User Experience Analysis of Linkedin Social Media using Usability Metric for User Experience (UMUX)

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Abstract—**This article presents a user experience analysis of LinkedIn using the Usability Metric for User Experience (UMUX). The study aims to assess the usability and user satisfaction of LinkedIn, identify areas for improve-ment, and propose hypotheses for future research. The problem addressed in this research is the need to evalu-ate the user experience of LinkedIn, a popular professional networking platform. The solution offered is to uti-lize the UMUX metric as a comprehensive tool for assessing usability and user satisfaction. The objectives of the study are to measure the effectiveness, efficiency, satisfaction, and overall usability of LinkedIn, as well as to identify specific areas for improvement. Data were collected through online questionnaires from LinkedIn users. The UMUX scores were calculated, indicating a moderate level of user satisfaction and perceived usa-bility of LinkedIn. These findings suggest that LinkedIn is perceived as a useful platform for professional goals, but there is room for improvement in terms of efficiency and overall user satisfaction. Hypotheses for future research include enhancing efficiency to improve satisfaction, improving overall satisfaction for in-creased engagement and retention, and optimizing the mobile experience. The study provides valuable insights for LinkedIn to enhance user satisfaction, engagement, and usability. Further research can explore additional usability metrics and investigate the impact of implemented improvements.**

Keywords— **LinkedIn, Satisfaction, Usability, User Experience, UMUX.**

I. INTRODUCTION

Social media platforms have become an integral part of our day-to-day lives, connecting people across the globe and easing professional networking. LinkedIn, established in 2003, has surfaced as a leading professional networking platform, furnishing users with opportunities to showcase their expertise, connect with industry peers, and explore career opportunities. As the platform continues to evolve, it becomes increasingly critical to assess its user experience (UX) to ensure optimal usability and user satisfaction.

User experience analysis plays a vital part in assessing the effectiveness and efficiency of a digital platform, encompassing various factors such as ease of use, satisfaction, and overall user perception. To evaluate the UX of LinkedIn, this article employs the Usability Metric for User Experience (UMUX), a extensively recognized metric in the field of Human-Computer Interaction (HCI) research.

The UMUX metric, developed by Kraig Finstad and his colleagues in 2010 [1], offers a robust and validated approach to measuring user satisfaction with a system's usability. It captures users' understandings of both hedonic and realistic aspects of the system, furnishing a comprehensive assessment of the overall user experience. By employing the UMUX metric, we can gain precious insights into the strengths and weaknesses of LinkedIn's UX, allowing for targeted improvements and advancements.

Previous studies have employed the UMUX metric to estimate the user experience of various digital platforms, such as e-wallet [2], web application [3], and e-commerce platform [4]. However, to the best of our knowledge, there's a dearth of research that specifically focuses on applying the UMUX metric to LinkedIn. By filling this gap, we aim to contribute to the existing body of knowledge on UX evaluation and give valuable insights for LinkedIn's designers, developers, and stakeholders.

The objectives of this study are twofold. Firstly, we seek to assess the usability and user satisfaction of LinkedIn, employing the UMUX metric as the primary evaluation tool. Secondly, we aim to identify possible areas of enhancement and deliver applicable recommendations to enhance the overall user experience of the platform. To achieve these objectives, we will conduct a methodical evaluation of LinkedIn's crucial features, interface design, navigation, content organization, and interactive elements.

In conclusion, this article aims to shed light on the user experience of LinkedIn social media using the UMUX metric. By employing a robust evaluation approach, we strive to deliver precious insights and recommendations that can inform the design and development of LinkedIn, eventually enhancing the usability and user satisfaction of the platform.

II. LITERATURE REVIEW

A. User Experience Evaluation and Usability Metrics

User experience evaluation is a pivotal aspect of understanding users' interactions with digital platforms and optimizing their satisfaction and performance. Researchers have developed various usability metrics and evaluation approaches to assess the user experience of different systems.

One extensively recognized usability measurement is the Usability Metric for User Experience(UMUX), developed by Kraig Finstad in 2010. The Usability Metric for User Experience (UMUX) is a short qualitative assessment designed to measure the usability of a system. UMUX is based on research at Intel Corporation in 2010 and is a simple four-item questionnaire containing two positive and two negative statements that are rated by respondents on a five- or seven-point Likert scale, and is organized based on the ISO 9241-11 definition of usability [1]. UMUX targets usability by assessing effectiveness, efficiency, and satisfaction. This metric provides a reliable and validated approach to measure users' satisfaction with a system's usability. It captures both realistic and hedonic aspects of the user experience, encompassing factors such as efficiency, effectiveness, ease of use, and overall satisfaction.

