2020

Teaching with OER During Pandemics and Beyond

Jennifer Van Allen
CUNY Lehman College

Stacy Katz
CUNY Lehman College

Teaching with OER during pandemics and beyond

Jennifer Van Allen

*Department of Counseling, Leadership, Literacy and Special Education,
Lehman College, Bronx, New York, USA, and*

Stacy Katz

Leonard Lief Library, Lehman College, Bronx, New York, USA

Abstract

Purpose – Open Educational Resources (OER) are learning materials openly licensed so that others may retain, reuse, revise, remix or redistribute (the 5Rs) these materials. This paper aims to raise awareness of OER by providing a rationale for using these learning materials and a strategy for educators to get started with OER during the collective crisis and beyond.

Design/methodology/approach – Using a broad research base and anecdotes from personal experience, the authors make the case that OER improves student access to learning materials and improves the learning experience in both PK-12 and higher education contexts.

Findings – The authors define and describe the benefits of OER to provide practical suggestions educators can implement during the pandemic and beyond.

Practical implications – To support educators in finding and using OER, this paper highlights repositories that include a breadth of various learning materials across subject areas and educational contexts. The authors provide specific suggestions for finding, personalizing and contextualizing OER.

Originality/value – This work not only provides an overview of OER with particular considerations for educators during the COVID-19 pandemic but also makes the case that OER should be integrated into classrooms beyond the pandemic.

Keywords Open educational resources, OER, Access, Equity

Paper type General review

According to the most recent *What's Hot in Literacy* report published by the International Literacy Association (2020, p. 6), "increasing equity and opportunity for all learners" was ranked as one of the top five most important issues to improve student outcomes by 1,443 international survey respondents comprising teachers, higher education professionals, literacy consultants and administrators. Equity in education is an important issue during times of normal operation. During the COVID-19 pandemic, school districts worldwide have made massive shifts to remote learning. With this change, educational news sources are reporting grave disparities in student access to learning, particularly for students with disabilities, those who are homeless and English language learners, along with calls for elected officials, parent leaders and community leaders to come together to rapidly address these issues (Viega, 2020).

While increasing in popularity in higher education, Open Educational Resources (OER) present an underused concept for improving student access to learning in all educational contexts, including prekindergarten through 12th grade (PK-12). This paper proposes that increasing the use of OER, which are globally available, may help to lessen these disparities and work to close the achievement gap not only in today's collective crisis but also beyond the pandemic. Many educators are unfamiliar with these openly available, free resources. According to a nationwide survey conducted with PK-12 school district leaders in the USA, only 34% of respondents had awareness of OER and Creative Commons licensing (Allen and Seaman, 2017), and only 37% of higher education faculty reported awareness of OER and Creative Commons licensing (Seaman and Seaman, 2017). This paper aims to raise awareness of OER by defining OER, providing a rationale for using these materials, explaining where to find OER and suggesting ways to incorporate OER into existing teaching practices.

What are Open Educational Resources and Why?

Traditionally, learning materials are published under copyright and their use requires either payment or permission of the copyright-holder. OER are learning materials that are openly licensed, which means the copyright-holder has published the material on the internet under a Creative Commons (CC) license that allows others to retain, reuse, revise, remix or redistribute (the 5Rs) these materials (Wiley and Hilton, 2018). OER also includes material in the public domain, which are materials that are no longer under copyright or where the creator dedicates the materials to the public domain and relinquishes copyright (William and Flora Hewlett Foundation, 2013). All of the CC licenses require those who use the resources to credit the original work by providing attribution (Wiley and Hilton, 2018) and the licenses delineate how that work can be used. According to the William and Flora Hewlett Foundation (2013, p. 4):

> [. . .] the idea behind OER is simple but powerful [. . .] these digital materials have the potential to give people everywhere equal access to our collective knowledge and provide many more people around the world with access to quality education.

