

Usability Evaluation of a Mobile Application Directory for People with Disabilities (OKU): Assessing Factors for Successful Navigation

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Submitted: 09/01/2026; Accepted: 19/01/2026; Published: 20/01/2026

Abstract—People with disabilities (PWDs) continue to face critical underrepresentation and persistent usability barriers across digital platforms, limiting their opportunities for empowerment, inclusion, and meaningful self-expression. Addressing this gap requires digital tools that not only meet accessibility standards but also amplify the voices and achievements of PWDs. This study presents a usability evaluation of OKUd, a mobile storytelling application developed to promote digital inclusion and highlight success stories within the disability community. The primary objective of the project was to assess the application's utility, usability, and user satisfaction to determine its readiness for full-scale deployment. A quantitative research design was employed, using an adapted version of the USE (usefulness, ease of use, satisfaction). Questionnaire to evaluate user experiences with the 80% functional prototype. After completing guided hands-on interactions with the app, 30 valid responses were collected from both PWD and non-PWD participants. The results indicate strong agreement across all three evaluated dimensions, demonstrating that users found OKUd highly useful, easy to use, and satisfying. These findings validate the effectiveness of the app's core design, including its accessible interface and intuitive storytelling workflow. The positive outcomes confirm that OKUd is well-positioned for final development refinement and underscore its potential significance as an inclusive digital platform that addresses representation gaps, enhances user engagement, and contributes to broader digital accessibility efforts. By centering the lived experiences of PWDs, OKUd demonstrates how purposeful usability-driven design can advance equity and transform the digital participation landscape.

Keywords: Usability Evaluation; People with Disabilities; Mobile Application; Successful Directory

1. INTRODUCTION

Despite the rapid growth of digital platforms, many marginalized groups, especially people with disabilities (PWDs), still face significant challenges in accessing and using these technologies effectively. Many platforms lack accessible design, user-friendly interfaces, and content that reflects the experiences of PWDs, which limits their ability to participate fully, express themselves, and gain recognition (Henry et al., 2014; W3C, 2018). While digital technologies have the potential to empower marginalized communities and amplify their voices, mainstream platforms often fail to meet the specific needs of PWDs, resulting in ongoing barriers to inclusion, engagement, and visibility (WHO, 2011).

In response to these challenges, the OKUd mobile application was developed as a viable, accessibility-driven solution using the Adalo platform. The application functions as a mobile directory that allows PWDs to share inspirational success stories, discover achievements within their community, and promote awareness of their contributions. OKUd was intentionally designed to combine an intuitive interface with practical features, including a home screen with navigation icons, success story listings, an upload form for new submissions, and a chat and text system for user interaction. Each interface was developed with accessibility principles in mind, incorporating mid-to-large touch targets, legible fonts, and a simplified layout to enhance usability and facilitate engagement across diverse user groups. These design considerations aim to reduce usability barriers, streamline content creation, and support the development of an inclusive digital community where PWDs can actively participate and connect.

The persistent lack of digital resources highlighting PWD achievements and the inaccessibility of mainstream social platforms served as key motivations for the development of OKUd. The application seeks not only to meet basic accessibility standards but also to empower users by enabling storytelling, peer engagement, and community recognition. To evaluate its effectiveness, a summative usability study was conducted, combining quantitative surveys and unmoderated usability testing, guided by the USE framework (Lund, 2001). Participants were asked to engage directly with an 80% functional prototype while completing a structured questionnaire measuring three critical dimensions: usefulness, ease of use, and user satisfaction. This approach ensured that the evaluation captured authentic user experiences and provided actionable insights for iterative design refinement (Nielsen & Molich, 1990).

This study therefore contributes empirical evidence on the capacity of a purposefully designed mobile application to address digital exclusion among PWDs. By centering the experiences and needs of PWDs, OKUd demonstrates how accessibility-driven, user-centered design can foster empowerment, facilitate community building, and promote sustained engagement in digital spaces. The findings presented herein offer valuable guidance for the development of inclusive digital tools and highlight the importance of integrating usability, accessibility, and user satisfaction into the design of platforms aimed at marginalized populations.

