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A Design Case for Open Education Practice: A Framework and Model for Engagement in Open, Online Spaces

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Abstract

This design case study describes the development of the Rethink Learning Design untextbook, an open educational resource designed to challenge traditional textbook structures and embrace open pedagogy. The project, initiated by a team of four educators, aimed to create a digital space that prioritizes interactivity, agency, accessibility, structure, and voice. Dissatisfied with existing platforms' limitations in fostering non-linear learning and multi-vocality, the team collaborated with a Web developer to design a software tool to meet pedagogical needs. This tool allows for non-linear organization of content, encourages multiple entry points, and allows for various open licensing options, facilitating a more inclusive and participatory learning experience. The resource features contributions from educators worldwide, organized into chapters that address various aspects of open and critical learning design. A key feature in the tool is the embedded reflective-practice framework, which encourages users to engage critically with the content and consider multiple perspectives. In this paper, we acknowledge ongoing design challenges, such as managing user annotations and feedback, and balancing learner agency with a navigable structure. Despite these challenges, the project offers a valuable model for developing open educational resources that promote critical engagement and challenge traditional pedagogical approaches.

Keywords: design case, open educational practices, open pedagogy, learner-agency

Introduction

For educators who are interested in shifting to more open approaches to teaching and learning, there is a recognition that this might require a change in epistemological and pedagogical practice. The practices and tools used to encourage learners to become more active participants in their own learning processes, and the digital literacy skills that are needed to support and work in these spaces are still emerging. In our own practice as teachers and learning designers who embrace open approaches, we noted that contemporary resources and educational tools continued to be based on traditional, systematic, and static approaches to knowledge that did not meet our design needs and pedagogical intentions. For example, the traditional textbook format, even when offered as an open educational resource, can lack the interactivity, agency, and accessibility needed to enable spaces that honour multiple voices and perspectives. We embarked on a project to help "rethink" our learning tools and frameworks, with an overall goal to look for ways to support co-created knowledge and to challenge traditional roles and hierarchies afforded by open pedagogical approaches.

Throughout the design process, we explored different ways to engage with learners and to also help support our colleagues in critically examining their own practices. Our first step in this iterative project was to develop a reader/resource in critical learning design that we initially termed the *untextbook*, based on the principles of open pedagogy, including participatory technologies, knowledge sharing and co-creation, and open, connected communities (Hegarty, 2015). As we worked collectively to build this resource, we discovered a second emergent need. We could not just develop the content of the resource (or book) that could be used by students and practitioners; we also required a new tool that could house the resource while modeling and including pedagogical approaches that are more inclusive, participatory, and open.

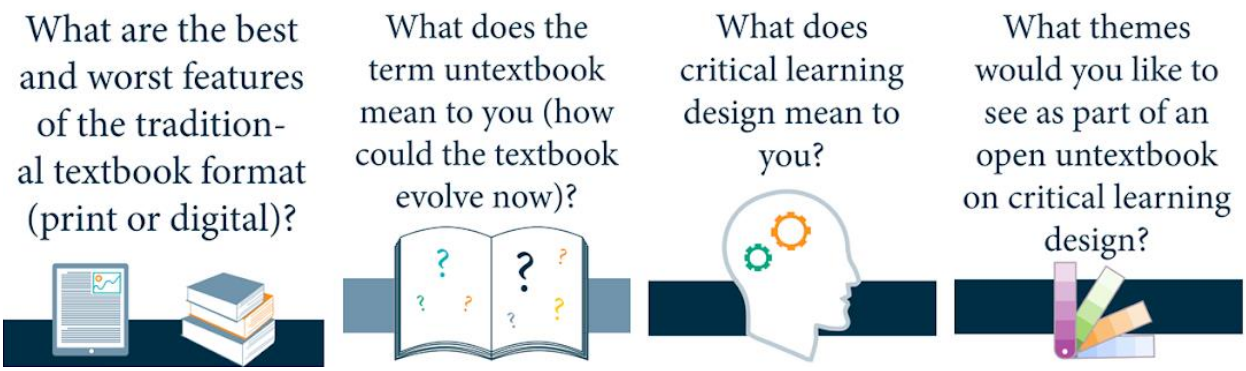
This design case outlines the development of this emergent resource, including a software application and reflection framework tool, that explores open and critical approaches to learning and instructional design. We try to capture the thinking and discussion that occurred among the design team at each stage to illustrate our decision-making and how various elements may have influenced the final design. We examine and discuss the various ethical tensions we encountered in building an open tool, such as how to safely raise and surface multiple perspectives, balance open critical discourse with the need for privacy and safety for students, and embed a continuum of openness that allows for choice by contributors. We hope that in documenting this design case, readers who face similar design challenges discover utility in the messiness of designing floor-by-floor, working across diverse teams, and aligning pedagogical desires with technical feasibility (Boling, 2010).

