

Say 'Ahhh!': Looking into Open Educational Resources at Middle Tennessee State University

Caroline LaPlue

ABSTRACT

This essay delves into the role and potential future impact of Open Education Resources (OER) at Middle Tennessee State University (MTSU) amidst the changing landscape of U.S. higher education. The discussion highlights national examples of engagement with OER, emphasizing its importance in creating accessible and equitable educational experiences. This sheds light on the practicalities of OER projects at MTSU and suggests ideas for institutional change.

The author uses an ecological framework to examine how OER integrates within the educational ecosystem, emphasizing the need for robust support structures for sustainability. The advantages of OER are also addressed, such as cost reduction and more customized teaching materials, while acknowledging challenges like maintaining resource quality.

Tennessee, MTSU, and the local student body would benefit from stronger institutional and statewide commitments to supporting OER, an initiative that is crucial to making education more inclusive and responsive to future needs, thus contributing to a more equitable learning environment.

In February of 2021, Middle Tennessee State University (MTSU) received a \$100,000 grant from the Tennessee Board of Regents (TBR) with the express purpose of promoting “widespread faculty use of free or low-cost open digital course content that could result in significant savings for students,” and the idea of using Open Educational Resources (OER) and creating free and accessible textbook options for General Education courses quickly made its way into the MTSU English Department (Hart). In 2022, I joined a team that took on the expansive task of creating a new OER housing MTSU faculty resources to streamline important information and explore whether OER could work for the General Education English program. A few months later, I joined a team funded by a second TBR grant whose mission was to create a third English OER textbook, this time for our primary first-year composition course. Throughout these experiences at MTSU, I have regularly engaged in conversations about OER’s function, working to situate OER’s role in our local programmatic and departmental perspectives, and education more generally. Many of these conversations have been fundamentally structured around if adopting OER will holistically improve students’ educational experiences, and consequently whether we should make official programmatic changes or retreat honorably to the traditional route of expensive print textbooks.

As the reputation of higher education in the United States declines and it becomes increasingly difficult to push the narrative that “college is for everyone,” the pursuit and adoption of OER is an essential step for institutions to adapt to current needs and to render their offered content and skills more palatable, equitable, and accessible to students. The statistical decline in undergraduate enrollment, the improved equity campaigns making college a more realistic option for students of all backgrounds, and the COVID-induced acceleration of online education—each has contributed to the societal need for open, affordable, accessible education and resources. Exploration, creation, and use of Open Educational Resources has slowly proliferated alongside the use of the internet for more than two decades across academic departments and institutions, and even more broadly around the world in an array of humanitarian, academic, and governmental capacities. With a few localized exceptions, though, the state of Tennessee did not (for the most part) actively pursue OER in K12 or higher education until 2015 when the Tennessee Board of Regents (TBR) began to offer grants to institutions for the express purpose of improving OER use across the state. Though not quite on the cutting edge, Middle Tennessee State University has, as of 2021, finally begun to “dip its toes” into the world of OER, to explore, to question, and make positive changes to more equitably support the student body—and it is not a minute too soon. Though the startup costs in terms of both the time investment and faculty buy-in are steep and arduous, and

maintenance will be an ongoing need, the ultimate benefits to our student body and the enhancement of our ability to keep our materials updated and aligned with current best practices make the effort required to pursue OER at MTSU a relevant, viable, equitable, and just choice. OER is still in its fledgling stage with plenty of room for improvement, but MTSU would both *be* well-served and *serve well* our student body by committing to make education more accessible and beneficial through the widespread use of Open Educational Resources.

Definitions & Terms

The William and Flora Hewlett Foundation—perhaps the most significant financial contributor to OER use and research to date—has defined Open Educational Resources as:

Teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge.¹

The key distinction of OER, as opposed to Open Access materials, is “the 5 Rs,” which are Retain, Reuse, Revise, Remix, and Redistribute (Levin). Though many educational resources are free and accessible on the internet, from TEDtalks to government reports, Allen and Seaman note that some people “confuse ‘open’ with ‘free’ and assume all free resources are OER” (9). But not everything that is free will stay free, and even Open Access resources that are and will remain free are often not remixable. Open Educational Resources are unique in their explicit permission and approval for viewers to take and alter their materials, as long as alterations fit within the bounds of whatever Creative Commons license is being used.

