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# I'm Never Doing This Again!: Identifying and Solving Faculty Challenges in Adoption of Open Educational Resources

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## **Abstract**

Open educational resources (OER) can be an effective tool in lowering student textbook expenses and bringing current material into the classroom, but come with many barriers for faculty related to time, expertise, motivation, standardized testing requirements, and subject matter differences. Given the number of potential challenges and problems with using OER, school administrators with distance learning programs should be proactive in helping faculty overcome those obstacles.

## **Introduction**

Across America, K-12 schools and universities are embracing OER as a way to reduce costs for students and as a recruiting tool. The U.S. Department of Education (DOE) supports openly shared resources in their #GoOpen initiative for monetary savings, for the ability of open resources to be more current than textbooks, to encourage creativity among educators, and to make resources available to all students (U.S. Department of Education, n.d.). OER are particularly useful for delivery to online students since the material is readily available through the Internet. In this article, we examine factors about OER that may cause problems for faculty curricula developers and administrators, and we also offer some potential solutions to these problems.

## **Scope of OER**

The DOE defines OER as “teaching, learning, and research resources that reside in the public domain or have been released under a license that permits their free use, reuse, modification, and sharing with others” (U.S. Department of Education, n.d., p. 1). The DOE identifies the types of materials that can be classified as OER as everything from textbooks, articles, and sample tests to complete online courses (U.S. Department of Education, n.d.). Many faculty will likely just be looking for a textbook or other supplemental material to enhance their courses. However, wading through the available material can be challenging as much of it may not be readily adaptable to a particular course or module. Educators seeking to bring new material into the classroom make up a small percentage of overall OER access. For example, one popular website, MIT OpenCourseWare, receives two million visits per month. Only 9% of those visitors are educators and of that small fraction, only 43% are looking for material to bring into a course. The majority of educator visitors to MIT are seeking to improve personal knowledge or learn new teaching methods (Massachusetts Institute of Technology, n.d.).

Licensing is another important consideration. Not all material available through online OER resource websites actually meets the DOE definition of open. Sometimes the licenses are more limited, and the burden is on the person using the material to comply with the terms of the license. For example, OER Commons lists 49 online textbooks in the life sciences category. Only 34, however, allow unrestricted remixing and sharing, therefore meeting the definition of OER. Twelve of the available textbooks do not permit remixing under a “share only” license, and three direct the user to “read the fine print” (OER Commons *Life Science Textbooks*, n.d., p 1-9). Put another way “open educational resources are and always will be free in digital form, but not all free resources are OER... Moreover, free resources which may not be modified, adapted or redistributed without express permissions from the copyright holder are not OER” (OER Commons *Frequently Asked Questions*, n.d., p. 2). When using material that is not OER, faculty should be aware of the limitations imposed by copyright restrictions as well as permissible uses in compliance with copyright law under the ‘fair use exception’ (Wiggins, 2011).

## **Advantages of OER**

OER present many advantages over traditional textbooks. Advantages for faculty include:

- Flexibility of curricula. With traditional textbooks, faculty often pick only certain chapters for students to read and supplement the text with additional material. Using OER, faculty can include only the relevant assignments but all assignments can be incorporated into one delivery method.
- Special topics. Not every course offering has a perfect textbook match, and for some highly specialized topics there are no textbook options at all. Through OER, faculty can create their own textbook equivalent.
- Rapid updates. Textbooks are updated slowly and sporadically. With OER, faculty can make quick, topical adjustments to account for current events to bring timely information to students in an integrated format each time the course is offered.

Advantages for administrators include:

- Cost savings to students. OER are, by definition, free and that directly reduces students’ educational expenses. However, even if the course uses a blended form of OER, fair use material, and traditional textbooks, the students still benefit financially.
- Recruitment. Many prospective students consider the full cost of attending a school, including textbooks, before deciding where to go. Free or low-cost textbooks offer a financial incentive that can be attractive to students.
- Faculty buy-in. Faculty who have control over the reading assignments are likely to be heavily invested in the course. Their reputations are on the line because they cannot place blame on the book for flaws in the reading assignments. Furthermore, faculty excitement levels should increase because of the control they exert over the content.

