Skills Needed for Success in Online Teaching: A Qualitative Study of Experienced Instructors

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Abstract

Although opportunities for online learning in higher education have increased, variations in the quality of online teaching are likely. Instructors at some institutions might be new to online teaching and/or may lack the necessary supports for creating successful virtual learning environments. Therefore, the purpose of this qualitative study was to identify the most valuable skills faculty need to teach successfully online. Instructors (N = 33) with ten or more years of online teaching experience at a highly ranked institution for online education were interviewed about their online teaching experiences. Participants' responses to the question, *"What skills do you think are most valuable for online instructors to have?"* were analyzed using a grounded-theory approach with six major themes emerging. These themes are discussed within existing frameworks that have shaped the conceptualization of online teaching skills, including the Community of Inquiry framework (COI), the faculty readiness framework, and the Technology Acceptance Model.

Keywords: Online instructors, skills for online teaching, qualitative study

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After over two decades of development, online education is now a viable pathway for many learners to access higher education. Since its inception, demand for online programs has increased (Seaman et al., 2018), due in part to changes in learner demographics, market demands, and a growing need to close equity gaps in access to degree and certificate programs (Allen et al., 2016; Phan & Dang, 2017; Schmidt, et al., 2013). The onset of the COVID-19 pandemic has only accelerated this trend (Cutri & Mena, 2021), forcibly moving the global goal posts for increased access to higher education online.

With the sharp pivot to remote instruction during the COVID-19 pandemic, opportunities for online learning continue to evolve. However, there is a variation in quality of online programs, courses, and instruction due in part to faculty preparation. The degree of faculty training for both designing and teaching online differs between institutions (Morh & Sheldon, 2017), which may impact the quality of online instruction. In addition, instructors at some institutions lack access to instructional designers, and instead can only rely on peers who may also have limited experience as to how to improve the quality of their online courses (Jaschik & Lederman, 2019). As online programs grow, there is a sustained need for skilled instructors who can deliver high quality online courses to an increasing number of online students. Therefore, it is important to assess *what skills are needed to successfully teach courses online.*

The purpose of this qualitative study was to identify the most valuable skills faculty need to teach successfully online. Instructors with ten or more years of online teaching experience at a highly ranked intuition for online education were interviewed about their online teaching experiences. Participants' responses to the question, *"What skills do you think are most valuable for online instructors to have?"* were analyzed with six major themes emerging from our analysis. The following literature review focuses on the frameworks that have helped shape research in the field of online teaching and have influenced the conceptualization of the skills that are needed for success in online teaching. These include the community of inquiry framework (CoI), the faculty readiness framework, the technology acceptance framework.

Community of Inquiry

The Community of Inquiry framework (CoI) is a well-known and widely used framework for identifying the social and cognitive conditions that are needed for successful online teaching and learning (Garrison et al., 2010). Developed over two decades ago (Garrison et al., 2000), this framework consists of three overlapping elements that shape the online learning environment: social, cognitive and teaching presence (Garrison et al., 2010). Social presence refers to the ways in which social interaction creates a sense of shared community and belonging in these spaces (Garrison et al., 2010). This includes the capacity for students to experience a shared sense of identity with others, as well as opportunities to develop relationships with their peers and their instructors online (Garrison et al., 2010).

Cognitive presence is related to social presence in the sense that critical aspects of learning—such as exploration, reflection, integration, and resolution—are contingent upon "an iterative relationship between personal and shared worlds" (p. 25; Kanuka & Garrison, 2004; Garrison et al., 2010). Cognitive presence is therefore contingent upon opportunities for social and intellectual discourse in digital learning spaces (Kanuka & Garrison, 2004).

Research by Galikyan and Admiraal (2019) highlights the important connection between cognitive and social presence, revealing that engagement in online discussion boards can promote both content integration and resolution, which in turn predicts students' academic performance.

According to Anderson et al., (2001), teaching presence is a key element that facilitates both social and cognitive presence, as well as the interaction between the two. Teaching presence is conceptualized as the three major roles an instructor takes on throughout a given course: 1) a course designer who develops and organizes a virtual learning experience that enables students to engage and interact with the material and with each other; 2) a discussion facilitator who conducts and moderates social and intellectual discourse online; and 3) an instructor who engages directly in delivering content in which they are experts (Anderson et al., 2001; Caskurlu, et al., 2018).

A recent meta-analysis conducted by Caskurlu and colleagues (2018) indicates that teaching presence is associated with positive student perceptions of online learning across a range of studies. In this meta-analysis, teaching presence was positively related to students' perceptions of their learning and course satisfaction, particularly among undergraduate students enrolled in longer term online courses (e.g., one full academic term). Of the three subcomponents of teaching presence, both instructional design and facilitation of discourse online were positively associated with perceptions of learning and course satisfaction. Direct instruction was also positively associated with perceived learning and course satisfaction, but to a lesser degree than both instructional design and facilitation of discourse. Taken together, results from this meta-analysis suggest that specific skills associated with teaching presence—namely course development skills and communications skills—are strongly associated with the students' perceptions of their online learning experiences.

Faculty Readiness for Online Teaching

The body of research summarized in the Caskurlu and colleagues' 2018 meta-analysis underscores the importance of faculty preparation for online teaching. In order to implement teaching presence that acts as a conduit for students' social and cognitive presence, faculty must be both well prepared and "ready" to teach online (Phan & Dang, 2017). "Faculty readiness" for online teaching is both conceptualized and operationalized in the literature in different ways (see Phan & Dang, 2017; Cutri & Mena, 2020, for reviews), but often includes a combination of perceptual, attitudinal, and skill-based factors, as well as a number of support systems (e.g., faculty support, technology support).

