

Cultivating Student Voice and Choice in Open and Networked Learning Environments

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Abstract

Networked learning environments are evolving rapidly beyond the confines of centralised learning and content management systems. Our shared approach to designing networked learning is grounded in a student owned and federated model that allows for student agency and ownership of a portfolio of their learning that can be personalized and curated by the learner. In these open and networked learning environments, there is an opportunity for the creation of multiple artefacts and possibilities for remixing, reusing, and creating new and novel experiences for other students and educators to interact with. This requires students to consider and reflect on what they decide to create and how it is shared more broadly while also attending to ethical concerns. This design-based research study investigated the student experience and perceptions of using a networked learning environment to support the creation of community-generated, non-hierarchical teaching and learning resource(s) using a multiple perspectives reflection framework. The tool and framework were used in two graduate level courses offered over a two-year period involving seven participants. Eleven posts and their associated comments/discussions/artifacts were analysed as part of this project. This research reports on the preliminary findings from the evaluation and reflection phase of this three-phased research project. Initial analysis showcases the importance of interactivity, agency, accessibility, structure, and voice in the co-creation of meaningful, engaging, critical learning experiences. These findings provide useful input for the next phase of this tool and for further understanding of what students experience when working in open and networked learning environments.

Keywords

Open learning; online pedagogy; digital transformation; qualitative research; student voice

Background

This study reports on a design-based research project exploring novel ways that learning materials, and particularly openly licensed textbooks and other openly accessible digital resources, may be used to engage learners in networked learning environments. Due to the affordances of open licensing, open resources enable both teachers and students to reuse, reimagine, remix, and extend content in multiple ways. This provides opportunities to engage in new ways with teaching and learning materials, and to invite new teacher- and/or student-generated content for others to review and interact with. This further enables students to engage with digital literacies centred around open practices, modelling an ethical and legal approach to working with and reusing digital media.

Networked learning environments include digital learning tools that foster connection, peer review, and community as well as pedagogical designs that leverage these tools to enable communication across time, space, and media (Goodyear, et al., 2004; NLEC, 2020). This present study examines graduate student contributions and engagement in networked learning environments, and the subsequent impacts on learning and experiences working openly as new scholars. Designing pedagogical activities that draw upon student's personal contexts, lived experience, and areas of interest, this approach seeks to engage learners in activities that they personally value and may contribute to in a meaningful way. We draw theoretically from the networked learning literature in the design of this study foregrounding peer collaboration and review, intentional sharing of learning and learning contexts, open access to resources, ideas, and experts, networked across time and space, and in an open access way (NLEC, 2020).

Presently, networked learning environments are evolving rapidly beyond the confines of centralised and often hierarchical learning and content management systems. This flattened approach to learning design seeks to

emphasise and prioritize student voice, reduce the tendency for dominant voices, approach learning as a decolonial act, and reduce the potential for knowledge sharing disparities (Oztok, 2024). Our shared approach to designing networked learning is grounded in a student owned and federated model that allows for student agency and ownership of a portfolio of their learning, personalized and curated by the learner. This enables learners to make creative choices about the content they publish in networked learning contexts, and how it gets shared with other students and community. We believe these offer significant opportunities for personalised learning and a sense of agency and ownership not associated with engagement in networked learning environments where students have less control and ownership. Each student portfolio is then networked together enabling an activity feed of student reflections and contributions related to a shared learning experience (Childs et al., 2020; Irvine et al. 2024).

A missing link identified in this model was deeper engagement around the threading together of conversations, debates, reinterpretations, and questions about course content from individual student portfolios in a succinct way. Not wanting to confine these to a closed and somewhat isolated discussion forum, we explored participatory and open platforms that allowed for less hierarchical and linear ordering of content, acknowledging that these approaches still represented Western epistemologies and knowledge-sharing traditions (Funk & Guthadjaka, 2020). Working in these more open environments can be potentially unsettling for learners and requires them to carefully consider and reflect on what they decide to create and how they share it more broadly, while also attending to the ethical concerns. Students also need to consider in what ways they anticipate others will engage with their creations and how they can foster an engagement in order to meet and possibly exceed the intention behind the artefact. For some, this ability is inherent in how they do their work while others struggle to consider multiple perspectives and various possibilities for engagement. Coupled with the difficulties associated with fostering engagement in the online setting where the potential for vulnerability is possible, encouraging meaningful and authentic exploration of student created content can be a challenge in an open networked learning environment.

Developed through consultation with many learning designers at international conferences, our platform (Harrison et al., 2022) centred around five overall attributes that emerged as design principles. These included interactivity, agency, accessibility, structure, and voice.

- Interactivity implied students could interact with content, not only as a consumer, but also as a remixer, format shifter, creative reinterpreter, or questioner. This was largely enabled by the open licenses used on the platform, but also through the tool itself as it invited and curated contributions and discussions. Where necessary, students could develop content outside of the tool, on their own learning portfolio or media specific platform (YouTube, Canva, etc.) and provide embedded content or links to those resources for further review.
- Student agency was promoted by offering choice and voice to students, inviting their contributions, contextual observations, and lived experiences. Our focus on agency was initially described as developing a capacity for “foraging literacy” to help learners develop their own resources and learning pathways, assess materials found online, and remix and present them in creative ways. By foraging, students were encouraged to reach outside the bounds of the course material, draw on lived experience, and add depth and richness to the course discussion by sourcing and presenting additional resources.
- Accessibility was a core design principle of the tool and it was also interpreted as providing open access to the platform.
- Structure was key to maintaining a sense of order around the learning experience. A central hub for contributions and conversations was maintained using the software, but this also invited external links, resources, citations, and connections to multimedia around the web.
- Lastly, voice enabled learners to use their own positionality and to make choices about their identity on the platform. Contributors were invited to engage in multimodal ways, anonymously, and informally where appropriate. By inviting student voices our intent was to promote multivoicedness going beyond one dominant, authoritative voice to celebrate the multiple perspectives and experiences that graduate students bring to this work (Harrison et al., 2022).

