

# EQUITABLE EDUCATIONAL PLANNING: EMBRACING OPEN EDUCATIONAL RESOURCES FOR THE POST-PANDEMIC ERA

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## ABSTRACT

*Educational leadership, whether in PK-12 or higher education, often examine the planning of curricula and materials for equity. Due to the global pandemic that began in early 2020, the planning of instructional materials had to be reexamined due to the travel and interaction restrictions that closed most brick-and-mortar schools, colleges, and universities. Educational leaders around the globe scrambled to assist educators in what was for many uncharted methods of delivering instruction. Educators and students with access to the Internet, an online academic library, Open Educational Resources (OER) or Open Access (OA) resources had the option to continue to move forward with educational endeavors. With an increased reliance on digital materials to meet online instruction demands, those without access to these same resources were limited, if not stopped entirely, from being able to continue their studies and/or research activities. Work was already being done to promote OER and OA prior to COVID-19, however the restrictions put in place highlighted the need for equitable, online access to resources and scholarship for educators to autonomously choose from. The purpose of this article is to go further into the post-pandemic landscape and explore how increasing OER and OA and removing access barriers could increase equity by establishing the ability for teaching/learning to continue for all, regardless of the ability to attend a brick-and-mortar building and regardless of socio-economic status. The lens being used to examine the consequences of the current inequities, as well as the benefits of decreasing these inequities, is that of self-determination theory (SDT), a macro theory of development, motivation, and well-being. SDT also provides one possible framework to promote future research around the increased production and use of OER and OA..*

## INTRODUCTION

Digital technologies are changing the landscape and methods of conducting business in many organizations, including in academic institutions. Nevertheless, even though there is forward movement, the education sector is largely lagging behind businesses and other industries in adopting new technologies and innovations. In fact, COVID-19 spotlighted disparities across academic operations, especially in equitable access to online resources. Certain digital innovations such as Open Education Resources (OER) and Open Access (OA) could have a positive impact and alter the future of educational planning by increasing equitable options and closing certain gaps. In higher education, faculty awareness of open educational resources, (course materials that are freely available for use, reuse, adaptation and sharing), has grown consistently, according to a study by Bay View Analytics (2020). UNESCO supports both OER and OA through initiatives such as “Recommendations on Open Education Resources (OER)” (UNESCO, 2019) and the Global Open Access Portal (UNESCO, n.d.).

Despite these globally supported initiatives, prior to COVID-19, much curriculum planning remained focused on hard-copy sources with many courses throughout the world taught using books and other materials that were primarily made available to students in classrooms or in library resource rooms. When this method was no longer available because teachers and students had to work at home and many no longer had access to physical resources, the need was amplified for open digital options that could provide the foundation for lessons. For educators and students who were physically going to academic libraries prior to COVID-19, the inconvenience transformed to an insurmountable obstacle when campuses had to shut down. If primary instructional resources had been OER or OA, learning would have continued in a more equitable manner. As it was, many had limited or even no access to resources to keep courses going.

Libraries and classrooms can remain stocked in many items, however, the more that can be made open and available to all, the more equitable learning and research becomes. Increased digital access would allow for learning and research to continue when there is limited or no access to brick-and-mortar libraries or resource centers. This is an international issue, and increasingly academic libraries around the globe contribute to student success in many ways, including impactful collaborations with faculty to incorporate information literacy into disciplines, liaising to departments, and embedding digital resources in courses and groups. The recognition and support of such initiatives is not insignificant and grows steadily, as evidenced recently by the U.S. including billions of dollars in a stimulus package to promote the expansion of digital resources at libraries (ALA, 2021).

At the beginning of the 2020/2021 academic school year, over five months after the start of many COVID-19 related lockdowns, many educational leaders, instructors, and students were as prepared as possible to begin educational activities online. The hope for many was that there would be a return to face-to-face education as soon as a vaccine was made available, and infections decreased. Unfortunately, that did not happen as quickly as many anticipated. Therefore, efforts were expended to continue and improve virtual learning well into the second semester of the academic year. Many educational materials and scholarly works were made available online to help expand educational options, particularly for PK-12 schools, and scholarly communication, particularly surrounding the science of COVID-19 (Alemneh et al., 2020; Schaffhauser, 2020; Tavernier, 2020). Even though these strides were greatly beneficial, gaps in resources still abound. If opening up resources for PK-12 teachers increased educational planning options, and opening up peer reviewed publications advanced the research on reducing the spread of a global disease, would it not behoove other scholarly resources be made available that would advance other areas of equity and research as well?

