
Types of Barriers Experienced by Online Instructors in Higher Education

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Abstract

This literature review focuses on barriers higher education instructors experience while teaching online. A search for literature published between 2010 and 2020 and the application of exclusion and inclusion criteria resulted in 20 articles that underwent thematic analysis. Online instructor barriers with online teaching were identified and categorized as initial barriers and ongoing barriers: (a) barriers to getting started, (b) barriers to knowing students individually, (c) barriers to supporting community and student learning, (d) barriers to managing time and workload, and (e) barriers to achieving professional success. This review revealed that online instructors' initial barriers with online teaching can be mitigated by institutional maturity; however, ongoing barriers require more institutional investment.

Introduction

Online education has seen consistent growth in higher education over the last two decades, with institutions expanding their use of technology, online program offerings, and access for different student populations (Garrett et al., 2019; Seaman et al., 2018). In 2020-2021, the COVID-19 pandemic resulted in many institutions temporarily transitioning all teaching and learning online. On the frontlines of these changes in higher education are faculty who adapt their teaching practices, learn new technologies, and create motivating online learning environments conducive to student success. The transition to online teaching necessitates various forms of support for instructors to succeed (MaGuire, 2005; Authors, 2020), and in order to appropriately provide support to online instructors, the barriers they face need to be determined. In this article, we review literature on the barriers faced by online instructors in higher education. Online instructors play a crucial role in online learning and their satisfaction is termed a pillar of quality online education by the Online Learning Consortium (<http://olc.org>). A thorough review and discussion of the barriers they face can thus be useful to create supportive environments for online instructors as various forms of online teaching and online education continue to emerge.

Research on Barriers in Online Education

Over twenty years ago, stakeholders across distance education environments were surveyed by Muilenburg and Berge (2001) who identified ten barriers – administrative structure, organizational change, technical expertise, social interactions and quality, faculty time and compensation, legal issues, student support, access, threat of technology and concerns with effectiveness of distance education. In an early survey of online instructors, Berge (1998) reported several areas for policy development, technical barriers, and cultural barriers. Areas for policy development included accreditation, consortia agreements, transferability, tuition rates, curriculum standards and approval, academic calendar integration, online course integrity, intellectual property concerns, faculty FTEs, test and exam proctoring, student support, library access, and increasing faculty and student participation in online education. Technical barriers included a lack of reliable technology, connectivity, and staff conversant with technology. Institutional culture, resistance and fear of online learning, and faculty concerns over compensation, workload, and training, were the cultural barriers identified.

Subsequent studies focusing on faculty barriers reveal similar technical and cultural barriers, but less concerns related to accreditation, agreements, tuition rates, and academic calendar integration, indicating that these barriers were possibly resolved as distance education became more prevalent. Pajo and Wallace (2001)

categorized barriers faced by online teaching staff as personal barriers faced by individuals, attitudinal barriers related to “broader philosophical concerns and affective reactions” (p. 80), and organizational barriers related to institutional support. Significant barriers in their study were the time needed to learn technologies, develop, implement, and monitor online courses; lack of technical training and teaching support, and lack of incentives or recognition for distance teaching. These concerns of time, support, and incentives were mirrored in subsequent studies on faculty barriers (Haber & Mills, 2008; MaGuire, 2005; Shea, 2007), reflecting a lack of administrative and institutional understanding of the time taken to teach online. In Oomen et al.’s (2009) study, administrative and institutional support was a recurring theme where online instructors worried about increasing online enrollments and the associated workload, and administrative expectations of effective online instruction without provision of adequate instructional or technical support and time needed. Concerns related to instruments for online teaching evaluations, student readiness for online learning, academic integrity, and how online teaching factored into tenure and promotion processes were also expressed.

Concerns with the value and recognition of online teaching were reported as demotivating for younger faculty and tenure track faculty by Shea (2007) who found that “voluntariness” (p 80) played a role - faculty were more demotivated if required to teach online. Specific challenges with respect to online teaching practice have been investigated, such as large online class sizes and the time taken to interact and provide individualized feedback (Tomei, 2006), and the difficulties faced by novice online instructors in learning to manage technology, interacting with online students, and facilitating online synchronous sessions (Choi & Park, 2006).

Haber and Mills (2008) used Muilenburg and Berge’s (2001) framework of ten barriers to study faculty barriers at multiple institutions to find common concerns of time and workload, social interaction with students, academic plagiarism and dishonesty, and legal or intellectual property issues. They found the size of an institution, its level of adoption of online education, the complexity of its programs, the policies for online education, and instructor training influenced online faculty perceptions of barriers. This reinforces Berge et al. (2002)’s assertion that “organizational maturity” (p. 1) and expertise with distance education play a role in the barriers experienced at an institution. For organizations embarking on distance education, “technical support, social quality and interaction, evaluation, and access” (p. 6) were major barriers, but organizations more mature with distance education would have addressed administrative, organizational change, technical support, assessment, student access, and student support services problems. Organizations in a more mature phase and with more expertise were more likely to experience barriers with faculty compensation, time, and workload.

