Toward Governance Best Practices for Open Educational Resources

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ABSTRACT

Open educational resources (OER) constitute a form of digital media that have received growing interest and adoption. Infrastructures are becoming more widely available to support OER authorship and adaptation. However, this article argues that infrastructures for the ongoing governance of OER have been lacking, despite the medium's possibilities as "evolutionary media." The article provides a review of existing literature on OER and their governance, in conversation with the governance of other kinds of software commons. It then offers an auto-ethnographic reflection on the authors' experience with the challenges of OER maintenance in the context of a specific textbook on social media, and the resulting need for taking governance seriously. Finally, the article proposes strategies for improving support for OER governance through collaborative processes among their stakeholders.

ALISE RESEARCH TAXONOMY TOPICS

information governance; pedagogy; social media; open source software; publishing.

AUTHOR KEYWORDS

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INTRODUCTION

Are open educational resources (OER) books, or something else? The affordances of publishing technologies have long communicated, if not ensured, that books are static once published, with a fixed author or authors. But since OER live primarily online, not in print, they are a species of media in which those characteristics need not be taken for granted. And since OER exist chiefly to serve the purposes of pedagogy, they are adaptable and evolutionary by design. However, OER still lack essential infrastructure adequate for the affordances of what we call evolutionary media—media artifacts that change over time through practices of continual adaptation and modification, often without the original authors' knowledge. To the extent that they mediate interactions across networks of practitioners, OER can be understood as a class of social media.

This article contends that taking the evolutionary affordances of OER seriously requires attention to the maintenance of ongoing governance among stakeholders. Understandably, OER advocates have focused primarily on generating more examples of OER and promoting their adoption. But the longer experience of a sibling field, that of commons-based software, suggests that dedicated infrastructures for maintenance and governance are essential as well. These textbooks need not be static in ways that books historically have been; they require not just authorship but stewardship.

What follows draws on our respective experiences as the author, adopting instructor, and teaching assistant for an introductory college OER textbook (information redacted for blind review). Because the textbook's content centers on the rapidly changing field of social media, we have experienced with particular acuity the need for the textbook to evolve—not just through a sequence of revisions by a given author and an institutional publisher, but through an intentionally collaborative process of contributors and users.

BACKGROUND

What are OER?

The laws and norms that govern OER today derive above all from regarding them as a type of book, with particular authors and publishers, with the rights that typically accrue to each. But OER are also a product of media convergence (Jenkins, 2004), combining affordances of print textbooks, ebooks, and freely available online media. Meanwhile, the OER movement has grown from the need for exceptions to ebook publishing conventions around copyright and authorship, with the most influential visions of OER emphasizing inclusion, sharing, and sustainability (UNESCO, 2019; William and Flora Hewlett Foundation, n.d.). OER textbooks continue to follow conventions of private ownership by their authors or publishers, yet they are openly licensed to allow for iterative reuse and adaptation of the original work. OER thus

construed have drawn widespread interest as an effective way to deal with the problems of accessibility, cost, and quality in educational materials—while leaving other aspects of authorship and ownership unchallenged.

Benefits of OER adoption for students

Much research has documented how OER affect student learning outcomes, such as by improving student engagement, retention, and performance in a variety of educational contexts (Colvard et al., 2018; Grimaldi et al., 2019; Wiley et al., 2017). Evidence suggests that OER significantly benefit students facing financial constraints within diverse university settings (Lebens, 2019; Mullens & Hoffman, 2023). These investigations often reveal the substantial costs associated with textbooks as a notable impediment to academic success (Nusbaum et al. 2020; Magro & Tabaei 2020; Nyamweya, 2018). Another critical arena where OER shows promise is in enhancing accessibility and fostering inclusion for students who experience disability within educational settings (Zhang et al., 2020), by designing resources in a variety of different formats to meet the requirements of students with disabilities related to vision, hearing, physical, and learning difficulties (Kourbetis & Boukouras, 2014).