2. RESEARCH METHOD

The OKUd mobile application was developed as a viable solution to address the persistent underrepresentation and usability barriers experienced by people with disabilities, with the prototype implemented using the Adalo platform. The

application incorporates an intuitive home screen with navigation icons, a success story listing to highlight user achievements, an upload form for submitting new stories, and a chat and text system to facilitate user interaction. Figure 1 presents screen captures of the OKUd interfaces, illustrating the structure and functionality of the application. Each screen was designed with accessibility considerations, including mid-to-large touch targets, legible fonts, and a simplified layout, to optimize usability for all users (Nielsen, 1994; Petrie & Bevan, 2009). These design features were strategically integrated to support efficient content creation, enhance storytelling experiences, and promote community engagement, ensuring that users can navigate the platform effectively, share experiences, and interact with others. By combining accessibility-focused design with interactive functionalities, OKUd seeks to empower people with disabilities and provide a practical, user-centered tool that advances digital inclusion and visibility.

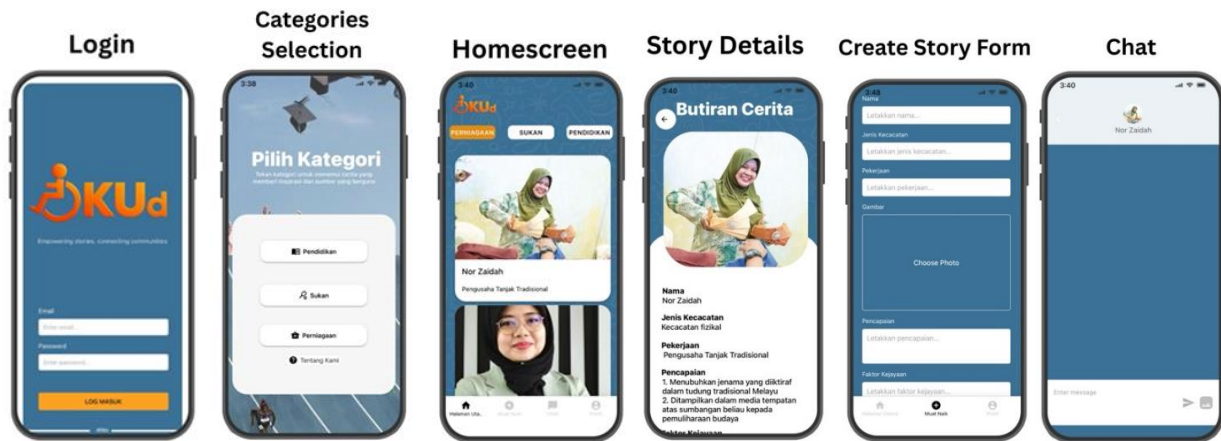


Figure 1. User Interfaces of OKUd

The evaluation of OKUd was conducted using a summative methodology that integrated a quantitative survey administered via Google Forms with unmoderated usability testing, enabling participants to engage directly with the application while completing a structured questionnaire based on the USE framework (Lund, 2001; Yussop et al., 2019; Brooke, 1996; McLeod, 2018). The study followed a systematic five-phase process to ensure methodological rigor. In the Conceptual Phase, the USE framework was adopted, and research objectives and questions were defined. The Design and Planning Phase involved adapting the survey instrument, constructing the Google Form, and providing detailed guidelines to facilitate consistent and accurate participation. During the Empirical Phase, the survey was disseminated through WhatsApp and social media channels, yielding 35 responses over six days, with participants performing predefined tasks to validate active interaction with the prototype. Figure 2 presents respondents engaging with the OKUd application during the evaluation phase. In the Analytic Phase, the dataset was cleaned, invalid responses were excluded, and descriptive statistical analyses, including mode computation, were conducted to evaluate three key dimensions: Usefulness (productivity, goal achievement, and relevance), Ease of Use (learnability, interaction flow, and design intuitiveness), and Satisfaction (user enjoyment, willingness to reuse, and confidence in system functionality), all measured on a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree) (Braun & Clarke, 2006). Demographic information and task validation items were included to ensure authentic engagement. Finally, in the Dissemination Phase, the findings were interpreted to guide iterative design improvements, providing evidence-based insights to enhance the usability, accessibility, and overall user experience of OKUd (Norman, 2013; Story et al., 1998).