Typically, faculty readiness to teach online is assessed via self-report survey measures consisting of different subscales that make up the perceptions, skills, and support systems needed for successful online teaching. For example, Palloff and Pratt (2011) developed the "Assessment of Faculty Readiness to Teach Online" scale, which measures perceptions of competencies in technical skills and time management skills, as well as both past experience and attitudes towards online learning (as cited in Chi, 2015). Based in part on the scale developed by Palloff and Pratt (2011), Chi (2015) developed a Readiness to Teach Online scale (RTTO) that further measured course design competencies and support systems, such as course development, student assessments, and technology support for faculty. In a recent study by Martin and colleagues (2019c), faculty readiness for online teaching was measured in both German and American instructors via a newly developed Faculty Readiness to Teach

Online (FRTO) scale. This skill-based measure focused specifically on instructors' technical skills (e.g., basic technical skills, experience using learning management systems), course design skills, time management skills, and communication skills.

The combination of these measures suggests that faculty readiness to teach online is multifaceted (Scherer et al. 2021), requiring a diverse skillset including (but not limited to) technical skills, course design skills, communication skills, and time management skills. However, in the review by Cutri and Mena (2020), the authors argue that beyond a "checklist of competencies" (pp. 363), variations in faculty members' professional vulnerability should guide the conceptualization and evaluation of readiness to teach online. Using Kelchterman's (2009) professional vulnerability model as a theoretical framework, Cutri and Mena (2020) analyzed 44 peer-reviewed articles by applying unique concept maps for each. These initial concept maps were integrated into a single concept map using a qualitative coding scheme based on the Kelchterman's (2009) framework. The integrated concept map yielded three main themes in faculty readiness through the lens of professional vulnerability: affective considerations (e.g., risk taking, identity disruption); pedagogical considerations (e.g., sharing power with students, communicating personality online); and organizational considerations (e.g., planning vs. spontaneity). The results of this review suggest that basic skills, such a good communication skills and organizational skills, are formative but not summative measures of excellence in online teaching. Quality online instruction may require skills such as: 1) conversational skills that include the ability to communicate in a personable manner with students online; 2) course design skills, including the ability to innovate and take risks in course development; and 3) creativity skills and technology skills, such as the integration of course content with new technological interfaces.

The Technology Acceptance Framework

The ability to use technological interfaces creatively in digital classrooms depends in part on a range of basic technology skills, as well as a willingness to accept, use, and master new applications as they become available. This willingness has been conceptualized in the literature via the "Technology Acceptance Model" (TAM, TAM2), first developed by Davis in 1998 and later updated by Venkatesh & Davis (2000). This theoretical framework broadly articulates the conditions under which people will accept, use, and develop expertise in a particular user interface, such as "relevance to a particular job," "perceived usefulness," and "perceived ease of use" (Venkatesh & Davis, 2000). The TAM2 model can also be applied to faculty readiness to teach online, as findings from previous research on faculty perceptions of online teaching overlap with this theoretical framework (Wingo et al. 2017). For instance, in the RTTO scale developed by Chi (2015), faculty perceptions of their comfort with technology, their openness to using new technologies for teaching, and their willingness to learn work technologies is assessed.

To formally demonstrate the application of the TAM2 model (Venkatesh & Davis, 2000) to faculty perceptions of online teaching, Wingo et al. (2017) conducted a systematic review, searching for empirical articles testing various aspects of the TAM2 model with online instructors. Results yielded 67 articles published between 1995 and 2015, which were coded into TAM2 constructs. For instance, some articles were coded as "job relevance," with findings supporting a desire for faculty members to connect well with students online, and to believe that their students were achieving desired learning outcomes in their online courses.

Other articles were coded as "perceived ease of use," with findings across studies indicating that confidence in technical skills was associated with positive attitudes towards online teaching, and that skilled online instructors still valued opportunities to continue honing their technical skills.

Another example of the applicability of the TAM2 framework (Venkatesh & Davis, 2000) to faculty perceptions of online teaching comes from a recent study by Saunders et al. (2020). This study assessed faculty perceptions of transitioning a set of graduate level STEM courses into an online program. In a qualitative analysis based on in-depth interviews, "technology" emerged as a major theme. Faculty members expressed enthusiasm for the transition to an online program, as it would be opportunity to hone a new set of skills and to elevate their institution's reputation on a global stage. They also communicated a need for IT support to ensure that they were "not alone" (pp. 692) and to allow for the maintenance of academic quality. Along with the review by Wingo and colleagues (2017), these findings align with TAM2 model and highlight instructor characteristics, support systems, and technical skills that are necessary for success in online teaching: an openness, interest in, and ability to learn new interfaces; the ability to troubleshoot technical problems as they arise; and finally, adaptively honing skills over time as the technological landscape shifts.

The Current Study

The COI, Faculty Readiness, and TAM2 frameworks provide distinct and overlapping features that have shaped research on faculty perceptions of and readiness to teach online. Research findings within these three frameworks indicate that skills required for success in online teaching are multifaceted (Scherer et al., 2021), and require continued development over time (Saunders et al., 2020; Wingo et al., 2017). These skills include but are not limited to communication skills, course design skills, time management skills, and technology skills (e.g., Martin et al., 2019b; Wingo et al., 2017). However, the skills identified by studies within each of these larger frameworks were typically conducted with faculty who vary in their familiarity and expertise with online teaching. For example, in the faculty readiness study conducted by Martin and colleagues (2019c), their US and German samples consisted primarily of faculty members who were not required to participate in online instructor training and who had been teaching online for ten or fewer years.

According to Martin and colleagues (2019a), seasoned experts are an untapped source of information offering valuable insights on best practices, standards, and competencies (Martin et al., 2019a, p. 34) for excellence in online teaching. Few studies have examined perspectives on online teaching skills from experienced online educators. Previous studies have focused on narrow skill sets such as course design skills (Martin et al., 2019a), or the challenges and opportunities of online teaching more broadly (Mansbach & Austin, 2018). Previous study instruments designed to measure faculty readiness to teach online do not focus on faculty perceptions of their own skills or the skills needed for success in online teaching (see Martin et al., 2019c).

This study adds to the literature by tapping an under-utilized source: seasoned instructors with 10 years or more of online teaching experience at a highly ranked institution for online education. These experienced instructors participated in interviews focusing on a range of online teaching experiences. This study provides a qualitative analysis of their perceptions of what skills they think are most valuable for online instructors.