Working in the City University of New York (CUNY) system in New York City, the authors observe educational disparities daily. Among students in CUNY, 53% of community college students and 37% of senior college students live in poverty (City University of New York, 2018). Revealing the realities of CUNY students' lives further, in 2019, results from the #RealCollege survey indicated that 48% of students were food insecure in the prior 30 days, 55% were housing insecure in the previous year, and 14% were homeless in the previous year (Goldrick-Rab et al., 2019). Unsurprisingly, students with basic need insecurities often delay or decline purchasing their assigned textbook due to the high cost, which means they have limited to no access to essential learning materials (Hilton, 2016; Jhangiani and Jhangiani, 2017; Martin et al., 2017; Senack, 2014; Stein et al., 2017).

As library faculty at a CUNY senior college in the Bronx, the second author often sees the coping mechanisms students use because they do not have access to their textbooks. Students come to the reference desk hoping to find a copy of their textbook for class on reserve or an older edition in the stacks. The disappointment is palpable when that one copy is checked out or worse, not owned by the Library. As a teacher educator, the first author's students, who are largely working in schools in the Bronx, New York, complain that their PK-12 students aren't able to participate in research at home because they lack access to quality learning materials to do so. This complaint remains despite the fact that public schools spend more than $3bn a year on digital content (Herold, 2016) and $9bn a year on

K-12 textbooks and related curriculum resources (Bliss *et al.*, 2013). The disparities in access to resources at our institution and in the surrounding community are clearly evident.

Open Educational Resources improve access and learning experiences
Some educators have begun to adopt open textbooks and other OER learning materials as a way to increase equity by improving student access, particularly with an eye to those who are struggling with basic need insecurities. As one CUNY faculty member remarked:

> I mean, our students can't really afford to buy their books 90% of the time, and it never feels fair to make them buy books when it's really hard for them to pay for tuition and pay for rent and pay for childcare and all the things they're trying to pay for (Katz and Brandle, 2020).

In a CUNY-wide survey about the student experience of Zero Textbook Cost courses, 96.9% of the students who responded found their course materials to be the same or easier to access than traditional textbooks (Brandle *et al.*, 2019). The #GoOpen Initiative, which supports the transition to OER in PK-12 education in the USA, lists increasing equity, keeping content relevant and high quality, empowering teachers and saving money as the primary reasons to use OER (Office of Educational Technology, 2020). Research on OER use in PK-12 education points to improved differentiation of content based on student needs as these materials can be freely adapted and remixed by teachers (Blomgren, 2018; de los Arcos *et al.*, 2016). Teachers also report adding OER into the mandated curriculum as a way to contextualize the content for students within current world events, issues, and interests, making the curriculum "more accessible, transparent, and flexible" (Blomgren, 2018, p. 61) and promoting culturally sustaining pedagogy (Paris, 2012).

Findings from research and the authors' experiences confirm that teaching with OER increases students' access to learning materials and improves student learning experiences (de los Arcos *et al.*, 2016). Student reflections on the OER used in a teacher education course offered by the first author during fall 2019 confirmed that they found the materials easier to access. As one student commented:

> I think they were easier because they're on the Internet, so that's an easier source rather than going to a library or getting a book. It's just right there, it's easier to access.

In addition, the teacher candidates indicated that they preferred learning from OER because of the flexibility afforded by the materials. Another student noted:

> What I think is great is that for a student or for myself, you could just read the article and be done. You can read the article and watch the video and be done. Or you can read the article, the video, read another article, watch another video. You know, there's a lot of options. There are choices. And yeah, I think just for learning, it goes beyond just what a printed academic article can give you.

Exposure to OER enhanced the teacher candidates' learning experience and made the class learning resources more accessible and individualized to their needs. Additionally, they were invited to explore, create, revise and remix OER for K-12 education, including open textbooks, lesson plans, lesson resources and more. Incorporating OER within teacher preparation coursework not only benefits the teacher candidates in the classes but also potentially benefits the future students these candidates will teach. Learning about CC licenses, where to find open teaching and learning materials within coursework, and how to effectively use these materials can increase equity by widening access and supporting learning experiences for their PK-12 students.

Yet, for all of these teacher candidates, this was their first exposure to OER. One student reflected:

> I really think that [. . .] the Masters of Education (programs), they should be telling people about this. And I'm not sure why they don't [. . .] It's just funny people don't know about it.

