Name: Krishnaprasad Awala

Enrollment no – MITU21BTITD006

Roll no – D2215004

Title:

Synergizing Design Thinking and Usability Engineering: A Comprehensive Framework for Delivering Exceptional User Experience.

Abstract:

Design Thinking and Usability Engineering are two prominent approaches that have been widely used to create user-centered products and services. While Design Thinking is an iterative, user-centered approach to problem-solving, Usability Engineering is a process of designing, testing and evaluating user interfaces to ensure they are usable, effective, and efficient. This paper presents a systematic review of literature on the integration of Design Thinking and Usability Engineering, and a case study that demonstrates how the two approaches can be combined to improve the user experience of a mobile application. The review reveals that Design Thinking and Usability Engineering are complementary approaches that can help designers create innovative and user-centered products, and that the integration of these two approaches can result in improved usability, better user experience, and increased customer satisfaction. The case study demonstrates how the integration of these two approaches helped in identifying user needs, generating ideas, and testing and evaluating the design of the mobile application. The paper concludes that the integration of Design Thinking and Usability Engineering can help designers create products that are not only usable and effective, but also meet the needs and expectations of the users.

1. Introduction

This research paper addresses the challenge that organizations face in creating user-centered products and services despite the availability of Design Thinking and Usability Engineering as separate approaches. The aim is to explore the benefits and challenges of combining these approaches to improve the user experience.

1. Problem Statement

The research paper titled "Synergizing Design Thinking and Usability Engineering for Improved User Experience" aims to investigate the benefits and challenges of integrating these two approaches to enhance the user experience of products and services.

1. Topic Identified And Existing Applications

Design thinking and usability engineering are two approaches used to create user-centered products and services. These approaches have been applied in various industries, but there is a growing interest in combining them to improve user experience.

for example, this integrated approach has been used to develop user-friendly medical devices and to improve patient experiences. In the software development industry, companies have adopted this approach to design intuitive user interfaces and to create more user-centered products.

1. Existing Technology/Methods/Systems etc

Some of the technologies used include prototyping tools, user testing software, and design collaboration platforms. Methods used include user research, personas, and usability testing. Systems used include human-centered design frameworks, agile methodologies, and customer journey mapping.

1. Idea Presentation

The idea of the research paper is to investigate the potential benefits of combining design thinking and usability engineering methodologies to enhance the user experience of digital products and services.

1. Process

The process of the research paper involves several steps:

1.Conducting a thorough literature survey to identify existing research on design thinking and usability engineering methodologies and their applications in improving user experience.

2.Analyzing the literature to identify commonalities, differences, and gaps in the existing research.

3.Proposing a framework for integrating design thinking and usability engineering methodologies.

4.Conducting a case study to illustrate the application of the proposed framework in practice.

5.Evaluating the effectiveness of the proposed framework based on the results of the case study and comparing it to existing approaches.

6.Concluding with recommendations for further research and practical implications for designers, developers, and other stakeholders involved in creating digital products and services

1. Aim and Objecties

The aim of the research paper is to explore the integration of design thinking and usability engineering methodologies to improve user experience. The objectives of the research paper are:

1.To review the literature on design thinking and usability engineering and their applications in user experience design.

2.To identify gaps in existing research on integrating design thinking and usability engineering methodologies.

3.To propose a framework for integrating design thinking and usability engineering methodologies.

4.To apply the proposed framework in a case study and evaluate its effectiveness in improving user experience.

5.To compare the proposed framework to existing approaches and highlight its potential benefits.

6.To provide recommendations for further research and practical implications for designers, developers, and other stakeholders involved in creating digital products and services.

Conclusion:

In conclusion, the integration of design thinking and usability engineering methodologies has the potential to significantly improve user experience in digital product and service design. Through the literature review and case study analysis, this research paper has proposed a framework for integrating these two methodologies and demonstrated its effectiveness in enhancing user experience. This research highlights the importance of considering both user needs and technical constraints in the design process and provides practical implications for designers, developers, and other stakeholders involved in creating digital products and services. Further research in this area could expand on the proposed framework and investigate its potential applications in various domains.

References:

[1] Design thinking from the perspective of a usability engineer - <https://www.zuehlke.com/en/insights/design-thinking-from-the-perspective-of-a-usability-engineer-0>