Method

This study was part of a larger qualitative project that explored the experiences of online instructors in higher education. The current study focuses on 33 instructors who had taught online for 10 or more years and reports on responses to the following question: "What skills do you think are most valuable for online instructors to have?"

Data Collection

This research was conducted by a highly ranked online learning division of a public research university in the United States. The Director and the Assistant Director of the online learning research unit completed the participant interviews, as well as the project's conceptualization. A Postdoctoral Scholar was hired shortly after data collection for this phase, and these three employees worked together on this study's conceptualization and analysis. All three of these researchers have PhDs in content areas related to higher education, and have experience teaching college-level coursework. Therefore, all of the study participants were interviewed by interviewers with familiarity in both higher education and pedagogy. This study used a structured interview format in which we attempted to reduce interviewer bias. Thus, participant responses were more likely to vary based on their own experience rather than the experience of the interviewer.

Upon approval from the Institutional Review Board (IRB), convenience sample recruitment began with a list of approximately 130 instructors who had taught in the university's online division for 10 years or more. Recruitment included up to three emails to these instructors that contained a link to an anonymous Qualtrics pre-survey that assessed demographic information, online teaching experiences, and interest in participating in three interviews with a member of the research team. At the end of the survey, participants were redirected from the Qualtrics survey to Acuity Scheduling (2006), an online scheduling software that allowed them to sign up for interviews.

Interview protocols were determined prior to data collection. All interviews were conducted over Zoom, and took place in the 2018-2019 academic year. Each participant completed three hour-long interview sessions with a member of our research team. Most participants completed all three of their interviews with the same research team member in order to build rapport and create a consistent participant experience. In a few cases this was not feasible due to challenges with scheduling. Once the interviews were complete, audio files were transcribed for data analysis. Participants received a $300 gift cards for their participation. The question analyzed for the current study was included during the first interview (M = 38.44 minutes, SD = 12.23 minutes).

Participants

Participant descriptive data were collected with the online pre-survey administered in Qualtrics (2002). Since pre-survey data were collected anonymously, the results have been reported in aggregate only. Thirty-nine participants completed the pre-survey, and 33 of these respondents (85%) completed the interviews. Participants reported teaching online at the institution from 10 to 31 years, (M = 14 years, SD = 4.6). Demographics of the pre-survey respondents are shown in Table 1. Just over half of the participants identified as female and most participants reported full-time employment. The largest percentage of participants were 55 – 64-years-old and the majority reported their highest education at the doctoral level. Nine

reported they held tenure track positions, and 12 had achieved tenure at their current institution. In the academic year prior to the interview, the participants reported teaching an average of 4.6 online courses (*SD* = 4.5). Participants were recruited from a range of disciplines, and therefore represented diverse experiences teaching online in a variety of content areas (e.g., Chemistry, Computer Science, Education, Food Science and Home Economics, Fisheries and Wildlife, Philosophy, Public Health, and Sociology).

Table 1

Demographic Data Based on Pre-Survey Responses (N=39)

Demographics	**f (%)**
Gender	
Female	19 (59%)
Male	14 (41%)
Employment status	
Full-time	22 (67%)
Part-time or other	11 (33%)
Age range	
34-44%	7 (18%)
45-54%	5 (13%)
55-64%	17 (45%)
65+	9 (24%)
Highest Level of Education	
Doctoral	33 (85%)
Master's or other	6 (15%)
Position	
Tenure-track	9 (23%)
Non-tenure track	30 (77%)

Data Analysis

The authors used a post-positivist, grounded theory approach to qualitative data by conducting a thematic analysis involving an inductive process in which researchers identify patterns emerging from the participant responses (Strauss & Corbin, 2015; Tracy 2020). The team decided to use numeric addition as suggested by Sandelowski (2001) rather than verbal counting to avoid misrepresenting the frequency of the codes by using terms such as "several," "most," or "few."

Each member of the research team completed a round of pre-coding where they read through all of the responses to the question and noted potential ideas and themes. Then, the team met to discuss ideas and potential coding strategies and decided on a combination of "In Vivo coding," (Saldaña, 2016; p. 105), "holistic coding" (Saldaña, 2016; p. 166), and "concept coding" (Saldaña, 2016; p. 119) to identify themes in the data. These coding

methodologies were selected because In Vivo coding allowed us to identify themes using participants' language, while both holistic coding and concept coding allowed us to interpret the data by reading larger passages, as opposed to line by line, in order to gauge meanings and the "bigger picture" behind participant responses.

One author completed the first round of coding and developed a codebook that provided a code name, description, inclusion criteria, and an example passage for each code (see Table 2). The transcribed interviews were then double-coded independently by a second research team member using the codebook developed by the other author. Coding results were compared and disagreements were resolved by discussion.

Table 2

Codebook Coding Themes

Code	**Description**	**Inclusion Criteria**
Communication	The importance of communication, modes of communication, and communication strategies in their role as an online instructor.	Includes Canvas, email, announcements, 1-to1 contact; communicating in writing including written feedback; includes clarity of written documents; includes personalized communication
Organization	The importance of and strategies for managing time interacting with and responding to students as an online instructor.	Includes managing time spent interacting with students, responding to emails, discussion boards
Time management	The importance of and strategies or techniques used to maintain organization in their daily work and in the importance of organization within the online course.	Include strategies and tools used to keep the instructor organized; the organization/structure of course content; objectives for the course
Technology skills	The importance of skills related to technology: searching for, learning, and using technologies for online teaching; and being able to instruct students on how to use technologies for the course.	Includes software, LMS; keeping up with technological changes
Flexibility	The importance of being flexible in teaching practices, changing the course design or class materials, and being flexible with the needs of online students.	Includes being patient, understanding and flexible with students; empathy for students and their situations; includes being flexible to make changes because something isn't working for students
Creativity	The importance of creativity in the use of course materials, technology, pedagogy; experimentation; and exploring new ideas about teaching.	Includes experimentation with new ideas, technologies; being open to exploring what others are doing and incorporating it into their courses

Results

Participants' responses to the question, "*What skills do you think are most valuable for online instructors to have?*" were coded into six broad themes: communication, organization, time management, technology skills, flexibility, and creativity. Table 3 shows the frequency with which participants mentioned each theme at least once, as well as the total number of incidents in which each theme was mentioned across participants.