It follows that the barriers experienced by online instructors might differ as online education becomes more prevalent in higher education - 6.3 million higher education students in the US took at least one online course during Fall 2016 (Seaman et al., 2018), and in the CHLOE 4 report (Garrett et al., 2020), 60% of institutions reported preparing faculty to teach online. In this context where technology is increasingly used for teaching and learning, and online education is growing dynamically in higher education institutions, it is important to understand the barriers faced by online instructors in recent years. This literature review thus focuses on research on the barriers faced by online instructors in higher education between 2010 and 2020. The findings of the review could be helpful to higher education institutions as they emerge from the COVID-19 emergency remote teaching period and plan for a post-2020 world in which new forms of online teaching emerge and most faculty and students have had some experience with online courses.

Research Question

What kinds of barriers do higher education instructors experience while teaching online?

Methodology

To answer this question, keyword searching was limited to Google Scholar for widely accessible results, but full-text access was retrieved from various library databases through a US university. To reflect recent barriers in online education, the search was limited to literature published between 2010 and 2020. Six separate Google Scholar searches were conducted in early 2021 by entering combinations of key terms, with each search resulting in tens of thousands of sources: instructor, barriers, online teaching (18,100); faculty, barriers, online teaching (44,300); faculty, concerns, online teaching (95,000); instructor, concerns, online teaching (23,400); faculty, challenges, online teaching (127,000); instructor, challenges, online teaching (25,700). Only the first five pages of Google Scholar results were vetted for this inquiry, for a total of 300 sources (including

some duplicates) identified. The sources were then screened and selected using the following inclusion and exclusion criteria:

- Only sources focused on higher education (e.g., not K-12 education) were included.
- Only empirical articles and literature reviews in English were included. Books, book chapters, and conference proceedings were eliminated.
- Only literature pertaining to online learning and teaching was included. Sources pertaining only to blended or hybrid learning, technology integration, social media, e-learning in face-to-face environments, and challenges related to Massive Open Online Courses were not included.
- Literature on barriers experienced or reported by faculty was included. The focus of this inquiry was barriers faced by online instructors; therefore, only sources related to *faculty* barriers when teaching online were included although some sources also include student or administrative perspectives.
- Articles about predicted or potential barriers for faculty members who had yet to try online learning, faculty Stages of Concern regarding whether or not to teach online, and faculty reflections on shifting beliefs as they transitioned to online learning were excluded.

The application of these exclusion criteria narrowed the findings from 300 sources to 20 sources. Details of the 20 articles such as publication year, country of context, methodology, etc. were first documented in a spreadsheet before a thematic analysis was conducted. Two researchers carefully read the articles independently and coded the articles for higher education instructors' experienced barriers in online education. Five resulting themes of instructor barriers with online teaching were identified: (a) barriers to getting started, (b) barriers to knowing students individually, (c) barriers to supporting community and student learning, (d) barriers to managing time and workload, and (e) barriers to achieving professional success.

Findings

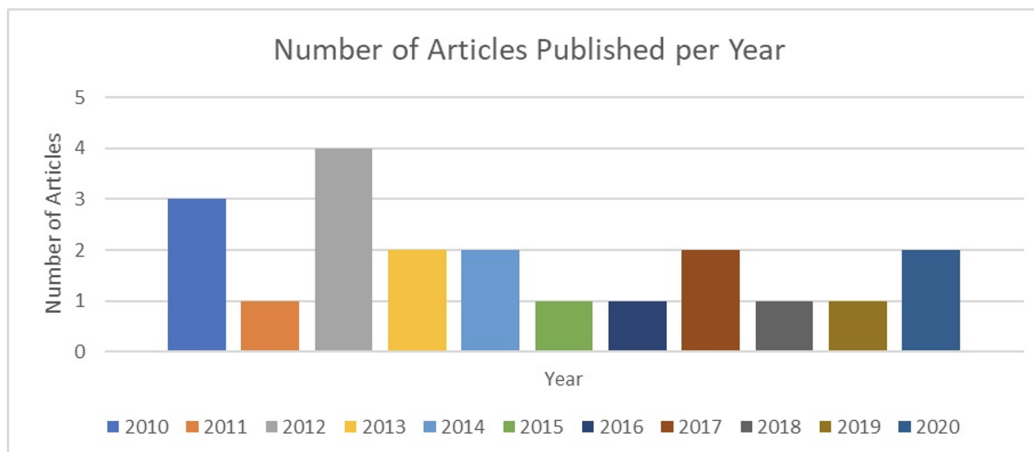
The articles represented a range of journals and research methods. They were published across sixteen different journals (Table 1) with the largest number of articles published in 2012 (Figure 1). Eight articles used qualitative methods, collecting data using interviews (4), case studies (1), written response analysis (1), focus groups (1), and reflection journal analysis (1). Four of the articles employed quantitative research, utilizing surveys (4). Another four of the sources employed mixed methods, combining qualitative methods with quantitative methods such as surveys (2) or student perceptions of teaching forms and faculty observations or evaluations (2). Four of the articles were literature reviews.