Other generally used usability metrics include the System Usability Scale(SUS) [5]and the User Experience Questionnaire(UEQ) [6]. The SUS is a broadly adopted measure of usability, while the UEQ focuses on user emotions, hedonic qualities, and pragmatic aspects. However, for the purpose of this study, we will focus on employing the UMUX metric to assess the user experience of LinkedIn.

B. User Experience Evaluation of Social Media and Other Platforms

The evaluation of user experience on social media and other platforms has gained significant attention due to their widespread usage and impact on individuals and society. Researchers have examined various aspects of user experience on social media platforms, including usability, user satisfaction, engagement, and information sharing.

For instance, Abro and his colleagues conducted a study to evaluate the factors influencing the user experience of interactive system [7]. Their findings highlighted factors such as ease of use, user comfort, and user satisfaction as critical determinants of user's affective and goals on the platform.
Similarly, Tai Wen Jun and his colleagues conducted a study evaluating the usability of social media websites [8]. They identified factors such as interface design, privacy controls, and content relevance as significant contributors to users' perceived usability and satisfaction on these platforms.

C. LinkedIn User Experience Evaluation

While previous studies have explored the user experience of various social media platforms, limited research has specifically focused on evaluating LinkedIn's user experience using standardized usability metrics such as the UMUX.

To the best of our knowledge, no specific studies have applied the UMUX metric to evaluate the user experience of LinkedIn. However, researchers have examined specific aspects of LinkedIn's user experience. Al-Badi and his colleagues conducted a study improving usability of LinkedIn social media [9]. The findings of this study highlight several usability problems and A set of recommendations for developers to improve the social network so that in the future it can have a much better impact on its usability.
By employing the UMUX metric in this study, we aim to provide a comprehensive evaluation of LinkedIn's user experience, encompassing aspects of usability, satisfaction, and overall user perception. This evaluation will contribute to the existing body of knowledge on user experience evaluation of social media platforms and provide valuable insights for LinkedIn's designers, developers, and stakeholders.

III. RESEARCH METHOD

The research began with an extensive literature study to understand the concepts of user experience evaluation, usability metrics, and social media user experience. Relevant literature was reviewed to gain insights into the theoretical foundations

[10]. Existing research related to user experience analysis of social media platforms and the application of usability metrics is also important to consider as a foundation and support for this research. This step provided a solid theoretical foundation for the subsequent stages of the research. Based on the literature study, a clear problem statement was formulated to guide the research. The problem statement focused on assessing the user experience of LinkedIn social media using the UMUX metric. This involved identifying the key research objectives and questions that aimed to explore the usability and user satisfaction of LinkedIn as a professional networking platform. To evaluate the user experience of LinkedIn, appropriate usability assessment methods were determined [11]. The Usability Metric for User Experience (UMUX) was selected as the primary usability metric for this research. The UMUX metric, developed by Kraig Finstad in 2010 [1], has been widely adopted in previous studies to evaluate the overall user satisfaction and usability of digital platforms.

To collect data on users' experiences and perceptions of LinkedIn, online questionnaires based on the UMUX metric were designed and distributed to a targeted sample of LinkedIn users. The questionnaires included items that captured users' perceptions of efficiency, effectiveness, ease of use, and overall satisfaction with the platform. The distribution process ensured a diverse representation of LinkedIn users to obtain comprehensive and varied insights. Data collection involved gathering responses from the distributed questionnaires. The collected data consisted of users' ratings and qualitative feedback regarding their experiences with LinkedIn. The data collection process aimed to capture a significant sample size, ensuring statistical validity and reliability of the findings. The collected data were processed to ensure accuracy and consistency. This involved organizing and structuring the data obtained from the questionnaires, ensuring proper categorization and coding of the responses. The data processing step prepared the dataset for subsequent analysis and interpretation.

Data analysis was conducted to derive meaningful insights and draw conclusions [12]. The analysis involved both quantitative and qualitative techniques. Quantitative analysis included statistical calculations to determine the average UMUX scores, identifying patterns, and exploring correlations between different variables. Qualitative analysis involved categorizing the qualitative feedback provided by participants to identify common themes and recurring issues. Based on the data analysis, conclusions were drawn regarding the user experience of LinkedIn. The findings were interpreted in light of the research objectives and the UMUX metric. The conclusions encompassed an assessment of the usability, user satisfaction, and overall user perception of LinkedIn as a professional networking platform.