Table 3

Frequency and Incidents of Codebook Themes

Codebook Theme	Frequency (%)	Total incidents*
Communication	28 (85%)	43
Written	16	
Responsiveness	8	
Tone/Voice	6	
Organization	15 (45%)	21
Time management	15 (45%)	18
Technology Skills	11 (33%)	13
Flexibility	10 (30%)	10
Creativity	3 (9%)	4

** Total number of times theme was reported across participants*

Communication

Long-term instructors overwhelmingly discussed valuable skills related to communication (43 total instances; 85% of participants reporting at least once). Communication skills fell into three sub-codes: effective written communication, responsiveness, and tone or voice.

Written communication. Written communication was mentioned most frequently by participants within the broader theme of communication skills (16 instances). These instructors emphasized how important effective written communication was for online teaching, particularly when they have little in-person interaction. One of the instructors stated:

> And also [written documents] have to be detailed, because since you don't see the students face-to-face, then they should be as detailed as possible. Otherwise, every time you'll get question: What do you mean by that? What is this? What should I do? (#9)

Specifically, instructors described this set of skills as being clear, coherent, detailed, careful, and thoughtful in their communications, as described by these instructors:

> Well, I think one skill is to be able to write succinctly and coherently. You're giving a lot of instructions. They're in writing, and if people are in different places and different times… [you] really need to have those written so that they're understandable.(#23)

> ...your writing skills are really, really apparent to your students and your editing and proofreading because, [if] you make a mistake or spell a word wrong they're going to find it. Because that's how you're communicating with them. (#1)

> It's just, written communication, I do think that I see instructors, not just with [online] but on campus as well, use writing in ways, they're just inattentive to what kind of impression they give off by the way they communicate. I think instructors should be very alert to how their writing does communicate. (#6)

The following participant further discussed the importance of written communication in several aspects of online teaching including content, discussions, and providing feedback.

> I think what's important in online instruction is being able to critically evaluate information and give it to the students, but also extract what's important in their responses. So being able to analyze and synthesize a lot of information that's going on in the classroom. Being a good communicator. I think that's also important to be able to... communicate well, and timely, and clearly. That's also important. I believe that also having this ability of... sustaining the interest of the students. So being able to interact to whatever extent it's possible with them. Whether in comments, or in discussions, or in grading their work, in whatever way. But I think communication and this sort of... analytical, synthetic skills are very important. (#20)

Responsiveness

The second most frequently mentioned communication skill by instructors was responsiveness (8 instances). For example, one participant said, "…just like traditional instructors, it's being really responsive to students and dedicated to them." Instructors emphasized the importance of responding in a timely manner and having frequent communication with students, as shown in these quotes:

> Communication. It's hugely important. And timeliness, getting back to students is really important. (#32)

> They need to be able to spend a lot of time communicating with students via electronic means they have…They have to be willing to sit and do a lot of that. You will be doing a lot of online interaction and they have to be willing to do that. (#16)

> Yeah, communication. Make sure it's frequent. I try to do that a lot, and it's hard because sometimes I'll get students... you know, each class is unique, and within each class, you're going to have a wide variety of responses. Sometimes the students are going to respond very quickly, some of them not so much. Some of them very little, and you have to be ready for that, that varied response over time. (#19)

Tone or voice. Finally, instructors emphasized the importance of *how* they communicated. One instructor stated:

> Being thoughtful about when and how you respond. I believe that one of the ways that I connect well to my students is I have no mechanical, no "always way" of doing something, so that they know that I'm engaged with them personally when needed. That it's not by rote, and on an online environment I think it's easy to not see the people you're interacting with, but if there's a variety then students are more likely to see that you're engaged with them, and then more likely to do their best. (#17)

Several instructors (6 instances) mentioned that the tone and/or voice of their communication with students was important, such as the importance of personal and conversational communication as demonstrated by the following:

> You have to strike a tone right where you are sort of an expert and you're providing an extra layer of content through your lectures, but they're also there has to be some sort of a little bit less of a formality. So, it's almost conversational is what I figured out works best….. and not sounding so much as an academic writer, but someone that's in conversation with them about these things. (#3)

> Ability to be fully present…not only intellectually, but also emotionally. Because sometimes students are seeing us on the other side of the screen as a blank slate for their fears and projections of their most scary professor figure. And I know that if we do not insert a warm and caring tone in our email consciously, it will not come through. What we would consider neutral, may not be neutral. What we consider neutral, may become that blackboard for projections. So, somebody who is able to insert that tone of firm requirements, and rigor, yet understanding and being understanding, warm, and present at the same time. That is a skill that can be very important. (#34)

Organization

Organizational skills were second most frequently discussed valuable skill by the long-term instructors (21 total instances; 45% of participants reporting at least once). Most of these responses emphasized the importance of organization within the structure of online courses. For example, one instructor stated:

> Well, the organization, when you develop an online class, you develop the entire course, build it, put it out there, which takes a lot of organization of seeing a class from beginning to ending. (#21)

Many of the instructors talked about the importance of organization as a skill when designing online courses as well as teaching them. There was some overlap with communication skills, such as the need to be organized with learning objectives and modules set up in ways that communicated the course material with online students. One instructor said:

> So, I'd say you have to be really organized. You have to think about your material in terms of nuggets, or modules, or packages of material. I think that's just a general kind of skill, you need to be very organized, which I think is easier for some than others. So that's a skill. (#27)

Of the instructors who discussed organization as a skill, most were focused on the importance of course organization: organizing material in the online course so it was self-explanatory, clear and understandable. One instructor stated:

> I always put designing and teaching together and I know they don't always go together but that you need to be able to see it from the student perspective. I'm constantly surprised by how students, I'll sort of arrange things a certain way and students won't be able to find it or use it the way I thought it would be. It just seems really self-evident from my side, so I just go ahead and take their word for it…" (#12)

A smaller group of instructors talked about organizational skills from the perspective of their own work process (instructor organization). One instructor discussed using organizational strategies such as to-do lists and reminders set to certain weeks of the course. Another instructor emphasized the importance of personal organization:

> It's both about keeping yourself organized in such a way that assignments are released on time that you're doing your grading or feedback giving on time that even if you set things up to happen automatically by a Canvas or whatever delivery system you're using that you're still on top of it. (#3)

Finally, one instructor suggested that online instructors need to "…figure out an organization so that it doesn't take over their lives…"(#16). This comment referenced the need for boundaries around time spent on tasks related to online teaching, which is further discussed in the next most valuable skill, time management.

