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Partnership models in online learning design and the barriers for successful collaboration

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Abstract

The design of quality online courses is a team task, as this process requires multiple areas of expertise that are not typically possessed by a single individual. Yet, existing models of stakeholder partnerships in online learning design, and their nature, has yet to be explored in depth. This study was designed to address this gap. Using the PRISMA guidance, twenty-one articles that documented the experience of teamwork in designing online courses or programmes were analysed. For each study, a reported partnership model, stakeholders involved in the teamwork, and barriers to their communication were considered. Six partnership models in online learning design were identified: mentoring and guidance; equal collaboration; technical or formal support; multisectoral collaboration; focus on relationship building; and an iterative or flexible approach. Key barriers to establishing successful partnerships include poor knowledge of the design process, lack of financial incentives, no adequate regulation of the design process, insufficient project planning and management, time constraints and required time commitments, increased workload, and psychological barriers.

Keywords: Online learning, Learning design, Partnership models, Barriers to partner relationships, Systematic literature review

Introduction

The COVID-19 pandemic facilitated an expansion of online education, requiring all faculty members to be ready to deliver online teaching following institutional quality standards. In such circumstances, online education moved beyond the era of early adopters and became the primary educational delivery mode. Not surprisingly, the topic of online learning design, and the role of designers in enabling a transition to the virtual learning environment, are gaining additional attention in the literature (Rotar & Peller-Semmens, 2021).

In the past, it was acknowledged that the design of quality online courses is a team task, as this process requires multiple areas of expertise (Campbell et al., 2009; Keller, 2018;



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Tatarinov, 2020; White & White, 2016). Tatarinov (2020) highlights the peculiarities of online teaching and learning, and describes the challenges faced by online learning designers. He argues that multiple issues can be resolved during the collaborative design process, where there is the possibility for mutual teaching and learning among different stakeholders (Tatarinov, 2020). The importance of stakeholder partnerships became apparent during the COVID-19 pandemic (Rotar & Peller-Semmens, 2021). Different actors, such as learning designers, subject matter experts, and technical developers, worked collaboratively to redesign educational programs and implement online learning, making educational provision possible during the pandemic.

In traditional education, course design is the responsibility of individual academics (Chao et al., 2010). Therefore, faculty members generally lack the knowledge and skills necessary for designing high-quality online courses (Olesova & Campbell, 2019; van Rooij & Zirkle, 2016). As Tatarinov (2020) points out, in online course design, the roles of academics are changing, since they are required not only to be familiar with their subject areas, but also with the technology and methodology of online teaching and learning. Collaborative work allows faculty to gain experience and acquire the skills necessary for online course design and delivery (Chao et al., 2010). Jaguszewski and Williams (2013) emphasise that “collaboration and partnerships at every level [of course design], as well as clear roles and responsibilities, are critical to leveraging expertise” (p. 13).

Online learning design based on a model of labour division (Daniel, 2009; White et al., 2020) is now implemented in many educational institutions. However, research has identified various challenges to successful collaboration (Chao et al., 2010; Drysdale, 2019; Singleton et al., 2019). For instance, learning designers may struggle to communicate with resistant faculty (Drysdale, 2019). On the other hand, faculty may experience some fear or anxiety over such concerns as lack of confidence, poor technology skills or time commitments (Kumar & Ritzhaupt, 2017; Richardson et al., 2019). In addition, educators may be sceptical about the value of learning designers’ expertise (Drysdale, 2019).

To address challenges in communication, the literature advocates relationship building based on mutual support and trust among different stakeholders (Pan et al., 2003). It has been argued that a strong partnership foundation reduces the risks of misunderstandings and minimises the time of design completion (Chao et al., 2010; Keller, 2018). The development of such relationships ensures that different visions and goals are considered.

Even though past studies strongly emphasise the importance of partnerships and collaboration between stakeholders involved in online learning design, there is no systematic examination of the reported teamwork models. As a result, little is known about the nature of partner relationships in online learning design. Furthermore, research on barriers to effective course design is fragmented, with little attention paid to the challenges to forming successful relationships between stakeholders.

This literature review has been informed by a qualitative study on the experiences of learning designers in their adaptation to the COVID-19 pandemic and a post-pandemic working environment (Rotar & Peller-Semmens, 2021). Rotar and Peller-Semmens (2021) uncovered challenges faced by learning designers and summarised lessons that could be implemented for the future. One of the major themes that emerged from the study was the need to establish partnerships among learning designers, educators, and other stakeholders, during online learning design.

The literature also confirms that collaboration between different stakeholders in online learning design is not a trend, but a core aspect of the design process (Keller, 2018; Tatarinov, 2020; White & White, 2016). The need for a team effort on a practical level is also recognised. Online learning designers advocate the use of collaboration for leveraging human resources and technological efficiency. For example, the eLearning Office at HSE University¹ provides a note for teachers that the development of a quality online course requires a team effort, and a significant investment of time and money (i.e., the production of a MOOC takes approximately six months). During online course production, academic staff are required to gain additional competences in content design, lecture recording, and learning to work with different technological interfaces. Academics should also be ready for close communication with multimedia experts, course producers, and the technical support team. To summarise, the relationship building aspect of course design is crucial, especially at the early stages of the design process, where the aims, objectives and values of different stakeholders are negotiated.

However, the examples of successful partnerships are fragmented in the literature. Consequently, researchers and practitioners are still struggling with the design and implementation of online courses. Although the partnership approach to learning design is a recognised way to produce quality online courses and programmes during the rapid development of online education (White & White, 2016), the models of stakeholder relationships or barriers to successful teamwork are not well-examined. This review aims to fill gaps in the research. In doing so, it provides valuable information for stakeholders involved in an online course design in higher education on how to better approach collaborative work. The following research questions are addressed in this study:

1. *What are the models of successful partnerships between stakeholders involved in online learning design in the context of higher education?*
2. *What are the main barriers to establishing and facilitating successful partnerships between stakeholders?*

Addressing the first research question, I outline how the literature points towards team efforts and partnerships to approach the design of online courses or programmes. To answer the second research question, I investigate key barriers in establishing and maintaining successful partnerships between stakeholders involved in online learning design.

The paper is structured as follows. Section “Literature review” discusses the evolution of approaches to teamwork in online course design and sets up a definition of the term “partnership” in stakeholder relationships. Section “Methodology and methods” presents the methodology used in this study, including the literature search and paper selection strategies, and the data analysis. Section “Results and discussion” gives the results followed by a synthesised discussion of the literature. Section “Conclusion” concludes and summarises the main findings and the research contribution. Finally, limitations of the paper and directions for further research are indicated.