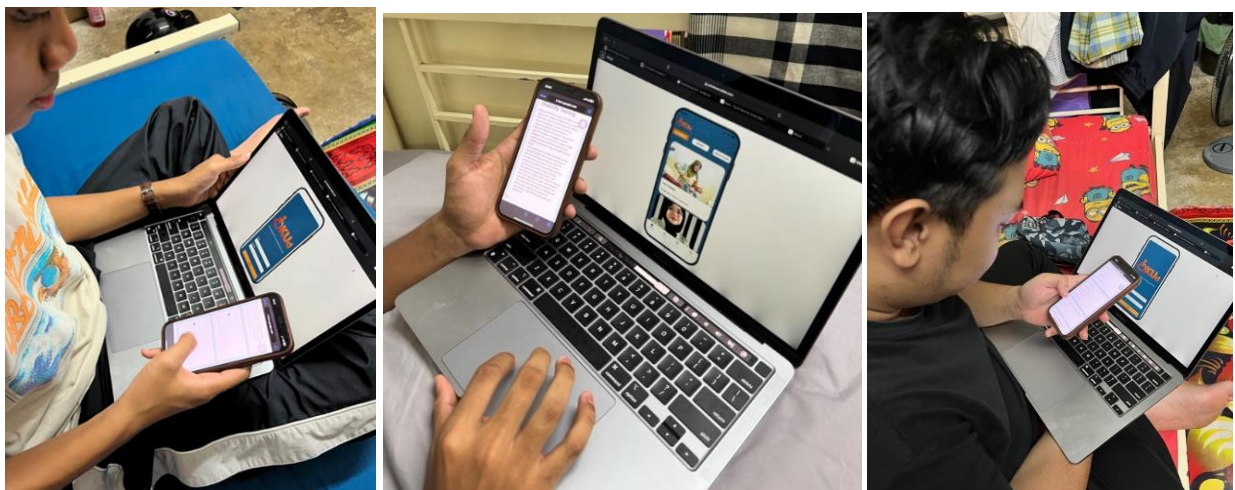


Figure 2. Respondents Interacting with OKUd During the Evaluation Phase

3. RESULTS AND DISCUSSION

3.1 Result

Among the 30 respondents who participated in the usability evaluation, 16 individuals (53.3%) were male and 14 (46.7%) were female, indicating a relatively balanced gender distribution with a marginal predominance of male participants. All respondents fell within the 21 to 25-year age range, representing a cohort of digitally proficient young adults who align closely with the primary target users of mobile storytelling applications. The concentration of participants within this specific age group enhances the internal validity of the findings by reducing variability associated with generational differences in technology adoption, digital literacy (Lazar, et al., 2015), and interaction behavior. As such, the demographic composition of the sample provides a focused and analytically coherent basis for interpreting usability outcomes, particularly regarding interface design (Schmutz et al., 2017), navigation preferences, and accessibility expectations among young adult users who are well positioned to engage with and advocate for inclusive digital platforms.

Figure 3 presents the Usefulness results from the summative evaluation, demonstrating that OKUd effectively supports users in achieving their goals. A substantial majority of respondents (96.7%) agreed or strongly agreed that the application enhanced productivity, was useful, and simplified task completion, while 93.3% reported that it saved time and met their needs. These outcomes confirm that OKUd’s design successfully facilitates content creation and storytelling, providing an intuitive and accessible interface that empowers people with disabilities and reinforces the platform’s intended purpose.