Rethinking the Notions of a Textbook

Our first step was to gather feedback from other educators, and we engaged in various sessions at conferences, gathering artifacts and input. Figures 1 to 3 outline questions and capture feedback in a visual recording. At this stage of the project, we were still thinking of this resource as an untextbook as we tried to interrogate the notions of how traditional structures, still embedded in our open tools, influenced our pedagogical decisions and resulting practices, often enacted through hierarchical digital spaces.

Figure 1

Questions for Feedback (Used to Gather Stakeholder Input at Several Conferences)



While gathering the feedback from conference attendees based on the questions in Figure 1, we had a visual designer create sketchnotes capturing the process and feedback. These visualizations are represented in figures 2 and 3.

Figure 2

Graphic Recording from the Cascadia Open Education Summit, 2019

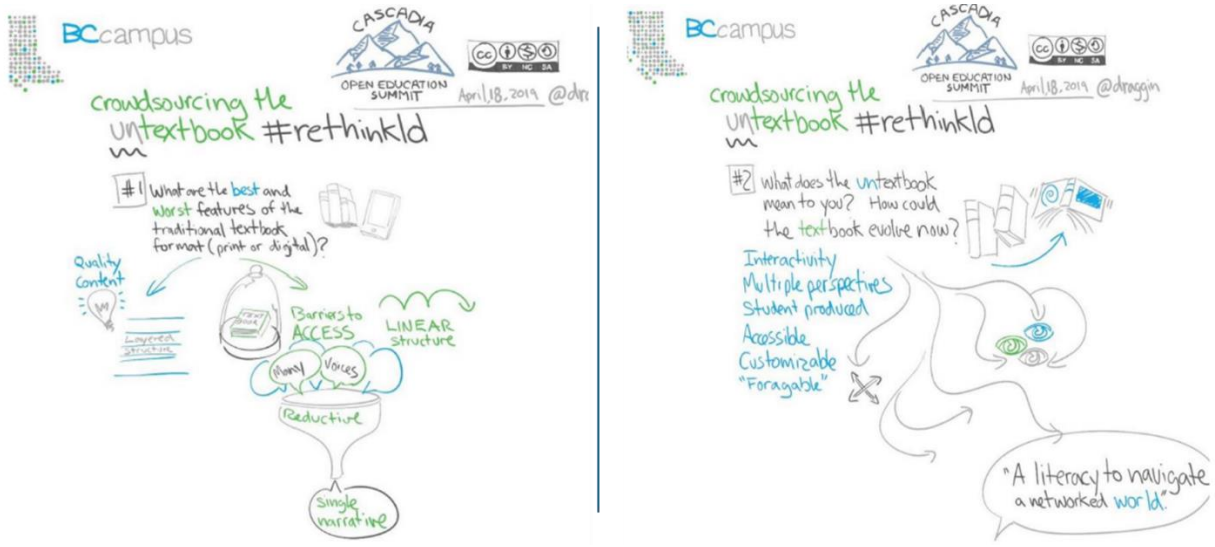
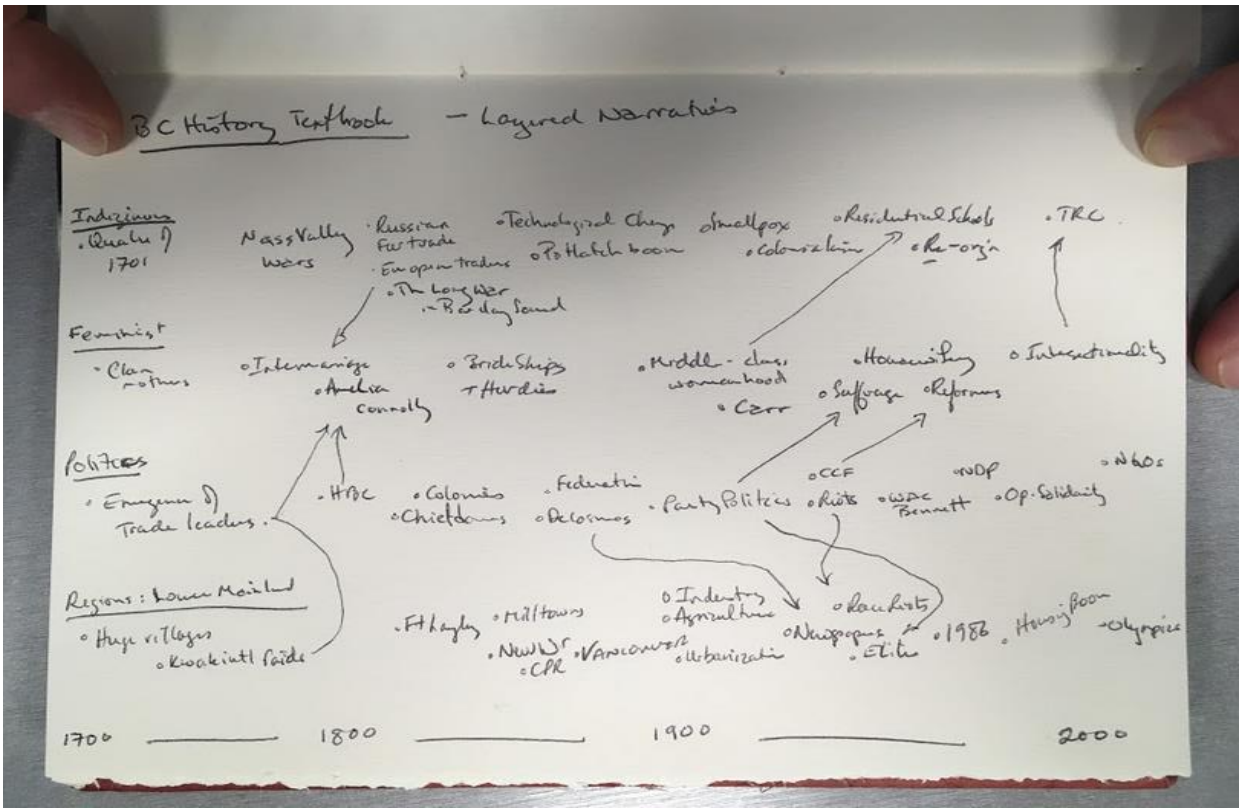


