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## Time Management Matters: Online Faculty Perceptions of Helpfulness of Time Management Strategies

Beth Oyarzun

Florence Martin

Robert L. Moore  
*Old Dominion University*

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# Time management matters: Online faculty perceptions of helpfulness of time management strategies

Beth Oyarzun <sup>a</sup>, Florence Martin <sup>a</sup>, and Robert L. Moore <sup>b</sup>

**Q1** <sup>a</sup>Educational Leadership, The University of North Carolina at Charlotte, Charlotte, North Carolina, USA;  
**Q2** <sup>b</sup>Darden College of Education and Professional Studies, Old Dominion University, Norfolk, Virginia, USA  
**Q3**

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## ABSTRACT

This study examined 256 faculty survey responses to determine perceptions of helpfulness of 24 time management strategies grouped into four categories defined by Berge (1995) as managerial, pedagogical, technical, and social. Findings indicate that establishing clear and specific expectations ( $M = 4.32$ ) was perceived as the most helpful, followed by organizing content into modules or units ( $M = 4.28$ ), which were both pedagogical time management strategies. Participants additionally responded to two open-ended items regarding the most and least helpful time management strategies. The open-ended responses were consistent with the survey findings. The relationship between faculty demographic factors and strategies showed that receiving training to teach online affected the faculty perceptions of technical time management strategies.

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online faculty; time management; perceptions; helpfulness

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## Introduction

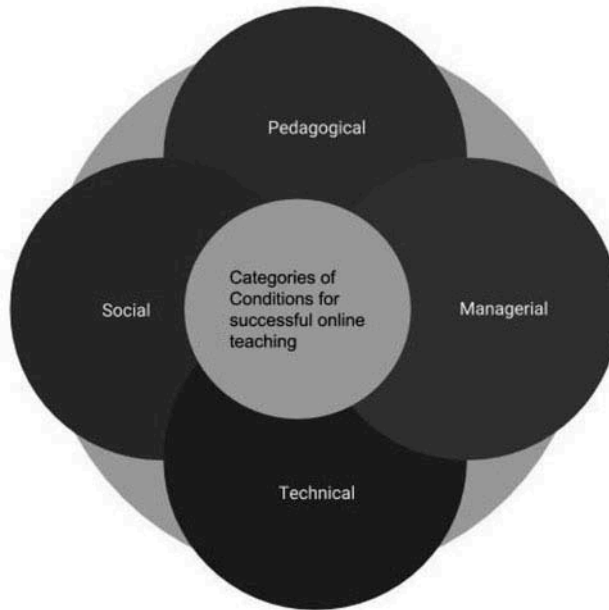
Seaman et al. (2018) reported an increase in distance education enrollment for the 14th year in a row, citing that the growth over the previous year had been larger than the previous few years. However, there are still barriers to faculty adoption of online teaching practices. Loyd et al. (2012) explored faculty-perceived barriers to online teaching and identified four themes: interpersonal, institutional, training and technology, and cost-benefit barriers. Faculty identified time management as a barrier, which fell into the theme of cost-benefit barriers. An online instructor has unique challenges that differ from those of a face-to-face instructor, and time commitment has been acknowledged as one of those challenges that contribute to barriers to faculty adoption of online teaching (Bacow et al., 2012; Bolliger & Wasilik, 2009; Giles et al., 2014; Van de Vord & Pogue, 2012).

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Research on student satisfaction and retention in online learning may offer insights into why time commitment is an issue for online faculty (Hart, 2012; Lee & Choi, 2011). Students report higher satisfaction and are more likely to be retained when faculty are engaged, responsive, and provide substantive feedback (Lewis & Abdul-Hamid, 2006; Sher, 2009). However, being engaged and responsive, and giving substantive feedback while facilitating an online course can be time-consuming tasks for faculty. Additionally, designing quality courses for online delivery requires a significant time investment that may offer faculty little

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**Q4** Figure 1. Categories of conditions for successful online teaching, adapted from Berge (1995)

perceived return on investment. Several researchers have identified faculty concerns about workload and compensation as discouraging factors for teaching online (Bacow et al., 2012; Bolliger & Wasilik, 2009; Green et al., 2009). However, there is little research on how online instructors can manage their time to minimize these concerns. Our study investigated the perceived helpfulness of online instructor time management strategies.

### **Theoretical framework**

Our study used a framework created by Berge (1995), who outlined four categories of necessary strategies for successful online teaching: managerial, pedagogical, technical, and social. The framework was used to identify and categorize time management strategies of online faculty because it purposefully defines categories that distinguish instruction from information delivery. Online instruction is broader than organizing and presenting content; there is a purposeful intent by the instructor in online course design to elicit engagement with the course materials and learners.