Table 1

Journals Represented in the Study

Journal	Authors, Date
<i>Australian Journal of Teacher Education</i>	Huss, et al., 2015
<i>Computers & Education</i>	Hsieh, 2010
<i>Creighton Journal of Interdisciplinary Leadership</i>	El Turk & Cherney, 2016
<i>Educational Policy Studies</i>	Bohan & Perrotta, 2020
<i>International Journal of E-Learning & Distance Education</i>	Seaton & Schwier, 2014
<i>The International Journal of Instructional Technology and Distance Learning</i>	DeRanieri, 2012
<i>International Journal for the Scholarship of Teaching and Learning</i>	Bair & Bair, 2011
<i>Internet and Higher Education</i>	Regan, et al., 2012; Roby, et al., 2013
<i>Journal of Educational Technology Systems</i>	Kebritchi, et al., 2017
<i>MERLOT Journal of Online Learning and Teaching</i>	Keengwe & Kidd, 2010; Lloyd, et al., 2012
<i>Online Journal of Distance Learning Administration</i>	Hunt, et al., 2014; Lin, et al., 2012
<i>Online Learning</i>	Wingo, et al., 2017
<i>Quarterly Review of Distance Education</i>	Wickersham & McElhany, 2010
<i>Teaching and Learning</i>	Kumi-Yeboah, et al., 2020
<i>Teaching and Learning in Nursing</i>	Richter & Schuessler, 2019
<i>Turkish Online Journal of Distance Education</i>	Berge, 2013; Kibaru, 2018

Figure 1
Number of Articles Published per Year

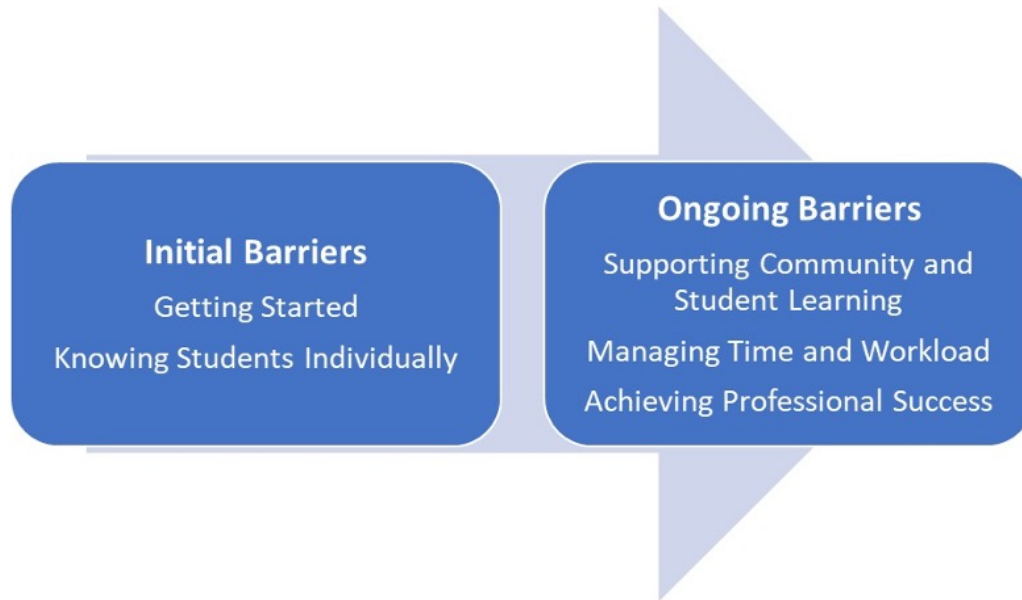


Of the sixteen studies, twelve gathered data from faculty members, three from faculty members and administrators, and one from faculty members and students. Most of the studies took place at higher education institutions in the United States (12), one in a United States university in Lebanon, one in the United States and Israel, one in Canada, and one collected data from institutions in six countries (Australia, Canada, China, the United Kingdom, the United States, and Taiwan).

Barriers for Online Instructors

The five themes identified are grouped as initial and ongoing barriers (Figure 2) faced as instructors gain experience with online teaching. The initial barriers are frequently encountered when launching online courses, and ongoing barriers are often experienced over time in order to sustain quality online courses. Ongoing barriers, such as ‘Supporting Community and Student Learning’ also can be initial barriers for some instructors.

Figure 2
Barriers as Instructors Gain Experience with Online Teaching



Initial Barriers

Barriers to Getting Started

Instructors confront issues of confidence and insecurity as barriers to getting started with online learning. Eleven of the articles in this review emphasized instructors’ barriers with this initial stage of teaching online (Table 2). Instructors’ lack of confidence in institutional preparedness obstructs them from feeling comfortable teaching online. Instructors need to know that online credits will be seen as legitimate through governmental policies (El Turk & Cherney, 2016) and through institutional policies (Roby et al., 2013). When instructors worry about institutional infrastructure reliability, such as adequate bandwidth and connectivity (El Turk & Cherney, 2016; Keengwe & Kidd, 2010), it increases apprehension about online instruction. Lack of preparation for online teaching also generates anxiety, creating the need for quality, ongoing technical support (El Turk & Cherney, 2016; Hunt et al., 2014; Kebritchi et al., 2017; Keengwe & Kidd, 2010; Roby et al., 2013; Wickersham & McElkany, 2010), particularly when instructors self-identify as lacking technology skills (El Turk & Cherney, 2016; Hunt et al., 2014; Kebritchi et al., 2017; Keengwe & Kidd, 2010; Regan et al., 2011). Even with technical support, instructors balk at the significant time investment required to build an online course (Hunt et al., 2014; Kebritchi et al., 2017; Keengwe & Kidd, 2010; Lloyd et al., 2012; Richter & Schuessler, 2019; Wickersham & McElkany, 2010).