OER maintenance and governance

The affordances enabled by Creative Commons licensing and online availability invite OER to become evolutionary media in a fuller sense, yet, discussions around sustaining OER are only beginning to reflect the medium's evolutionary affordances. Bell (2020), Khanna (2018), Wiley et al. (2013), and Wiley & Hilton (2018) have emphasized the importance of continual upkeep and quality control to ensure accuracy, relevance, and pedagogical efficacy in open textbooks and educational resources. Several models and strategies have been proposed to promote the sustainable development of OER projects (De Langen & Bitter-Rijkema, 2012; Farisi, 2013; Geser et al., 2019; Santiago & Ray, 2020; Tlili et al., 2020; UNESCO, 2019). However, despite its affirmations of stakeholder engagement, the OER literature takes for granted that open textbooks are essentially books in the traditional sense—artifacts with stable authorship that, while being common goods for access and adoption, are not open in their production processes. In both theory and practice, OER are not conceived as open in their production nearly so much as in access.

OER and software commons

OER as a phenomenon are in some respects a younger relative to the Free Software and Open Source movements in the context of computer programming. Sharing and openly collaborating on source code was a common practice in the early history of computing, and those practices started to become formalized in the late 1980s, especially through licenses such as the GNU General Public License and the more permissive MIT License (Coleman, 2013; Kelty, 2008). These licenses constituted a legal hack that leveraged the rights of copyright holders to grant permission for others to freely copy, modify, and share their creations. The Creative Commons licenses, which apply the ideas proven in software licenses to non-software works

(Lessig, 2004), opened a clear legal and cultural pathway for OER. As an earlier variety of evolutionary media, lessons from the experience of the software commons may be instructive.

The software commons has been wildly successful, at least to the extent that it encompasses millions of projects, millions of contributors globally, and the underlying infrastructure for large swaths of the digital economy. But increasingly the movement has recognized its challenge is not just to create new projects; for projects to be durable, they must be sustained and maintained (Eghbal, 2020). Practitioners have increasingly recognized that maintenance, sustainable funding, and collective governance are essential for open software projects to be successful (Currie et al., 2013; O'Mahony & Ferraro, 2007; Red Hat, 2020). Recent years have also seen significant advances in the adoption of codes of conduct to make software communities more inclusive (Schneider, 2022b).

One striking difference between the norms of OER and the software commons surrounds practices of "forking"—copying a project and modifying it into something distinct from the original. This behavior is widely encouraged for OER and treated as a norm; an instructor, for instance, might take another author's OER and modify it for a specific course. In the software commons, however, such "hard" forking is relatively rare (Chua & Zhang, 2020; Nyman & Lindman, 2013). This is because such a fork risks diffusing contributions across multiple projects and siloing access to improvements. Successful software projects, by and large, are those in which contributors submit their changes "upstream" to the common codebase, rather than isolating them in a distinct fork.

This difference appears in the design of the software infrastructures that support these movements. Open software projects typically rely on Git, a version-control system that allows maintainers to "merge" revisions from multiple contributors into a canonical repository. In contrast, leading OER platforms such as Pressbooks and Manifold (Buck, 2022; Nyland, 2018) are designed only for publishing and duplicating; they do not include Git-like features for easily adopting user contributions. Notably, a familiar platform for developing and publishing multi-author texts—, the MediaWiki software that underlies Wikipedia—, does not frequently appear on the list of recommended platforms for publishing OER. It is not common to see codes of conduct for OER, because the communities surrounding them are not frequently in ongoing collaboration.

Thus far, OER practices have neglected some of the central lessons of software commoning, particularly the need for tools and habits that support collaborative maintenance. There are important reasons grounded in pedagogy and sustainability to reconsider the governance of OER—in some respects borrowing from norms in software commons and in others departing from them.