Literature review

Online learning design

As information and communication technologies continue to permeate every aspect of education, supporting technology-enhanced teaching and learning, the process of learning design is becoming increasingly important. The common principles of systematic instructional design approaches initially did not fit well with the academic culture (Magnussen, 2008). Thus, instructional design evolved, reflecting the need for technological skills and resulting in a team model of online learning design (Moore & Kearsley, 1996). A key component of the design process in higher education was the collaboration between an instructional designer and one or more faculty members to create a quality course (Chen & Carliner, 2021). Accordingly, greater emphasis is being placed on design teams, as learning design is often handled by a team of professionals working together to accomplish an intended purpose (Caplan & Graham, 2008).

Research has examined the collaborative approach to online course design (see Hixon, 2008; Kang, 2001; Torrisi-Steele & Davis, 2000), providing a description of the workflow, the distribution of responsibilities, and documenting challenges experienced by different stakeholders. Kennedy and Laurillard (2019) provided examples of a collaborative co-design methodology to produce a MOOC by teachers from different countries in refugee camps. In the collaborative process, digital champions have been a solid foundation, acting as mentors for less experienced colleagues (Kennedy & Laurillard, 2019). Such experiences were intended to create a collaborative co-designed course and instil a sense of ownership of the course among the teachers. The literature shows that faculty members perceived collaborative co-design as a valuable experience and as an opportunity for professional development. It was argued that instructional designers must possess a high level of interpersonal skills, to be able to work with subject matter experts in a sensitive manner and negotiate challenging issues (Carnevale, 2000; Fredericksen et al., 2000). White (2000) and Meyen et al. (1999) stated that language is a potential barrier in communication between different stakeholders. To mitigate this issue, Meyen et al. (1999)

suggested explicitly differentiating team responsibilities and clarifying expectations, including a likely increase in the workload.

In addition, scholars examined instructional design through the lens of community of practice, proposed by Wenger (1998) and Lave and Wenger (1991) (see Boada, 2022; Kowch and Schwier, 1997; Smith et al., 2017). Kowch and Schwier (1997) highlighted the importance of dialogue and negotiation between community members. Correia and Davis (2008) argued that communities are in constant renewal through socialisation and enculturation. Furthermore, mentoring was identified as a practice that compensated for a lack of specific skills, such as the experience of instructional design (Correia & Davis, 2008). In other words, developing effective instructional materials depends on a great deal of planning, collaboration, and diverse and relevant expertise of design teams (Brown et al., 2013). These requirements are even more crucial in online course development, which is dependent on ever-changing technologies (Caplan & Graham, 2008).

Overall, it can be concluded that relationships matter for successful collaborative work. However, faculty and instructional designers often find themselves at cross-purposes. The design process expects two groups of experts to bring their unique perspectives and skill sets together, without providing instruction or support for the knowledge transmission and production, necessary for collaboration (Richardson et al., 2019). Although collaborative models for online curriculum development have been discussed in the literature (Moallem, 2003; Xu & Morris, 2007), less attention has been paid to identifying the nature of those relationships and to highlight barriers for successful collaboration experienced by different stakeholders (Chen & Carliner, 2021). Benefits from collaborative course design are ongoing professional dialogue and peer support, the academic development of faculty, and improved course design and delivery (Brown et al., 2013). To unlock these benefits, stakeholders involved in online learning design need to carefully build environments of trust and caring (Schwen & Hara, 2003). Creating the conditions for a healthy community fosters productive behaviours (Schwen & Hara, 2003). Thus, examination of effective collaboration and teamwork practices is crucial for uncovering successful online learning design practices.

Stakeholder partnerships in online learning design: setting up the definition

The words “collaboration”, “partnership” and “cooperation” are often used interchangeably in research on online learning design (Leoste et al., 2019; Mayo, 2014; Meulemans & Carr, 2013). Mayo (2014) describes the reported project work as a partnership between two international universities and a library service, and further refers to it as a productive collaboration towards a successful educational programme. Similarly, Sukhun and Terui (2012) talk about the collaboration between the Centre for Online

Learning and the Office of Information Technology to establish a User Support Service, and later report the results of a successful partnership.

A further deconstruction of the term, with a distinction of specific activities within a partnership or a collaboration, is also presented in the literature. Meyen et al. (1999) advocate a collaborative attitude, whilst Chao et al. (2010) describe a collaborative approach to online course design. van Rooij and Zirkle (2016) refer to collaboration between stakeholders (e.g., a subject matter expert, an instructional designer, a multimedia specialist) that can be established through a partnership with support services. Reported partnership and collaboration activities also include joint reflections, idea sharing (Leoste et al., 2019), positive relationships building (Drysdale, 2019), and cooperation between partners (van den Berg et al., 2016). Some scholars refer to teamwork between stakeholders as a partnership (Northcote & Kendle, 2001) and further distinguish communication and collaborative learning as partnership activities.

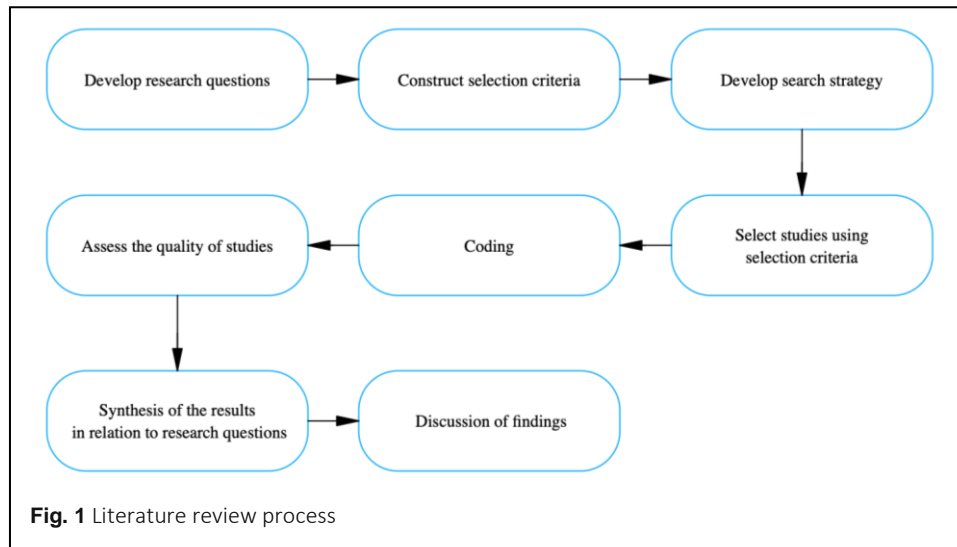
The hierarchy of the identified terms is neither consistent nor clear. Jipson and Paley (2000), for example, report two forms of partnerships, collaboration and co-mentoring, whilst Jin et al. (2018) and Singleton et al. (2019) refer to the partnership between a learning designer and faculty using the term relationship and collaborative relationship respectively. To add to the confusion, Olesova and Campbell (2019) advocate the development of trustful and successful relationships to establish equal partnership that promotes a collaborative effort.