So why wouldn’t everyone want to adopt OER? Educators are taking what was a highly centralized and peer-reviewed process run by publishing companies and experts in the field and decentralizing it to individual faculty developers who lack time, expertise, and motivation. Before looking at ways that administrators can mitigate against these concerns, we will first take a look at some of the negative factors.

## **Challenging Factors**

Faculty and administrators face significant difficulties in adopting OER. Some of the challenges include:

### Time

- Locating resources. Finding relevant, useful resources can take days of researching various websites and databases. Reading through the materials to ensure they are high quality and meet the needs of the course takes substantial additional time.
- Assembly. Once located, putting all the resources into a format and order that enhances learning takes additional time, and in some cases requires considerable computer skills.
- Supplemental material. Faculty will have to develop supplemental resources such as a testbank for quizzes, ideas for discussions or case studies, and PowerPoint slides that are typically provided by textbook publishers.
- Broken links. Faculty may have developed their curriculum using web-based resources that are later taken off line and no longer exist. This will result in the exhausting process of finding new resources again and creating new supplemental materials.
- Updates. The faculty developer will need to keep the curriculum updated periodically to reflect new discoveries, current events, or new trends.

### Expertise

- Topic selection. Faculty, and new faculty especially, are not all at the same level of expertise as textbook authors. Local faculty may struggle to decide which topics are worthy of inclusion.
- Quality assessment. Not all OER are created equal. Some are more recent and easy to read. Others are not as well written. Faculty members who are not true experts in the area may not be able to devote sufficient attention to selecting the highest quality materials.
- Copyright. Faculty do not understand the intricacies of the fair use exception to copyright law and may inadvertently use resources that are copyright-protected, such as question banks, PowerPoint slides, or other supplemental materials from prior textbooks they used in the course. Faculty that base learning modules on resources they thought were open but were actually copyright-protected may need to redevelop the materials. Alternatively, faculty may refrain from using OER resources due to fear of copyright infringement.

### Motivation

- Financial. Faculty are not paid additional money to develop curricula with OER resources. Adjunct faculty in particular are at a financial disadvantage as they are usually paid by the course, hour, or student with no additional compensation for the time it takes to find the resources online and create supplemental guides, questions, and slides. Adjunct faculty also have little motivation to do the extra work required by OER due to job insecurity as they are employed on a term-by-term basis.
- Recognition. While writing a textbook and assembling OER are substantially different tasks, faculty that author or co-author a textbook get recognized for their contributions to the literature in their field. On the other hand, assembling a collection of OER for a class will usually be seen as just part of the job for which no recognition is forthcoming.
- Master course templates. Many online programs seek to provide a consistent student experience for a given course no matter which of several instructors may be teaching it. Except for the lead instructor/course developer, the other faculty have little incentive to utilize OER and may not even be able to alter the course to adopt OER.
- Administration policy and support. While increasing numbers of schools are beginning to encourage the use of OER, a lack of formal policy and institutional support contribute to faculty indifference regarding OER adoption.

### Standardized Testing

- Major Field Test. Collegiate faculty at schools where students take an Educational Testing Services (ETS) Major Field Test as a comprehensive program assessment will need to annually review test areas and OER to ensure that all tested subjects are covered. Major Field Tests are frequently offered in the undergraduate subjects of English literature, music, biology,

computer science, chemistry, mathematics, physics, economics, psychology, sociology, political science, criminal justice, and business. Some Master of Business Administration programs also use Major Field Tests (ETS, n.d.).

- High school end of course (EOC) exams. State-mandated EOC exams present an additional burden on secondary school faculty. The faculty must consider the EOC exam testing objectives and ensure they find OER that covers all the objectives so that students will pass the exam. If the substance of the EOC changes, the OER must change as well.

### Subject Matter Differences

- Introductory level courses. The availability of OER depends on the topic. Those instructors that teach classes like Algebra 101, Chemistry 101, and Sociology 101 are more likely find applicable OER resources than faculty that teach highly advanced, technical topics.
- Updates. Some subjects require more regular updates whereas other subjects remain static for long periods of time. For example, an English literature class on Shakespeare will need no updates, but a class in a dynamic field such as employment law would require frequent changes to keep up with current law and events. Faculty teaching courses requiring frequent updates may be hesitant to move to an OER-based curriculum.