CASE STUDY OF AN OER TEXTBOOK

A detailed case study (Daly, Schneider, & Ahmad, under review) of the textbook Humans R Social Media (Daly & iVoices Media Lab, 2024) provides a valuable illustration of the challenges of maintaining OER over time without adequate governance infrastructure. The authors describe their experience with a collaboratively developed open textbook on social media, titled *HRSM*. The

textbook, authored in 2017 and continuously updated until 2021 with external funding, gained significant popularity. However, when funding ended, the original author and adopting instructors faced difficulties in sustaining the textbook's evolution. The lack of a clear governance model meant that contributors could not easily collaborate on updates, and attempts to "fork" the project risked losing future improvements. This scenario highlights the need for shared governance and infrastructure that supports collective decision-making and contributions to OER, rather than relying solely on the efforts of individual authors. The case of *HRSM* is just one example that underscores the importance of developing tools and models that enable OER to evolve collaboratively and sustainably.

In parallel with the development of this paper, we have outlined a preliminary strategy that we refer to as "shared governance" for the future of *HRSM*, designed to support a practice of collective governance and authorship—led by the original author but inviting contributions from others who benefit from the text. This strategy includes:

- An introductory section to the book, "An Invitation to Shared Governance," explaining the model to instructors and students
- A set of basic bylaws for decision-making about future editions of the book
- A template for guest authors interested in contributing a chapter to the book
- An online form for recommending corrections or smaller additions
- An email discussion list for any instructors interested in participating in ongoing adoption, contribution, and governance for *HRSM*

We see this strategy as a work in progress, and we expect to reshape it while we continue to reshape the book itself. But we also recognize that we cannot build a healthy OER governance practice in isolation. The following section offers recommendations for how the broader OER ecosystem can be more supportive of the governance and maintenance that evolutionary media require.

SHARED GOVERNANCE FOR EVOLUTIONARY OER

What follows are three recommendations for future investments in OER infrastructure.

Share and curate best practices for OER governance

In many arenas of institutional life, basic patterns have formed for governance practices that become standardized and templatized. This means that people creating new entities do not have to devote much attention to designing governance and can focus on the activities they want to undertake. For instance, the OER ecosystem already depends on the various Creative Commons licenses, which are available as carefully crafted standards, meaning that individual authors do not need to develop their own legal text for licensing their works. Similarly, many community organizations and academic departments begin designing their governance processes with template bylaws that have been used by many other similar entities, and that reflect the lessons from that experience.

Develop economic flows to support OER governance

In our experience, funding for OER has focused on authorship and adoption while largely neglecting sustainability and governance. We argue that grantmakers in the ecosystem should recognize and invest in these practices more intentionally. Norms among OER practitioners may need to change as well. For instance, users of OER should recognize that while the materials are free of cost, they are not cost-free to create or maintain. Educational institutions that rely on OER, particularly wealthier institutions, should adopt norms of making even modest financial contributions to support the evolution of the materials they and their students rely on.

Integrate governance processes into OER platforms

Governance cannot be regarded as a merely technical problem any more than we can expect technology to dispense with the need for it. However, the affordances of technologies can powerfully shape social possibilities (Winner, 1980). For example, the design pattern of "implicit feudalism" encoded in most online social spaces promulgates an assumption of unitary power deriving from an "admin" role, along with a lack of affordances for democratic accountability (Schneider, 2022a). Platforms that support OER development and publication, such as the Pressbooks platform discussed in the case study above, generally lack functionality to support collective processes for maintenance. They seem to assume the logic of a singular author or a few coauthors, rather than an open and collaborative community of contributors.

Through recommendations like these, the OER ecosystem can more fully recognize OER as a form of evolutionary media that requires not just authorship and adoption but also maintenance and governance. With appropriate infrastructure, sustainability can become a natural outgrowth of OER creation and use, rather than something that requires costly or difficult extra labor on the part of participants.

CONCLUSION

In this paper we have argued for regarding OER as evolutionary (and social) media, requiring not just authorship and adoption but also maintenance and governance. The ambition of this paper has been a reminder that any durable commons is not just an object or resource but must also be a collective practice.

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