Instructors experience barriers learning to teach online due to the idiosyncratic nature of technology and the restrictions it places on teaching methods that have worked for them in the past (Regan et al., 2011). Consequently, instructors require professional development training and access to ongoing instructional design support to overcome concerns about reconceiving their teaching methods (El Turk & Cherney; Kebritchi et al., 2017; Keengwe & Kidd, 2010; Kibaru, 2018; Roby et al., 2013; Wickersham & McElkany, 2010; Wingo et al., 2017). Once secure in these baseline resources, instructors can more easily begin teaching students online.

Table 2
Barriers for Getting Started

Barrier or Challenge	Citation
uncertainty regarding legitimacy of online credits	El Turk & Cherney, 2016; Roby et al., 2013
worry over adequate technical infrastructure	El Turk & Cherney, 2016; Keengwe & Kidd, 2010
worry over adequate initial training and technology support	El Turk & Cherney, 2016; Hunt et al., 2014; Kebritchi et al., 2017; Keengwe & Kidd, 2010; Roby et al., 2013; Wickersham & McElkany, 2010
insecurity about instructor technical skill abilities	El Turk & Cherney, 2016; Hunt et al., 2014; Kebritchi et al., 2017; Keengwe & Kidd, 2010; Regan et al., 2011
onerous time investment to build a course	Hunt et al., 2014; Kebritchi et al., 2017; Keengwe & Kidd, 2010; Lloyd et al., 2012; Richter & Schuessler, 2019; Wickersham & McElkany, 2010
reconceiving teaching methods for online, requiring instructional design support	El Turk & Cherney, 2016; Kebritchi et al., 2017; Keengwe & Kidd, 2010; Kibaru, 2018; Regan et al., 2011; Roby et al., 2013; Wickersham & McElkany, 2010; Wingo et al., 2017

Barriers to Knowing Students Individually

After instructors launch online courses, concerns often shift from barriers to getting started onto barriers to knowing students individually as discussed by twelve articles in this study (Table 3). Numerous researchers focused on instructors' challenges with creating personal relationships with online students without facial and body language cues or informal social interactions (Bair & Bair, 2011; El Turk & Cherney, 2016; Huss et al., 2015; Lloyd et al., 2012). Huss et al. (2015) discussed using tools to foster personal instructor rapport to differentiate teaching presence from the automated platform. Some researchers described the need to pay attention to tone in written messages to avoid miscommunication (Bair & Bair, 2011; Berge, 2013; Kibaru, 2018; Richter & Schuessler, 2019) since communications in online courses are mostly text-based.

The absence of visual cues in online courses can increase the challenges of identifying ineffective lessons and the individual students in need of more help (Hunt et al., 2014; Kebritchi et al., 2017; Kibaru, 2018; Lloyd et al., 2012; Seaton & Schwier, 2014). DeRanieri (2012) determined that faculty self-identify as uncomfortable with their ability to address students' different learning styles online. Berge (2013) and Kumi-Yeobah et al. (2020) discussed the challenges of identifying and meeting the needs of students' cultural characteristics online. When an online course is taught in a single language, diversity can be more difficult to discern and address (Berge, 2013). Instructors in some disciplines might incorporate diversity awareness and success strategies more easily while others may need to enhance their knowledge, understanding, and multicultural resources (Kumi-Yeobah et al., 2020). For many instructors, knowing students individually cultivates learner engagement, bolsters class community, and supports student learning.

Table 3
Barriers to Knowing Students Individually

Barrier or Challenge	Citation
difficulty establishing personal relationships with students online	Bair & Bair, 2011; El Turk & Cherney, 2016; Huss et al., 2015; Lloyd et al., 2012
potential for miscommunications of tone in text	Bair & Bair, 2011; Berge, 2013; Kibaru, 2018; Richter & Schuessler, 2019
difficulty recognizing when online students need more help	Hunt et al., 2014; Kebritchi et al., 2017; Kibaru, 2018; Lloyd et al., 2012; Seaton & Schwier, 2014
difficulty with differentiation for students' learning styles	DeRanieri, 2012
difficulty recognizing multicultural students	Berge, 2013; Kumi-Yeobah et al., 2020

Ongoing Barriers

Barriers to Supporting Community and Student Learning

Online instructors perceive online course facilitation and student engagement as two of their main responsibilities (Martin et al., 2019). However, as discussed by ten of this study's articles, online instructors must utilize various methods to facilitate and monitor learner engagement, meaningful interaction, and

learning outcomes achievement without the physical and social cues available in brick-and-mortar classrooms. (Table 4). New online instructors encounter this barrier when developing courses that support community and student learning; it also persists as a continuing barrier for online instructors in each subsequent course they teach.

Supporting meaningful interaction in online discussions can be challenging. Bair and Bair (2011) explained how online instructors have to foster student engagement in online discussions that lack the immediate back-and-forth response times of synchronous, brick-and-mortar conversations. Instructors are confronted with how much they should participate in online discussions without disrupting the student discussion with instructor expertise (Bair & Bair, 2011; Seaton & Schwier, 2014). Lin et al. (2012) discussed specific instructor solutions for online discussion barriers, such as using groups, multiple deadlines, and individualized feedback.