In addition to the view that increasing OER and OA would directly increase equity, we could examine how increasing these options could contribute additional benefits to the field of education. Self-determination theory (SDT), the lens being used in this article to promote equitable access to learning resources, is a macro theory interested in promoting high quality development, motivation, and well-being (Ryan and Deci, 2017). Supporters of SDT state that individuals need to have the basic psychological needs of autonomy, competence, and relatedness met in order to exhibit healthy development, motivation, and well-being. The SDT tenant focused on for this article is that of autonomy and how it is directly linked to motivation and well-being. Simply put, if educators and students do not have the full range of resources to choose from when designing their curricula or completing their assignments, they may not feel autonomous and evidence shows lack of autonomy has a negative effect on motivation and well-being (Johari et al., 2018; Marshik et al., 2017). On the flip side of the coin, for those that have expanded access to educational resources, the need for autonomy is met, frustration is decreased, and higher levels of motivation and well-being are

experienced. Currently many educators still work with limited autonomy due to the inability to access necessary resources. The whole premise behind OER and OA are to increase access and choices for individuals, including for educators who are planning and creating curricula, and through the lens of SDT this could mean enhancing motivation and well-being.

As schools are slowly returning to face-to-face operations, students, teachers, and administrators are looking at ways to redesign the education experience enabled by new practices. Education will be forever changed due to the effects of COVID-19 (Duncan et al., 2020), and not all of the changes need be negative. Since the spotlight on certain iniquities that could be remedied with OER and OA intensified during the lockdowns, educational leaders, planners, and policy makers, could use this illumination as a catapult to increase these resources to lessen the resource gap and therefore make education more equitable across the board. The myriad benefits of OER and OA were recognized long before the global pandemic, therefore educational planners were already including them, however, there is still much to be done to promote both types of open resources and the timing may be optimal. The focus of this article is on how COVID-19 exposed resource inequities and how OER and OA can make planning curriculum more equitable by allowing educators and educational planners more autonomy in the choices of resources they can utilize to build and enhance their curricula.

### **OPEN EDUCATIONAL RESOURCES (OER) and OPEN ACCESS (OA)**

Digital technologies such as OER and OA provide scholars with access to diverse and previously unavailable content that span various formats and innumerable technologies across institutions and even nations. OA information is essentially digital information that is online, free of charge, and free, in varying degrees, of most copyright and licensing restrictions. OERs are a type of open access materials that are intended for teachers and learners, and include a wide range of pedagogical resources, such as textbooks, lesson plans, activities, media, and supporting materials. Users can build on OER and/or adapt the material and then redistribute them usually under a creative commons (CC) or some other open license, or even with a complete waiver of copyright or “public domain” (UNT, 2021). OA resources, including peer-reviewed scholarly works, permit users to download, copy, print, display, distribute, search, index, and link to the information. OA resources remain the intellectual property of their creators, who have attribution rights as well as control over the integrity of their work.

The benefits of OER include but are not limited to reduction of costs for production and distribution (Keller, 2021; Wiley et al., 2012), increased access, promotion of independent learning, collaboration (Keller, 2021), and openness about teaching, and social justice (Heller and Gaede, 2016; Henderson, and Ostashewski, 2018). Using OER across departments can also increase collaboration as the faculty can work together to develop the additional course materials (Keller, 2021). The benefits of OA include an increase in citations (Piwowar, 2018), equity, and the generation of new ideas and discoveries, as well as wider availability and accessibility. OA has the potential to increase the exposure and use of authoritative and reliable information (Alemneh et al., 2020). These benefits have a snowball effect of increasing research outputs. This increase in turn improves education, economies, and overall welfare of populations by decreasing inequities for students, faculty members, researchers, and at times the general public.

Inequities in education have been the focus of much research and policy discussions for decades with a specific emphasis on portions of the population that cannot access high quality or even

adequate resources (Carter, and Welner, 2013; Ford, 2019; Kozol, 2012), thwarting and at times frustrating the basic psychological need of autonomy as defined by SDT. This directly and indirectly reduces healthy motivation and affects well-being. OER and OA by the very nature of making knowledge accessible, reduce the gap in resources by providing additional options for educators and students, and in so doing contribute to reducing the gaps in achievement and other academic advancements that may also lead to employability and successes outside of academia. As was stated earlier, COVID-19 shed light on several inequities such as the examples provided below.