A survey of teacher education faculty at the authors' institution revealed that only 1% of faculty used OER to share information and deliver content to students, with only two respondents indicating they had their teacher candidates create and share OER with others. These findings are consistent with OER awareness research that shows less than 40% of educators surveyed in the USA indicated an awareness of OER and Creative Commons licenses (Allen and Seaman, 2017; Seaman and Seaman, 2017). Now is the time to raise awareness of OER in all educational contexts to provide more equitable and culturally relevant and sustaining educational experiences for all learners.

Teaching with Open Educational Resources

The rapid rise in online classrooms during the COVID-19 pandemic has led to the adoption of more online resources than ever before (Schaffhauser, 2020). Much of the commercial content that has been made temporarily available for free use during the pandemic will no longer be available to all once the pandemic is over, perpetuating inequitable access to learning materials (Schaffhauser, 2020). Many parents and teachers are turning to the website Teachers Pay Teachers (TPT) during the pandemic. TPT reports that 6,000,000 users, or 85% of US teachers, are on the platform (Hahm, 2020). While some resources on TPT are free, many are not, and the resources are not openly licensed. Resources that are free, but not open, cannot be revised, remixed or redistributed. Teachers often learn about TPT through teacher influencers on Instagram (Reinstein, 2018). While OER does not have the same level of awareness and cachet, it provides more flexibility for teachers than commercial or copyrighted resources.

OER provides content that can be downloaded and saved, or retained for later use, as well as adapted or remixed to better meet the needs of the global user. The OER designation means that the content within the resource can also be customized and personalized to a classroom, allowing for greater cultural inclusivity than commercial materials. In raising awareness of OER, this paper intends to extend beyond a rationale and definition to envision where to find and how to teach with these resources. For the purposes of this section, the term "educators" refers to both PK-12 teachers and higher education faculty.

Where educators find Open Educational Resources

When people hear the term OER, textbooks often come to mind. Beginning in 2012, OpenStax created peer-reviewed, openly licensed textbooks for introductory college courses and advanced high school courses, which are freely available in digital formats and are low cost in print. More open textbooks are available through the Open Textbook Library, a referatory of textbooks across disciplines that are available with an open license, which allows for revising and remixing content. The Open Textbook Library also includes reviews by faculty about the textbook, which helps by providing considerations for teaching with that textbook. Open textbooks specifically about education are available at the EdTech Books website. This platform provides books that are freely available to a global audience, many under an open license, though some are only free and cannot be revised or remixed. As these books are published on the EdTech Books platform, they are fully searchable making it easy to find chapters or sections of books relating to educational topics. Public domain books, such as Dewey's *Democracy and Education*, are also reprinted on the platform, which many faculty find easier to use and assign to students than the Project Gutenberg version of the same text.

OER is more than textbooks, and the broad term "resource" reflects that they range from entire open textbooks to lesson plans to assignments. Repositories, such OER Commons, include OER that vary by material type and format for every subject at every educational level. For example, learning materials for PK-12 teachers include a variety of videos, handouts, unit plans, lesson plans, assessments, rubrics and online lesson modules. Resources for higher education include textbooks, course outlines, online teaching modules and even full online courses. Curriki is a repository aimed at PK-12 and career/technical education resources, providing open access to collections of printable worksheets, lessons and more across major subject areas. Finally, most educators are familiar with Khan Academy as an important learning resource. However, few know that many of the resources included in Khan Academy are openly licensed as Attribution-NonCommercial-ShareAlike (CC-BY-NC-SA). Learning materials under this license may be downloaded, remixed and adapted as long as the user attributes the original source, ensures the materials are not used for commercial purposes and shares any adaptations or remixes under the same CC license. For links to these OER repositories and more, see Table 1.

Librarians and instructional designers have particular expertise in finding and helping educators teach with OER and can assist educators in this process (Katz and Van Allen, 2020; Morgan, 2020; Smith and Lee, 2017). In higher education, OER Librarian positions have been developed to help faculty find and teach with existing OER, as well as create and publish their own OER (Larson, 2019). Resources such as the #GoOpen Launch Packet (https://tech.ed.gov/open/districts/launch/) provide guidance for PK-12 state, district and school-based administrators looking to start the process of transitioning to open learning materials.

