International Journal of Multidisciplinary Research and Development
www.allsubjectjournal.com
ISSN Online: 2349-4182 ISSN Print: 2349-5979
Received: 20-02-2026, Accepted: 23-03-2026, Published: 07-04-2026
Volume 13, Issue 2, 2026, Page No. 116-118

A comparative study of good and bad user interface design in web applications

Deepikaa D[1*], Kamesh P[2]
[1] Assistant Professor, Information System Management, Annai Violet Arts & Science College, Menambedu, Ambattur, Chennai, Tamil Nadu, India
[2] Information System Management, Annai Violet Arts & Science College, Menambedu, Ambattur, Chennai, Tamil Nadu, India

Abstract
Web apps are now an essential component of daily activities including social networking, online shopping, banking, and education in today's digital world. As technology advances, consumer pleasure, engagement, and confidence in online platforms are significantly influenced by the quality of the UI (user interface) design. Modular design, minimal layouts, responsive interfaces, usability, and the use of AI for customised user experiences are the current developments in web development. This study compares effective and ineffective web application user interface designs and examines how design quality affects usability and user preference. Two websites were created for the study using a comparative research design, one with good user interface principles and the other with a subpar design. A systematic questionnaire was used to gather data from 100 respondents, and percentage analysis was used for analysis. The results show that most users greatly favour interfaces that are aesthetically pleasing, well-organised, and simple to use. While sloppy interfaces lower interest and engagement, well-designed interfaces greatly increase user pleasure, usability, and confidence in digital platforms. The report emphasises that in order to improve the user experience & business performance, modern web development must give priority to user-centred design and current UI/UX trends.

Keywords: User interface (UI) design, user experience (UX), web development, responsive web design, usability, digital user experience, web application design, ui/ux trends

Introduction
Websites and web applications have become an essential part of our everyday lives in the current digital era. We depend on web platforms for nearly everything, including online shopping, bill payment, ticket booking, online banking, online education, social media communication to e- commerce. Because of our growing reliance on the internet, a website's appearance and functionality are now just as crucial as the services it offers.
Web development is now one of the most significant areas of technology due to the quick expansion of web applications. Websites were very basic at first. There were few ways for users to interact with them, and they were primarily static pages that showed text and images. Websites were primarily static pages with text and images in their early stages. Although users had very few options for interaction, they could read information. Websites started to become more dynamic as faster internet connections and sophisticated programming technologies became available.

Significance of the Study
1. This study highlights the importance of user interface design in improving user experience in web applications.
2. It helps web designers understand how UI quality influences user preference and satisfaction.
3. The findings can assist businesses in improving website design to increase customer engagement.
4. The study provides practical comparison between good and bad UI design.
5. It contributes to academic research in the field of user interface and user experience design.

Statement of the Problem
In recent years, web applications have become an essential part of daily life and business operations. Although many websites offer advanced features and functionality, users often face difficulties due to poor user interface design. Confusing layouts, improper navigation, inconsistent design elements, and unattractive visual presentation can negatively affect user experience.
As a result, users may lose interest, develop distrust, or leave the website, which ultimately impacts business performance. Therefore, it becomes important to examine how differences in user interface design specifically good and bad UI influence user preference and experience in web applications.

Objective of the Study
1. To compare the features of Good UI and Bad UI designs.
2. To analyze user preferences between well-designed and poorly designed interfaces.
3. To evaluate how UI design influences user satisfaction and trust.
4. To determine the impact of UI design on business performance and customer engagement.

Limitation of the Study
This study is limited to a small sample size and focuses only on selected respondents. The comparison was made using only two sample websites, which may not represent all types of web applications. User preferences may vary based on age, experience, and personal interest. Time constraints and limited resources also restricted deeper experimental analysis.

Research Methodology
The study adopted a comparative research design to analyze the impact of Good and Bad UI design. Two websites were developed — one with proper UI principles and another with poor design structure. Data was collected through a structured questionnaire distributed to respondents. The collected data was analyzed using percentage analysis and simple statistical tools to interpret user preferences and opinions.

Sample Design
The sample for the study was selected using the convenience sampling method. A total of 100 respondents participated in the research. The respondents included students and general internet users who regularly use web applications. The sample was chosen to understand user preferences and opinions regarding good and bad user interface design.

Statistical Tools
Percentage analysis was used as the statistical tool to analyze and interpret the collected data.

Review of Literature
Paneru *et al.* (2024): Exploring the Nexus of User Interface (UI) and User Experience (UX). This study investigates the relationship between UI and UX, highlighting how modern interface trends affect customer satisfaction and interaction quality in digital products. It emphasizes that UI and UX Ytogether influence overall user experience.

Sidapara (2025): UI/UX Design: Principles, Trends, and Best PracticesThis article reviews key design principles and emerging trends in UI/UX, explaining how usability, accessibility, and visual design impact user engagement and satisfaction in contemporary digital systems.

Huma *et al.* (2025): Exploring the Influence of UI/UX Design on Engagement and Retention. This research explores how visual layout, navigation flow, and interactive feedback elements of UI/UX increase audience engagement and retention, providing empirical evidence for design decisions in digital platforms.