Imagine for a moment a high school teacher who has always relied on physical textbooks that remain in the classroom. The books remain in the classroom simply because there are not enough textbooks for each student to have their own. Had this teacher had an OER textbook, this solution would have been solved long before COVID-19, however, he was forced to scramble to locate other options when the physical distancing guidelines were instituted to prevent the transmission of the disease. This teacher was strained to come up with an alternative way to distribute readings to his students. He could not hand out the textbooks for the students to take home, he simply did not have enough books for every student.

Now imagine for a moment a college professor that has always grappled with finding an affordable textbook for her students. She struggled to find one textbook that covered all the material she wished to cover. She would have chosen to have her students purchase two books and use sections from both in her class, but this was too much of a financial burden. In addition, the institution that she works for has little funding for scholarly journal subscriptions and she was unable to supplement the research portion of her course with many of the peer-reviewed articles she would have chosen to use, because they were not open to her and her students but were locked behind a paywall. Once COVID-19 hit and the economic status of many of her students plummeted even lower, she wanted to avoid the already poor textbook option altogether and focused on OA publications. Even though she was able to keep presenting material, she felt that the situation negatively impacted the instruction she could offer and believed her curriculum would have been stronger if she had been able to provide an online open textbook and access to many of the sources not currently open to her.

Both of these imagined educators may have also searched for online education best practices as soon as they realized they were going to have to move instruction to an online modality. The high school teacher struggled to find scholarly literature that he could access because he did not have access to a higher education academic library. The college professor was able to access more resources due to her library access, however, still came upon studies and reviews she felt would have been helpful, and yet, her library was not subscribed to those sources, and they were locked behind the paywall. Both imagined educators represent real-life educators around the globe that function despite limited choices in curricula design and resource use. Both could have improved their curricula, and therefore instruction, and possibly student motivation and well-being, with access to high quality OER and OA resources. Access to more resources would provide genuine autonomy for educators and students. This would have been true before COVID-19, and during the pandemic restrictions, educators would have been able to plan a more equitable and seamless move to socially distanced learning when it was thrust upon them.

From a student perspective, many, even in developed countries suffer when their PK-12 school is unable to provide the textbooks or when their college or university assigns textbooks to be used that are high in cost. Many students are not able to afford updated textbooks causing them to delay purchasing until the courses are weeks in, causing them to share, or even causing them to choose

older editions. If most students in a class have the newest edition of a textbook, but a couple students have an older version because it is available free to them, do they suffer? Open textbooks would equalize the options instructors have when deciding what resources to use, would prevent students from having to sacrifice due to high costs, and would also prevent the frustration of the basic psychological need of autonomy.

## REDUCING INEQUITIES

In addition to reducing inequity by increasing choices and satisfying the SDT tenet of autonomy in curricula resources and design, other aspects of increasing the use of OER and OA need to be considered. Institutions of higher education are challenged by external accreditation and many stakeholders may not have a positive outlook regarding the net effects of OER on education in general. Some commentators argue low- to middle-income countries may not have the same highly accentuated beneficial effects from OER as more wealthy countries do; yet other experts generally see the potential benefits of OER as outweighing the possibly negatives. Inequity may not be something that can be completely eradicated, however, individuals involved in educational planning often strive toward equalizing learning in as many ways as possible. Many inequities that have been spotlighted during the pandemic restrictions have centered around access to resources and access to instruction. The need for a strong infrastructure, such as consistent electricity, high speed Internet, and durable and well-maintained computers, are outside of the scope of this article. However, they warrant mentioning because even if high quality OER and OA abound, they are of little to no use to those that cannot gain access due to poor electricity, poor Internet, or lack of functional devices. In other words, governments, institutions, and other organizations need to ensure these challenges have been addressed. This is certainly a problem in the Global South but is also a problem in pockets of the Global North.

As far as OER and OA reducing inequities, a few other items must also be mentioned. For school districts and or colleges/universities, using OER resources might create a more consistent curriculum as instructors might be encouraged to use similar resources and/or collaborate to create the texts and materials that will be used. Particularly during restrictions, OER and OA would allow for students who are forced to stay home, to continue to read assigned texts that coincide with the instruction being offered in their online classrooms. Even for students attending face-to-face instruction, OER could provide an equitable method to disseminate knowledge to all students regardless of the classrooms they find themselves in, rather than the current trend that limits resources to institutional budgets. Students would simply need to be provided a link via email or learning management system or provided a device with the resources already downloaded. It is important to remember if equity is the goal, OER should be downloadable for students who have limited or no access to Internet at home.