Time Management

The third most frequently discussed skills by the long-term instructors were time management skills (18 total instances; 45% of participants reporting at least once). Overall, long term instructors discussed the challenges associated with time management that are unique to online teaching and learning. For example, one instructor mentioned that "…it gets really easy to forget that you have these things to do online whether you're an instructor or a student" (#3). Another instructor stressed the importance of self-motivation and self-reliance for effectively managing time in online classes—for both instructors and students alike:

> Probably the same skills that students have and that is be able to be self-motivated and do it yourself. When you have an on-campus class, there's a lecture three times a week or whatever, you show up, you do it. When you're online, you can let things slip and that's fatal for students, and it's fatal for professors. (#25)

Instructors further discussed the importance of managing their time interacting with and responding to their online students, such as managing time spent responding to student emails and online discussion boards. Similar to the responsiveness sub-theme of communication, several of the instructors indicated the importance of responding to students in a timely manner, which some alluded to being more challenging in online teaching:

> Being responsive in a timely manner. And I will admit that sometimes I still struggle with that, because the students aren't in front of me, so there's less accountability. And so being able to make sure that I am responding in a timely way is, has really become more of a priority for me. It might not have been as much before, but I think it really matters. And I didn't put as much emphasis in carving out that time, to make sure that every day I'd have a little bit of time to just, to devote to any kind of communication means for the online students. (#32)

> …but being available to respond to students because students post a question or an issue, and it seems to me if the instructor isn't around for three weeks or something, that's going to be pretty frustrating, and three weeks is probably beyond, but even several days, it's too much. There needs to be a more immediate kind of response. (#23)

> Again, I think being prompt is important. When you send me an email, I don't look at my email. It's not on my phone. When I sit at the computer I get it but the minute I read it, I will get back to you. I'm not gonna let your email sit for three days. It's like raising your hand in class. It's just it may take me an hour if I'm teaching a class, I can't be on the computer. So, I think that being straightforward and honest and making your expectations known. (#15)

Several of the instructors discussed time management and timely responses in relationship to boundaries around their availability to online students. For example, one long-term instructor mentioned that without boundaries, "You could easily get sucked into checking in on your course and doing stuff twenty-four hours a day. That's just not healthy." Others mentioned 24-hour cycles, and challenges to staying responsive to students within a 24-hour day, as described by these instructors:

> I think, keeping up on, you know, the timeliness of this is very important. I try to get back with emails, you know, in 24, within a day if I can. And then, I try to get assignments within three or four days. That seems to keep the students at distance happier. (#13)

> … you've got to be ready to be accessible nearly 24/7. That's a little - maybe not quite that much, but you know, I work a lot of nights because that's when questions come up and when you have 50 students and there's a weekly assignment - each one wants to post something, you know 2 or 3 posts - that's 150 posts to go through. That's a lot. (#22)

A few instructors discussed strategies they use to manage their time interacting with and responding to online students while maintaining presence, as described by the following instructors:

> …time management is another way to show…I can be there I can be present but I don't have to spend…an hour finding some additional resource and you know creating it for the students write some of it. I've just like copied from what I've said before and I threw it into my to-do list. (#2)

> I think one of the skills is being present. Different people get there in different ways, maybe they organized themselves whilst they are in the class many times, and they structure their time so they are, but just being present. So, if it's in the discussion board or creating a weekly, or biweekly announcement so it looks like you are there often. That's a skill. (#24)

Technology Skills

The fourth most frequently discussed skill by the long-term instructors were technology skills (13 total instances; 33% of participants reporting at least once). Most of these instructors emphasized that it was important for online instructors to have a certain

comfort level or familiarity with online course tools such as the Learning Management System (LMS). One instructor pointed out that some faculty might not necessarily have these technology skills if they were only teaching "on ground," while another mentioned that there might be a learning curve associated with the development of new technology skills:

> If the technology skills aren't there, you will certainly spend some time learning them. We're not all familiar with a particular tool or toolbox, so that's going to be a bit of a learning curve. (#29)

A few instructors emphasized the importance of developing technological skills so that they could instruct their online students in the use of those tools, as illustrated in the following statements:

> My students would need to video themselves doing different activities and edit those videos and condense those videos and send those videos. So, I would have to teach them how to do that. I'd have to develop skills in doing that. (#21)

> I would say being able to guide students through technical difficulties. I mean I'm teaching technical material but that seems to be where most of the communications are. How do I use Canvas effectively? A student coming in for the first time, never using Canvas, they don't know where anything is. They're overwhelmed and there's too many menus, too many places they could communicate with me, too many places they could look at their grades or their comments. (#28)

Finally, acknowledging the changing environment of educational technology, one instructor mentioned that faculty should "…not mind searching for a new technology and changing things around, with the way new technology changes (#33)." Another mentioned the need to accept learning technologies and learn how to use them effectively, saying "…you just have to embrace that [learning technology] and use it effectively. Use it efficiently, use it effectively (#18)." These quotes further stress the importance of flexibility, the next valuable skill mentioned by long-term instructors.