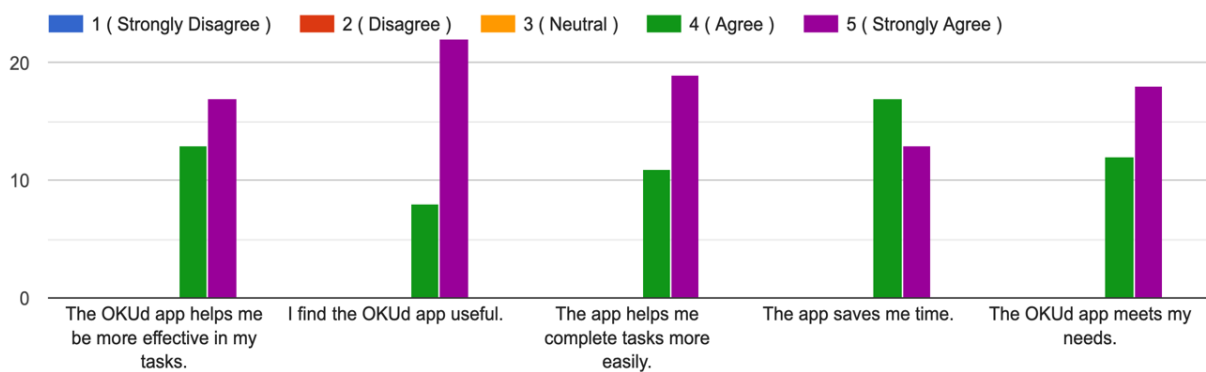


Figure 3. Data Collection on the Usability Aspect of Usefulness

Figure 4 illustrates the Ease of Use results, showing that all 30 respondents (100%) found OKUd user-friendly, easy to navigate, and requiring minimal steps to complete tasks. A small portion (16.7%) were neutral about using the app without instructions, suggesting that brief onboarding or tooltips could further support independent use. Additionally, 96.7% of users agreed that the interface was consistent and logically structured. Overall, these findings demonstrate that OKUd provides an intuitive and highly usable experience, with only minor refinements needed to maximize accessibility and ease of use.

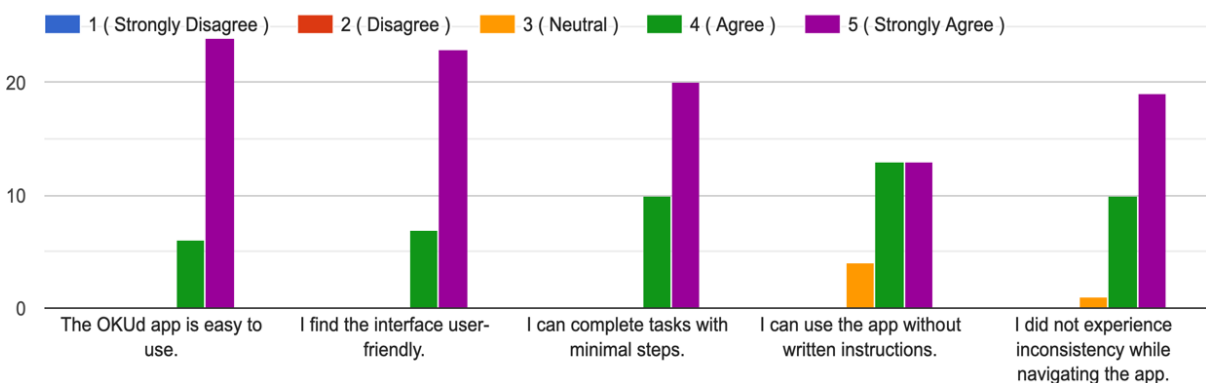


Figure 4. Data Collection on the Usability Aspect of Ease of Use

As illustrated in Figure 5, user satisfaction with OKUd was consistently high across all five measured items. All participants (100%) reported being satisfied with the application, finding it enjoyable to use, and appreciating its overall design quality (Zulkifli et al., 2021; Newell et al., 2011). Notably, 96.7% indicated that they would recommend the app to others, reflecting strong endorsement and perceived value. A small proportion of respondents (6.7%) selected a neutral response regarding whether the system operated exactly as expected, suggesting minor opportunities for refinement in system responsiveness or feedback mechanisms. Overall, the satisfaction outcomes underscore the application’s

effectiveness in eliciting a positive user experience, a critical factor for sustained engagement and the long-term growth of an inclusive storytelling community.