It is clear that students suffer who do not have access to educational resources, however, having access to subpar resources can also be detrimental and therefore quality must be considered. If the choices are not genuinely good choices, the autonomy is not authentic, and frustration will still occur. Veletsianos, (2020) argues that open sources do not always help decrease inequities. Those using and recommending open resources should still consider social justice issues such as who the authors are and who are being cited. Citation politics should be considered as open resources could promote research and researchers that are supporting the dominant culture rather than opening up exposure for minority research to be showcased (Hodgkinson-Williams and Trotter, 2018). In order

for inequities to be avoided in production, aspects must be considered such as, who is making the decisions about what materials are important and who is creating those materials.

In addition to OER and OA, another attempt at reducing inequities in education come in the form of Massive Open Online Courses (MOOCs), which saw a renewed interest as a means of gaining higher education once COVID-19 shutdowns were implemented. MOOC provider Udemy reported a 425% increase in enrollments from February to March 2020 (Udemy 2021). In sum, increasing OER, OA, MOOCs, and other types of open knowledge sources would allow educators at all levels and in all regions of the world to plan for and establish more equitable curricula through offering an increase in choices.

## **PLANS TO INCREASE OER AND OA**

We have established how increasing OER, and OA would benefit educators and students through increasing options and supporting the SDT tenet of autonomy. In this section practical methods of doing so will be discussed. Views and rhetoric from governments, institutions, other organizations, and individuals can promote or deter both the creation and use of open sources such as OER and OA. Many concerns and misconceptions surround the production and use of open-source scholarly works. Since mystery and ignorance breed unfounded fear, addressing the concerns and dispelling the myths or misconceptions would be a great step toward a wider acceptance of open sources. Some of the top concerns include, intellectual property and copyrights, predator publications, and quality.

Many individuals promoting open sources work diligently to educate academics, administrations, and other stakeholders internationally through presentations, publications, and even an Open Access Week. The last three Open Access Week themes have focused on the need for action on equity and inclusion. In 2018, it was “Designing Equitable Foundations for Open Knowledge.” In 2019, the theme was “Open for Whom? Equity in Open Knowledge, and the last one in 2020 was, “Open with Purpose: Taking Action to Build Structural Equity and Inclusion” (Alemneh et al., 2020).

Support of OER and OA is not a new concept. In 2012, a report by Center for American Progress encouraged governments and institutions to institute a policy that, “All publicly funded resources are openly licensed resources” (Wiley et al., 2012, p. 2). McKenzie (2020) noted that awareness and adoption of OER continues to grow, but the movement could be overshadowed by publisher initiatives like inclusive access. In light of the transformation of scholarly communication, higher education institutions worldwide are increasingly building digital repositories that will enable them to foster a more sustainable publishing ecosystem and make research outputs available via the OA route.

In addition to disseminating information about open sources and constructing institutional repositories, higher education institutions hold a great deal of power in how they show value by how they evaluate the production of open sources for evidence of promotion and tenure (McKiernan, 2017). The trend is to be more accepting and even supportive of open source development as acceptable measures. Also, more OER and OA might be created if there were incentives put in place by colleges or departments to develop necessary skills to produce open sources and/or small grants for those that pursue such publications. Many institutions of higher education express a goal of passing along information to the general public and yet they are not accomplishing that purpose if the teaching materials and scholarly communication their faculty produce is locked behind paywalls

(McKiernan, 2017). An increasingly popular view is that if publicly funded faculty produce manuscripts, then these items should be open to the public.

Specifically, to support the creation of OER, universities can encourage the creation of texts and other materials by instructors for their own courses and for PK-12 courses as well. Educators at all levels could be encouraged to start small by sharing teaching materials (slides, notes, etc.) and maybe even establishing in house open textbooks (McKiernan, 2017). Partnerships could be formed between faculty in higher education and faculty in PK-12 to create textbooks to meet specific needs. This might have the benefit of bridging the gap between the ivory tower and practice in some fields and might also help prepare high school students for entrance into college level work if the partnership's goal is to create college preparatory texts and those writing the text are both high school and college educators. Openstax, an online library of textbooks and resources for both high school and college level courses run by faculty at Rice University, could serve as an example of successful OER production (Openstax, 2021).

In the US, Congress has recognized the role that libraries play in the health of communities, especially during the COVID-19 pandemic. In fact, the pandemic has exposed the level to which citizens rely on libraries to access resources and services via the Internet. Libraries are eligible for billions of dollars in recovery funding as part of the \$1.9 trillion American Rescue Plan Act (ARPA) of 2021 passed by Congress. The Institute of Museum and Library Services (IMLS) received \$200 million, the largest single increase in the agency's 25-year history. The package also provides billions of dollars in academic, public and school library-eligible programs, including the Emergency Education Connectivity Fund through the federal E-rate program (ALA 2021).