While these challenges generally directly impact faculty, administrators will not be able to reap the advantages of OER if those resources are under-utilized by faculty. Therefore, faculty and administrators need to work together to understand the challenges and develop potential solutions.

### **Solutions**

Pioneer faculty are, in essence, quilting their own textbooks using open resources as fabric and then creating supplemental materials without funding or additional support and are experiencing many frustrations and setbacks along the way. What assistance and encouragement do they need?

### Institutional Experts & Faculty Mentors

Administrators have many potential avenues to encourage use of OER as part of the culture of the school. Instructional designers or librarians could aid faculty in finding OER and supplemental materials, especially hard-to-find material embedded in other courses such as massive open online courses (MOOCs). Instructional designers could be tasked to help faculty developers create supplemental materials, such as testbanks for assessments and interactive activities, based off of OER. Once faculty become proficient in OER, they could be assigned as mentors to assist other faculty.

### Training & Professional Development

The school could pay for consultants on OER to provide training on how to find OER materials; or a full-time expert could be added as staff to the library or instructional design team. The institution could provide training on copyright law and the fair use exception. Some schools, like the University of Minnesota, already provide information on copyright law (“Copyright Information Site,” 2018).

OER or copyright training could be incorporated into part of the school’s professional development opportunities, which have been shown to be an important incentive in getting faculty to teach distance education courses (Scarpena, Riley, & Keathley, 2018; Chapman, 2011). In a survey of faculty motivators to teach online by Chapman (2011), “free professional development activities” was the number one incentive for adjunct faculty and the number three incentive for tenured or tenure-track faculty (p. 8). Of course, as noted by Elliot, Rhoades, Jackson, & Mandernach (2015), professional development opportunities for online faculty should be focused on meeting the needs and concerns of those faculty.

### Online OER Faculty Communities & Certification for OER Instruction

In Chapman's (2011) survey, "online community for DE [distance education] instructors like me" was the number eight incentive for tenured or tenure-track faculty and the number three incentive for adjunct faculty (p. 9). Thus, creating an online resource center and forum for OER educators could be a low-cost solution to faculty motivation. A certification program for OER instruction could also be an incentive as "program for certification in online instruction" was the number nine incentive for tenured or tenure-track faculty and number four for adjunct faculty (Chapman, 2011, p. 9). Although the studies we reference were not looking at incentives focused on increasing adoption of OER, many of the same concepts from those studies still apply.

### Pre-planning

Many problems can be avoided during the planning period prior to development. Rubrics for OER course design can be shared or sample courses could be shown to the developer for inspiration and ideas. McCurry & Mullinex (2017) advocate a "concierge model" for instructional design focusing on the individuality of the course and developer where the designer and the faculty developer work closely to plan the course through a series of consultations (p. 1). The problem of basing curricula on online resources that are later removed can be avoided by downloading OER instead of directly linking to it whenever possible. OER resources could be screened for possible copyright restrictions and licensing limitations prior to development of curricula so that faculty will not have to recreate supplemental materials. Deans/principals and department chairs could remind faculty developers about the requirements of EOCs and MFTs, if applicable, or that reminder could be incorporated into an OER pre-planning rubric.

### Sharing

Faculty could be encouraged to share their OER-based curricula with other instructors in the same school that teach the same or similar courses. Sharing in this way would reap most of the same benefits of OER but cut down on the time required to develop the material. For public university state-wide systems and county-level secondary schools, the time savings through this type of sharing would be even more substantial. Faculty that teach the same courses could also collaborate when developing the curriculum, which would increase faculty buy-in and decrease the individual time commitment. Finally, faculty could also share lessons learned and important resources with each other and with the institution's expert on OER. This iterative process could be used to improve the rubrics and other pre-planning activities.

### Peer Review

Peer reviews of course materials could be used to provide feedback for faculty developers prior to the deployment of course. This review, by a department chair or other senior faculty member, could identify gaps in the materials, improve the content and organization of the OER, and head off problems that might require re-development or re-design of the curriculum down the road.

### Master Course Templates

Academic freedom would be limited if faculty are forced to use a master template that they are not allowed to change. On the other hand, a master course template based on OER and created by experienced faculty and peer-reviewed would be helpful so long as faculty are able to customize the content. Carefully developed and vetted master course templates would also help with concerns about the curricula being sufficient to prepare students for standardized testing or end-of-course exams.