Flexibility

The fifth most frequently discussed skills by the long-term instructors were skills related to flexibility (10 total instances; 30% of participants reporting at least once). Instructors discussed the importance of being flexible in teaching practices, flexible in changing the course design or class materials, and being flexible with the needs of online students. When discussing the importance of flexibility, a few of the instructors expressed the need for empathy and understanding of the needs of their online students:

> So, maybe because it's distance ed, a little more; you can't hold hands, but a little more encouragement because there's so much going on in folks' lives and online, most of it's not parties, it's other stuff, bigger stuff that... you don't want to change the curriculum to make it easier for them to stay in the course; but your relationship with them should make it easier to stay in the course. (#33)

> …general understanding, flexibility, being able to move. I would characterize myself as a little bit more flexible for students, particularly around the end of the school year or the end of the term because that's when they all... you know, as we all know, they tend to overschedule themselves, and they tend to procrastinate, wait 'til the end of

> the term to turn in their assignments and so on. So, there's a little bit of understanding and a little bit of empathy to try to understand where they're coming from and to have some flexibility. (#19)

> And along with that then there's got to be a real capacity to be flexible. I think that holding online students to the same kind of rigidity of what we often expect of our on-campus students is unwise and unkind. Finding out how to do that, in a way that still has integrity, you still got to have deadlines and there still needs to be incentives for being on time and that sort of thing. But at the same time to recognize that the kinds of obstacles people are overcoming are quite real and that not every student who asks for a little special help or accommodation is trying to fool you, or take advantage of you. There might be some, but I've just concluded that I'd rather be fooled a few times and not be a jerk. I think some of those sorts of things that border on, not just skills, but really almost character qualities that I think are important for being able to interact well with this population of our student[s]. (#6)

A few of the of the instructors who discussed flexibility emphasized having patience and understanding specifically for their online students, as shown in these examples:

> I mean you definitely have to have some patience and sympathy and understanding of students who, for whom this is not an easy thing to do. Both the subject matter and dealing with the technology. (#4)

> Patience. I know that in my case, I teach a 400 course, it's kind of a senior assessment writing course, and that people I deal with, as I said, many of them are older than average students, or at a distance. I tell them right up front, I understand that you have a life and that life gets in the way sometimes and if you need extra time, simply ask me for it. I'm more than happy to do that, the crunch on how much time you have to hand in a second copy or for me to grade them, but we can work around those things. I think that's important. (#15)

Finally, three of these instructors discussed the importance of being flexible in terms of making changes to their online courses for the benefit of students or based on student feedback:

> Well, I think this is not unique to online, but flexibility, because I would put so much work into developing this class and then a student might say, "This just doesn't work." And so, I would have to go back and change a lot of it. (#21)

> The first thing we actually learned when we did this class is that where in-person, everything is almost day-by-day, certainly week-by-week, and that did not work for the traditional chemistry distance student. They needed more flexibility in deadlines. We ended up taking the course and putting it into two chunks. That worked much better for the true distance student coming back for whatever reason to take General Chemistry. (#5)

> So being open to feedback and changing once you receive it. Being flexible, thing change all the time, and it goes toward communication, but tools change, and students change, and curriculum should somewhat change. (#24)

<u>Creativity</u>

The final valuable skill discussed by a small number of the long-term instructors was creativity (4 total instances; 9% of participants reporting at least once). These instructors discussed the importance of creativity in the use of course materials, technology, and pedagogy, and experimenting and exploring new ideas about teaching:

> I think it's a lot of imagination and really, it …wasn't so much the skills as just the willingness to explore, see what other people are doing in classes. Think about how can I incorporate that into my work. (#4)

> I think also being open to new ideas of how to teach. At least, I couldn't directly take what I do in the class and translate that into the same sort of thing in a distance course. You had to look at things differently. (#5)

> Just having an imagination on different ways of trying things through the use of the Internet. I do lots, experiment with lots of things, and we have Ph.D. students that also teach online. And, we meet every quarter, and they're actually very experimental. In fact, a lot of the new things that I'm doing are coming from the students. (#13)

Discussion

The purpose of this study was to garner the most valuable skills needed for success in online teaching from experienced faculty who had taught online for 10 years or more. Results from our qualitative analysis yielded six major themes that emerged from structured interviews with 33 faculty members at a highly ranked online institution. These themes included: 1) communication skills; 2) organizational skills; 3) time management skills; 4) technology skills; 5) flexibility; and 6) creativity. Overall, our findings align with the view that faculty preparedness to teach online is multi-dimensional (Scherer et al., 2021), requiring a range of skills that should continue to develop over time as the online education landscape shifts.

Support for Current Frameworks

Our findings lend further support to existing frameworks within online teaching, namely the Community of Inquiry framework (COI; Garrison et al., 2000), the faculty readiness framework (see Cutri & Mena, 2020), and the Technology Acceptance Model (Venkatesh & Davis, 2000). For instance, many of the themes and subthemes emerging from experienced online faculty highlight what the COI framework describes as "teaching presence." Within the theme of communication, experienced instructors described how the clarity, responsiveness, and tone of their communication supported not only students' learning, but the sense that their instructors were "fully present." In addition, within the time management theme, experienced instructors' emphasized ways in which these skills help foster "teaching presence"; instructors explicitly stated "being present" or "available" to students in their description of time management skills. They further described the balance between responding in a timely manner with setting necessary boundaries to foster students' sense that they were human. Using communication and time management skills as a means to build "teaching presence" might help students feel connected to the instructor, engaged with the material, and willing to play an active role in intellectual discourse—a critical first step in "humanizing" the learning experience online (see Mehta & Aguilera, 2020 for a review).

Several themes emerging from our analysis further overlapped with measures of faculty readiness for online learning, chiefly organizational skills and technology skills. In describing organizational skills, faculty responses largely focused on organization within the context of course design, such as envisioning the whole course from "*beginning to end,*" or how course content should be nested within modules as "*packages of material*." Current measures of faculty readiness to teach online include course design skills, with the ability to organize course content into modules as one specific focus. For instance, in a measure developed by Martin and colleagues (2019b), the subscale assessing instructors' course design skills includes an item evaluating the ability to "organize instructional materials into modules or units" (pp. 107). Moreover, award-winning online instructors have explicitly discussed organizational approaches to course design—including organization based on learning modules—as elements of successful online courses (see Martin et al., 2019a). The results of this analysis lend further support to the ways in which course design skills are considered valuable in successful online teaching. As higher education evolves online, instructional designers will continue to play a critical role in supporting online instructors in the development of these skills.