Although online instructors' facilitation strategies can reduce online student isolation (Epp, Phirangee, & Hewitt, 2017), the integration of such strategies requires instructors to know how and when to apply them in online courses. Instructors in the research recognized that lower levels of online interaction - with the content, fellow learners, or the instructors - contributed to student isolation, diminishing students' motivation and achievement (Berge, 2013; Regan et al., 2011; Roby et al., 2013). Additionally, some of the studies detailed how online instructors must not only build interactive assignments but also prompt students to participate in those activities, such as sending email reminders, making phone calls, taking polls, providing online office hours, or holding synchronous forums, which they find challenging (Bair & Bair, 2011; Bohan & Perrotta, 2020; Hsieh, 2010; Huss et al., 2015; Lin et al., 2012; Regan et al., 2011; Roby et al., 2013). Likewise, community-building in online courses requires a wide variety of activities, such as discussions, group work, and multimedia projects (Hsieh, 2010; Huss et al., 2015; Lin et al., 2012). These activities lead online instructors to check their assessment techniques carefully to ensure proper evaluation of individual learners, like immediate feedback, rubrics, and technology activity tracking tools (Hsieh, 2010; Lin et al., 2012). While utilizing such strategies better supports students, creating and assessing these online activities can produce an immense amount of ongoing work for online instructors.

Table 4
Barriers to Supporting Community and Student Learning

Barrier or Challenge	Citation
need for strategies to support robust online discussions	Bair & Bair, 2011; Lin et al., 2012; Seaton & Schwier, 2014
need for techniques to mitigate learner isolation	Berge, 2013; Regan et al., 2011; Roby et al., 2013
need for methods to increase student participation in interactive tasks	Bair & Bair, 2011; Bohan & Perrotta, 2020; Hsieh, 2010; Huss et al., 2015; Lin et al., 2012; Regan et al., 2011; Roby et al., 2013
need for a variety of interactive tasks	Hsieh, 2010; Huss et al., 2015; Lin et al., 2012
need for evaluation methods	Hsieh, 2010; Lin et al., 2012

Barriers to Managing Time and Workload

In addition to the effort needed to build an online course and the continuous challenge of supporting student learning, online instructors face barriers to managing their time and online teaching workload. Ten of the articles in this study emphasized the volume of tasks and time investment essential to teaching a quality online course (Table 5).

The research mentioned online students' expectations that instructors answer questions day and night, seven days a week, in the learning management system (LMS) (Bair & Bair, 2011; Keengwe & Kidd, 2010; Kibaru, 2018; Lin et al., 2012; Richter & Schuessler, 2019; Seaton & Schwier, 2014). Without the observational group learning possible in a face-to-face setting, online students often seek one-to-one guidance, support, and feedback from instructors. Articles discussed that instructor feedback was mostly text-based and could thus take longer to provide; additionally, LMS's offered tracking and monitoring tools that required instructor time to learn, mine, and interpret meaningfully (Bair & Bair, 2011; Keengwe & Kidd, 2010; Kibaru, 2018; Lloyd et al., 2012; Richter & Schuessler, 2019).

Additionally, LMS's, Web 2.0 tools and other technologies continue to evolve, creating frequent challenges with technology mastery and course design and a need for constant technology training (Keengwe & Kidd, 2010; Kibaru, 2018; Richter & Schuessler, 2019; Seaton & Schwier, 2014; Wingo et al., 2017). Some researchers pointed out that beyond learning how to use emerging technology, online instructors need more professional development in instructional design, to employ improvements or try new solutions to identified and emerging course problems (Keengwe & Kidd, 2010; Kibaru, 2018; Wingo et al., 2017; Bohan & Perrotta, 2020). These challenges faced by online instructors are exacerbated by larger class sizes or high student count workloads (DeRanieri, 2012; Kibaru, 2018). However, some institutions lack incentives or additional compensation, such as course releases or stipends, to acknowledge this higher workload and constant effort (Keengwe & Kidd, 2010; Kibaru, 2018; Lloyd, et al., 2012; Richter & Schuessler, 2019; Wingo et al., 2017).

Table 5
Barriers to Managing Time and Workload

Barrier or Challenge	Citation
students' expectation of constant instructor availability	Bair & Bair, 2011; Keengwe & Kidd, 2010; Kibaru, 2018; Lin et al., 2012; Richter & Schuessler, 2019; Seaton & Schwier, 2014
increased volume of text-based communication; management of technology monitoring tools	Bair & Bair, 2011; Keengwe & Kidd, 2010; Kibaru, 2018; Lloyd, et al., 2012; Richter & Schuessler, 2019
need for ongoing support to learn new technology	Keengwe & Kidd, 2010; Kibaru, 2018; Richter & Schuessler, 2019; Seaton & Schwier, 2014; Wingo et al., 2017
need for ongoing professional development in instructional design	Keengwe & Kidd, 2010; Kibaru, 2018; Wingo et al., 2017; Bohan & Perrotta, 2020
burdens of large class sizes and/or student count workloads	DeRanieri, 2012; Kibaru, 2018
absence of institutional incentives or additional compensation	Keengwe & Kidd, 2010; Kibaru, 2018; Lloyd, et al., 2012; Richter & Schuessler, 2019; Wingo et al., 2017