IV. RESULTS AND DISCUSSION

A. UMUX Usability Components

The UMUX questionnaire used in this study aimed to measure users' satisfaction with the usability of LinkedIn. The

questionnaire consisted of several items designed to capture users' perceptions of efficiency, effectiveness, ease of use, and overall satisfaction with the platform [13]. Participants were asked to rate their agreement with each statement on a Likert scale, typically ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

TABLE I.
USABILITY COMPONENTS AND SCALE ITEMS

Usability Components	UMUX Questionnaire Items
Effectiveness	LinkedIn's capabilities meet my requirements
Satisfaction	Using LinkedIn is a frustating experience
Overall	LinkedIn is easy to use
Efficiency	I have to spend too much time correcting things with LinkedIn

The usability components assessed from each of the four items in UMUX are Effectiveness, Satisfaction, Overall, and Efficiency [1]. The UMUX assessment is carried out first the odd items are scored as [user score - 1] and the even items are scored as [5 - user score] then add them up then divide the sum by 16, finally multiply the quotient by 100.

B. Data Collection and Calculation

Data were collected through online questionnaires distributed to LinkedIn users. The questionnaires were designed to gather both quantitative ratings and qualitative feedback regarding users' experiences with LinkedIn. Below are the results of the questionnaire form filled out by 22 respondent.

TABLE II
QUESTIONNAIRE FILLING RESULTS

Gender	User Score			
	Q1	Q2	Q3	Q4
L	5	2	4	1
L	4	1	5	2
P	4	3	4	2
L	4	3	4	2
P	5	2	4	2
L	5	1	5	5
L	5	1	4	4
L	4	2	4	2
P	4	1	4	3
P	5	2	4	1
P	3	3	3	3
L	5	1	5	1
L	4	2	4	3

Gender	User Score			
	Q1	Q2	Q3	Q4
L	5	4	3	3
P	5	2	4	2
P	4	2	3	2
P	4	3	3	2
P	4	2	5	2
L	4	2	4	4
L	4	2	2	5
L	4	3	4	3
L	5	2	4	3

The collected data were processed by organizing and structuring the responses. Quantitative data were coded and entered into a spreadsheet, while qualitative feedback was analyzed for common themes and issues. This process ensured that the data were ready for further analysis. Below is a table containing the results of user scores that have been calculated by measuring UMUX scores.

TABLE III
USER SCORE CALCULATION RESULT

User Calculated Score				Total	Individual UMUX Score
Q1	Q2	Q3	Q4		
4	3	3	4	14	87,5
3	4	4	3	14	87,5
3	2	3	3	11	68,75
3	2	3	3	11	68,75
4	3	3	3	13	81,25
4	4	4	0	12	75
4	4	3	1	12	75
3	3	3	3	12	75
3	4	3	2	12	75
4	3	3	4	14	87,5
2	2	2	2	8	50
4	4	4	4	16	100
3	3	3	2	11	68,75
4	1	2	2	9	56,25
4	3	3	3	13	81,25
3	3	2	3	11	68,75
3	2	2	3	10	62,5
3	3	4	3	13	81,25
3	3	3	1	10	62,5
3	3	1	0	7	43,75

User Calculated Score				Total	Individual UMUX Score
Q1	*Q2*	*Q3*	*Q4*		
3	2	3	2	10	62,5
4	3	3	2	12	75
Overall Average UMUX Score					
72,4					

From the results of the calculations obtained, the overall average UMUX score is 72.4 by summing up all individual UMUX scores and dividing them by the number of respondents who filled out the UMUX survey.

C. Analysis and Evaluation of UMUX Score Results

The UMUX scores were analyzed and evaluated to gain insights into users' satisfaction with the usability of LinkedIn. The results were interpreted to evaluate the overall user experience of LinkedIn. Higher UMUX scores indicated greater user satisfaction and perceived usability, while lower scores suggested areas that may require improvement.
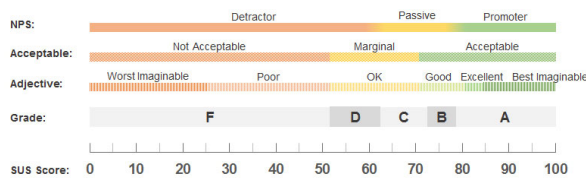

Figure 1. Interpretation of UMUX value calculation adapted from SUS

The UMUX score obtained in this research is 72.4, indicating a moderate level of user satisfaction and perceived usability of LinkedIn. This suggests that while users generally find the platform usable, there is room for improvement to enhance the overall user experience.

Based on the calculation results of the usability component values, effectiveness, which obtained a percentage score of 84.1%, indicates that users perceive LinkedIn as a useful tool for achieving their professional goals. This high effectiveness score suggests that users find LinkedIn effective in supporting their networking, job search, and professional development needs. It implies that the platform provides valuable features and functionalities that assist users in their professional endeavors.