The allure of free resources that are more easily accessed by their students may initially draw educators to OER; however, Blomgren (2018, p. 65) notes, "greater awareness for the implications of OER requires a complex understanding and response that is broader and deeper than the concept of free resources". After a bit of experience selecting and using OER, many educators quickly realize that these materials can be repurposed to personalize learning and, subsequently, use their teacher creativity to make the content more relevant, meaningful and innovative for their local context or specific student needs (Blomgren, 2018; de los Arcos et al., 2016; Hayman et al., 2018).

Repository	Weblink	Levels included
OpenStax	https://openstax.org/	High School and Higher Education
OER Commons	https://www.oercommons.org/	Prekindergarten - Higher Education
Curriki	https://www.curriki.org/	Preschool - 12th Grade; Career/Technical Education
CK12	https://www.ck12.org/student/	Kindergarten - 12th Grade
Khan Academy	https://www.khanacademy.org/	Kindergarten-12th Grade; Early College
Wide Open School	https://wideopenschool.org/	Prekindergarten - 12th Grade
K-12 OER Collaborative	https://education-reimagined.org/resources/oer-collaborative/	Kindergarten - 12th Grade
EdTech Books	https://edtechbooks.org/	Teacher Education and Professional Learning
Open Textbook Library	https://open.umn.edu/opentextbooks/	Higher Education
Project Gutenberg	https://www.gutenberg.org/	All Levels; Mostly Public Domain Texts

Table 1.
OER repositories

Suggestions for use

DeBarger (2020), Hewlett Foundation Program Officer, tweeted:

> Right now, parents everywhere are getting a crash course and reminder in why the work of educators is essential — and challenging. We're all looking for help and resources, and realizing that while there's a lot of wonderful stuff online, it takes teachers to bring it alive.

Teachers are critical in the educational process. Simply connecting learners with resources is never sufficient for learning, and this holds especially true during a pandemic. Because of their training, educators are best positioned to determine how to have students interact with learning materials. While educators may find OER aligned with their learning goals, CC licensing provides them the flexibility to modify content even further (depending on the license type). Hayman *et al.* (2018) found that PK-12 teachers and administrators sought OER training that provided the opportunity to localize and contextualize content and assessment activities. As such, the true power of OER lies in the permissions of the work to be collaboratively adapted and remixed by a global community, resulting in new OER that are more culturally relevant and inclusive for different communities of learners.

Personalizing content. According to Blomgren (2018, p. 59), "educators want textbooks but also desire a variety of resources to support individualizing and personalizing the content covered in the textbooks". One K-12 study indicated that teachers rarely used OER as is but often adapted the materials to accommodate student needs, taking ideas from various sources as inspiration to create tailored student materials (de los Arcos *et al.*, 2016). OER provides the perfect opportunity for personalization given the permissions afforded by a CC license. For instance, educators often fear their students may not have sufficient background knowledge to fully understand content. When using an OER textbook or instructional resource, the specific background knowledge an educator anticipates their students lack may be added to the content through videos, images, hyperlinks, etc. By finding, adapting and remixing OER, educators can create materials that are not only personalized to their students' learning needs but also foster greater equity for accessing content for those with limited background knowledge.

The same principle is true of students' misconceptions and assumptions. Experienced educators are acutely aware of common misconceptions, faulty assumptions, persistent mistakes or places where their students tend to go wrong when working with subject matter. OER allows educators to adapt learning material by embedding reminders and quick checks for understanding for their students to interact with using instructional videos, call out text boxes, multiple choice quizzes, etc. One educator the first author recently worked with designed an OER textbook chapter for her first-grade students to use at home when completing their homework. As the educator often received feedback from parents that they struggled to support their children with their math homework, the teacher was able to embed instructional "how-to" videos for the parents within the textbook making it more accessible to all. As echoed in the teacher candidate's quote earlier in this article, the flexibility of OER affords students the opportunity to individualize their learning experience making it more accessible. In addition, OER affords teachers the creativity and opportunity to personalize content for their students.

