability issues reported.
  - This aligns with studies showing that social networking features often have higher usability scores than transactional features (e.g., job searching, profile editing).

B. Results of Usability Testing

The usability test measured three core UX metrics:

1. Effectiveness (task completion rate).
2. Efficiency (time taken per task).
3. Satisfaction (user rating of LinkedIn's interface).

Findings reveal significant variability in task performance, particularly among beginners.

A) Quantitative Analysis

The data in **Table 2** highlights usability differences across task categories.

TABLE II. TABLE 2: USABILITY METRICS PER TASK

Task	A	B	C	D	E	F
	Completion Rate (%)	***Min Time (s)***	***Max Time (s)***	***Avg Time (s)***	***Avg Satisfaction (1-10)***	***Task Category***
1	70%	20	85	50	7	Job searching
2	80%	16	94	49	8	Networking
3	60%	11	95	50.8	6	Profile setup
4	70%	46	140	88.4	7	Profile setup
5	60%	19	146	93.1	6	Job searching
6	60%	19	96	42.6	8.3	Networking
7	100%	8	64	34.8	9.1	Networking
8	90%	18	104	54	7.6	Profile setup
9	80%	45	135	69	7.5	Job seeking

Findings:

- Job searching had the lowest completion rate (65%) and satisfaction (6.5/10).
- Networking tasks had the highest success rates (80–100%) and satisfaction (8.46–9.1/10).
- Profile setup tasks had moderate success (73.3%), but higher variability in completion time.

B) Qualitative Analysis

- **User Mistakes:**
  - Misuse of LinkedIn search bar – Users attempted job searches using the general search function instead of the dedicated job search feature.
  - Language skills misplaced under "Skills" section due to unclear navigation.
- **User Complaints:**
  - Adding skills one at a time is too slow.
  - Search results often do not match queries.

- **User Recommendations:**
    - Add a position filter for people searches.

C. System Usability Scale (SUS) Results

The SUS questionnaire was used to assess overall usability perception.

Findings:

- LinkedIn's overall SUS score is ~70, placing it at the borderline of "Good" usability.
- Users with LinkedIn experience >3 years rated usability higher (~80).
- Beginners rated usability significantly lower (~50), indicating high learning barriers.

CONCILUSION

Key findings from the cognitive walkthrough revealed critical usability issues, including overly restrictive mandatory fields during registration, inefficient skill addition processes, a lack of profile templates, and inconsistent search functionalities. Empirical testing corroborated these findings, with participants experiencing difficulties in registration, skill and language input, search accuracy, connection recommendations, and job posting. Also, SUS scale shows that LinkedIn interface is on the borderline of being considered "Good".

Future research could be conducted with a more balanced and diverse user population for usability testing and SUS respondents: For this, the process could include:

- Different age groups
- Different genders
- Various degrees of education
- Different sectors and positions

Also, the work can be expanded in the direction of accessibility by including people with physical and mental disabilities.

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