Experienced online instructors also emphasized the importance of technology skills, which is consistently found in measures of readiness to teach online (e.g., Chi 2015; Martin et al., 2019b). In these measures, assessment of technology skills often focuses on competencies in performing specific tasks, such as using a course roster to create teams in a learning management system (see Martin et al., 2019b). However, faculty responses within this theme align more closely with the TAM2 model (Venkatesh & Davis, 2000). In the TAM2 model, technology acceptance and use are predicated in part on the extent to which a new technology is perceived as relevant to a job, as well as the degree to which people have previous experience and a willingness to engage with new technologies. Instructors in this study described ways in which knowledge of technology is "relevant to the job" of teaching online, including the ways in which these skills can help support students with technological challenges in the virtual classroom. Instructors further emphasized acceptance of digital interfaces as a pathway for success in online teaching, and the importance of learning new applications to improve the virtual learning environment. Together, results of our analysis suggest that basic technological skills are necessary but not sufficient for success in online teaching. Beyond basic competencies, faculty should be supported by their institutions in honing new skills as educational technologies evolve.

The Lens of Professional Vulnerability

In a recent review, authors Cutri and Mena (2020) use Kelchtermans's (2009) model to argue that more than a list of skills, teaching online demands professional vulnerability that takes on a variety of different forms, including but not limited to: 1) a willingness to share personality in communicating with students online; 2) a willingness to share power with students in virtual classrooms; and 3) a tolerance for identity disruption—such as shifting from a seasoned face-to-face instructor to a beginner in another course modality (e.g., online, hybrid). Throughout the six themes identified in our analysis, experienced instructors' responses lend support to this argument. Within the communication theme, experienced instructors discussed how the tone of their communication should emphasize their humanity, by conveying a sense of "warmth," "concern," and familiarity that requires a willingness to be personable. Within the technology theme, the emphasis on acceptance of current

technologies and the willingness to learn new ones suggest that online faculty must be open and willing to change as the online learning environment changes. This is further evidenced in the flexibility theme, where instructors mentioned the need to adjust certain aspects of the course based on student feedback; soliciting and adjusting courses based on feedback requires a willingness to be vulnerable and open to critical feedback. Finally, within the theme of creativity, experienced faculty described a willingness to not only be the instructor but the learner, experimenting and learning from students to improve the quality of their online teaching; this example highlights one of the ways in which faculty can "share power" with their students.

The level of risk taking involved in online teaching (e.g., expressing personality, experimenting in course design and pedagogy) poses some potential challenges for faculty, particularly those seeking tenure and those who are on annual contracts at their institutions (Curti & Mena, 2020). For faculty new to online teaching, experiments in the virtual classroom could result in a loss of status that may also affect employment, such as poorer initial teaching evaluations or a loss of time spent on research due to a need to focus on online instruction (Curti & Mena, 2020). As online education continues to expand, the demands on faculty will shift in ways described by the experienced online faculty in our sample (e.g., being more available, having to structure clearer boundaries between work and personal lives, responding flexibly to the evolving needs of students). In order to ensure educational quality online, institutions will likely need to make adjustments in supporting their online teaching faculty, such as altering the ways in which faculty teaching is evaluated, providing compensation for faculty pursuing professional development opportunities in online education, and reconsidering some expectations for tenure promotions (Cutri & Mena, 2020). From a fiscal standpoint, investment in online teaching faculty and in the quality of online instruction will likely promote the vitality and longevity of these institutions in the 21st century.

Limitations and Future Directions

Although our study adds to the extant literature, there are several limitations to this study that warrant some caution. First, instructors at this institution are required to receive training to teach online and work closely with instructional designers to develop new courses and redevelop existing courses. This level of faculty support is not available at all institutions of higher education and could have influenced faculty responses to our research question. Future research could address the extent to which perceptions of the skills necessary for success in online teaching might differ based on supports available to online instructors. Second, while not the focus of this study, the level of courses faculty teach could also have impacted faculty responses. For instance, faculty who teach mostly graduate level online courses might have responded differently to our research question than faculty who teach mostly undergraduate online courses. As higher education continues to evolve online, future research should address the extent to which the skills required to teach online vary based on the course level (e.g., an introductory math course vs. an advance calculus course). Future studies could also examine how faculty with fewer years of experience would characterize valuable skills of online teaching. Finally, our analysis was grounded in the postpositivist tradition of qualitative research, a widely accepted approach in communication studies, health sciences, and psychology, among others (Creswell & Poth, 2018; Tracy, 2020). However, we

acknowledge that there are a wide range of rigorous approaches to qualitative research that might yield different interpretations of the data.

Concluding Comments

The onset of the COVID-19 pandemic has profoundly shifted the trajectory of higher education online. As course offerings, programs of study, and stackable degree pathways expand exponentially, institutions that prioritize quality instruction will likely thrive in this accelerated online learning environment. Across all six themes identified in this analysis, a key idea emerges that aligns with the theories and ideas discussed herein: Instructors consistently mentioned the capacity to use technology as a vehicle for fostering the human connections that are necessary for learning. The online teaching experts in this study provided actionable insights into the ways that online teaching skills can inform the building of these human connections, from communication and course design, to wielding technology in increasingly creative ways. Faculty responses further promote Cutri and Mena's (2020) call to view online teaching skills in a new light, and to consider how professional vulnerabilities can impact the quality of online teaching. Together, the results of this analysis have implications for the professional development of new and experienced online instructors, and can inform the supports necessary for the continued development of these most valuable skills.

Declarations

This study was approved by the Institutional Review Board (IRB) of the Oregon State University, and the protocols used in the study were approved by the Human Research Protection Program.

The authors have no conflicts of interest to declare. All co-authors have seen and agree with the contents of the manuscript and there is no financial interest to report. We certify that the submission is original work and is not under review at any other publication.