Figure 3

Brainstorming for a Multi-Layer Narrative Form of a Textbook With Non-Linear Structure



Based on the feedback gathered on expanding the notions of the textbook and open resources, we quickly realized that no existing tool could make possible the values that were identified. As a result, we determined that we would need to explore options outside of what we knew was available and considered developing a tool that could make the design criteria possible.

Developing a Platform

From our initial engagement with our open community, five overall attributes emerged as a useful starting point to focus equity-centred learning design in a digital resource, including interactivity, agency, accessibility, structure, and voice. Our challenge was to consider the ways that we could incorporate these attributes, including elements of open pedagogies, knowledge sharing, and co-creation, critical approaches, and the creation of open, connected communities (Hegarty, 2015), which could be built into a digital online space.

While some participatory and open platforms allow for less hierarchical and linear ordering of content, we knew from our own experience and from the research that many of these platforms still represented Western epistemologies and knowledge-sharing traditions (Funk & Guthadjaka, 2020). We explored a variety of current publishing models and found that even fairly novel open textbook publishing platforms such as Pressbooks do not fully allow for non-linear pathways or for the inclusion of multiple voices, multimodalities, or annotation by default.

We were inspired by elements included in other projects, such as RavenSpace and the Between the Chapters project (Pasquini & Lalonde, 2020), that focused on providing space for alternative modalities and commentaries, specific invitations for participation, and guidance on centring and respectful inclusion of traditional knowledge. As we explored the possibilities and constraints of the various platforms, our colleague and Web developer, Tom Woodward, posed many challenging questions, including:

- What can "non-linear" mean in a digital space? How do you deal with the balance between scaffolding and open-ended decision-making?
- How do you determine what content is prioritized? Where can we add elements of randomization and audience/reader determination?
- What are the different kinds of elements that the space will have? Beyond chapters, how can you organize content so that it is somewhat meaningful in its connections?
- How do you include/create spaces for discourse, argument, and disagreement that are respectful and evidence-based?
- What does annotation look like? At what level, and whose voice is emphasized? (Harrison, DeVries, et al., 2022, p. 10)