Creative Commons is a non-profit organization whose mission is to provide a free, simple, and standardized way to grant copyright permissions for creative and academic works; ensure proper attribution; and allow others to copy, distribute, and make use of those works” (“What We Do”). Creative Commons is fundamental to the successful publication and distribution of OER and has developed a bevy of different

1. Notably, it seems that the Hewlett Foundation once provided a definition of OER, which then became part of OER canon and is now quoted in nearly every public overview page explaining OER (whether government, humanitarian organizations, or educational institutions). But it appears that the Hewlett Foundation subsequently altered or removed their definition and, thus, the original source for the most widely-referenced definition of OER is essentially untraceable

licenses that provide the legal backup needed for any level of protection desired by creators of OER. These range from the most permissive—“Attribution”—which requires nothing in the sharing and remixing except for attribution the original creator, all the way to “Attribution-NonCommercial-NoDerivs,” which prohibits commercial use and remixing of any kind (“About the Licenses”).

Ecological Framework

To situate my work, I use an ecological framework that considers pedagogical practices in a web-like context of related practices and values, as well as the necessary supportive structures required to keep a “biome” of sustainable practices in a healthy system. Rivers and Weber explain that approaching a conversation ecologically draws attention not only to the final product but also to the invisible structures and systems required for the product to survive and proliferate (188). Rivers and Weber further explain that “highlighting this mundane, ecological approach” helps to emphasize the fact “that most changes proposed by advocates occur through concrete modifications to the institutional structures of government offices, courts, schools, corporations, and religious and community organizations” (188). True transformation and an accompanying stability can only be fully realized when OER are worked throughout the whole system, from legislator to student, and no longer pose intimidating risks of shadowy uncertainties.

In the case of OER specifically, the importance of establishing a healthy ecosystem becomes apparent when considering the time and money costs of maintaining accessible educational materials that are both high quality and free to students. The end goal is, of course, students—particularly low-income students—who are now able to complete their assigned homework from the first day of class as a direct result of OER, while not suffering additional financial strain because of textbook costs. The necessary invisible root system of this “free” product, though, must include substantial financial and structural support. For any given teacher to effectively understand and use OER in a classroom, the resources must first have been compiled, evaluated, and typically gathered into a cohesive “book.” Then those resources must be consistently maintained and updated due to changing information, strategies, or technical difficulties, which take time, effort, and money—resources which, as most teachers can enthusiastically affirm, are often in short supply for instructors at any level of education.

Throughout this project, I draw attention to places where the sustainability of OER, and thus its ecology, comes forcibly into play. The need is great, but there is hope that such sustainability is possible. Like the Beatles, advocates for open education can get by with a little help from our friends.

History of Open Educational Resources

In 2001, the new Council on Educational Technology at the Massachusetts Institute of Technology (MIT) was tasked with “[reaching] beyond boundaries” and developing a plan to respond to the changes in academia brought on by the existence of the internet. That council developed OpenCourseWare (OCW), an initiative in which one of the most prestigious universities in the world still shares research, pedagogical resources, and entire courses on the internet for anyone to freely access. OCW includes “courses from every MIT department and degree program, and ranging from the introductory to the most advanced graduate level” (“Get Started”). Since 2001, MIT has continually added and updated courses in its repository, and OCW has not only become popular, but has also been able to respond to and meet great needs, such as educational deficits caused by the COVID-19 pandemic.

