

Platforms like Wikipedia have transformed how we perceive knowledge-sharing. However, implementing technical changes in systems for large communities poses a significant challenge, often met with resistance akin to the Luddite movement that opposed industrialisation in the 19th century. Navigating these complexities and enabling successful adoption in large-scale systems requires careful negotiation of socio-technical relations.

Despite Wikipedia's immense success, partially attributed to its asynchronous collaboration model, persistent criticism remains. Researchers argue that the bureaucratic rules and technical infrastructure supporting this model contribute to Wikipedia's content bias. However, Wikimedia data dumps are crucial for AI engines, making it essential to address gaps that may lead to biased AI perspectives. Efforts to introduce alternative collaboration models have been ongoing but unsuccessful. Nevertheless, the recurring nature of these initiatives suggests a community preference for features like real-time collaborative editing.

Drawing from my research, which benefits from an adaptive methodology for co-designing socio-technical solutions in geographically distributed communities, I demonstrate how participatory design sessions and community engagement facilitated the design of WikiSync, the first Wikipedia training tool that involves real-time collaborative editing of Wikipedia articles co-designed using a distributed approach that involves the Wikipedia community through several phases that vary in focus and scope of user participation. By consulting the broader Wikipedia community using online social ideation and voting tools, I evaluated the desirability and applicability of the solution.

In my presentation, I introduce a new Ethnographically-informed Distributed Participatory Design (EDPD) Framework (initially covered in my PhD thesis [1]) and its underlying six principles tailored to the needs of small teams developing socio-technical systems for large communities. Supported by insights gained from designing WikiSync, this framework aims to enhance online design in complex social settings, involve the community in solution design, and secure stakeholder acceptance through diverse community representation in system construction. Moreover, I discuss new directions in utilising the 'efficiency and Care' framework introduced by Rossitto et al. (2021) [2] for bringing socio-technical change.

My presentation aims to encourage the UK Systems Community, particularly those engaged in open knowledge projects, to explore innovation approaches that prioritise community needs. By focusing on community-led solutions, we can address pressing societal challenges like digital poverty in the UK [3], which is the primary focus of my current research. The presentation offers insights into building inclusive digital environments while addressing critical societal needs, emphasising the importance of responsible design and participatory methodologies in shaping the future of large-scale systems. The talk concludes with an appeal for the UK Systems Community expertise to pave digital research pathways that address issues within open knowledge using such inclusive approaches.

[1] <https://dl.acm.org/doi/10.1145/3479611>

[2] <https://research-repository.st-andrews.ac.uk/handle/10023/28494>

[3] <https://api.parliament.uk/s/8e2afba6>