Managerial strategies are the procedural or administrative tasks required of an online course. Pedagogical strategies are tasks surrounding facilitating an online course either in the design or delivery phases. Technical strategies are efforts to make the technology transparent and helpful instead of a barrier to learning. Social strategies are efforts to create a friendly environment that promotes human relationships. Time-saving strategies in each of the four categories were identified through an extensive literature review and interviews with expert online faculty.

### ***Managerial strategies***

Berge (1995) identified management strategies for computer-mediated communication, which at the time was mostly synchronous chats or asynchronous discussions with students. However, many of the strategies can translate into the robust asynchronous learning environments of today, such as responsiveness, procedural leadership, clarity, planning, preparation time, and online teaching experience. Current research, which collected advice from experienced online instructors, supports these strategies as being effective for asynchronous online teaching (Dunlap & Lowenthal, 2018). Sheridan and Kelly (2010) investigated important behaviors of online instructors, finding that the most important were making requirements clear and being responsive to student needs. These behaviors fall into the managerial category and are consistent with workload concerns since both tasks can take an exorbitant amount of time. However, there is little empirical evidence of how these strategies assist with faculty time management.

Mandernach et al. (2013) investigated the time commitments of online faculty and discovered that online faculty spend more than 40 hours a week facilitating online courses to ensure effectiveness. Most of that time was spent providing feedback and communicating with students. Several researchers have identified that the use of course announcements (as a way to stay connected with students and also to provide useful information) helps students feel comfortable and leads to higher rates of student satisfaction in online courses (Dykman & Davis, 2008b; Majeski & Stover, 2007; Zhao et al., 2009).

Conrad (2016) analyzed students' and instructors' perceptions of feedback in an asynchronous online course and found that, while students found collective feedback helpful, specific, detailed, and personalized feedback was more helpful. Using collective feedback can save instructors time by avoiding writing the same feedback over and over for individual students. Similarly, reusing feedback from other iterations of the course or from other students may also be a time-saver. In either case, instructors could spend time personalizing feedback comments instead of regenerating similar comments. Additionally, periodic course announcements could be a venue to provide collective feedback in addition to course information and reminders such as a synopsis of a discussion that highlights a few student posts along with general comments.

Scheduling time to reflect and learn new strategies can improve online course design and teaching practices, which in turn may save time during the facilitation of the course. Schmidt et al. (2016) noted that training is essential for successful online teaching, while Baran et al. (2011) suggested that continuous reflection can transform the understanding of processes related to online learning. While this integration of reflection may increase the time commitment during the design of the course, it can reduce time-consuming tasks during delivery. Based on the research evidence, our study included the following time-saving managerial strategies: sending or posting periodic course announcements, providing collective feedback, reusing feedback from previously used or saved feedback, scheduling time to facilitate the course, and scheduling time to learn and apply new strategies.

### ***Pedagogical strategies***

Berge (1995) identified pedagogical strategies for successful online computer-mediated communication. While many of Berge's recommendations are more appropriate for

synchronous online environments, some translate to the design of effective asynchronous environments, such as including clear objectives, encouraging participation, and making material relevant. More recently, Jaggars and Xu (2016) suggested that the quality of interaction relates significantly and positively to student achievement, particularly the student-to-instructor interaction, and this directly relates to encouraging participation. Trammel and LaForge (2017) asserted that careful course design, consistent structure, and due dates can mitigate frustrations for online students and instructors. Relieving frustration may also save faculty time during course facilitation by preventing student confusion and questions.

Content development has become easier with advances in technology. This has created momentum around sharing existing content. Open educational resources (OER) promote shared access to existing instructional materials (Wiley et al., 2014). Caudill (2011) stated that using OER can ensure a quicker course development process because it enables faculty to mix in existing resources instead of creating instructional material from scratch.

Clear and consistent navigation and course structure have been recommended best practices in online course design since the inception of course quality rubrics (MarylandOnline, 2018). The latest edition of the Quality Matters rubric addresses the organizational and technical aspects of course navigation and structure. Ralston-Berg et al. (2015) investigated student perceptions of online course quality best practices and found that students valued clear instructions and ease of navigation to ensure their success in online courses. However, research has not yet examined how these strategies relate to time management for the instructor. One can speculate that if students can locate necessary course materials without assistance, this may relieve frustration and save time for the instructor and the student.

Taylor et al. (2015) tested orientation videos in courses with high withdrawal rates and broad grade distributions and saw improvements on both measures after the orientation videos were introduced. Walker et al. (2016) investigated faculty use of the learning management system (LMS) and the grade center. They highlighted the LMS as a mechanism to enable the management of student information in addition to a communication tool to keep students updated on their progress. Using the grade center saves faculty time because it enables students to track their own grades and progress within the course. Our study investigated the perceived helpfulness of the following pedagogical strategies: scheduling time to design the course, using existing materials such as OER or publisher resources, creating clear and consistent navigation, organizing content into modules or units, creating a course orientation (video or text, quiz or scavenger hunt), establishing clear and specific expectations (e.g., to-do list, rubrics), and establishing a grading system that the LMS grade center supports.