Contextualizing content. In the same fashion that adaptations and remixes can be integrated to personalize OER, educators may consider ways to contextualize content to make it more current, relatable and relevant to their students. In a psychology class, Nusbaum (2019) made modifications to an OER psychology textbook with her class by providing examples of the content from their institution. One valuable modification adapted the textbook sections on where psychological treatment may occur to provide information

and statistics on their local campus mental health facilities (Nusbaum, 2019). Similarly, educators may adapt OER content to contextualize local or global issues, problems or challenges that interest students. When major events occur in the world or local community, such as the COVID-19 pandemic, it often takes years for published curricula to reflect the event. Savvy educators may adapt OER to make curricular connections to these events, engaging students with the content in an engaging and relevant way that is not possible with traditional curriculum materials.

An explicit goal of our current educational system should be to promote and celebrate the language, literacies and cultural traditions of society and critique the many ways we have students engage with culture, referred to as culturally relevant and sustaining pedagogy (Paris, 2012). Students should not only have opportunities to explore the cultural practices of others but also see themselves represented in the learning materials. Opportunities to adapt and remix OER content for students supports this goal in myriad ways. Teachers may adapt and remix OER to include case studies and anecdotes that more closely represent the places, spaces and communities in which their students feel like they are "cultural insiders". Replacing traditional stories or historical events with more culturally relevant examples or replacing geographical landmarks or organizations with local examples contextualizes the content in powerful ways that help students see the relevance and build on their prior knowledge. Examples of OER adaptations made to address local systems and cultures can be seen in the Teacher Education in Sub Saharan Africa (TESSA) project (Wolfenden *et al.*, 2012). In this project, OER teacher education materials developed in the USA and Western Europe were adapted to African contexts, demonstrating global accessibility, adaptability and use of OER to achieve equity.

Conclusion

Teaching has always been, and always will be, a profession in which educators share resources to benefit their students. Professional learning communities (PLC's) established in PK-12 schools and districts encourage educators to collectively develop lessons, units and assessments tailored to the content and needs of their students. As educators begin exploring and using OER, they often find that they enter into a welcoming, collaborative global community that extends beyond their local teaching circles, mimicking PLC's. Those teaching with OER build personal learning networks (PLN's) through social media and other connected technologies bringing educators, librarians, researchers, instructional designers, parents, etc. together in communities of practices as they select, share, design, adapt and remix OER (Fulantelli *et al.*, 2012; Smith and Lee, 2017). This greater connection among educators not only is especially needed during social distancing requirements and remote learning but also provides support beyond the pandemic.

In this paper, the authors call for educators to adopt OER to increase student access to learning materials and adapt or remix the materials to maximize student engagement and learning experiences during this collective crisis. However, OER use should not end there. Disparities in student access to resources can be lessened through OER. The power, and paradox, of OER is that these learning materials are available for everyone globally but adaptable for anyone locally. Now is the opportune time to introduce educators to OER and advocate for its use over commercially published materials that are being made freely available during the crisis. The potential of OER to improve equity in learning beyond the pandemic is compelling. As the Creative Commons blog notes, "Open education is not a short-term fix to a passing problem—it is a long-term solution to ensuring equitable, inclusive access to effective educational resources and learning opportunities" (Vézina and Cable, 2020, para. 5).

References

Allen, I.E. and Seaman, J. (2017), "What we teach: K-12 school district curriculum adoption process 2017", BABSON Survey Research Group, 17 September, available at: https://www.onlinelearningsurvey.com/reports/k12oer2017/whatweteach_2017.pdf (accessed 14 April 2020).

Bliss, T. Tonks, D. and Patrick, S. (2013), "Open educational resources and collaborative content development: a practical guide for state and school leaders", International Association for K-12 Online Learning, available at: http://www.aurora-institute.org/wp-content/uploads/oer-and-collaborative-content.pdf (accessed 15 April 2020).

Blomgren, C. (2018), "OER awareness and use: the affinity between higher education and K-12", *The International Review of Research in Open and Distributed Learning*, Vol. 19 No. 2, doi: 10.19173/irrodl.v19i2.3431.

Brandle, S.M., Katz, S., Cooney, C., Beth, A., Disanto, J., Hays, A., Miles, L. and Morrison, A. (2019), "But what do the students think: results of the CUNY cross-campus zero-textbook cost student survey", *Open Praxis*, Vol. 11 No. 1, pp. 85-101, doi: 10.5944/openpraxis.11.1.932.