Research Aims

We have designed a software application (Harrison et al., 2022) and reflection scaffolding tool (The Perspectives Framework) that aligns with our goal of encouraging open and critical approaches to learning and instructional design. While the Perspectives Framework has been shared (see Paskevicius et al., 2024) we focus here on the student feedback using the networked learning approach and platform. The tool has been used with graduate students in learning technology and learning design, in an online networked learning context. Following their experience using the platform, students were invited to give feedback via interviews on a specific learning activity episode experienced during the course once all class assessments were complete. Our goal was to understand the student experience of using the tool, their interpretations of the affordances it supported, and gather feedback to revise future learning designs using this approach.

Methods

This is the final phase of a design-based research process that followed the development of a prototype for a community-generated, non-hierarchical teaching and learning resource, with an embedded reframing learning framework. Our design-based research process included three iterative stages, including analysis and exploration, design and construction, and evaluation and reflection with practitioners and students working in open, networked learning environments (McKenney & Reeves, 2012). In the first phase of this project (analysis/exploration), we hosted a variety of collaborative workshops, where participants shared their perspectives on how to design more iterative, interactive and non-linear resources that would better support open and community-based approaches to learning. In the second phase (design/construction) we considered this community feedback and designed an open digital resource that allowed for the five overall design attributes highlighted above (interactivity, agency, accessibility, structure and voice), weaving in these attributes in the call for chapters, building activities, and developing a framework for learner engagement. The resource and platform were used in two courses over a three-year period. In this paper we will focus on the third phase (evaluation and reflection) and present initial analysis as we reflect on the implementation and plan for future iterations.

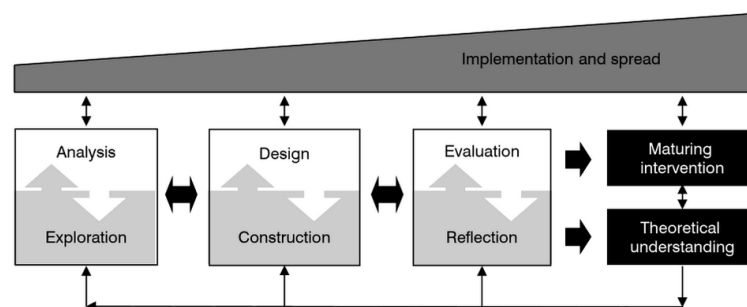


Figure 1: Dual-layer model that includes practical solutions and theoretical understanding for conducting design research in education (Figure 3.3 from McKenney & Reeves, 2012).

Data Collection

For this phase of the data collection, we sent invitations to all 27 learners registered in the two courses in 2023 and 2024 to participate by sharing their contributions to the resource (posts and comments) and then completing a follow-up interview with one of the research team. Seven participants volunteered, and 11 posts and their associated comments/discussions were gathered.

Preliminary Findings

Interview data was transcribed and returned to participants for confirmation before an inductive coding process took place. The data revealed a set of 16 codes that were applied and linked to the main design attributes under

analysis for this research. Data codes related to the themes identified in the earlier phase of the research and included accessibility, agency, interactivity, structure, and voice. A summary of this data is presented in Figure 2.

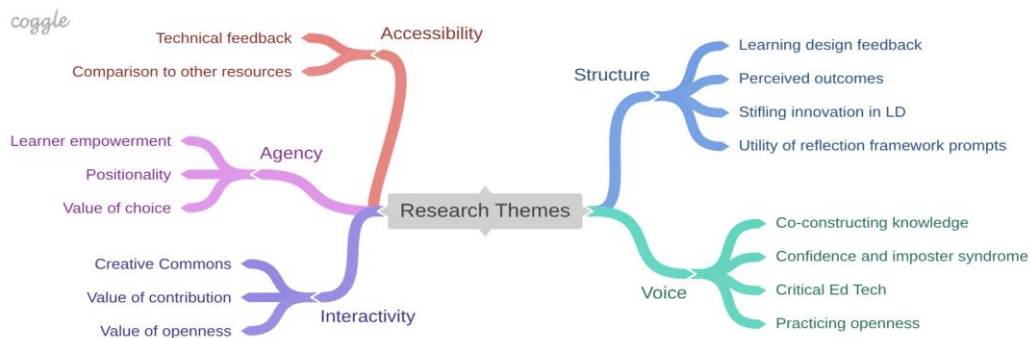


Figure 2: Codes and sub-codes discovered in the student interview data related to the learning experience.

An initial attempt has been made to connect the codes in the data to the themes presented in this paper, recognizing that there is still additional data to be analysed from the student artefacts. During our presentation we will explore the student data in more depth sharing student perspectives and voices related to their experience and invite comments from the audience around its interpretation.

Summary

We have evolved our approach to designing networked learning environments extending well beyond the bounds of proprietary learning and content management systems, to a federated portfolio model (Childs et al., 2020; Paskevicius et al., 2024). This paper reflects on the next iteration, one that is complemented by a software environment and reflection scaffolding tool. The student feedback provides valuable input for our next phase of design and development for this tool and also reveals their lived experiences working openly in networked learning environments. Initial analysis provides input on the importance of accessibility; the empowerment, reflections on positionality and value of choice provided by agentic affordances; reflections on interactivity and structure; and finally, reflections on developing their own voice in these environments through co-construction, developing and considering confidence, criticality, and chances to practice developing their voice anonymously where needed.

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