As a team, we discussed technological challenges and ethical dilemmas for work in the open. While we all embrace the benefits of open pedagogical practice, we recognize that openness introduces other ethical tensions around ensuring safety and privacy for learners. There is also a tension between creating a space that has structured connections versus one that is completely open but which might become chaotic and unnavigable. Through multiple sessions with Tom and our team, we landed on a customized WordPress theme (https://wordpress.com/) that allowed for simple authoring, non-linear organization, and multiple-entry points, and a variety of choices around open licensing. Figure 4 shows an early hand-drawn storyboard for one of the pages, while Figure 5 shows a team member's notes on the types of design choices we were discussing.

Figure 4 shows a rough sketch of what we imagined the tool might look like. As we had selected WordPress as an open framework for the development of the theme, we had some constraints that came with the software in terms of content organization, taxonomies, and the editing toolset. Notable from Figure 4 are the categories of reflection presented near the top, where we imagined each page inviting reflection and prompting users to consider the perspectives framework as a reflection heuristic. In the lower right corner, we envisioned a constellation visual that showed the connections between the page and associated reflections, other site resources, and people contributing.

Figure 4

Storyboard and Design Notes for Open Platform

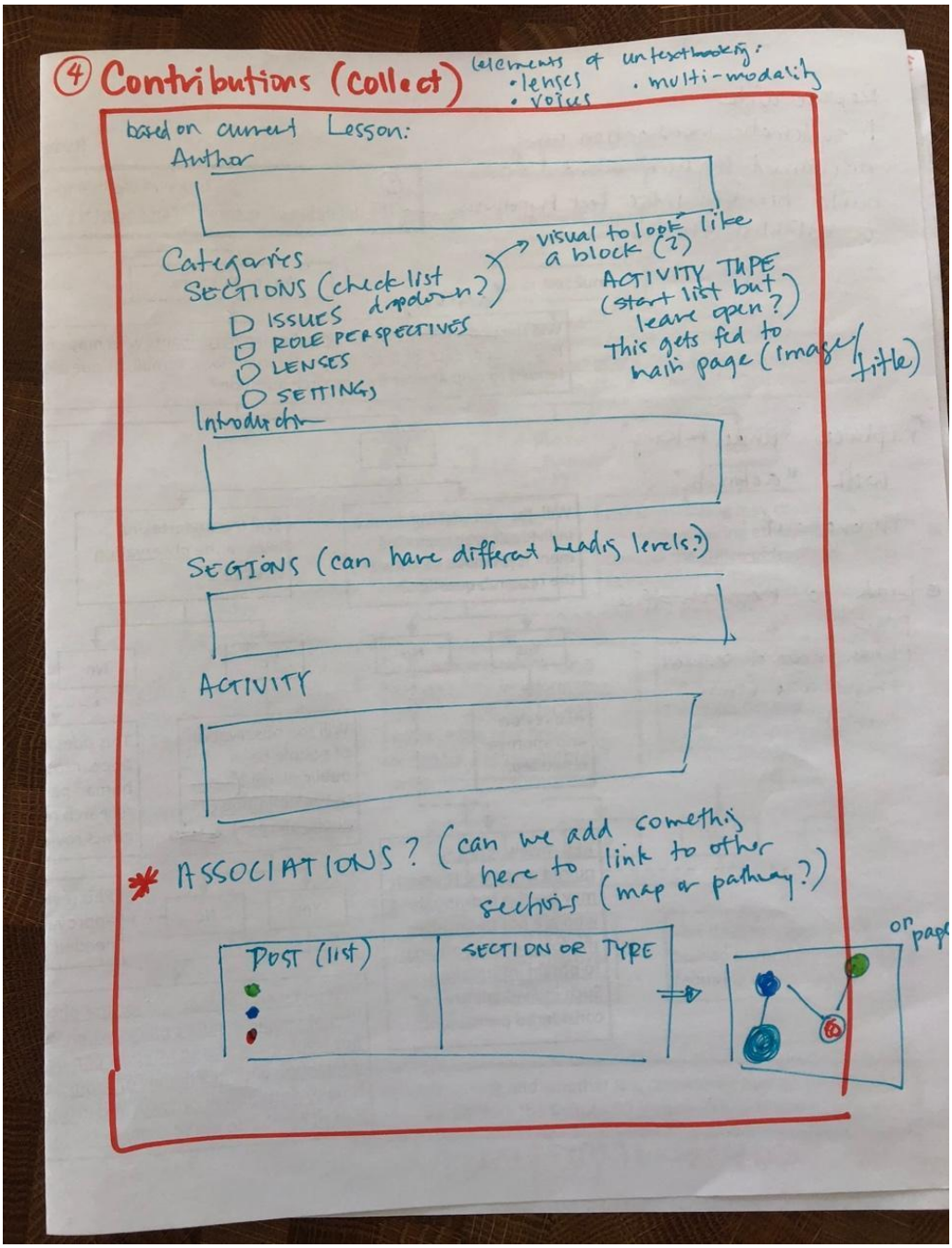
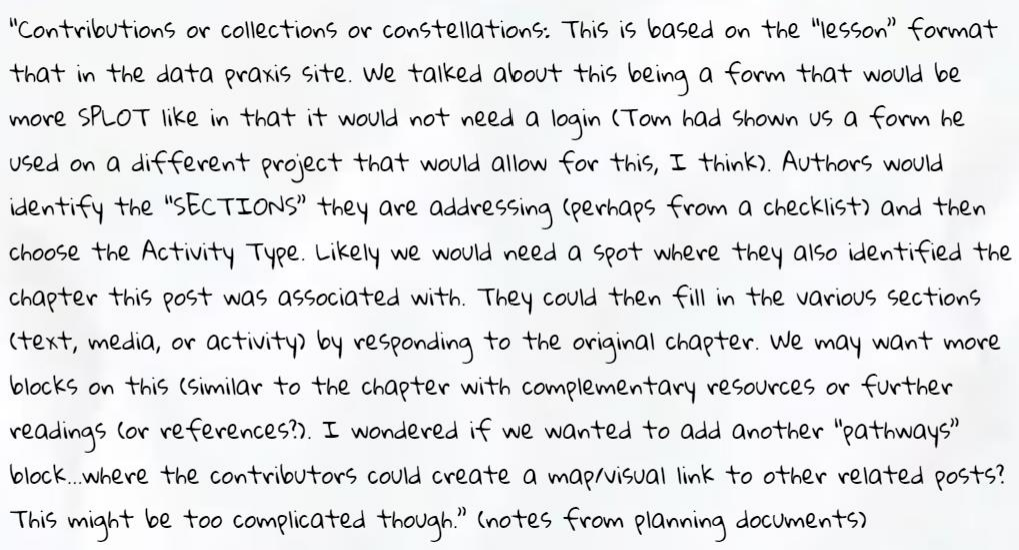


