Enhancing Inclusivity and Accessibility in Wikimedia Projects for Users with Learning Disabilities

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Abstract

The study aims to improve accessibility and inclusivity for people with learning difficulties in Wikimedia projects by addressing their unique challenges, implementing technology fixes, and creating a more welcoming community. It will use surveys and interviews to understand user experiences and collaborate with advocacy organizations, educational institutions, and the Wikimedia community to develop best practices for inclusive educational content. Technical upgrades to Wikimedia tools will be evaluated, with a focus on user interface advancements and accessibility features. Workshops and training sessions will be organized to educate the community on user needs. The research also explores the potential role of emerging technologies like AI and machine learning in addressing user needs.

Introduction

There is a digital space unbridged between people who are able to learn with the use of computer devices and a lot of others who can't. Even in the presence of digital infrastructures, about a billion people around the world, according to Kreisa (2021), are being excluded from innovative learning opportunities offered by the Internet. There is no specific data to assess the digital exclusion of people with learning disabilities in Nigeria. Divergent factors, including social and economic prowess, influence the accessibility of digital learning opportunities. Disabilities influence how people are able to take advantage of digital opportunities. When the design of solutions, including Wikimedia products, is not inclusive of the special needs of persons with learning disabilities, a barrier to learning will be created. The research aims to contribute to a more equitable and diverse knowledge-sharing landscape within Wikimedia projects by systematically investigating and implementing solutions to enhance accessibility for users with learning disabilities.

Date: The project aimed to commence on the 1st of June 2024 and will be completed on or before the 31st of July, 2025.

Related work

Popular works like Buzzi et al. (2008) explore the usability challenges faced by blind users in accessing and editing Wikipedia content. The analysis identifies issues in the current editing interface and proposes solutions, particularly implementing the W3C ARIA standard. The research aims to enhance inclusivity and

accessibility within Wikimedia projects, making knowledge accessible to all users.

The dissertation "D-Lexis: Alphabet Mobile Learning Application for Dyslexia" by Nor Nadia (2013) is relevant to our proposal as it outlines the development of an Android application for dyslexic students that uses the Slingerland method for alphabetical learning. The application addresses dyslexia-related challenges through a multisensory approach and aligns with inclusive education and technology-based solutions.

Methods

This research aims to investigate and enhance the inclusivity of Wikimedia projects for users with learning disabilities using a mixed-methods approach. Surveys and interviews will be conducted to gather insights from users, including those with learning disabilities, about their experiences with Wikimedia projects. The survey population will be diverse and recruited through outreach within the Wikimedia community, educational institutions, and advocacy groups. The data collected will be analyzed using statistical methods to identify trends, preferences, and areas for improvement. In-depth interviews will provide richer qualitative insights, with thematic coding techniques applied to extract patterns and themes related to user experiences and needs. The analysis will inform the development of guidelines and best practices for creating inclusive content on Wikimedia platforms. The impact of implemented changes will be measured through ongoing analytics and user feedback, providing a basis for continuous improvement. The study is ethically responsible, requiring informed consent from all participants and compliance with data protection laws and regulations.

Expected Output

The project aims to create guidelines and best practices for creating inclusive content on Wikimedia platforms, benefiting users with learning disabilities. A comprehensive research report will be produced, summarizing methodologies, findings, and recommendations. The report will serve as a reference for understanding challenges faced by users with learning disabilities and propose solutions. The findings will be disseminated through scientific publications, aiming to contribute to the academic discourse on inclusive technology. Additionally, webinars and workshops will be organized within the Wikimedia community and educational institutions, facilitating knowledge sharing and practical insights into implementing inclusive practices and technologies.

Risks

The research's success relies on user engagement, including those with learning disabilities, and addressing privacy and ethical concerns. Compliance with regulations and informed consent are crucial. Technological constraints may arise due to compatibility, scalability, or technical limitations within the Wikimedia platform. Collaborating with technical experts is essential to navigate these hurdles. Community adoption may be challenging, and effective communication and collaboration are necessary to encourage adoption. The research may not generalize findings to all learning disabilities, and tailored solutions may be needed for diverse learning needs.

Community impact plan

The research aims to engage diverse audiences beyond academic circles by collaborating with Wikimedia volunteer editors, educational

institutions, and advocacy groups. Through workshops, webinars, and community-driven events, the research will raise awareness about learning disabilities' challenges on Wikimedia projects and demonstrate the practical application of proposed guidelines and technologies. Open communication channels within the Wikimedia community will foster ongoing dialogue, promoting the widespread adoption of inclusive strategies and technologies.

Evaluation

The research project will be evaluated using both quantitative and qualitative metrics. Key performance metrics include user engagement, adoption of inclusive practices, technological integration, community feedback, publication and dissemination impact, and long-term impact. User engagement, particularly for users with learning disabilities, will be measured through surveys, interviews, and workshops. Inclusive practices will be adopted by the Wikimedia community, and technological integration will be measured by improved accessibility features and user satisfaction. Community feedback and collaboration will be crucial. The research's long-term impact will be measured by sustained improvements in inclusivity and accessibility for users with learning disabilities.

Budget

Personnel: $20,000
Research Tools and Software: $5,000
Community Engagement and Outreach: $10,000
Data Collection and Analysis: $7,000
Miscellaneous and Contingency: $3,000

Prior contributions

Over the years, contributors working on this study have produced learning resources aimed at enhancing the inclusion of learning opportunities and systems. Working on Gender, the contributors on inclusion have been featured on international platforms including the United Nations. The team of researchers enlisted in this proposal has also developed policy instruments focusing on beefing up the inclusion of girls and people living with disabilities in Nigeria and her regions.

References

Buzzi, M., & Leporini, B. (2008). Is Wikipedia usable for the blind? https://doi.org/10.1145/1368044.1368049
Nor Nadia. (2013). D-Lexis: Alphabet Mobile Learning Application for dyslexia for dyslexia Based on Slingerland Methods of Learning. Uptedia. Retrieved December 15, 2023, from https://utpedia.utp.edu.my/id/eprint/13554/
Reagle, J. M. (2010). Good faith collaboration: The culture of Wikipedia. MIT Press.
McNaughton, D., & Light, J. (2013). The iPad and mobile technology revolution: Benefits and challenges for individuals who require augmentative and alternative communication. Augmentative and alternative communication, 29(2), 107-116.