The William and Flora Hewlett Foundation also began pursuing open education in 2001. The Hewlett Foundation is, by its own report, a “nonpartisan, private charitable foundation that advances ideas and supports institutions to promote a better world” (“About Us”). Established in 1966 by the Hewlett family (though “wholly independent of the Hewlett Packard Company”), the Hewlett Foundation awards hundreds of millions of dollars each year to philanthropic initiatives around the world. The foundation hosts programs focused “on education, environment, gender equity and governance, performing arts, and effective philanthropy, as well as support for disadvantaged communities in the San Francisco Bay Area,” “special projects,” and “other timely problems, such as challenges related to cybersecurity and U.S. democracy” (“About Us”). In 2021 alone, the Hewlett Foundation awarded over \$516 million, with \$20 million of that going towards forty-nine discrete open education projects across the United States and the globe (“Open Education”).

As early as July of 2002, the Hewlett Foundation began funneling money into open education research, and the term “Open Educational Resource” was officially introduced at forum they sponsored with the United Nations Educational, Scientific and Cultural Organization (UNESCO).² Since 2002, the Hewlett Foundation’s active financial support—combined with the work being done with MIT OCW, Massive Open Online Courses (MOOCs), and OER databases like the Multimedia Educational Resource for Learning and Online Teaching (MERLOT)—has resulted in OER reaching into an impressive range of academic fields and international locations. The

2. The term “open educational resource” had been published in 1999 in the *British Medical Journal* in reference to available online resources, but the term was not popularized or “official” until the 2002 UNESCO determination (Gray).

ecology of Open Educational Resources cannot be comprehensively discussed without acknowledging the importance of the Hewlett Foundation. The foundation not only helped to kickstart OER research, but has maintained regular, massive contributions into the sustainable ecosystem required for long-term OER use.

Current Position of Open Educational Resources

As Open Educational Resources continue to reach across political and social borders, improved OER awareness leads to a complementing increase of OER data, experimentation, troubleshooting, and innovation. Within higher education, two-year colleges lead the way in use of OER, arguably because the demographic of students attending community colleges consists of higher ratios of non-traditional students, returning students, and students from low-income backgrounds, to say nothing of the trend of rising textbook costs (Doan). In a 2014 survey of over two-thousand faculty from different departments in universities all over the country, Allen and Seaman observe that “Faculty at two-year institutions report consistently higher level of awareness of OER than faculty at four-year institutions. [. . .] Faculty at two-year institutions, in general, seem to see greater potential for OER in their courses than do faculty at four-year institutions” (Allen 13). Community colleges have overall lower measures of faculty autonomy for choosing a curriculum within a given course, with administrators predetermining instructional content more frequently than at four-year institutions (Allen 2). The likelihood of having more administrators devoted to instructional design and updating curricula could help explain the expanded use of OER at two-year-colleges over four-year institutions.

Regardless of institution type, funding from grants like those from the Hewlett Foundation provides significant financial impetus behind the production of OER. In addition to the Hewlett Foundation’s millions of dollars-worth of grants, the Institute of Museum and Library Services as well as the North Carolina State University Foundation, the states of New York and Virginia, and the Tennessee Board of Regents (which has itself received and redistributed nearly \$2 million from the Hewlett Foundation) are just some examples of organizations that have funded the development and distribution of OER (Doan; “Alt-Textbook;” “Open Education Resources;” Hart).

In New York City particularly, building upon ground-breaking Open Admissions work of Mina P. Shaughnessy in the 1970s, the City University of New York (CUNY) and the State University of New York system (SUNY) together have annually received \$8 million from the state of New York for furthering OER use across their eighty-nine campuses. That first year, “SUNY and CUNY, respectively, re-engineered roughly 3,700 and 1,500 course sections that served roughly 56,000 and 40,000 students.

By using OER instead of traditional textbooks, officials say, students in the sections were estimated to have saved about \$12 million” (Lederman). In some ways, the support of OER by the State of New York functions as a useful case study that demonstrates to the rest of the country how OER proliferation could look. In the CUNY Four Year Report of 2022, the authors emphasize that,

Prior to the allocation of \$4 million to CUNY [. . .] OER adoption was for the most part sporadic and uncoordinated across the University. The State funds helped to leverage an Achieving the Dream grant awarded in 2016 and propel systemwide OER adoption, with an eye towards scalability, sustainability, and student success. (*New York State Open Educational Resources Funds: CUNY Four Year Report 3*)

While the phrase “sporadic and uncoordinated” likewise describes the 2024 OER situation in Tennessee, CUNY’s report plainly highlights the importance of engaging the New York state legislators in the endeavor to “propel systemwide OER adoption,” and which became for them an essential component to CUNY’s ability to sustain their OER ecosystem.