Figure 5

Design Notes for Open Platform Development

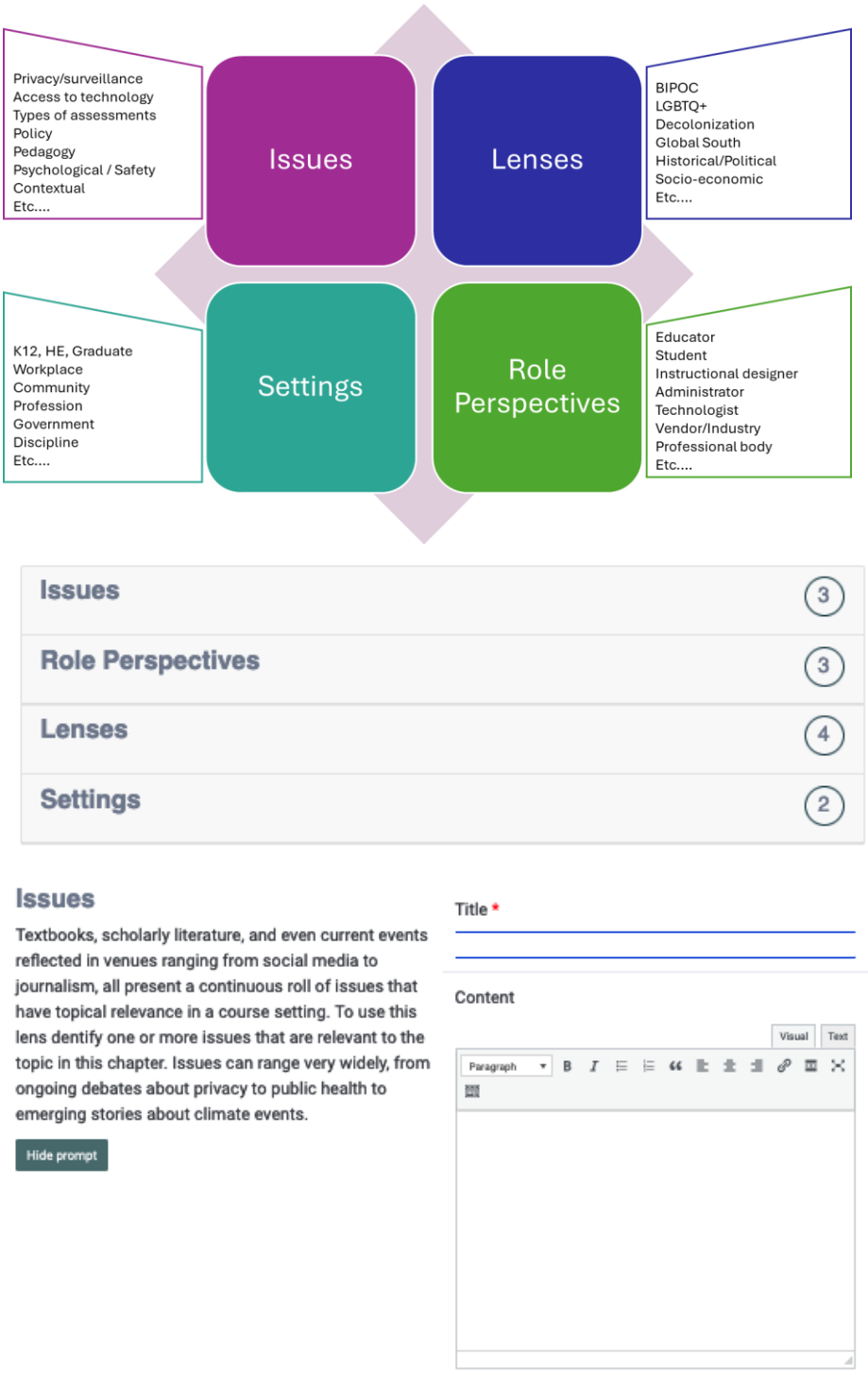


Learner agency, multi-vocality, and non-linearity were key principles for the design of the resource (see Harrison, Paskevicius, et al., 2022). The platform allows for the ongoing building of resources and learner ownership/authorship. Content and contributions can be reorganized into new configurations and iterated, authoring can be open/anonymous or other, and the simple authoring tools embedded directly in a page will allow students to choose different lenses and approaches. We also considered how to create an invitation to contemplate contested knowledge and invite multiple layers and perspectives.

One design decision that we felt would address some of our ethical questions around respectful discourse and inclusion was to confine the intended use within an educational setting that includes responsible and accountable moderation, and setting appropriate boundaries for debate, including a focus on equity and respect. As we considered how this untextbook might be used, we felt that some pedagogical structure might be helpful and developed a reflective practice framework that provided guidance around participatory interaction with the content, which would help learners honour multiple voices and lead to a shift in perspective. In our conversations about how to build this element of scaffolding into our activities, it became a central feature, and Tom was able to incorporate it directly into the WordPress theme (see Figure 6).

Figure 6

Reflective Practice Framework for Engaging in Activities, Embedded Directly Into WordPress With Simple Authoring Tools and Scaffolding