Satisfaction and overall usability received the same percentage score of 72.7%. This suggests that users are moderately satisfied with their overall experience on LinkedIn. While users are generally content with the platform, there may be certain aspects that can be enhanced to further increase user satisfaction. Analyzing the qualitative feedback from participants may provide valuable insights into specific areas where improvements can be made.
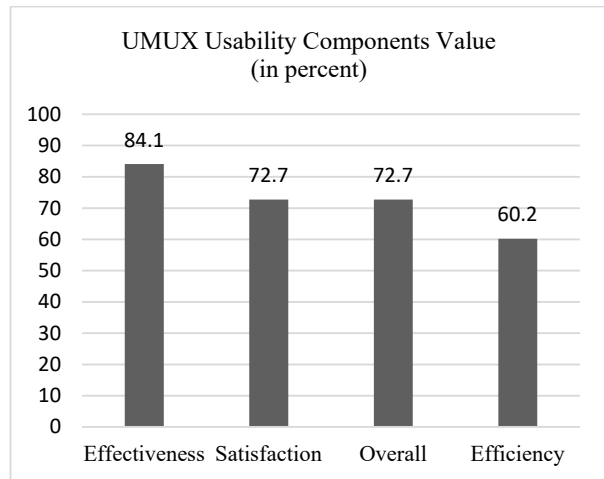

Figure 2. UMUX Usability Component Value Chart

Efficiency, on the other hand, received a lower percentage score of 60.2%. This indicates that users perceive some challenges or inefficiencies in accomplishing tasks on LinkedIn. It suggests that streamlining processes, optimizing user workflows, and improving the platform's responsiveness could contribute to enhancing user efficiency and overall satisfaction. Further analysis of specific pain points or bottlenecks experienced by users during their interactions with LinkedIn could provide valuable insights for improvement.

Based on these results, several hypotheses can be formulated for future research or improvements to the LinkedIn user experience:

1. Enhancing efficiency will lead to improved user satisfaction. By focusing on optimizing workflows, minimizing user effort, and improving the platform's responsiveness, it is hypothesized that users will find LinkedIn more efficient and, as a result, experience higher satisfaction.
2. Improving overall satisfaction will positively impact user engagement and retention. By addressing users' specific pain points and incorporating features that enhance satisfaction, it is hypothesized that users will be more engaged with the platform, leading to increased user retention and long-term usage.
3. Enhancing the usability of LinkedIn's mobile app will positively influence user experience. As mobile usage continues to grow, it is important to investigate and improve the mobile user experience of LinkedIn. Hypothesizing that a seamless and intuitive mobile experience will positively impact user satisfaction, engagement, and overall usability.

Further analysis of the qualitative feedback received from participants can provide valuable insights into specific areas of improvement and help refine these hypotheses. Future research can then validate and explore these hypotheses to drive enhancements in the user experience of LinkedIn

V. CONCLUSION

In this study, we conducted a user experience analysis of LinkedIn social media using the Usability Metric for User Experience (UMUX). Through a sequential research methodology consisting of a literature study, problem formulation, usability assessment method selection, data collection, processing, and analysis, we gained valuable insights into the usability and user satisfaction of LinkedIn.

The results of our research indicate a moderate level of user satisfaction and perceived usability of LinkedIn, as reflected by the UMUX score of 72.4. The effectiveness component received a high percentage score of 84.1%, suggesting that LinkedIn is perceived as a valuable tool for users to achieve their professional goals. However, the efficiency component received a lower score of 60.2%, indicating potential areas for improvement in streamlining processes and optimizing user workflows.

The satisfaction and overall usability components obtained the same percentage score of 72.7%, suggesting that while users are moderately satisfied with LinkedIn, there is room for enhancement to further increase user satisfaction. By analyzing the qualitative feedback provided by participants, we can identify specific areas where improvements can be made to address user pain points and optimize the overall user experience.

Based on our analysis, we have formulated hypotheses for future research and improvement initiatives. These include hypotheses related to enhancing efficiency, improving overall satisfaction to drive engagement and retention, and focusing on the usability of LinkedIn's mobile app.

It is important for LinkedIn to consider these findings and hypotheses to improve the user experience of the platform. By prioritizing enhancements in efficiency, addressing user pain points, and optimizing the mobile experience, LinkedIn can work towards increasing user satisfaction, engagement, and overall usability.

However, it is important to note that this research has some limitations. The study focused on the UMUX metric as the primary evaluation tool, and other usability metrics or methods could provide additional insights. Additionally, the research was conducted with a specific sample of LinkedIn users, and the findings may not be fully generalizable to the entire user population.

In conclusion, this research provides valuable insights into the user experience of LinkedIn and highlights areas for improvement. By considering the findings and hypotheses presented, LinkedIn can take proactive steps to enhance user satisfaction, engagement, and overall usability. Future research can build upon this study by incorporating a larger and more diverse sample, exploring additional usability metrics, and investigating the impact of implemented improvements.

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