Aienobe & Iqbal (2025): Responsive Web Design for Enhanced UX and UI

This paper focuses on responsive web design's role in optimizing UI and UX, especially for e- commerce, showing how adaptable interfaces improve user engagement across different devices.

Table 1: Table Showing Age of Respondents

S.no	Age group	Respondents	Respondents
1	18-22	40	40%
2	23-26	35	35%
3	27-30	15	15%
4	Above 30	10	10%
	Total	100	100%

Interpretation:
The above table shows that the majority of respondents belong to the age group of 18–22 years. This indicates that young users actively participated in the study. Since this age group frequently uses web applications, their opinions are relevant for analyzing user interface preferences. The data reflects the views of active digital users.

Table 2: Table showing preference between good UI and bad UI

S.no	Preference	Respondents	Percentage
1	Good UI	82	82%
2	Bad UI	18	18%
	Total	100	100%

Interpretation
The above table shows that most respondents preferred the Good UI website compared to the Bad UI website. A significant percentage of users selected the well-designed interface. This clearly indicates that users are more attracted to clean, organized, and visually appealing layouts. The result proves that UI quality influences user choice.

Table 3: Table Showing **Ease of Use**

S.no	Which website was easier to use	Respondents	Percentage
1	Good UI	85	85%
2	Bad UI	15	15%
		100	100%

Interpretation
The above table shows that the majority of respondents found the Good UI website easier to use and navigate. Only a small percentage reported difficulty with the Bad UI design. This suggests that proper layout, clear buttons, and structured navigation improve usability.

Table 3: Table Showing user opinion on good vs bad UI

S.no	Statement	SA	A	N	DA	SD	T
1	Good UI website is visually appealing	48	32	10	6	4	100
2	Good UI website is easy to navigate	52	30	8	6	4	100
3	Buttons and layout are clear in Good UI	50	28	12	6	4	100
4	Bad UI website is confusing	45	30	10	8	7	100
5	I would trust Good UI website for business	55	25	10	6	4	100
6	Poor UI reduces my interest in using a website	49	29	12	6	4	100
7	UI design influences my decision to use a website	53	27	9	6	5	100
8	I would recommend the Good UI website to others	51	28	11	6	4	100

Interpretation
The above table shows that most respondents either strongly agree or agree that good UI design improves trust, usability, and satisfaction. Very few respondents disagreed with the statements. This demonstrates that users strongly believe interface design affects their interaction with web applications. The findings highlight the importance of UI in business success.

Findings
1. Majority of respondents (82%) preferred the website with good UI design.
2. 85% of users found the good UI website easier to navigate and understand.

3. 88% of respondents felt the good UI website appeared more trustworthy for business purposes.
4. Only 18% preferred the poorly designed UI.
5. The results clearly indicate that UI quality significantly influences user preference and perception.

Suggestions

Based on the findings of the study, it is suggested that businesses should focus more on creating user- friendly and visually appealing interfaces. Proper use of colors, typography, and navigation structure can significantly improve user engagement. Companies should also conduct usability testing before launching websites to ensure better performance. A well-designed UI not only improves user satisfaction but also increases customer trust and business growth.

Conclusion

The comparative study clearly shows that users strongly prefer web applications with good user interface design. A well-structured, visually appealing, and easy-to-use interface improves user experience and builds trust. Therefore, user interface design plays a critical role in the success of web applications and business growth.

References

1. Amelia M, Sari R, Apriadi. User interface and user experience design of a web-based personnel application. Journal of Technology & Applied Sciences,2026:1(1):33–41.
2. Grigera J, Espada JP, Rossi G. AI in user interface design and evaluation. IT Professional,2023:25(2):20–22.
3. Ahmad Faudzi M, Che Cob Z, Omar R, Sharudin SA, Ghazali M. Investigating user interface design frameworks of current applications: A systematic review. Education Sciences,2023:13(1):94.
4. Arora L, Choudhary A, Bhatt M, Kaliappan J, Srinivasan K. A comprehensive review on multi-sensory interfaces and UX design. Frontiers in Public Health,2024:12:1357160.
5. Abdellrazik TA, Abodonia SH, Abdelwahab AH. User interface design trends for modern applications. International Design Journal,2024:14(3):337–344.
6. Okonkwo C. Assessment of user experience design trends in applications. Journal of Technology and Systems,2024:6(5):29–41.
7. Faudzi MA, Che Cob Z, Ghazali M, Omar R. User interface design in learning applications: Measuring cognitive load. Heliyon,2024:10(18):e37494.
8. Pushparani MK, Katagi B, Jain NG, Sudeep PM. UI/UX design in the digital era: Trends and challenges. International Research Journal on Advanced Engineering Hub,2025:3(5):2341–2346.
9. Abdallah S, *et al*. Towards AI-driven user interface design for web applications. Procedia Computer Science,2024:237:179–186.
10. Krajcovic M, Demcak P, Kuric E. Usability testing and evaluation methods in interface design. Journal of Systems and Software,2025:226:112446.