Barriers to Achieving Professional Success

This literature review revealed that lack of incentives or additional compensation were not the only barriers associated with the perceived value of online teaching for instructors at higher education institutions. Five sources in this study mentioned online instructors' barriers to achieving professional success because institutions have not adapted processes adequately to integrate online teaching and acknowledge its value (Table 6). Researchers identified instructor concerns regarding online workload and opportunities for tenure (Lloyd, et al., 2012; Seaton & Schwier, 2014; Wingo et al., 2017), with Seaton and Schwier (2014) suggesting that faculty research expectations have not been scaled to the time investment online teaching requires. Online instructors suffered feelings of professional isolation and missed informal colleague exchanges, particularly if they lacked an on-campus workspace, (Bohan & Perrotta, 2020; Kibaru, 2018; Seaton & Schwier, 2014). Online instructors also expressed the need for consistent peer mentoring opportunities or department feedback on their courses (Bohan & Perrotta, 2020). When online courses were evaluated, instructors experienced inconsistency in the criteria applied, even with the use of rubrics (Bohan & Perrotta, 2020; Wingo et al., 2017).

Table 6
Barriers to Achieving Professional Success

Barrier or Challenge	Citation
countering isolation and missing collegiality	Bohan & Perrotta, 2020; Kibaru, 2018; Seaton & Schwier, 2014
less opportunity for peer mentoring and/or department feedback	Bohan & Perrotta, 2020
unclear or inconsistent evaluation processes	Bohan & Perrotta, 2020; Wingo et al., 2017
concerns for tenure processes, including research pressures	Lloyd, et al., 2012; Seaton & Schwier, 2014; Wingo et al., 2017

Discussion and Implications

This literature review focused on empirical research about barriers experienced by online faculty with teaching experience in higher education published between 2010 and 2020. It does not include barriers experienced in other environments, by other stakeholders in online higher education, or literature about emergency remote instruction (Hodges et al., 2020). It includes only journal articles (e.g., not book chapters) and excludes literature published in languages other than English. This review revealed that institutional-level start up barriers such as infrastructure support, reliable technology, and policies and procedures that were prevalent in earlier literature (Berge, 1998) have receded as online education has matured and scaled. As organizations address technological and procedural barriers, pedagogical barriers, barriers to managing time and workload, and the lack of incentives and barriers to professional success for online instructors have become more prominent in the literature. At the same time, when new technologies or online teaching formats are required, such as during the COVID-19 pandemic, initial barriers related to technology, policy, infrastructure and support can still play a role, as can barriers to getting started that were identified in this study. For instance, these barriers might be experienced by new online instructors or instructors forced to engage in emergency remote teaching (Hodges et al., 2020) or by new online instructors whose organizations lack “maturity” with online education (Berge et al., 2002, p. 1).

Many instructors enjoy teaching because of the relationships they develop with students. Adapting their strategies for building such relationships and establishing teaching presence (Garrison & Cleveland-Innes, 2005) in the online environment creates challenges for instructors. The instructor-student relationship and teaching presence play an important role in the online environment where online learners value instructor-student interactions more than student-student and student-content interaction (Martin & Bolliger, 2018). Instructors have to constantly learn new interactive technologies and strategies for interacting with students, determine when online students need more assistance, and meet ever-increasing expectations in the online instructor-student relationship. Professional development in online teaching, the provision of exemplars, individual guidance, and opportunities to learn from experienced peers can support online instructors in this process (Choi & Park, 2006).

Today’s new online instructor is more likely to have experience using technologies for learning during their education and taking online courses or professional development, which increases their familiarity with the online environment and technologies used to teach, if not online teaching itself. As online communication technologies evolve and synchronous interactions are increasingly included in online courses, pedagogical barriers may change, but online instructors will always need to build a meaningful relationship with their students. Likewise, they will also need to create sense of community that influences online student satisfaction, cognitive learning, and persistence in online courses (Rovai, 2002).

Instructors need ongoing instructional design support, especially with online activities and assessments that build community and facilitate student learning (Pedro & Kumar, 2020). Barriers faced by online students, such as lack of technology infrastructure, inadequate technical or online learning skills, and cultural challenges (Olesova et al., 2011) can also influence the pedagogical barriers that online instructors face. The instructional design support that intermediate-level or experienced online instructors require differs from that of beginning instructors and may require the ratio of instructional designers to online faculty members be increased. Experienced online instructors often need customized attention, which can be challenging to provide as online education scales up.

Instructors’ strategies for managing their time and workload improve as they gain online teaching experience, but barriers in this area persist as online instructors seek to improve, revise, and include newer technologies. Concerns in prior literature about the increased time and workload in teaching online courses, facilitating online discussions, creating course community, establishing teacher presence, and providing ongoing individualized feedback or assessment (Bolliger & Wasilik, 2009; Tomei, 2006; Trammel & LaForge, 2017) continue to be reflected in this study’s articles that described these challenges in detail. High enrollment, increased expectations of compliance with quality guidelines for online course design, and the increasing adoption of new online teaching formats (e.g., synchronous online teaching during the COVID-19 pandemic) cause this barrier to persist. Acknowledgement of the time and workload associated with online teaching, as well as new policies informed by research in online education, are needed to support faculty in their online teaching. This study’s literature reinforces the findings of Kumar et al. (In Press, 2022) that despite investments in infrastructure and professional development (Garrett et al., 2020), institutions provide inadequate rewards, compensation, and incentives for the ongoing workload experienced by online instructors.