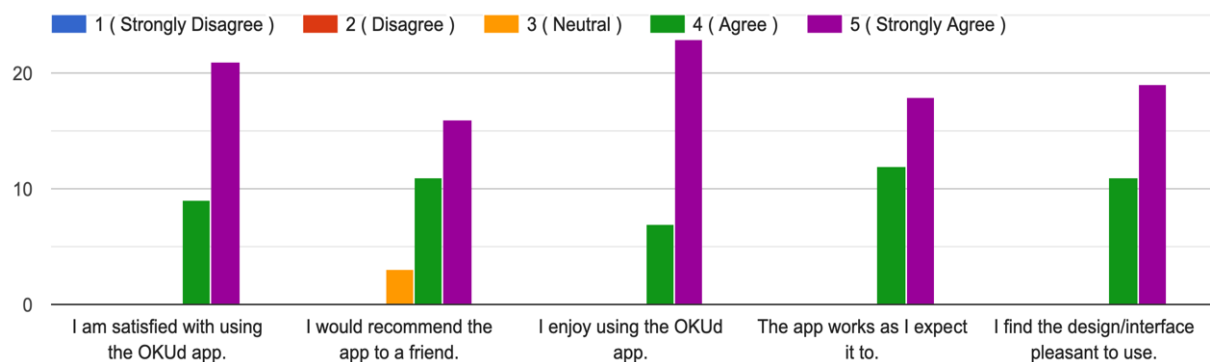


Figure 5. Data collection on the Usability Aspect of User's Satisfaction

3.2 Discussion

The respondents' demographic profile provides a focused basis for interpreting OKUd's usability outcomes. The balanced gender distribution and the concentration of participants aged 21–25 align well with the application's target users—digitally proficient young adults. This homogeneity reduces variability related to generational differences and strengthens the internal validity of the findings, allowing the results to more accurately reflect system usability rather than demographic effects (Lazar et al., 2015).

The usefulness results (Figure 3) indicate that OKUd effectively achieves its functional goals. More than 93% of respondents agreed that the application enhanced productivity, simplified tasks, saved time, and met their needs. These outcomes suggest that OKUd supports efficient, goal-oriented interaction and successfully empowers users, including people with disabilities, in digital storytelling activities, consistent with established usability principles emphasizing perceived usefulness as a key adoption factor.

Ease of use findings (Figure 4) further confirm OKUd's strong usability performance. All respondents reported that the application was user-friendly, easy to navigate, and required minimal steps to complete tasks, supported by high ratings for interface consistency. The small proportion of neutral responses regarding use without instructions suggests that brief onboarding support could further enhance learnability, a core dimension of usability (Schmutz et al., 2017).

User satisfaction results (Figure 5) demonstrate consistently positive user experiences. Universal satisfaction and enjoyment, together with a high intention to recommend the application, indicate strong user acceptance and perceived value. Minor neutral responses related to system behavior suggest limited opportunities for improving feedback or responsiveness, which are important for maintaining trust and sustained engagement (Newell et al., 2011).

Overall, the combined findings on usefulness, ease of use, and satisfaction position OKUd as a highly usable and effective inclusive storytelling platform. The results reinforce evidence that accessibility-oriented and user-centered design can deliver efficient, intuitive, and satisfying user experiences, supporting long-term engagement and the growth of inclusive digital storytelling communities.

4. CONCLUSION

The findings of this study reaffirm that people with disabilities (PWDs) continue to experience critical underrepresentation and persistent usability barriers across digital platforms, underscoring the need for tools that not only comply with accessibility standards but also elevate their voices, achievements, and lived experiences. In response to this gap, the usability evaluation of OKUd, a mobile storytelling application designed to promote digital inclusion and highlight success stories within the disability community, demonstrates the platform's strong potential to transform digital participation for marginalized users. Using a quantitative research design and an adapted USE (usefulness, ease of use, satisfaction) questionnaire, thirty participants, including both PWD and non-PWD users, assessed the 80% functional prototype through guided hands-on interaction. The results show consistently high agreement across all measured dimensions, confirming that OKUd is highly useful, easy to use, and satisfying. These outcomes validate the strength of its accessible interface and intuitive storytelling workflow, affirming its readiness for final development refinement and its significance as an inclusive digital platform that addresses representation gaps and supports broader digital accessibility efforts. By centering the narratives of PWDs, OKUd exemplifies how accessibility-driven, user-centred design can meaningfully advance equity. Future enhancements, including screen reader support, voice navigation, expanded multilingual content, and broader testing with diverse disability groups and older adults, will further strengthen its inclusivity. With these refinements, OKUd is poised to evolve into a rigorous, equitable, and fully accessible tool that empowers users and enriches the digital ecosystem.

ACKNOWLEDGMENT

The authors gratefully acknowledge Universiti Utara Malaysia, Sintok, Kedah, for its essential support, facilities, and research environment. Appreciation is also extended to the School of Multimedia Technology and Communication (SMMTC), the project team, colleagues, and final-year students for their significant contributions. The authors further thank all individuals who supported this project, directly or indirectly, in bringing it to successful completion.

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