Increasing the use of OER and OA might grow organically as the resources are made available and advertised as viable high-quality options for educators. However, more strategically fiscal and equity policies could be implemented such as requiring or at least encouraging the identification and use of OER and OA materials. Incentives could be provided for educators who identify and use these resources to build curricula.

## **RECOMMENDATIONS FOR FUTURE RESEARCH**

Future research could examine the benefits and challenges of using open sources, as well as developing them. Empirical research, equity research, program evaluation research, etc., could continue to establish a body of knowledge that would dispel myths and increase the value placed on such sources, as well as explore ways to overcome certain challenges. Examples of studies could include those that examine educator and student motivation and well-being using OER and OA while using the lens of SDT; studies that examine the academic success of students using OER and OA; and comparing student persistence, attitudes, and outcomes before use and after initiating the use of these sources (Keller, 2021). Equity research could be conducted examining achievement or success gaps with and without these sources and programs that use open sources could be evaluated for effectiveness.

As far as studying the development of OER and OA, attitudes toward collaboration and crowdsourcing for development could be examined as well as the benefits to those participating in such group endeavors (Baffy et al., 2020; Fleming et al., 2021). Case studies could be conducted to closely examine experiences of faculty from universities or colleges that choose to go the route of OER textbook development. One such study by Keller (2021) demonstrated that using OER across

departments helped increase collaboration as the faculty worked together to develop the additional course materials (Keller, 2021).

New innovations often need to be studied for both benefits and challenges. The challenges of using open sources are similar to using most new innovations. Innovation is viewed as the application of better solutions that meet new requirements, including unarticulated needs. As educational institutions, including cultural heritage institutions embrace open sources, they are facing unprecedented pressures to ensure privacy and reduce the exposure of their institutions to all kinds of data-related risks. Alemneh and Helge (2020) argue the critical importance of balancing the OA aspirations of higher education institutions with the need for respecting privacy and data confidentiality. Data security is for example, about the technology and policy for protecting confidentiality, integrity, and availability of data during its entire life cycle. In this regard, the potential effects need to be studied and analyzed longitudinally to measure the impact of adoption of OER on various aspects of education, using variables such as grades, completion rates, competencies, and many others.

Much research remains to be conducted that would examine OER and OA at all levels of education, from early elementary to doctoral studies. SDT provides one possible framework for such research by focusing on whether individuals experience higher quality motivation and well-being when provided with increased choices for educational resources. Continued empirical evidence is needed to support the development and use of open sources. The improvements to equity with the increased creation and use of open sources could expand and transform educational planning options and the learning possibilities for students around the globe. Well curated OER course materials can be continuously updated and also customized and integrated with available learning management tools or platforms. Despite improvements in faculty satisfaction with OER, it is evident that much work will need to be done to make the most of these tools for educational planning. Few, if any, true winners will emerge from this global health crisis, yet OER and OA have become even more popular in response to the pandemic, making the topic particularly timely. Even though the COVID-19 pandemic created an almost infinite number of challenges, the many unforeseen benefits are being felt and may be experienced beyond the post-pandemic era.

## CONCLUSION

In sum, post pandemic educational planning will look different, but the different view need not be bleak. If educational planners grab on to all that has been learned and all that has come to light through this worldwide experience, education could be changed for the better in the area of access to equitable resources. The focus of this article has been to explore how the use of OER and OA can increase equity and choices, and possibly even motivation and well-being, both in brick-and-mortar classrooms and in virtual learning environments through shifting paradigms of accessible and high quality sources. Autonomy, as defined by SDT, was used as a framework for examining the benefits of increasing authentic, high quality, open-source educational resources. This adds to the literature by further exposing the inequities highlighted during COVID-19 restrictions and provides a possible lens for future research and investigations of policies.

The improvements to equity with the increased creation and use of open sources could expand and transform educational planning options and the learning possibilities for students around the globe. Well curated OER course materials can be continuously updated and also customized and integrated with available learning management tools or platforms. Despite improvements in faculty satisfaction with OER, it is evident that much work will need to be done to make the most of these tools for

educational planning. Few, if any, true winners will emerge from this global health crisis, yet OER and OA have become even more popular in response to the pandemic, making the topic particularly timely. Even though the COVID-19 pandemic created an almost infinite number of challenges, the many unforeseen benefits are being felt and may be experienced beyond the post-pandemic era.

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