In some instances, the term partnership is used in addition to collaboration. For example, when talking about the development of a professional value system, Meulemans and Carr (2013) place primary emphasis on the meaningful collaboration and partnership, whereas Keller (2018) uses the term collaborative partnerships. Some authors prefer one term to the other (Ezell, 2021; Harp Ziegenfuss & Furse, 2016; Jameson, 2008). Harp Ziegenfuss and Furse (2016) note that the reported project represents an example of a partnership rather than a collaboration. The authors referred to a partnership to emphasise that a librarian's role should not be limited to providing services but involve interaction at all stages of the design process.

In this study, for the purposes of analysis, I use partnership as an umbrella term for any form of team effort, e.g., teamwork, collaboration, cooperation, co-creation, in online course design. When reporting and discussing the results of the analysis, I employ terms partnership and partner relationship interchangeably, as synonyms.

Methodology and methods

The analysis followed a systematic review process that reflected recommendations of the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) statement (Moher et al., 2015). The flowchart of the process is presented in Figure 1.



Literature search strategy

To identify relevant studies, I performed a search in the Scopus, Google Scholar, and ScienceDirect databases using a combination of the following keywords: “instructional design”, “learning design”, “partnership”, “partnerships”, “collaborat*”, “online education”, “online learning”, “online higher education”, “distance learning”, and “distance education”. A refined search in the Scopus database was conducted in May 2022. The resulting database of 327 titles and abstracts was created in Atlas.ti software. To expand the pool, additional searches in the Google Scholar and in the ScienceDirect databases were conducted in December 2022.

Eligibility criteria

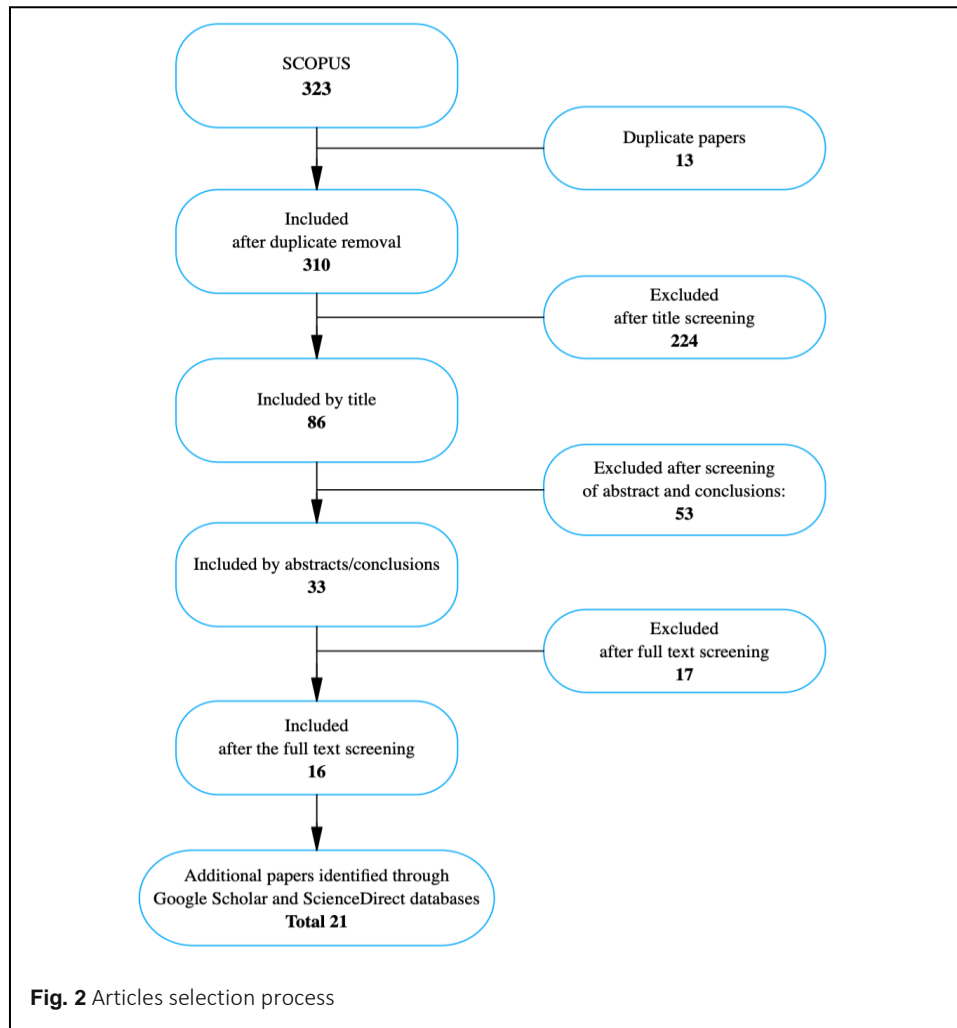
The following inclusion criteria were selected and applied:

- studies focusing on online tertiary course design,
- studies focusing on partnerships in the design or development of online learning,
- studies presenting a clear and detailed indication of the stakeholders involved in the partnership model.

The exclusion criteria were set as follows:

- studies focusing on the design of one specific tool,
- short conference papers without a clear description of a partnership model,
- studies where the full text was not available,
- articles, book chapters and books published in a language other than English or Russian,
- not peer-reviewed studies.

The selection process is shown in Figure 2.



I selected relevant studies by judging the title, abstract and conclusions, and full text against the criteria for inclusion and exclusion. After excluding papers based on the title, abstract and conclusions, and a full text reading, 16 studies remained. Additional search was conducted through the Google Scholar and the ScienceDirect databases, to include more articles to the pool. When in doubt, I consulted a “critical colleague” who independently judged the papers in question. Afterwards, the author and the colleague discussed the eligibility of the selected publications until a consensus was reached. In this way, 21 articles were selected for analysis.

Analysis

For processing the data retrieved from the Scopus database, I used several tools, including Microsoft Excel for basic processing and sorting, and Atlas.ti for coding and analysis. To systematically analyse the studies, I created a protocol based on items from the PRISMA checklist (Moher et al., 2015) and developed a coding scheme. For research question one,

I distinguished two major areas of focus: a description of the partnership model, the nature of the partnership, and the stakeholders involved in the partnership. Selected studies were coded following the coding scheme. Initial codes for identifying stakeholders were developed based on the results of a study on course designers' experience during the pandemic (Rotar & Peller-Semmens, 2021). Additional codes were added during the analysis following an open coding procedure.

The first round of coding distinguished partnership models and their nature, and identified the stakeholders involved in the partnership. The second round of coding revised existing codes and included codes that emerged from the open-coding procedure.