Though the foundational principles for New York’s progress in open education were established fifty years ago with Shaughnessy, and Tennessee has been slow to promote OER in state institutions, the Tennessee Board of Regents (TBR) is beginning to move in that direction. Since 2021, TBR has provided three discrete cycles of grants for Tennessee institutions to expand OER in the state, and Middle Tennessee State University received grants from two of those cycles in order “to increase student success and equity by assisting underrepresented student populations” (Hart).

Open Educational Resources themselves come in various modes and do not look a particular way, unless prompted by an institution. This customizability assists individual programs, departments, and professors in gathering or creating the materials best suited for their specific needs, but it simultaneously creates difficulties in the widespread conceptions of what OER are. In their 2014 review, the Babson Survey Research Group reported that, of over two-thousand surveyed faculty, “only about one-third of faculty members claim to be aware of open educational resources,” but that there were “some faculty who said that they were not at all aware of OER who report that they have used it once the concept is explained for them” (Allen and Seaman 19). At MTSU, one administrator confirmed that “some people are doing OER and don’t even know they’re doing OER because it’s just not labeled. They’ve always kind of cultivated their

own materials and not really relied on the textbook” (Smith)³. In addition to a limited understanding of OER in general, Allen and Seaman’s study further found that part of the situation could be explained rather problematically by “the fact that faculty often make resource choices without any consideration to the licensing of that resource” (19). Though the impetus behind OER has always been equity and access for students, which aligns nicely with using freely available materials, Creative Commons licensing ensures that this free material is shared legally and does not involve unethical appropriation of intellectual property.

Popular Benefits of Using Open Educational Resources

The most celebrated exigency behind the advocacy of OER is simply equity (Doan; Smith). Not paying for a stack of \$60-\$200 textbooks provides relief to students who are struggling financially, and one study of students in statistics courses demonstrated lower measurable stress found in students using OER as opposed to students who had been required to purchase statistics textbooks (Lin). Unsurprisingly, reducing financial strain can have direct and immediate positive implications in student lives.

A second significant benefit is the draw of new students who are attracted by the low-cost options. Smith explains, “some of the community colleges have what they call Z-degrees, so it’s zero cost to the students. So, the students know coming in there’s zero textbook costs for the duration of their program, which—that’s a good selling point.” According to Smith, that “Z-degree” (which is unavailable at MTSU yet) can often lead to students deciding to continue and get a four-year degree after completing their free two-year degree—and that will “be a way to attract students when the enrollment cliff that everyone’s dreading gets here.”

Then there is customizability. Whether an organization wishes to establish a particular approach, or a specific department, or even a single instructor, OER textbooks are as customizable as the resources they use. Even within the constraints of Creative Commons licenses, customization options are almost endless.

Instructors are drawn to the concept of OER by the appeal of first-day access and avoiding textbook hassle and cost conversations with students at the beginning of each term. North Carolina State University’s Director of the Copyright and Digital Scholarship Center, Will Cross, explains that “Some [faculty] are moved by the cost issue, but I find we get a lot more traction when we talk about more students able to participate in class instruction or giving them back control of the classroom” (Doan). If a faculty

3. Personal interviews conducted for this project have been anonymized and use the pseudonyms “Smith,” “Jones,” and “Walker” because this project was conducted without approval from the Institutional Review Board (IRB).

member can see direct benefit to their own pedagogical process and a reduction to their own teaching difficulties, considering switching to OER becomes more palatable.

Finally, not only are OER textbooks available anywhere that has internet and thus accessible to students on the first day of class (at least on campus, even if they struggle with internet accessibility at home), but they are also more accessible to students needing accommodations and can help instructors stay compliant with the Americans with Disabilities Act (ADA). Digitized textbooks inherently allow for significant student customization as well, whether magnified text for reading, volume adjustment, screen readers, and other assistive technology.