City University of New York (2018), "A profile of undergraduates at CUNY senior and community colleges: fall 2017", Office of Institutional Research, City University of New York, New York, NY, 23 July, available at: https://www.cuny.edu/wp-content/uploads/sites/4/page-assets/about/administration/offices/oira/institutional/data/current-student-data-book-by-subject/ug_student_profile_f17.pdf (accessed 13 April 2020).

de los Arcos, B., Farrow, R., Pitt, R., Weller, M. and McAndrew, P. (2016), "Adapting the curriculum: how K-12 teachers perceive the role of open educational resources", *Journal of Online Learning Research*, Vol. 2 No. 1, pp. 23-40.

DeBarger, A. (2020), "Right now, parents everywhere are getting a crash course and reminder in why the work of educators is essential...[Twitter]", 10 April, available at: https://twitter.com/AngelaDeBarger/status/1248653169548132353 (accessed 11 April 2020).

Fulantelli, G., Taibi, D., Gentile, M. and Allegra, M. (2012), "Fostering OER communities of practice with teachers", in Okada, A., Connolly, T. and Scott, P. (Eds), *Collaborative Learning 2.0: Open Educational Resources*, IGI Global, Hershey, PA, pp. 51-71.

Goldrick-Rab, S. Coca, V. Baker-Smith, C. and Looker, E. (2019), "City university of New York #RealCollege survey", available at: https://hope4college.com/wp-content/uploads/2019/03/HOPE_realcollege_CUNY_report_final_webversion.pdf (accessed 13 April 2020).

Hahm, M. (2020), "Coronavirus: US teachers try to 'bring normalcy' amid 'very unique time in their little lives'", *Yahoo! Finance*, 5 April, available at: https://finance.yahoo.com/news/coronavirus-distance-learning-for-teachers-parents-students-194902018.html (accessed 15 April 2020).

Hayman, J. Heiser, R. and Ishmael, K. (2018), "Open learning and open communities: OER for preK-12 educators", [self-hosted pre-print chapter], available at: http://bit.ly/HaymanHeiserIshmael2018 (accessed 15 April 2020).

Herold, B. (2016), "Technology in education: an overview", *Education Week*, 5 February, available at: https://www.edweek.org/ew/issues/technology-in-education/index.html (accessed 15 April 2020).

Hilton, J. III (2016), "Open educational resources and college textbook choices: a review of research on efficacy and perceptions", *Educational Technology Research and Development*, Vol. 64 No. 4, pp. 573-590, doi: 10.1007/s11423-016-9434-9.

International Literacy Association (2020), "What's hot in literacy", available at: https://www.literacyworldwide.org/docs/default-source/resource-documents/whatshotreport_2020_final.pdf (accessed 13 April 2020).

Jhangiani, R.S. and Jhangiani, S. (2017), "Investigating the perceptions, use, and impact of open textbooks: a survey of post-secondary students in British Columbia", *The International Review of Research in Open and Distributed Learning*, Vol. 18 No. 4, pp. 172-192, doi: 10.19173/irrodl.V18i4.3012.

Katz, S. and Brandle, S.M. (2020), "Why do CUNY faculty adopt OER?", Paper presented at OER20, 1 April-2 April, online conference.

Katz, S. and Van Allen, J. (2020), "Evolving into the open: a framework for collaborative design of renewable assignments", [pre-print chapter], available at: https://academicworks.cuny.edu/le_pubs/306 (accessed 29 May 2020).

Larson, A. (2019), "What is an open education librarian, even?", Paper presented at OpenEd19, 30 October-1 November, 2019, Phoenix, AZ, available at: https://docs.google.com/presentation/d/13djsn1-Hbh3kMY1vzldZNRZbZ3U4kuNxEtV2LZOr9Uo/mobilepresent?slide=id.g7085ab2f78_0_5 (accessed 30 October 2019).

Martin, M.T., Belikov, O.M., Hilton Iii, J., Wiley, D. and Fischer, L. (2017), "Analysis of student and faculty perceptions of textbook costs in higher education", Open Praxis, Vol. 9 No. 1, pp. 79-91, doi: 10.5944/openpraxis.9.1.432.