To answer research question two, I analysed and coded the challenges and barriers to successful partnerships reported in the studies either explicitly or indirectly using open coding and constant comparison method (Glaser & Strauss, 1967). A "critical colleague" served as an independent reviewer of the coding process (Stenhouse, 1975). All disparities in the coding scheme or the coding procedure between the colleague and the author were discussed until a consensus was reached.

Results and discussion

Before proceeding with the discussion of the results, I would like to note that a number of potentially relevant studies had to be excluded from the analysis due to the failure to comply with the inclusion criteria. One instance is a study by Leoste et al. (2019) documented an experience of the co-creation of technology tools in the K-12 setting by the teachers in a partnership with learning designers. The authors stated that an equal model of collaboration created favourable conditions for teachers and resulted in a more effective design outcome. Nevertheless, this article was excluded from the analysis since my focus was set within the higher education context. Another example is a presentation paper by Kessler (2015), who reported the experience of establishing a partnership at the University of Virginia, US. The author reported a partnership between a virtual classroom associate and an instructor. The nature of the partnership was technology mentoring and facilitation which allowed the instructor to develop technology mastery. This study was excluded from analysis as it was not clear whether the paper had been peer reviewed or not.

The analysis of twenty-one papers distinguished six partnership models: mentoring and guidance, equal collaboration, technical or formal support, focus on relationships building, multisectoral collaboration and an iterative or flexible approach. The results show that stakeholders with independent expertise, e.g., instructional and technical developers; librarians and faculty members, faculty members and learning designers, subject librarians and instructional design librarians; and multimedia specialists (Drysedale, 2019; Ezell, 2021;

Table 1 Partnership models and involved stakeholders

N	Author	Year	Country	Model	Stakeholders
1	Singleton et al.	2019	USA	Mentoring/guidance, Equal collaboration, Technical/formal support, Focus on relationships building	Assistant programme manager of the DE office, learning design team
2	Jin et al.	2018		Equal collaboration, Focus on relationships building, Iterative/flexible relationships	Learning designer, faculty member
3	Olesova & Campbell	2019	USA	Mentoring/guidance, Equal collaboration, Focus on relationships building	Learning designer, faculty member
4	Sukhun & Terui	2012	USA	Technical/formal support	Centre for Online Learning, Office of Information Technology
5	O'Reilly	2004	Australia	Focus on relationships building, Multisectoral collaboration	Peak performers/earlier adopters, learning designer, faculty member
6	Meyen et al.			Equal collaboration	Technical developers, faculty member
7	Sweany et al.	2020	USA	Multisectoral collaboration, Iterative/flexible relationships	A "client", faculty member, teaching assistant, students
8	Harp Ziegenfuss & Furse	2016		Equal collaboration, Iterative/flexible relationships	Librarians, faculty members.
9	Drysdale	2019		Equal collaboration	Learning designer, faculty member.
10	Keller	2018	USA	Technical/formal support, Focus on relationships building	Online learning managers, learning designer, faculty member
11	Meulemans & Carr	2013		Equal collaboration	Librarian, faculty member
12	Ezell	2021	USA	Equal collaboration, Focus on relationships building, Iterative/flexible relationships	Project lead, learning designer, writing program administrator, subject matter expert, librarians, library instruction coordinator
13	Jameson	2008	UK	Equal collaboration, Technical/formal support	HE and industrial partners, student teams
14	Chao et al.	2010		Equal collaboration	Learning designer, faculty member
15	van Rooij & Zirkle	2016	USA	Technical/formal support	IDT faculty lead, distance education office, ID and technology faculty, assistive technology initiative group
16	Brown et al.	2013	Canada	Equal collaboration, Focus on relationships building	Associate Dean of Graduate Programs in Education, a design team, academic program coordinators, course instructors
17	Bendriss et al.	2015	Qatar	Equal collaboration	Librarians, faculty members
18	Glacken & Baylen	2001	USA	Equal collaboration	A faculty member, an instructional designer
19	Drysdale	2018	USA	Equal collaboration	Instructional designers, faculty members
20	Chao et al.	2010	Canada	Mentoring/guidance, Equal collaboration	Instructional designers, faculty members
21	Xu & Morris	2007	USA	Equal collaboration	A project coordinator, a web instructional designer, faculty members

Harp Ziegenfuss & Furse, 2016; Meyen et al., 1999; Meulemans & Carr, 2013; van Rooij & Zirkle, 2016) are often involved as partners when designing online programmes. However, new actors, such as students or industrial partners are also seen as valuable contributors to the design process.

Stakeholders involved in partnership models

Scalable education in an online setting involves, minimally, a contribution of a subject expert, design experts, and educational technology experts (e.g., instructional designers, learning designers, technical specialists, multimedia specialists) (Lavery & Stockley, 2006). The roles and responsibilities of educational technology and course design experts vary from one institution to another (Olesova & Campbell, 2019). Hixon (2008) distinguished five role categories, namely project management; subject matter expert or the author of the course; instructional designer; technical support or support with the course production; and other roles. It was also suggested that team members may perform multiple roles. Learning designers, for instance, may provide technology support and training for the faculty in addition to their key responsibility of online learning design (Ritzhaupt & Kumar, 2015). Nevertheless, an understanding of responsibilities and expectations is of particular importance in a team-based design approach (White, 2000).

The analysis of the literature and communication with designers allowed us to distinguish between a universal learning designer, a faculty or a subject matter expert, and other stakeholders. Quite often learning designers embrace all the tasks outside the faculty's expertise. Specifically, they tend to do project management tasks and coordinate the design process within the partnership. The literature review also showed that additional roles may include such stakeholders as students, a project lead, a course developer, IT staff responsible for technical support, as well as a whole department, such as a distance learning office or an IT office. Partnerships may also be formed with the participation of an industrial partner (Jameson, 2008; Sweany et al., 2020).

The nature of partner relationships: synthesis of the evidence

The analysis allowed me to distinguish six models or approaches to establishing partner relationships (Table 2). Despite existing similarities in the identified approaches, the nature of partner relationships between stakeholders varied from study to study (see Appendix for a description of each partnership). For example, in the cases described by Jin et al. (2018) and Singleton et al. (2019), faculty relied on learning designers to provide guidance in transitioning face-to-face courses to an online format, in choosing an appropriate educational technology and pedagogy, and in ensuring quality standards. A mentoring

model of collaboration was reported by Olesova and Campbell (2019), whereas Chao et al. (2010) and Jameson (2008) advocated collaborations based on intentional design and rapport building. To provide a more nuanced picture of partner relationships between stakeholders, in the following section I analyse the identified partnership models and provide a synthesised discussion on the alternative approaches.