Open Educational Resources: Drawbacks & Solutions

Obstacles to making the initial switch and then maintaining OER regularly emerge, but for each problem, a counterpoint with a potential solution has been suggested. During OER trainings and pitches, a common response to hearing the full process of discovering, modifying, and maintaining OER materials is weariness and uninterest. As creatures who tend to appreciate settling into comfortable routines, one of the greatest initial difficulties is simply inertia. As Cross notes, “The status quo is easy, and the cost issues feel remote enough that it just doesn’t move the needle for a lot of faculty members” (Doan). One administrator from CUNY adds that he sometimes hears responses from faculty of, “do I care about whether or not the students have to pay for it?” There’s often that, ‘Well, I had to pay for my books. They should pay for their books” (Jones). Convincing faculty members with decades of experience that they need to upend tried-and-true methods and materials is difficult, but even more so when that upending requires significant time and effort.

Depending on individual faculty goodwill is not the only way to effect widespread buy-in. Cross calls out institutions as the primary actors in this particular fight, arguing, “If we want to see major change we need to look at institutional incentives, which today often focus more on research than instruction” (Doan). Cross suggests incorporating widespread credit for “student success” as a metric for achieving promotion and tenure, or at least offering awards or classifications that could appear on a CV. He concludes that “faculty need something that spurs them to take action to change, and we haven’t really done that at scale yet” (Doan). Cross’s colleague Mira Waller suggests the profound value that can stem from an institution’s choice actively to hire faculty who are already knowledgeable and passionate about promoting OER while helping to educate and support interested faculty (Doan). When the institutions proactively support faculty, who then support students, who in turn bring prestige, money, and accolades to the university, the result is a functional, healthy ecosystem.

When the conversation moves past that first phase, one frequently referenced concern revolves around the relative quality of OER (Jones). For many faculty members and administrators, the idea of a rigorous, reliable, cutting-edge piece of scholarship being provided free to students and readers is intuitively too much of a stretch—no doubt connected, at least in part, to the capitalistic mindsets of many Americans who have heard “you get what you pay for” and “there’s no such thing as a free lunch” for their entire lives. Fortunately, this concern is easily addressed, as a close look at the available resources (and there are a lot) shows that “it’s just as rigorous, that the scholarship is just as refined” (Jones). In the early days, Smith qualifies, finding excellent resources was more difficult, but now, “with more universities considering OER contributions along the same lines as they would any other research or scholarly activity, then that’s helped with the quality.” Even in 2014, Allen and Seaman’s survey results showed that “three-quarters [of those who offered an opinion] rank OER as the same as or better than traditional resources” (2). As awareness and OER development has continued to expand in the interim decade, OER quality has likely continued to improve.

A more persistent OER concern is the question of discoverability. Discoverability refers to the ease (or, more frequently, the difficulty) of discovering any given OER, which often leaves OER pioneers feeling as though they must forge new trails where, in fact, one had already been established but not noticed. Though one of the touted benefits is how readily available OER are, Otto and Kerres observe, “[i]f a resource exists, but its existence is not detectable by search engines or portals, it is not available for potential users as such.” Allen and Seaman further explain, “The lack of a catalog and the difficulty of finding what is needed are the most often cited barriers. All three of the most mentioned barriers are related to the ease of finding appropriate material” (27). Once an institution or department has done the initial labor of gathering and publishing a functional OER textbook, the accompanying workload of interested faculty eases dramatically, but the initial ask would be difficult for anyone to look forward to. It could be akin to asking faculty members to look through all the resources in MERLOT and OCW and every resource published by Creative Commons to find the best and most appropriate resources for their program or course—in other words, too much.

Once again, though, developing an institutional ecology to support OER provides a solution to this problem. If institutions designate employees whose roles explicitly include familiarizing themselves with OER and supporting faculty users, those OER advocates can then “lead the way in creating more high-quality open educational resources and making existing OER easier to find by improving metadata, providing better labeling, tagging, or coding to improve retrieval of information” (Doan).