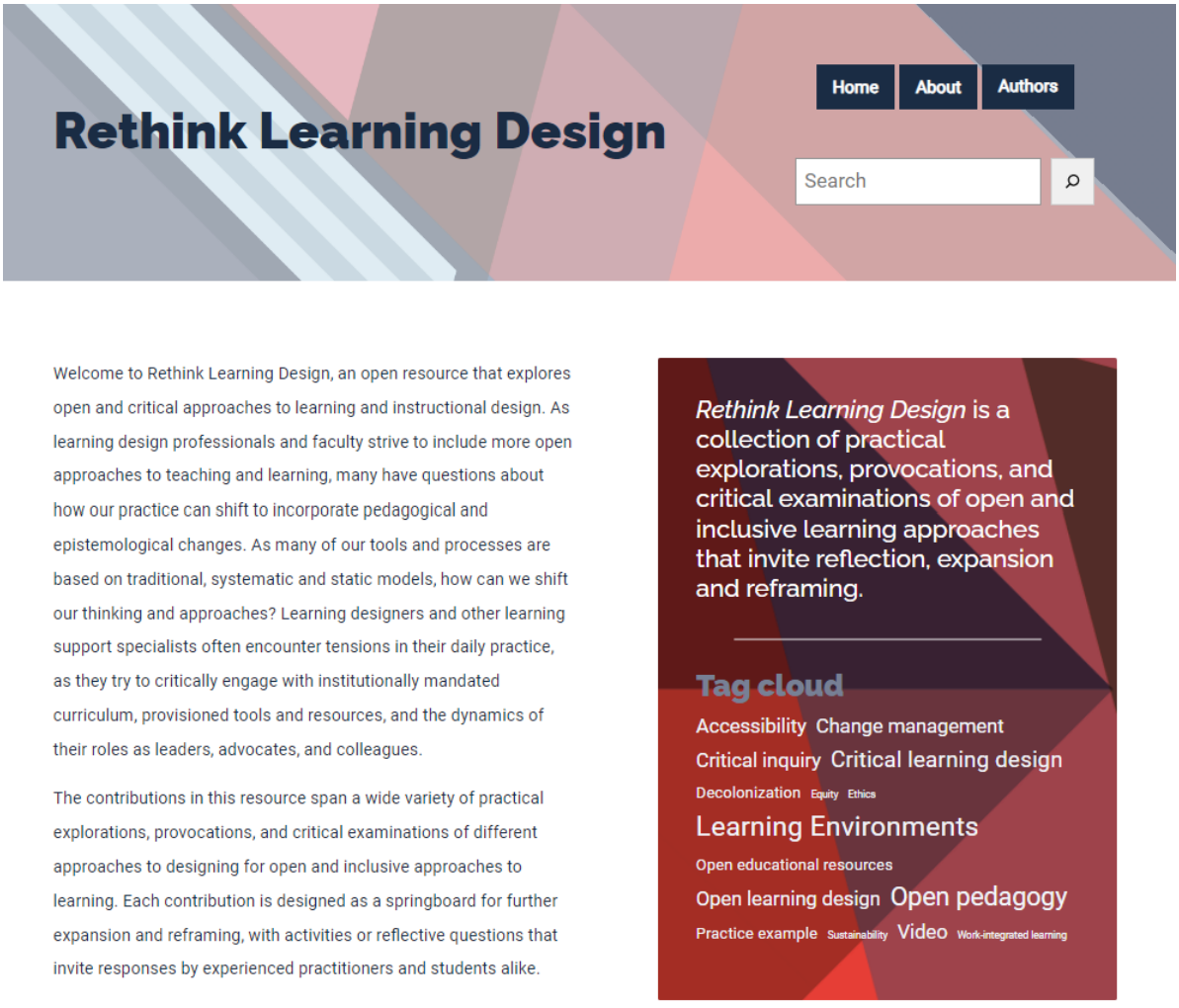
Note. Adapted from "Practice Example: Managing Change Activity," by M. Harrison, in M. Harrison, M. Paskevicius, & I. DeVries (Eds.), *Rethink Learning Design*, 2023 (https://rethinkld.trubox.ca/chapter/managing-change-in-digital-learning/). CC BY 4.0.

Call for Contributions and Resource Development

We embedded our design principles into the call for proposals, outlining the focus in both the background and the aim and scope, encouraging multiple modalities, and embedding the reflective practice framework directly into the contributions guidelines and into the peer review criteria and process (open peer review, emphasis on inclusion and diversity). We offered a series of workshops to help guide authors, provided multiple rounds of peer support and review, and supported them in their own dissemination of their contributed work (through conferences attendance). The current iteration of Rethink Learning Design is openly licensed, and has 12 chapters and two practice examples (with student voice contributions; see Figure 7). One of our goals was to create a shareable template for the resource design, so other educators, from various disciplines, could adapt and use it in their own contexts. We are working to incorporate feedback from users, but the original files can be found on GitHub.

Figure 7

Screenshot of the Rethink Learning Design Resource, Outlining a Non-Linear Organization of Contributions



Note. From *Rethink Learning Design*, by M. Harrison, M. Paskevicius, & I. DeVries (Eds.), 2023 (https://rethinkld.trubox.ca/). CC BY 4.0.

