Crafting User-Centric Innovation: Enhancing Focus on Emotional Support

Nishtha. R, Srishti Manipal Institue of Art, Design and Technology(2023)

ABSTRACT

The emotional fabric of user experiences is deeply woven into the modern digital landscape, especially when it comes to critical applications. This study sets out to investigate in depth, revealing the complex relationships that exist between technology and human emotions. Applications that are considered essential, like those that facilitate social interactions, messaging, and email, have a significant impact on how people experience their daily lives. The main goal of the study is to improve these experiences by offering users support and interactions at the exact moment they need them, not only in terms of functionality and context but also in terms of emotional resonance.

The theory of emotion regulation, which provides a conceptual framework explaining how people exercise control over their emotions, is at the centre of this investigation. The compass for comprehending and incorporating emotional dynamics into user interface design is Gross's (1998) classification of five main strategies for emotion regulation: situation selection, cognitive modification, attention regulation, action modulation, and physiological modulation.

The literature review makes its way through ground-breaking publications that lay the groundwork for comprehending the complex dance that occurs between user emotions and technology. Recent studies by Sundar (2018) and Kim et al. (2021) expand on Reeves and Nass' Media Equation theory by exploring the emotional effects of digital interfaces beyond simple interaction patterns. These researchers have investigated the emotional contagion effect, which reveals a dynamic interplay where users experience the emotions expressed by the interface as well as react to it, creating a relationship that benefits both parties.

The beneficial effects of emotions on user engagement are emphasised by Deng and Poole (2010), who also stress the significance of preserving a positive emotional state for prolonged interaction. This investigation is furthered by Diefenbach and Hassenzahl (2011), who show how emotionally fulfilling interactions enhance user satisfaction in general and create long-lasting relationships with applications.

Tondreau et al. (2015) reiterate Norman's support for anticipatory design and adaptive designs in "Living with Complexity". They complement anticipatory design concepts, which seamlessly mesh with the study's futuristic focus by attending to both immediate user needs and long-term requirements.
Tractinsky (2000) sheds light on the relationship between aesthetics, functionality, and usability with his theory of the aesthetic usability effect. According to the research, visually appealing

designs have a major positive influence on user satisfaction in addition to improving perceived usability. This emphasises how important aesthetics are as a fundamental part of the entire design process that affects how users perceive and interact with applications.

Picard (1997) offers valuable perspectives on the incorporation of emotional intelligence in technology through his seminal work on affective computing. This discussion is continued by Kapoor et al. (2018), who investigate the useful uses of emotion-aware systems in real-world scenarios. This implies that in order to enable more personalised and empathic interactions, user interfaces of the future will need to be able to identify and react to user emotions.

The study highlights a number of issues that are common to the core applications that are currently in use and exposes gaps that prevent emotions from being optimally integrated into user interactions. A major obstacle to a good user experience is the absence of emotionally intelligent interfaces, which makes it difficult for many core applications to build emotional connections with users.

Many times, the adaptive mechanisms needed to manage negative emotions like frustration or anger are absent from current core applications. This shortcoming may result in decreased user engagement and a reluctance to use the interface when going through difficult emotional times.

Usability and functionality are prioritised over the dynamic and ever-changing nature of user emotions in conventional user interface design methods. Because current designs are static, they cannot adjust to the various emotional states and contexts that users interact with core applications in.

Core applications today frequently lack proactive design strategies, which are essential for predicting future user behaviours and technological advancements. Applications run the risk of becoming out of date and unable to adapt to the changing context of user-technology interactions without anticipatory design elements.

The research methodology uses a phased structure and an objective approach that is research-intensive. This method, which painstakingly collected nearly 120 answers, seeks to reveal the intricate network of user requirements, objectives, and aspirations. The study focuses on interpreting the subtle nuances of the user mindset, which goes beyond simply understanding how technology is changing.

The study uses a multimodal approach to data collection, including surveys intended to capture a variety of perspectives. After that, the answers are examined by hand and divided into a number of categories, including social media, ride-hailing services, official websites, e-commerce, and food delivery.

Sentiment analysis was incorporated into the framework, and a two-tiered analysis was performed on each category's responses. First, feelings are identified and categorised within each domain. Second, the sentiment of the responses is systematically ranked from high to low using an attribute-based scaling method.

This sentiment-driven approach offers a comprehensive understanding of user preferences across multiple categories by facilitating a nuanced exploration of the emotional undercurrents within each domain. The data can be more fully interpreted by comparing the extracted sentiments with attribute-based scaling, which provides insights into the emotional environments that underpin user interactions with various tech-related domains.

The study's conclusion acts as a compass, shedding light on the present circumstances and indicating future directions. Through the identification of latent opportunities, the research provides a roadmap for future endeavours, urging exploration and development in the uncharted territories that lie ahead.

The section on analysis and interpretation breaks down the characteristics of different domains to provide insight into important aspects such as user satisfaction, ease of navigation, and addictive tendencies. The study's conclusion highlights how intricate user interactions can be and how crucial it is to plan and execute functionality with platform specificity in mind.

In conclusion, this study deconstructs the complex relationship that exists between user emotions and technology, and it suggests a future in which personalised, user-centered design will be paramount in digital experiences. In addition to pointing out problems with the core applications as they stand, the study provides a methodology for determining user attitudes and preferences in a variety of domains. This study adds to the continuing conversation about the changing nature of user-technology interactions by providing a roadmap for companies and designers to handle the complexities of emotions in the digital sphere. It can be used as a compass for future endeavours.

The study's long-term goal is to use sentiment analysis to create a fresh, approachable framework. This framework aims to quickly and easily highlight key features of any platform, making it a useful tool for companies looking to enhance their offerings. Similar to a goldmine, the collected data will fuel a continuous development cycle that will help businesses stay ahead of the curve by foreseeing future needs and satisfying current user expectations.