Iterative/Flexible vs Intentional design approach

The first two approaches to collaboration are more flexible in contrast to the focused and intentional. For instance, Jameson (2008) advocated intentional design when developing communities of practice, rather than relying on the natural development of teams. This approach is different from iterative collaboration that was helpful in adapting to team dynamics and changing contexts. Olesova and Campbell (2019) described the mentorship model of partnership. The flexibility of communication between faculty and course designers was ensured through regular face-to-face meetings, online conferencing, and informal email communication, and created an atmosphere of mutual trust and support. Meulemans and Carr (2013) suggested collaborative conversations as another form of the flexible approach to communication with stakeholders, whereas Jin et al. (2018) advocated storytelling and narration to share experiences between stakeholders in a safe and supportive manner.

Ezell (2021) reported how important it was to offer a flexible, fluid, and iterative approach to online learning design during the COVID-19 pandemic. She argued that a flexible way of communication was more organic and allowed stakeholders to meet unforeseen challenges and opportunities. The benefits of the flexibility of interpersonal communication in partnerships were also recognised before the pandemic. Although many design theories exist to assist in designing online programs, in practice, this process is not straightforward. Therefore, stakeholders involved in partnerships may benefit from an individually agreed balance of rigid planning and improvisational flexibility. This is in line with research that highlights variations in collaboration patterns and degrees of frustration observed in different design teams that successfully produced an online course (see Hixon, 2008). Hixon (2008) concluded that “some level of flexibility is acceptable or even necessary to ensure success” (p. 10).

Collaboration vs Mentoring/Guidance

Collaborative partnerships presume that all members are viewed as partners who equally share expertise and experience during the design process and where no one holds direct decision-making authority. In this model, designers do not see faculty as mere experts in the field, but rather as co-creators and equal contributors to the design process. The potential of working collaboratively on the design tasks have been emphasised in the

majority of studies (n=11). The common agreement is that collaboration creates a “multiplicative effect” from sharing expertise and experience, ensures mutual support and results in a stronger course design (Brown et al., 2013, p. 446).

This model is distinguished from approaches that advocate mentorship and guidance. As faculty members involved in the design and delivery of online courses often rely on support from online learning/instructional design teams, partner relationships in the form of mentorship and guidance is one of the ways to assist faculty in gaining experience and skills in the field.

Chao et al. (2010), who described an equal stakeholder relationship model, presented an example of how instructional designers served as informants or experts in the course development process, complementing faculty expertise. Singleton et al. (2019) advocated guidance as a model of partnership to assist faculty in transitioning campus-based courses to an online learning environment and choosing appropriate technology to implement and scale their courses. Similarly, Jin et al. (2018) argued that mentoring can help educators to develop confidence in working with educational technology and begin to focus on pedagogy rather than on technological issues. Trust developed through mentoring may facilitate the development of stronger partnerships beyond the existing project (Jin et al., 2018). The mentorship model was also emphasised by Olesova and Campbell (2019), who found that mentoring allowed faculty to correctly apply the acquired skills in designing online courses. Hixon (2008) emphasised the importance of a centralised figure with the function of a project manager for a successful collaboration, while pointing out that a faculty member should retain control over the design decisions.

The beneficial effect of guidance and mentorship in designing online learning is not surprising. As O’Reilly (2004) and Raab et al. (2001) emphasise, learning designers are in a good position to facilitate knowledge exchange and develop faculty confidence in online learning design. A similar positive effect from guidance was documented by Harp Ziegenfuss and Furse (2016). The authors reported the process and outcomes of collaboration between a faculty member and a librarian, where a librarian served as an expert guide in the process of a literature search. As a result, the two stakeholders developed a strong trusting relationship and have since worked on numerous projects together.

The importance of building a trusted partnership has been advocated by scholars who reported the collaboration, and mentoring and guidance approaches to partnerships. In both cases, the idea is to provide a comfortable working atmosphere for colleagues and to support less experienced team members as a way to eliminate various barriers to online learning design.

Technical/formal support vs Focus on relationship building

As mentioned, less experienced stakeholders often require support from more knowledgeable colleagues. In models with a primary focus on technical support, the focus is placed on providing training and support in the use of educational technologies. In the study described by Singleton et al. (2019), learning designers helped educators in choosing the appropriate educational technology to implement in their courses. Sukhun and Terui (2012) also documented the benefits of having 24/7 stakeholder technical support from User Support Services. They found that having a technical support team eliminated many problems related to technology use in online learning.

The role of technical support and formal training is hard to underestimate. Keller (2018) described an example of formal learning support, where participants could attend an in-person workshop to learn foundational concepts of instructional design and familiarise themselves with the backward design approach. Similarly, Ezell (2021) found that participation in the organised design of an online course allowed stakeholders to gain an understanding of the design process.

However, the literature suggests that the provision of technical support is not effective without the focus on relationships building and consideration of the psychological barriers of less experienced stakeholders. In a partnership example reported by Singleton et al. (2019), learning designers were concerned about the risk of overwhelming faculty members who were new to many technological tools involved in online learning design and delivery. Therefore, they adopted a sensitive and protective approach to partnerships, being aware of different possibilities for commitment. Keller (2018) also argued that strong working relationships based on trust, a mutual understanding of roles, and a common goal can have a positive impact on course design, including the continuation of the partnership for improvements to the course and the creation of new courses. Similarly, despite recognising the importance of following design principles, Jin et al. (2018) called for a mindset shift from the technocentric to the partnership perspective with an emphasis on trust, collaboration, mutual understanding, openness, and empathy.

Interdisciplinary/ Multisectoral collaboration

Often stakeholders involved in online learning design find themselves involved in a shared context for knowledge development. O'Reilly (2004) and Rotar and Peller-Semmens (2021) suggest that particular stakeholders, e.g., learning designers and educational developers, tend to adopt a hub-like role that places them in the position of the facilitator of an interdisciplinary and even multisectoral partnership. O'Reilly (2004) argued that ignorance of the commonalities of goals between stakeholders of different sectors and disciplines can be associated with higher costs. The pandemic experience has proved this suggestion; without outsourcing some of the online learning design tasks to external support services,

IT agencies and educational technology companies, and educational institutions could not cope with the challenge of the emergency shift to online learning.

Meyen et al. (1999) argued that the expertise of each stakeholder must be shared. They emphasised transdisciplinary collaboration, commonly accepted in higher education, which is even more relevant in online learning design. In such a shared practice partnership, faculty members with stronger technology skills and those with a good knowledge of online learning technology work together to ensure that pedagogy and technology are adequately balanced. Similarly, the learning designer and technical developer constantly share skills and enhance each other's understanding of the design process. This, in turn, results in a better-quality product and a shorter time required for its production (Meyen et al., 1999). Sweany et al. (2020) reported an example of multisectoral partnerships, where one stakeholder was an external client. Such a partnership model ensured authentic learning experiences for novice learning designers and produced critical and timely feedback from the client after the implementation of the online course template.

The benefits of interdisciplinary and multisectoral collaboration are not well researched. Yet, anecdotal evidence suggests that involving perspectives from stakeholders with different needs and values brings a critical eye to the design process.