### Compensation, Release Time, Recognition, & Awards

School administrators should consider ways to ensure that faculty have sufficient motivation to adopt OER in their courses. This is especially true for schools that have formal or informal policies encouraging the wide-spread use of OER. The biggest roadblock faculty face is the time commitment required to locate, incorporate, and update OER. One way that administrators could address the time concern is through additional compensation or release time from other obligations such as teaching or advising. Previous research has shown that different instructors are motivated by different incentives (Chapman, 2011; Giannoni, 2003). Therefore, such compensation would

need to take into account the seniority of the faculty member, tenure status, whether the faculty is full-time or adjunct, the course subject matter, the frequency of OER updates required, as well as the goals and resources of the school.

In a survey of faculty motivators to teach online by Chapman (2011), “stipends for professional development” was the number one incentive for tenured or tenure-track faculty and the number two incentive for tenured or tenure-track faculty; “higher pay” was the number two incentive for both groups (p. 9). Interestingly, stipends and higher pay were both at number two with adjunct faculty, emphasizing the importance of additional compensation to that group (Chapman, 2011, p. 9).

Recognition or awards could also be a way to motivate faculty. Chapman’s (2011) survey found that “eligibility for teaching awards” was the number six incentive for tenured or tenure-track faculty and number seven for tenured or tenure-track faculty (p. 9). Perhaps faculty developers who use OER-based curricula could receive a certificate of recognition from the administration.

### OER Supplements From Publishing Companies

Publishing companies such as Macmillan Learning, Lumen Learning, and Cengage have responded to these challenges by offering low cost resources with supplemental materials (Lederman, 2018; McKenzie, 2017). In particular, Cengage will be using OER from OpenStax to create a prepared course for \$25 per student to use the platform in its OpenNow initiative, but content will be available for free (McKenzie, 2017). Although these low cost alternatives will help with many of the challenges experienced by faculty developers, most feature a cost per student per course to use the materials and the platforms. Administrators can consider incentivizing hybrid approaches that use materials provided by these traditional publishers.

### **Linking Solutions With Challenges**

Solving the challenges associated with OER will not be a one size fits all approach. Not all solutions will not work at every school. For example, a small school, or even a small department in a large school, may not have enough personnel to implement sharing or review programs. Other solutions may work for some faculty, but not all, faculty in a particular school. Furthermore, progress in one area may offset the need for change in another. For example, schools with strong internal institutional support for OER may not need to consider additional compensation or release time. School officials should consider the full range of potential solutions before embarking on changes.

Table 1, which links our suggested solutions with the problems they help mitigate, can serve as a guide for administrators in this regard. Hosting an online research center and forum for OER faculty developers seems to be the one solution that could address each challenge. Using master course templates, sharing across systems, and publisher created OER platforms and materials may help with problems related to time, expertise, standardized testing, and subject matter—all but motivation. A certificate program in OER instruction, peer reviews, pre-design review, and rubrics/checklists for design address three of the five challenges. However, only five solutions apply to the essential component of faculty motivation: a certificate program in OER instruction, professional development opportunities, compensation/release time, and recognition/awards.

Table 1. Linking Solutions With Challenges

Solutions	Time	Expertise	Motivation	Standardized Testing	Subject Matter
Institutional experts	X	X			
Mentors	X	X			X
Training	X	X			
Professional development opportunities		X	X		
Online resource center/forum for OER faculty developers	X	X	X	X	X
Certification program in OER instruction	X	X	X		
Pre-design review	X	X		X	
Rubrics/checklists for design	X	X		X	
Avoiding linked OER	X				
Sharing across systems	X	X		X	X
Peer reviews		X		X	X
Master course templates	X	X		X	X
Compensation or release time	X		X		X
Recognition & awards			X		
Publishing companies OER platforms	X	X		X	X

## Conclusion

Open educational resources have the potential to enhance faculty involvement in their courses, keep course content fresh and current, and save students money. With these advantages come many downsides that administrators should be prepared to address to ease tensions between zero cost text initiatives and faculty workload. Teaching is a time-consuming endeavor, even when using a textbook with complimentary resources. Without adequate motivation and institutional support, many faculty may choose the easier path and just adopt a traditional textbook.

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