Morgan, T. (2020), "Instructional designers and open education practices: negotiating the gap between intentional and operational agency", Open Praxis, Vol. 11 No. 4, pp. 369-380. available at: https://openpraxis.org/index.php/OpenPraxis/article/view/1011 (accessed 16 April 2020).

Nusbaum, A. (2019), "Textbook project overview", available at: https://drive.google.com/drive/u/0/folders/14EoD8EopYzUbckxvBp1WF0mpZX3c73WY (accessed 16 April 2020).

Office of Educational Technology (2020), "Open education", available at: https://tech.ed.gov/open/ (accessed 15 April 2020).

Paris, D. (2012), "Culturally sustaining pedagogy: a needed change in stance, terminology, and practice", Educational Researcher, Vol. 41 No. 3, pp. 93-97.

Reinstein, J. (2018), "Teachers are moonlighting as Instagram influencers to make ends meet", Buzzfeed News, 31 August, available at: https://www.buzzfeednews.com/article/juliareinstein/teachers-instagram-influencers-school-tpt-pinterest (accessed 14 April 2020).

Schaffhauser, D. (2020), "Updated: Free resources for schools during COVID-19 outbreak", THE Journal, 13 April, available at: https://thejournal.com/articles/2020/03/13/free-resources-ed-tech-companies-step-up-during-coronavirus-outbreak.aspx (accessed 14 April 2020).

Seaman, J.E. and Seaman, J. (2017), "Opening the textbook: educational resources in U.S. higher education 2017", BABSON Survey Research Group, available at: https://www.onlinelearningsurvey.com/reports/openingthetextbook2017.pdf (accessed 14 April 2020).

Senack, E. (2014), "Fixing the broken textbook market", US Public Interest Research Group, and the Student PIRG, Washington, DC, 27 January, available at: https://uspirg.org/reports/usp/fixing-broken-textbook-market. (accessed 14 April 2020).

Smith, B. and Lee, L. (2017), "Librarians and OER: cultivating a community of practice to be more effective advocates", Journal of Library and Information Services in Distance Learning, Vol. 11 Nos 1/2, pp. 106-122. doi: 10.1080/1533290X.2016.1226592.

Stein, S., Hart, S., Keaney, P. and White, R. (2017), "Student views on the cost of and access to textbooks: an investigation at university of Otago (New Zealand)", Open Praxis, Vol. 9 No. 4, pp. 403-419, doi: 10.5944/openpraxis.9.4.704.

Vézina, B. and Cable, G. (2020), "Education in times of crisis and beyond: maximizing copyright flexibilities", Creative Commons, blog, 31 March, available at: https://creativecommons.org/2020/03/31/education-in-times-of-crisis-and-beyond-maximizing-copyright-flexibilities/ (accessed 14 April 2020).

Viega, C. (2020), "NYC community leaders want a taskforce to address disparities widened by coronavirus school closures", Chalkbeat, 7 April, available at: https://chalkbeat.org/posts/ny/2020/04/07/nyc-community-leaders-want-a-taskforce-to-address-disparities-widened-by-coronavirus-school-closures/ (accessed 13 April 2020).

Wiley, D. and Hilton, J. (2018), "Defining OER-enabled pedagogy", The International Review of Research in Open and Distributed Learning, Vol. 19 No. 4, doi: 10.19173/irrodl.v19i4.3601.

William and Flora Hewlett Foundation (2013), "Open educational resources", White Paper, William and Flora Hewlett Foundation, available at: https://hewlett.org/wp-content/uploads/2016/08/OER%20White%20Paper%20Nov%2022%202013%20Final_0.pdf (accessed 17 April 2020).

Wolfenden, F., Buckler, A. and Keraro, F. (2012), "OER adaptation and reuse across cultural contexts in Sub Saharan Africa: lessons from TESSA (teacher education in Sub Saharan Africa)", *Journal of Interactive Media in Education*, Vol. 2012 No. 1, doi: 10.5334/2012-03.

Corresponding author

Jennifer Van Allen can be contacted at: jennifer.vanallen@lehman.cuny.edu