Barriers to successful partnerships

Numerous barriers impact the facilitation of successful partnerships. First, barriers associated with different professional cultures among stakeholders may result in the difficulty of setting up working priorities and agreeing on shared values. Conflicting visions of multiple stakeholders further complicate interpersonal communication, which requires additional time to achieve a consensus (Harp Ziegenfuss & Furse, 2016). Furthermore, it is not always straightforward to integrate disciplinary knowledge and the available technological tools. Finally, partners often have other commitments, whereas teamwork requires investment of time and other resources.

In answering the second research question, seven groups of barriers that hinder partnership relationships in online learning design are distinguished. These include poor knowledge of the design process, lack of financial incentives, no adequate regulation of the design process, project planning and management, time constraints and required time commitments, increased workload, and psychological barriers (Table 3).

Poor knowledge of the design process

A lack of awareness of the design process was emphasised by Ezell (2021), Singleton et al. (2019) and van Rooij and Zirkle (2016). Jin et al. (2018) emphasised a lack of role clarity between stakeholders. The lack of understanding of the online learning design often leads to misunderstandings between stakeholders in terms of commitment and shared

Table 3 Barriers in stakeholder partnerships in online learning design

N	Barrier	Examples
1	Poor knowledge of the design process	<ul style="list-style-type: none"> ● Lack of understanding of online learning design, van Rooij & Zirkle (2016) ● Lack of awareness about time commitment, Singleton et al. (2019) ● Unfamiliar vocabulary, Harp Ziegenfuss & Furse (2006) ● Lack of faculty skills, van Rooij & Zirkle (2016)
2	No financial support	<ul style="list-style-type: none"> ● No financial compensation (Singleton et al., 2019) ● No incentives (Singleton et al., 2019)
3	No adequate regulation of the design process	<ul style="list-style-type: none"> ● Unclear expectations (Chao et al., 2010) ● No accreditation (Singleton et al., 2019) ● No formal requirements (Singleton et al., 2019) ● Balance of rigid planning and flexibility (Ezell, 2021) ● Different quality evaluation criteria (Chao et al., 2010; Chen & Carliner, 2021) ● Prioritising auditing over pre-development testing (Ezell, 2021) ● "Messiness" of design process (Ezell, 2021) ● No goal/needs documentation (Sweany et al., 2020) ● Lack of a top-down mandate/administrative enforcement (Singleton et al., 2019) ● Inconsistencies in design approaches (Singleton et al., 2019) ● Trade-off between interactivity and enrolment numbers (van Rooij & Zirkle, 2016) ● Lack of role clarity (Drysdale, 2019; Jin et al., 2013) ● Different levels of commitment (Singleton et al., 2019)
4	Project planning and management	<ul style="list-style-type: none"> ● Appropriate project management and insurance of faculty professional development (Glacken & Baylen, 2001) ● Lack of well-established alliance between the faculty and instructional designers (Drysdale, 2018)
5	Time	<ul style="list-style-type: none"> ● Time commitment/Lack of time (Chen & Carliner, 2021; Harp Ziegenfuss & Furse, 2016; Jin et al., 2018; Singleton et al., 2019, Sweany et al., 2020) ● Time pressures (Chao et al., 2010) ● Lack of time for evaluation (Harp Ziegenfuss & Furse, 2016; van Rooij & Zirkle, 2016) ● Rushed summative evaluation (Ezell, 2021) ● Struggle to adhere to milestones (Singleton et al., 2019)
6	Workload	<ul style="list-style-type: none"> ● Intensity of work (Harp Ziegenfuss & Furse, 2016) ● Risk of faculty being overwhelmed (Chao et al., 2010; Singleton et al., 2019) ● Increased workload (Xu & Morris, 2007) ● External demands on faculty (Singleton et al., 2019) ● Priority of research for promotion and tenure (Singleton et al., 2019)
7	Psychological barriers	<ul style="list-style-type: none"> ● Fear of criticism (Jin et al., 2018) ● Cultural divide between stakeholders (Harp Ziegenfuss & Furse, 2016) ● Different values and needs of partners (Harp Ziegenfuss & Furse, 2016) ● Resistant to the online course development (Singleton et al., 2019) ● Scepticism towards OL/IDs (Drysdale, 2019) ● Stress (Sweany et al., 2020) ● Technical reluctance (Singleton et al., 2019)

responsibilities (Singleton et al., 2019). Furthermore, as Singleton et al. (2019) stress, stakeholders new to online learning and teaching do not understand what is involved in the process and how it is different from educational delivery in a traditional setting. van Rooij and Zirkle (2016) also state that faculty members often require extensive training on online learning design as not all of them possess the skills necessary to produce good quality online courses. Even with good theoretical knowledge of online learning design, stakeholders with limited experience are not aware of how recursive and unpredictable design tasks can be (Ezell, 2021). Dmitrieva and Bozhko (2018) emphasised the importance of developing the learning design skills of faculty. For instance, Xu and Morris (2007) found that “consistency”, when all lessons are required to be designed in an identical way, was an “unpleasant surprise to the faculty and caused some conflict between the faculty and the project coordinator” (p. 43). The unaddressed issue of how to deal with different levels of stakeholder experience and understanding of the design process, in combination with other barriers, stands in the way of sustainable partnerships.

No financial support

The second identified barrier is a lack of financial support and the increased workload associated with online course design and delivery (Singleton et al., 2019). Herman (2013) and Singleton et al. (2019) argue that financial incentives are important to promote online learning adoption among faculty.

No adequate regulation of the design process

Scholars agree that there is no adequate regulation of online learning design either at the institutional or at the team level. Singleton et al. (2019) emphasised inconsistencies in approaches to specific design tasks across different faculties and pointed out the lack of institutional mandates, administrative reinforcement and online learning accreditation requirements. As a result, there was no clear understanding of how responsibilities are shared among different stakeholders, which created unnecessary tensions (Singleton et al., 2019).

Chao et al. (2010) emphasised that with no adequate regulation, different stakeholders put forward their values and focus on different standards. For instance, Ezell (2021) found that due to the lack of regulation, the setting of priorities was the responsibility of particular stakeholders. Consequently, accessibility was put forward with a lack of focus on pre-deployment testing. In the study conducted by Chao et al. (2010), the lack of clarity about quality standards resulted in more time spent on negotiations, since various stakeholders felt that some standards demanded additional attention. Differences in the levels of commitment are also closely associated with the lack of regulation (Singleton et al., 2019). Keller (2018) and Singleton et al. (2019) found that in teamwork, varying levels of

commitment and engagement patterns, with some members preferring an independent approach, are the barriers to effective relationships between stakeholders. Similarly, Bendriss et al. (2015) noted that without adhering to the rigorous standards and focusing on partnership development between different stakeholders, instructional design is “irregular and sporadic” (p. 827).

