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User Perspectives and Usability Insights in a Self-Service Portal

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ABSTRACT

In the era of digital transformation, the need for more efficient self-service technologies has increased, particularly after the COVID-19 pandemic, which highlighted the importance of reducing physical interactions. Although there is research on commercial self-service technologies, there is a shortage in studies focusing on self-service portals designed exclusively for internal use within an academic organizational environment. This study aims to address this gap by examining the usability of a self-service portal in a university in Sweden. The study adopts a mixed-methods approach, incorporating data collection techniques such as cognitive walkthrough, usability testing and semi-structured interviews. In addition, a system usability scale and interaction log file data were used to understand user behavior and satisfaction. Findings reveal important factors influencing the user experience, which are further materialized into design guidelines aiming to enhance the usability of the self-service portals.

KEYWORDS

Digital Transformation, Self-Service Portal (SSP), Usability Testing, User Experience (UX), System Usability Scale (SUS), Cognitive Walkthrough, Mixed Method, Empirical Research, Design Guidelines

INTRODUCTION

The digital landscape has undergone significant changes in recent years, with the COVID-19 pandemic further accelerating this shift. According to Fitzpatrick et al. (2020), the pandemic prompted many organizations to expedite their digital transformation efforts to avoid falling behind competitively. This global crisis has pushed organizations and individuals toward digital transformation, emphasizing the need for self-service portals (SSPs) as essential tools for remote engagement (Datta & Nwankpa, 2021).

As organizations rushed to adapt to the new digital reality, the importance of user-friendly SSPs became evident. These portals allow users to access services and perform tasks independently, minimizing the need for in-person interactions (Meuter et al., 2000). With the surge in demand for digital services during the pandemic, SSPs played a crucial role in facilitating remote transactions and interactions (Datta & Nwankpa, 2021).

Because usability encompasses effectiveness, efficiency, and satisfaction, it plays an important role in providing a good user experience (UX; International Organization for Standardization; Lamberz et al., 2018). Speicher (2015) described usability as a subset of usability quality and identifies

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user-friendliness as a critical factor in determining a website's usability. As a result, one of the primary strategic goals for SSP stakeholders should be to comprehend and evaluate SSP usability.

Despite the substantial research on digital tools' usability, especially in e-commerce, there is a gap when it comes to employee-focused platforms like SSPs (Kazemi et al., 2022; Scherer et al., 2015). The urgency for SSPs that cater to nontechnical users has become more evident post-pandemic, highlighting a research need for platforms within a work environment, considering their unique needs and expectations.

The significance of this research lies in its aim to refine SSP usability to accommodate a diverse range of users, thereby advancing organizational productivity and user satisfaction (Considine & Cormican, 2016; Hacker et al., 2020). Through an iterative design process informed by user feedback and usability testing, we sought in this paper to contribute to the ongoing dialogue in informatics on enhancing digital platforms' effectiveness. Our research investigating an SSP of a Swedish university examined the factors that can influence the UX and perception of an SSP. Specifically, we pose the following research questions (RQs):

- RQ1: What are the factors that can influence the UX and perception of the SSP?
- RQ2: What are the key determinants of the utilization of an SSP?
- RQ3: What are the user preferences and suggestions for improving the design of an SSP?

RELATED WORK

Scherer et al. (2015) stressed the importance of a user-centric approach in enhancing user satisfaction and productivity. Usability is measured through methodologies such as expert analysis and user testing, in line with principles proposed by Ardito et al. (2005) and Shackel (2009). These methodologies aim to comprehend nuanced factors influencing system navigation and use. Albert and Tullis (2013) highlighted the significance of usability assessment in providing user task support without undue complexity, thereby enhancing satisfaction with technology. Measuring UX metrics is crucial for evaluating product usability and ensuring user satisfaction; Albert and Tullis (2013) offered a comprehensive set of metrics that illuminate different facets of usability. Key metrics, such as task success, user satisfaction, and errors, help assess effectiveness, efficiency, and user satisfaction. Factors influencing website usability, beyond design and UX, encompass previous research limitations and various design types impacting user satisfaction.

Venkatesh (2000) highlighted the impact of increased user contact and experience on satisfaction, emphasizing the role of usability and perceived self-efficacy. Benaida (2022) suggested that the design of SSPs plays a critical role in their efficacy and user preference. Kumar and Telang (2011) highlighted that SSPs offer distinct value compared with other service channels, especially by reducing the reliance on these alternate channels. They emphasized that the effectiveness of SSPs in fulfilling user tasks hinges on their design, suggesting that thoughtful design is crucial for SSPs to function optimally and provide maximum value to users.

UX goes beyond just making technology easy to use, however. It also includes the emotional, aesthetic, and experiential aspects of interaction with technology. Benaida (2022) and Hassenzahl (2013) addressed the creation of meaningful interactions that deeply resonate with users, while Almeida and Monteiro (2017) and Hornbæk and Hertzum (2017) explored how UX design and a positive UX are crucial in driving technology acceptance. Lazar et al. (2017) advocated for a human computer interaction approach that incorporates findings from various disciplines to produce technology that is practical, satisfying, and attuned to user preferences.

In the context of SSP design, Manko (2022) emphasized the importance of prioritizing the needs of regular users who represent the general audience. This approach highlighted the principle that SSPs should be fundamentally user-friendly, catering to a broad user base without specialized needs.