We had a range of contributions to the untextbook resources from around the world. We do not see the resource as complete; we would like to imagine it as a living resource on learning design that could be added to and developed further. There is no logical starting point to accessing the resource, and it is not organized into sections to guide the reader, as illustrated in Figure 8. The visual presentation of the chapters is meant to invite readers to enter from all corners indicating an adjacent and complementary structure. We imagined the most interesting components of each chapter would be the user annotations and feedback provided through the perspectives framework, so these are prioritized in the chapter-level view. The current chapter list includes the following headings:

- Co-Creating Places for Learning
- Decolonizing and Opening the Academy via Study Abroad
- Designing Open Educational Resources (OER) Using a Paid Platform
- Crossing Boundaries: Learning Design and Work-Integrated Learning
- Control by Design: Examining the Design of Digital Learning Environments
- First, Do No Harm: Navigating the Ethics of Sharing Intellectual Property in Student-Generated Open Works
- Activation: There Are Other Fish in the Sea: Open-Up and Connect
- Rethinking the Learning Design for Open Education
- Simulations as an Instructional Strategy in Public Safety Education
- Open Anthropology: Open Pedagogy, Accessibility, and Decolonization in the Discipline
- Open Pedagogy in Trades Education
- Open Learning Design: Principles and Practices
- Practice Example: Managing Change in Digital Learning
- Practice Example: Inquiry Into Contemporary Issues in Learning Technologies

Figure 8

A Section of the Homepage of the Site Showing Chapter Presentation

Note. From *Rethink Learning Design*, by M. Harrison, M. Paskevicius, & I. DeVries (Eds.), 2023 (https://rethinkld.trubox.ca/). CC BY 4.0.

Design Questions

As we continue to implement this resource in educational settings (having used it in two courses in a graduate program thus far), we encounter further design questions. How will we manage the annotations and feedback that is appended to the resource, and how do we keep it manageable for users and readers? After 3 years of testing activities, participants have shared that the amount of annotations already contributed can be a bit overwhelming to parse. They have said that they appreciate seeing content from past learners but wonder how to engage with that past content. Questions arise on how to honour learners' past contributions but also create a space that invites new contributions without leaving users feeling overwhelmed. Any such modification will require code-based changes, and this tension to make this a usable resource and yet curate and honour past contributions leaves us at an impasse between our technical and pedagogical design teams.

We had also hoped for a more visual way for participants to chart their own pathway through the contributions, through a visual constellation, and to build the student contributions into chapters that could then be iterated on. We discovered this was not technically possible during the design phase, and so many of the other competing design criteria that were technically possible took precedence. We recall our pedagogical team letting go of some of these initial visions for the design due to pragmatic needs in the moment. Looking back, there has been some reflection that such design choices would have really enhanced the resource. We believe that the visual presentation of contributions may have addressed some of the overwhelm that users have expressed.

We also continue to consider the ethical dilemmas of working with students in open environments. As has been highlighted in other research, digital literacy around managing privacy and data needs to be a focus in the design of the activities, and learner choice in how they share and present themselves in open, online spaces needs to be negotiated (Harrison, 2023a; Roberts, 2022; Werth & Williams, 2021). We also need to open up conversations about what it means to be both open learners and practitioners, and help learners navigate their own boundaries and needs when they are building their digital identities in these open spaces.

We hope this design case brings insight to future developers, especially those with pedagogical goals who seek to align those to technological affordances. We began this process through the realization that we could not effectively reach our pedagogical goals with available tools, and through the process of seeking to map those goals to a technical design, realized the intricacies of such a process. The narrative above seeks to provide a thick description of our process, how key decisions were made, who was involved, our rationale, changes that were made along the way, and reflections on the outcome (Smith, 2010). Collecting our thoughts around this has been a useful endeavour, allowing us to look back, but also forward at future design projects.

Authors' Contributions

Authors both contributed equally to the writing of this manuscript. GenAI was used to create a draft abstract that was then reviewed and revised by the authors.

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Ethics Statement

Ethical approval was obtained through the Thompson Rivers University Research Ethics Board.

Conflict of Interest

The authors do not declare any conflict of interest.

Data Availability Statement

The data used in this study will reside with the authors as per the confidentiality statements agreed to in the participant consent forms. Authors may grant access to the data upon reasonable request.

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