Barriers to achieving professional success continue to prevail in the literature. Online instructor challenges persist, such as trying to meet expectations for tenure and advancement while managing research and online teaching, receiving minimal recognition for online teaching, and navigating an institutional culture that underestimates online teaching workloads (Haber & Mills, 2008; Shea, 2007). As more untenured faculty begin their careers teaching online courses, policies and expectations need to be adapted. For example, course evaluation or observation tools developed for face-to-face instruction need to be adapted for online instruction. Additionally, instructors teaching only online or as adjunct online faculty need more support, opportunities to exchange ideas with colleagues, and opportunities for inclusion in the campus community and culture.

Conclusion

In this literature review, we categorized barriers for online instructors in the last decade as initial barriers and ongoing barriers. As online education increases in popularity, and students' and instructors' expectations for teaching and support change, more research is needed to understand the barriers faced by both instructors new to online teaching and those with experience, especially in different geographies, cultures, and environments. This includes the types of barriers faced by online instructors at different types of institutions, those teaching different types of courses – only asynchronous, only synchronous or bichronous (Martin et al., 2020), and those teaching with different technologies. In addition to the stable infrastructure, initial training support, and instructional designers provided to online instructors by institutions, barriers to time, workload, and professional success also need to be addressed.

References

- Bair, D. E. & Bair, M.A. (2011). Paradoxes of online teaching. *International Journal for the Scholarship of Teaching and Learning*, 5(2). Retrieved from <https://digitalcommons.georgiasouthern.edu/ij-sotl/vol5/iss2/10/>
- Berge, Z. L. (1998). Barriers to online teaching in post-secondary institutions: Can policy changes fix it. *Online Journal of Distance Learning Administration*, 1(2), 2.
- Berge, Z. L. (2013). Barriers to communication in distance education. *The Turkish Online Journal of Distance Education*, 14(1), 374-388.
- Berge, Z. L., Muilenburg, L. Y., & Haneghan, J. V. (2002). Barriers to distance education and training: Survey results. *The Quarterly Review of Distance Education*, 3(4), 409-418.
- Bohan, C. H. & Perrotta, K. A. (2020). A reflective study of online faculty teaching experiences in higher education. *Journal of Effective Teaching in Higher Education*, 3(1), 50-66.
- DeRanieri, J. (2012). Impact of online teaching on nursing faculty workload. *The International Journal of Instructional Technology and Distance Learning*, 9(10), 15- 22.
- El Turk, S., & Cherney, I. D. (2016). Perceived online education barriers of administrators and faculty at a US university in Lebanon. *Creighton Journal of Interdisciplinary Leadership*, 2(1), 15-31.
- Epp, C. D., Phirangee, K., & Hewitt, J. (2017). Student actions and community in online courses: The roles played by course length and facilitation method. *Online Learning Journal*, 21(4), 53-77.
- Garrett, R., Legon, R. & Fredericksen, E. E., (2019). *CHLOE 3 Behind the Numbers: The Changing Landscape of Online Education 2019*. Retrieved from <http://qualitymatters.org>
- Garrett, R., Legon, R. & Fredericksen, E. E., (2020). *CHLOE 4 Navigating the Mainstream: The Changing Landscape of Online Education 2020*. Retrieved from <http://qualitymatters.org/>
- Garrison, D. R., & Cleveland-Innes, M. (2005). Facilitating cognitive presence in online learning: Interaction

is not enough. *American Journal of Distance Education*, 19(3), 133–148.

Choi, H. J., & Park, J. H. (2006). Difficulties that a novice online instructor faced: A case study. *Quarterly Review of Distance Education*, 7(3), 317-322.

Haber, J., & Mills, M. (2008). Perceptions of barriers concerning effective online teaching and policies: Florida community college faculty. *Community College Journal of Research and Practice*, 32(4-6), 266-283.

Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. *Educause Review*, 27. Retrieved from <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>

Hunt, D., Davis, K., Richardson, D., Hammock, G., Akins, M., & Russ, L. (2014). It is (more) about the students: Faculty motivations and concerns regarding teaching online. *Online Journal of Distance Learning Administration*, 17(2), 62-71.

Huss, J. A., Sela, O., & Eastep, S. (2015). A case study of online instructors and their quest for greater interactivity in their courses: Overcoming the distance in distance education. *Australian Journal of Teacher Education*, 40(4). Retrieved from <http://ro.ecu.edu.au/ajte/vol40/iss4/5>

Hsieh, P.H. (2010). Globally-perceived experiences on online instructors: A preliminary exploration. *Computers & Education*, 54(1), 27–36.

Kebritchi, M., Lipschuetz, A., & Santiago, L. (2017). Issues and challenges for teaching successful online courses in higher education. *Journal of Educational Technology Systems*, 46(1), 4–29.