Variations in the design process and quality concerns are natural phenomena when no centralised regulation is in place. It is not surprising that experts in different fields and subjects have different values: some may focus on student learning outcomes and assessment practices, whereas others may be more concerned with accessibility or workload (Chao et al., 2010). In any case, the barrier is clear and a need for its elimination is urgent. With no adequate regulation of the design process, there are risks of unnecessary work and tensions between stakeholders.

Project planning and management

Glacken and Baylen (2001) emphasised that in an online course design, attention should be paid to project management, faculty professional development, and ensuring that pedagogy, rather than technology, informs the design process. This reflects an ongoing issue of learning design conducted in a “piece-meal and unplanned fashion”, rather than approaching it in a considered manner (Moore & Kearsley, 1996, p. 6). Drysdale (2018) described how the structure of reporting within a team impacted leadership roles. Specifically, the lack of cooperation with the faculty was a communicative barrier for instructional designers due to misconceptions about their roles as mere technology experts, as wrongly perceived by the faculty (Drysdale, 2018).

Time commitment

The issue of time was also one of the prevalent barriers to successful partnership work. Jin et al. (2018) found that one of the barriers to the collaborative partnership was a justification for the time invested and a balance between the time spent and the quality of the product. In an example reported by Ezell (2021), the lack of time resulted in a situation where team members had to rush the summative evaluation of the course, prioritising the delivery time over the quality of the program.

Due to the lack of experience, faculty members are not always aware of the required time commitment. Thus, there is often a challenge to adhere to set timelines within partnerships that involves multiple stakeholders. Even given realistic time frames, there is the added pressure of meeting the realities of the design process (Ezell, 2021; Sweany et al., 2020).

Chao et al. (2010) also agree that time pressure is a barrier in the course development process. They suggested that, although following the developed guidelines was helpful, they are hard to follow in a real-life situation without the explicit agreement of a necessary

time contribution. In other words, when online learning design regulations do not adequately fit the time resources, they are unlikely to be useful. This is an important point, as both the development of successful partnerships and the evaluation of the quality of the produced educational product require time (Chao et al., 2010; van Rooij & Zirkle, 2016).

Workload

In addition to the lack of time, the intensity of work associated with online course design negatively impacts both working relationships and the quality of the produced course (Chen & Carliner, 2021; Harp Ziegenfuss & Furse, 2016). External workload and prioritising more rewarding activities in terms of promotion (e.g., research) are issues raised by Singleton et al. (2019). Singleton et al. (2019) explained that faculty tend to prioritise research activities that lead to promotion and tenure, rather than set additional time for teaching and design work. Moreover, an increase in work related to online learning design does not mean that other responsibilities are lessened. Quite the opposite, involvement in the online learning design may result in overwhelming those stakeholders who are less familiar with the design process.

Psychological barriers

Finally, the analysis identified psychological barriers to successful stakeholder relationships. Singleton et al. (2019) emphasised that due to hesitation and resistance, learning designers had to use various tools to convince the faculty to get more involved in the design process. These include the presentation of empirical data to support their arguments, reference to online students and a moral appeal related to the quality of online learning programmes.

Jin et al. (2018) underline the fear of criticism among faculty members regarding their lack of online learning design experience. Harp Ziegenfuss and Furse (2016) refer to the cultural divide between different stakeholders involved in the process, whereas Drysdale (2019) points out that faculty scepticism does not allow them to accept the expertise of online learning designers. As a result, learning designers experience strong misconceptions about their roles, focusing on psychological support and defence, rather than on a collaborative approach to the design process (Drysdale, 2019).

Furthermore, some stakeholders may hold self-perception as being less critical in the partnership. For instance, Meulemans and Carr (2013) explain that librarians may not feel empowered to offer their contribution to the online course design since they hold a subordinate role in the institutional hierarchy.

Conclusion

This literature review is one of the first attempts to systematically examine stakeholder partnerships in online learning design. The study identified six partnership models and uncovered the nature of stakeholder relationships within these models. The results demonstrate that there are contrasting approaches to the design process. There is a shift towards collaborations with a flexible approach to the design process, with an emphasis on relationship building. Partnerships in the form of mentorship and guidance are suggested to provide peer support and facilitate the professional development of less experienced and skilled stakeholders. Although technical support is important, an equal emphasis is placed on emotional support, e.g., empathy and the development of open and trusted relationships. The relationship-building aspect is especially beneficial for stakeholders who possess psychological barriers to the adoption of online learning or lack the appropriate skills and experience. These conclusions align with research that advocates the importance of soft skills and relationship building (Ritzhaupt & Martin, 2014) and prioritise the humanness of the design process.

The analysis emphasised that many stakeholders are usually involved in the design process, beyond those regularly mentioned in the literature, e.g., learning or instructional designers, faculty and subject matter experts. There is a recognition of the role of librarians in the online learning design process and an emergence of non-conventional team members, such as external partners and students. Past research also emphasised the growing agency of the learning designers in higher education and the emergence of a larger number of “seemingly peripheral actors” (White & White, 2016, p. 10). Furthermore, White and White (2016) argue that learning designers’ roles “straddle academic and professional functions” (p. 10). This study provided additional evidence that the model of equal collaboration is prevalent among stakeholders, involved in online learning design. Furthermore, multisectoral and interdisciplinary collaboration is encouraged.

The benefits of stakeholder partnerships became apparent during the rapid transition to online education associated with the COVID-19 pandemic. Team efforts provided joint expertise, peer support and an opportunity for gaining knowledge and expertise of less experienced stakeholders (Barczyk et al., 2010). This is in line with the research on community of practice that emphasises the importance of socialisation, mentoring and dialogue between community members, especially for the less experienced (Correia & Davis, 2008). The main practical benefit of collaborative design is the production of a high-quality online course (Brown et al., 2013). In other words, developing effective instructional materials depends on a great deal of planning, collaboration, and diverse and relevant expertise of design teams (Brown et al., 2013). These requirements are even more crucial in online course development, which is highly dependent on ever-changing technologies (Caplan & Graham, 2008).

However, due to the presence of multiple stakeholders, the existence of barriers to successful partnerships is likely. Seven groups of barriers have been distinguished: poor knowledge of the design process, lack of financial incentives, lack of regulation, inadequate project planning and management, time constraints, increased workload, and psychological barriers. To eliminate identified barriers, Samson (2019) and Wood and Kompare (2017) advocate the development of a stakeholders' agreement that includes shared goals, clarifies the nature and scope of the partnership, defines key roles and responsibilities, and establishes a communication protocol. Additionally, the adoption of quality standards is highly recommended to provide regulation for the team's work (Liston, 1999). Articulating expectations and time commitments is essential for building better awareness of the reality of the design process for less experienced stakeholders. Finally, a trusted and supportive environment fosters effective communication and teamwork (Schwen & Hara, 2003).