### ***Technical strategies***

Although some of the strategies identified by Berge (1995) are still applicable, our study found that technical strategies are in need of updating due to the rapid evolution of technology over the last 20 years. However, the strategies of using new methods to indicate feedback and promoting peer learning can translate into many technologies used today. The LMS has been introduced and become more robust over time. Utilizing the instructional tools available can make online courses more effective and be time-

savers for faculty if used effectively. According to Walker et al. (2016), the LMS features that benefited faculty in their teaching processes and quality of instruction were the gradebook, assessment tool, content creation tools, communication tools, and the interface of the LMS. However, technical issues with these tools became a hindrance to their online teaching process and instructional quality. Schoonenboom (2014) investigated why faculty use some LMS tools more than others and found that low intention use can be explained by low task importance, low tool usefulness, and/or low ease of use. Although these results do not specifically deal with time management, technical issues and the ease of use of tools suggest more use of time spent to resolve issues or learn the tools. However, once the technical tools are learned and working properly, they may save the instructor time.

In addition to LMS-specific tools, strategies in this category included providing audio or video feedback, using collaboration tools, and applying learning analytics techniques. Providing video or audio feedback can be more efficient and more personal than typing verbose feedback to students. Grigoryan (2017) found that multimodal feedback can also be more effective for student learning outcomes. The use of collaboration tools can provide faculty the ability to monitor progress as well as provide feedback during project development (Kai-Wai Chu & Kennedy, 2011). This may save the instructor time in providing feedback to the students in making revisions at the completion of projects. Learning analytics data retrieved from the LMS can assist faculty in providing personalized corrective feedback (Tempelaar et al., 2015). Leveraging technology tools to use time efficiently and effectively are the focus of these strategies. Our study investigated the perceived helpfulness of the following technical strategies: using LMS-embedded tools to create multimedia content such as lecture videos and podcasts, using LMS features for assessment (e.g., quizzes, assignments, exam), using the LMS gradebook to enable students to track grades, using collaborative tools (e.g., wikis, blogs, Google Drive, Dropbox), using technology to provide feedback (audio or video), using LMS data or reports to track student engagement and participation, and using the LMS calendar functionality for automatic reminders and notifications.

### ***Social strategies***

Berge's (1995) social strategies include some applicable strategies for today's online learning environments, such as using introductions as well as facilitating interactivity and cultural sensitivity. These strategies leverage social interaction among course participants for feedback, support, and questions, which can save the instructor time during course facilitation.

Jahng et al. (2010) investigated small-group versus whole-group collaboration and found that small-group collaboration had higher participation from those who lurked (read but did not participate) in whole-group collaboration. Oztok (2016) found that student-facilitated discussions helped students better understand online learning processes and increased interaction. Researchers have also found that virtual synchronous meetings can help build community and enhance interaction, although virtual office hours are scarcely used similarly to actual office hours (Li & Pitts, 2009). Lowenthal et al. (2017) experimented with incorporating optional synchronous meetings in an asynchronous online course, finding that students who attended found them helpful and wished they were used in other courses.

The social strategies investigated for our study were having students participate in small-group discussions, establishing peer-to-peer interaction through group activities such as group projects or student-moderated discussions, requiring students to provide feedback through peer evaluation, offering online synchronous sessions for assistance (office hours and help sessions), and using multiple channels of communication. 190

### ***Purpose of the study*** 195

There is a multitude of research on effective online teaching strategies involving the design and facilitation of courses. However, incorporating those strategies effectively takes time, and there is little research on how online faculty can effectively reduce their workload and manage their time while staying effective. Our study examined faculty perceptions of the helpfulness of time management strategies used in online courses through the following research questions: 200

- (1) Which time management strategies do faculty perceive helpful for online teaching?
- (2) What are some time management strategies that faculty do not use or perceive to be least helpful?
- (3) Is there a relationship between faculty demographic factors and their perceptions of time management strategies? 205

## **Methods**

### ***Data sources***

This survey-based research study was conducted in the Spring of 2019. After the Institutional Review Board approved the study, we emailed online faculty through the Association of Educational Communications Technology membership email list (1900 members) to invite them to participate in a survey through SurveyShare. In addition, we also invited online faculty who teach at two Southeastern United States universities (755 faculty) through each institution's online faculty distribution list. A reminder was sent approximately 2 weeks after the initial email. There was no incentive provided for completion of the surveys. A total of 267 instructors responded to the survey, equaling a 10% response rate. Of these responses, 11 entries were deleted (five respondents had not taught online, and six respondents had not completed more than 10% of the survey) resulting in 256 valid responses. The respondents were from 27 countries with most of them (219) from the United States. Table 1 includes several other demographic characteristics of the faculty respondents. 210  
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### ***Instrument***