Keengwe, J., & Kidd, T. T. (2010). Towards best practices in online learning and teaching in higher education. *Journal of Online Learning and Teaching*, 6(2), 533-541.

Kibaru, F. (2018). Supporting faculty to face challenges in design and delivery of quality courses in virtual learning environments. *Turkish Online Journal of Distance Education*, 19(4), 176-197.

Kumar, S., Ritzhaupt, A. D., & Pedro, N. S. (In Press). Development and validation of the Online Instructor Support Survey (OISS). *Online Learning Journal*.

Kumi-Yeboah, A., Dogbey, J., Yuan, G., & Smith, P. (2020). Cultural diversity in online education: An exploration of instructors' perceptions and challenges. *Teachers College Record*, 122(7).

Lin, H., Dyer, K., & Guo, Y. (2012). Exploring online teaching: A three-year composite journal of concerns and strategies from online instructors. *Online Journal of Distance Learning Administration*, 13(3). Retrieved from https://www.westga.edu/~distance/ojdla/fall153/lin_dyer_guo153.html

Lloyd, S. A., Byrne, M. M., & McCoy, T. S. (2012). Faculty-perceived barriers of online education. *MERLOT Journal of Online Learning and Teaching*, 8(1), 1–12.

Maguire, L. L. (2005). Literature review—faculty participation in online distance education: Barriers and motivators. *Online journal of distance learning administration*, 8(1), 1-16.

Martin, F. & Bolliger, D. U. (2018). Engagement matters: Student perceptions on the importance of engagement strategies in the online learning environment. *Online Learning*, 22(1), 205-222. doi:10.24059/olj.v22i1.1092

Martin, F., Budhrani, K., Kumar, S., & Ritzhaupt, A. (2019). Award-winning faculty online teaching practices: Roles and competencies. *Online Learning*, 23(1), 184-205.

Martin, F., Polly, D., & Ritzhaupt, A. (2020, September 8). Bichronous online learning: Blending asynchronous and synchronous online learning. *EDUCAUSE Review*. Retrieved from <https://er.educause.edu/articles/2020/9/bichronous-online-learning-blending-asynchronous-and-synchronous->

Muilenburg, L., & Berge, Z. L. (2001). Barriers to distance education: A factor analytic study. *American Journal of Distance Education, 15*(2), 7-22.

Olesova, L., Yang, D., & Richardson, J. C. (2011). Cross-cultural differences in undergraduate students' perceptions of online barriers. *Journal of Asynchronous Learning Networks, 15*(3), 68-80.

Oomen-Early, J., & Murphy, L. (2009). Self-actualization and e-learning: A qualitative investigation of university faculty's perceived barriers to effective online instruction. *International Journal on E-Learning, 8*(2), 223-240.

Pajo, K., & Wallace, C. (2001). Barriers to the uptake of web-based technology by university teachers. *Journal of distance education, 16*(1), 70-84.

Pedro, N. S., & Kumar, S. (2020). Institutional Support for Online Teaching in Quality Assurance Frameworks. *Online Learning, 24*(3), 50-66.

Regan, K., Evmenova, A., Baker, P., Jerome, M. K., Spencer, V., Lawson, H., & Werner, T. (2012). Experiences of instructors in online learning environments: Identifying and regulating emotions. *Internet and Higher Education, 15*(3), 204-212.

Richter, S. L., & Schuessler, J. B. (2019). Nursing faculty experiences and perceptions of online teaching: A descriptive summary. *Teaching and Learning in Nursing, 14*(1), 26-29.

Roby, T., Ashe, S., Singh, N., & Clark, C. (2013). Shaping the online experience: How administrators can influence student and instructor perceptions through policy and practice. *The Internet and Higher Education, 17*(1), 29-37.

Rovai, A. P. (2002). Sense of community, perceived cognitive learning, and persistence in asynchronous learning networks. *The Internet and Higher Education, 5*(4), 319-332. doi:10.1016/S1096-7516(02)00130-6

Seaman, J. E., Allen, I. E., & Seaman, J. (2018). Grade increase: Tracking distance education in the United States. *Babson Survey Research Group*.

Seaton, J. X., & Schwier, R. (2014). An exploratory case study of online instructors: Factors associated with instructor engagement. *International Journal of E-Learning & Distance Education, 29*(1), 1-16.

Shea, P. (2007). Bridges and barriers to teaching online college courses: A study of experienced online faculty in thirtysix colleges. *Journal of Asynchronous Learning Networks, 11*(2).

Tomei, L. (2006). The impact of online teaching on faculty load: Computing the ideal class size for online courses. *Journal of Technology and Teacher Education, 14*(3), 531-541.

Trammell, B., & LaForge, C. (2017). Common challenges for instructors in large online courses: Strategies to mitigate student and instructor frustration. *Journal of Educators Online, 14*(1), 10- 19.

Wickersham, L. E., & McElhany, J. A. (2010). Bridging the divide: Reconciling administrator and faculty concerns regarding online education. *Quarterly Review of Distance Education, 11*(1), 1-12.

Wingo, N. P., Ivankova, N. V., & Moss, J. A. (2017). Faculty perceptions about teaching online: Exploring the literature using the technology acceptance model as an organizing framework, *Online Learning 21*(1), 15-35.