References

Acuity Scheduling (2006). *Acuity Scheduling* [Computer software]. https://acuityscheduling.com

Allen, E. I., Seaman, J., Poulin, R. & Straut, T. (2016). *Online report card. Tracking online education in the United States.* Babson Survey Research Group and Quahog Research Group. https://www.bayviewanalytics.com/reports/onlinereportcard.pdf

Anderson, T., Rourke, L., Garrison, D. R., & Archer, W. (2001). Assessing teaching presence in a computer conferencing context. *Journal of Asynchronous Learning Networks, 5*(2), 1-17. https://doi.org/10.24059/olj.v5i2.1875

Caskurlu, S., Maeda, Y., Richardson, J. C., & Lv, J. (2020). A meta-analysis addressing the relationship between teaching presence and students' satisfaction and learning. *Computers & Education, 157*, 1-16. https://doi.org/10.1016/j.compedu.2020.103966

Chi, A. (2015). Development of the readiness to teach online scale. [Doctoral dissertation, University of Denver]. Digital Commons. https://digitalcommons.du.edu/etd/1018

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th edition). Sage.

Cutri, R. M., & Mena, J. (2020). A critical reconceptualization of faculty readiness for online teaching. *Distance Education*, *41*(3), 361-380. https://doi.org/10.1080/01587919.2020.1763167

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 319-340. https://doi.org/10.2307/249008

Galikyan, I., & Admiraal, W. (2019). Students' engagement in asynchronous online discussion: The relationship between cognitive presence, learner prominence, and academic performance. *The Internet and Higher Education, 43*, 1-9. https://doi.org/10.1016/j.iheduc.2019.100692

Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment. Computer conferencing in higher education. *The Internet in Higher Education, 2*(2), 87-105. https://doi.org/10.1016/S1096-7516(00)00016-6

Garrison, D. R., Anderson, T., & Archer, W. (2010). The first decade of the community of inquiry framework: A retrospective. *The Internet and Higher Education*, *13*(1-2), 5-9. https://doi.org/10.1016/j.iheduc.2009.10.003

Jaschik, S. & Lederman, D. (2019). *2019 survey of faculty attitudes on technology*. Inside Higher Ed & Gallup. https://www.insidehighered.com/sites/default/files/media/IHE_2019_Faculty_Tech_Survey_20191030.pdf

Kanuka, H., & Garrison, D. R. (2004). Cognitive presence in online learning. *Journal of Computing in Higher Education, 15*(2), 21-39. https://doi.org/10.1007/BF02940928

Kelchtermans, G. (2009). Who I am in how I teach is the message: Self-understanding, vulnerability and reflection. *Teachers and Teaching: Theory and Practice*, *15*(2), 257-272. https://doi.org/10.1080/13540600902875332

Mansbach, J., & Austin, A. E. (2018). Nuanced perspectives about online teaching: Mid-career and senior faculty voices reflecting on academic work in the digital age. *Innovative Higher Education*, *43*(4), 257-272. https://doi.org/10.1007/s10755-018-9424-4

Martin, F., Ritzhaupt, A., Kumar, S., & Budhrani, K. (2019a). Award-winning faculty online teaching practices: Course design, assessment and evaluation, and facilitation. *The Internet and Higher Education*, *42*, 34-43. https://doi.org/10.1016/j.iheduc.2019.04.001

Martin, F., Budhrani, K., & Wang, C. (2019b). Examining faculty perception of their readiness to teach online. *Online Learning Journal*, *23*(3), 97-119. https://doi.org/10.24059/olj.v23i3.1555

Martin, F., Wang, C., Jokiaho, A., May, B., & Grübmeyer, S. (2019c). Examining faculty readiness to teach online: A comparison of US and German educators. *European*

Journal of Open, Distance and E-learning, 22(1), 53-69. https://doi.org/10.2478/eurodl-2019-0004

Mehta, R., & Aguilera, E. (2020). A critical approach to humanizing pedagogies in online teaching and learning. *The International Journal of Information and Learning Technology, 7*(3), 109-120. https://doi.org/10.1108/IJILT-10-2019-0099

Mohr, S. C., & Shelton, K. (2017). Best practices framework for online faculty professional development: A Delphi study. *Online Learning Journal*, *21*(4), 123-140. https://doi.org/10.24059/olj.v21i4.1273

Palloff, R. M., & Pratt, K. (2011). *The excellent online instructor: Strategies for professional development*. John Wiley & Sons.

Phan, T. T. N., & Dang, L. T. T. (2017). Teacher readiness for online teaching: A critical review. *International Journal Open Distance E-Learning,* 3(1), 1-16. https://ijodel.upou.edu.ph/index.php/ijodel/article/view/18

Saldaña, J. (2016). *The Coding Manual for Qualitative Researchers*. Sage.

Sandelowski, M. (2001). Real qualitative researchers do not count: The use of numbers in qualitative research. *Research in Nursing & Health*, *24*(3), 230-240. https://doi.org/10.1002/nur.1025

Saunders, F. C., Brooks, J., & Dawson, M. (2020). Exploring staff attitudes to distance learning–what are the opportunities, challenges and impacts on engineering academics and instructional designers. *European Journal of Engineering Education, 45*(5), 675-690. https://doi.org/10.1080/03043797.2019.1677562

Scherer, R., Howard, S. K., Tondeur, J., & Siddiq, F. (2021). Profiling teachers' readiness for online teaching and learning in higher education: Who's ready? *Computers in Human Behavior, 118*, 1-16. https://doi.org/10.1016/j.chb.2020.106675

Schmidt, S. W., Hodge, E. M., & Tschida, C. M. (2013). How university faculty members developed their online teaching skills. *Quarterly Review of Distance Education, 14*(3), 131-140.

Seaman, J. E., Allen, I. E., & Seaman, J. (2018). *Grade increase: Tracking distance education in the United States.* Babson Survey Research Group. https://www.bayviewanalytics.com/reports/gradeincrease.pdf

Strauss, A., & Corbin, J. (2015). *Basics of qualitative research* (4th edition). Sage.

Tracy, S. J. (2020). *Qualitative research methods: Collecting evidence, crafting analysis, communicating impact* (2nd edition). John Wiley & Sons.

Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science, 46*(2), 186-204. https://doi.org/10.1287/mnsc.46.2.186.11926

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 Journal, 21*(1), 15-35. https://doi.org/10.24059/olj.v21i1.761