Establishing a comprehensive digital catalog, as implied by Allen and Seaman, would be a helpful project to undertake. Similarly, Larson and Murray mention that “branded repositories are one way of effectively identifying, tagging and organizing OER content. Gathering these resources in a trusted repository also provides the capacity to assess their quality, ease of use and effectiveness for teaching and learning” (Larson and Murray 92). Cross further recommends training the campus bookstore employees and librarians to become OER experts because finding resources is already such a significant part of their roles (Doan). But incorporating third-party experts into the search for resources would also help address lingering concerns over the quality of OER simply by having another academic professional’s assessment.

The most consistent challenge with OER, though, is the problem of sustainability, which highlights the importance of a healthy, functioning ecology. For OER advocates, it can be exhilarating to receive that first grant, and to be filled with starry-eyed visions of an equitable future, but once funding runs out, there is often (at least initially) no more, and the process must begin again. Larson and Murray were cautionary on this point: “Many fledgling OER projects make the mistake of focusing on their technical and educational goals without paying adequate attention to issues of financial sustainability” (92). Similarly, Smith strongly argues that “the more successful programs are the ones who figured out the sustainability part on the front end before they even launch the initiatives. [G]iving sustainability the attention that it needs is definitely [one of the main] things that determines successfulness.” If regular funding and support is not woven into the fabric of the institution’s ecology, then it is up to smaller teams or individuals to provide their own funding in their own time. This is most frequently done with grants, but repeatedly writing and submitting grant applications and subsequent grant reports demands significant time and attention that could be used more effectively. Within the General Education English Program at MTSU, for example, countless hours have been dedicated to the production of four separate OER books, but now that grant money has run out, the future of open education in the MTSU English Department and those books is uncertain.

And yet, for all that, there is hope! Though MTSU has not yet achieved the balance of an independently healthy ecosystem, Smith again provides suggestions for a solution: succession. He notes, “There’s not a lot of adequate succession planning, so the knowledge kind of dies when somebody leaves as opposed to knowing who you’re going to pass it off to and that person is willingly accepting it.” Too much reliance on a small number of OER advocates means that if they move on without sharing their knowledge or training a successor, then the sometimes years of OER progress are lost, and the effort

must begin again. But intentionally raising awareness, involving more people, and keeping better records would help momentum continue even as personnel fluctuates. Cross again recommends that librarians be an essential part of this process so that the created knowledge is not exclusive to any one department, but—if properly connected across departments and offices—the whole institution can effectively learn from each other and grow together (Doan). Institutional support is key to maintaining a healthy OER ecosystem.

Conclusion

Middle Tennessee State University has its own individualized factors to consider, but most of the hurdles facing the proliferation of OER at MTSU are non-unique and reflect struggles, strategies, and successes found other institutions, both in and out of Tennessee. Open Educational Resources are still, to a significant degree, a new frontier. Pioneers have been forging paths over, around, and through each new quagmire, and each trailblazer makes the path a little clearer and more accessible for those following behind. OER development can happen at every level, and opportunities abound for a wide range of positions and influences, from bigwig politicians to individual students. Those with significant power and influence can draw from the examples of CUNY, SUNY, TBR, and the Hewlett Foundation and advocate for widescale reform, awareness, and financial support of OER. Administrators and those with influence in an educational system (e.g., a county school board) or an individual institution can research OER development and advocate for providing financial support and training for programs or staff members who are interested. Individual faculty and staff can educate and empower themselves by finding out what OER projects are happening on their campuses or at nearby institutions and joining those teams, or by collecting OER to incorporate in their own courses, thus offsetting student costs even on a small scale. And everyone—even students or people not explicitly a part of any educational system—can make a positive difference by initiating conversations and asking questions of those with more influence, and by writing letters to their congresspeople or school administrators about the importance of OER development and maintenance. The opportunity for making quality education widely accessible has never been better. Now we need support to continue the journey, going where few have gone before.

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