This review systematises fragmented and inconsistent reports on stakeholder partnerships in working on online learning design tasks. By paying particular attention to the identification of stakeholders and the nature of stakeholder relationships, this study uncovers the directions of unbundling the roles traditionally fulfilled by faculty members in a campus-based education setting. This review also extends research findings on online learning design, which is attributed to the changing faculty roles due to the internalisation and globalisation of higher education (King & Bjarnason, 2003; Tucker & Neely, 2010). At the same time, the results of this review raise important questions regarding potential issues in partnerships related to the power dynamics and associated barriers. As seemingly "peripheral" actors (White & White, 2016, p. 9) gain more recognition in online learning design, this study shows that the relationship-building aspect of teamwork moves to the fore. A greater understanding of the experiences of those involved in the design process (e.g., their partnerships and the barriers to effective collaboration) is crucial for a sustainable and seamless design experience.

Limitations

A few limitations of this research have been identified at the methodology and outcome level. First, due to the strict selection criteria, a relatively small number of studies have been analysed. Secondly, several studies reported in the review are more than ten years old and thus the adequacy of the evidence may be questioned. A further limitation of this study is associated with the heterogeneity of the forms of reporting research results studies. Due to such heterogeneity, an extensive analysis had to be made to apply coding and offer comparison of the studies. Therefore, there is a level of researcher subjectivity involved in the review. To address this limitation, a review protocol and coding scheme was shared with a "critical colleague" during the work on the paper.

Further research

Despite the existence of learning and design theories, stakeholders still struggle to understand the practical aspects of the online design process. Thus, the examination and recording of examples of stakeholder partnerships are necessary to inform research and practice in online education. The current study extends the discussion of the design principle and highlights the humanness of the design process, suggesting partnership models that have the potential to address barriers to successful teamwork. However, this study also revealed that there is more to learn about the actual partnerships enacted by those involved in online learning design. Since there is no formula to produce good quality online courses, sharing and documenting stakeholders' experiences is invaluable. More research is needed to examine partnership models enacted by online learning design teams in collaboration with internal and external stakeholders.

Appendix

Articles selected for analysis

N	Document	Year	Country	Methods	Description of the model
1	Singleton et al.	2019	USA	Qual, semi-structured interviews, document analysis, snowball sampling	In this collaborative model, faculty members relied on instructional designers (IDs) who provided guidance when transitioning face-to-face courses to an online learning environment, with a particular focus on choosing the appropriate educational technologies.
2	Jin et al.	2018	USA	Qual, case study	By utilising a storytelling and narration method and focusing on establishing a long-term, open and trusted relationship, IDs assisted educators in ensuring the quality of their online courses, helped to identify potential problems, determine learning objectives, and design instructions that incorporate learning and design theories and best practices.
3	Olesova & Campbell	2019	USA	Qual, semi-structured interviews	Equal partnership based on trust and mentorship. All partners are engaged in social reciprocal interactions through a learning process situated in an authentic problem-solving context when designing and developing asynchronous online courses.
4	Sukhun & Terui	2012	USA	Mixed, case study	User Support Services as a partnership between the centre for online learning and the office for information technology to support the faculty and students with technology resources, providing in-depth hardware, software and multimedia support.
5	O'Reilly	2004	Australia	Qual, interviews, focus groups, one case by one-to-one discussion on the phone, purposive sampling	Transdisciplinary partnership which engages academics from a variety of disciplines that provide opportunities for cooperation free from disciplinary constraints.
6	Meyen et al.	1999	USA	Qual, journal reflections	Collaboration between instructional and technical developers with independent experience and expertise.
7	Sweany et al.	2020	USA	Qual, case study	A partnership between the School of Innovation (I-School) and the Educational Technology program, with I-School being a "client". Online graduate I-School students from an "Instructional Designer" course developed a product (a course) for the client.
8	Harp Ziegenfuss & Furse	2016	USA	Qual, case study	An equal collaboration between a librarian and a faculty member at all stages of the project design and delivery, with collaborative work extending beyond the single project.
9	Drysdale	2019	USA	Quan, survey method, action research	A collaborative mapping model of partnership that facilitated relationship building and a recognition of distinct expertise of faculty and designers.
10	Keller	2018	USA	Mixed, survey method, interviews, observations	A collaborative design approach with one-on-one support of instructors by experienced instructional designers to design or re-design online courses in accordance with the quality standards.

11	Meulemans & Carr	2013	USA	Qual, case study	The model focused on the development of a professional value system that places primacy on establishing partnership relations between librarians and faculty members instead of the service-oriented communication with librarians.
12	Ezell	2021	USA	Qual, case study	A collaboration between a subject librarian, an instructional design librarian and other team members that was based on the division of labour and expertise, and followed an iterative workflow similar to the rapid prototyping design approach.
13	Jameson	2008	UK	Qual, case study	The model that intentionally incorporated explicit structures, processes and intentional community building for the development of community of practice for students and industrial advisors involved in the design process. This model incorporated a recursive learning cycle that allowed design teams to develop design skills, as well as gain leadership and technical experience.
14	Chao et al.	2010	Canada	Qual, case study	Collaboration based on rapport through establishing conversations and clarifying expectations at the early stage.
15	van Rooij & Zirkle	2016	USA	Qual, case study	Collaboration built on support between the faculty subject matter expert, the instructional designer and a multimedia specialist, transparency of the process and with introduction of incentives.
16	Brown et al.	2013	Canada	Qual, case study	Equal collaboration, with the leadership support of the Associate Dean of Graduate Programs in Education, a design team, academic program coordinators, course instructors.
17	Bendriss, Saliba, & Birch	2015	Qatar	Mixed methods: needs analysis, quizzes, assignments, search logs, exit tests, a survey and focus groups.	Librarians designed modules to meet the students' information literacy needs following an online course syllabus provided by the faculty and negotiating with them an outcome.
18	Glacken & Baylen	2001	USA	Qual, case study	Faculty members, an instructional designer, and other technology staff worked together to develop an online undergraduate course, with the emphasis of team building, faculty development and project management.
19	Drysdale	2018	USA	Qual, multi-case study	Establishment of a single design team, with an academic reporting structure, proved to be a model that promoted opportunities for leadership among learning designers.
20	Chao et al.	2010	Canada	Qual, case study	Equal collaboration with rapport building. Faculty members and instructional designers showed different levels of experience of the design process, with instructional designers being informative in the course development process when needed.
21	Xu & Morris	2007	USA	Qual, case study	Collaborative model that provided an opportunity for professional development opportunity for the faculty. Roles of different stakeholders were interwoven and interdependent, allowing for the combination of their expertise.

Endnote

¹ <https://elearning.hse.ru/en/online/>

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