A validated instrument to measure time management strategies of online faculty did not exist, so we (expert online instructors and instructional designers) created it (see Appendix). The development of the instrument occurred in a three-step process: (1) conducted an extensive literature review on time management strategies, (2) documented time management strategies used by the research team, and (3) conducted an expert review through consultation with other expert online instructors. The draft instrument 225



**Table 1.** Faculty demographic characteristics (*n* = 256)

Variables	Frequency (%)
Gender	Male 70 (27.3%) Female 184 (71.9%)
Academic discipline	Prefer not to answer 2 (.8%) Architecture 11 (4.3%) Sciences 8 (3.1%) Business 14 (5.5%) Education 109 (42.6%) Engineering/Applied Science 7 (2.7%) Health Science/Medicine 37 (14.5%) Not answered 67 (26.2%) Full professor 40 (15.6%) Associate professor 37 (14.5%) Assistant professor 33 (12.9%) Full-time lecturer 40 (15.6%) Part-time lecturer 38 (14.8%) Instructor 27 (10.5%) Clinical/Visiting faculty 13 (5.1%) Asynchronous 177 (53.5%) Synchronous 22 (6.3%) Hybrid 52 (12.5%) Face-to-face 58 (11.7%) Undergraduate 145 (56.6%) Master's 81 (31.6%) Doctorate 27 (10.5%)
Primary teaching method	Asynchronous 177 (53.5%) Synchronous 22 (6.3%) Hybrid 52 (12.5%) Face-to-face 58 (11.7%) Undergraduate 145 (56.6%) Master's 81 (31.6%) Doctorate 27 (10.5%)
Primary teaching level	1-5 38 (14.8%) 6-10 42 (16.4%) 11-15 44 (17.2%) More than 15 132 (51.6%)
Years teaching	1-5 38 (14.8%) 6-10 42 (16.4%) 11-15 44 (17.2%) More than 15 132 (51.6%)
Years teaching online	0-5 115 (44.9%) 6-10 60 (23.4%) 11-15 44 (17.2%) More than 15 37 (14.5%)
Required training by university	Yes 68 (26.6%) No 188 (73.4%)

was then sent to six expert reviewers (two instrument design experts and four online teaching experts) for feedback. The expert reviewers recommended several strategies and also provided feedback on revising some of the strategies that were initially listed. That instrument was then revised and expanded based upon feedback. 230

The final instrument consisted of 24 Likert scale items within the four categories of managerial, pedagogical, technical, and social. Online instructors were asked to rate the level of helpfulness of these strategies regarding time management. A five-point Likert scale was used to measure the level of helpfulness: 1 = *not at all helpful*, 2 = *moderately helpful*, 3 = *slightly helpful*, 4 = *very helpful*, and 5 = *extremely helpful*. If they had not used 235

a strategy, they were given an option to choose "Not used". Cronbach's alpha was calculated to check the internal consistency of the online instructor responses to the survey. Cronbach's alpha for all items was at .92. Additionally, two open-ended items were included to capture additional time management strategies not included in the instrument: (1) What are some most helpful time management strategies that you use that are not listed here? and (2) What are some least helpful time management strategies that you use that are not listed here? Open-ended responses were coded to identify categories. Three categories were then used to identify common themes. 240



## Data analysis

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The data was reviewed for missing responses. Descriptive statistics (means and standard deviations) are used to report the perception of the faculty on the helpfulness of time management strategies. The descriptive statistics are reported at the item level, at the subcategory level, and by demographic factors. Cronbach's alpha was used to check the internal consistencies of the responses to the survey items. Inferential statistics (MANOVA) were employed to examine the differences among faculty in their responses to the survey with respect to gender, rank, teaching experience, teaching online experience, primary level of teaching, primary delivery method, and required training. Effect sizes were calculated with a MANOVA (small = .01; moderate = .06; large = .14) to document the size of obtained differences (Cohen, 1988). The open-ended responses were coded inductively to identify themes of strategies. We used the constant comparative method (Glaser & Strauss, 1967) to analyze the data.

## Results

Table 2 provides the descriptive statistics of the item and categorical means and standard deviation. An initial screening item, "If the strategy was used", applied for each of the 24 items. If the respondent had not used the strategy and they checked this item, it was considered as missing data. Table 2 includes data on the percentage of strategies not used, percentage of strategies used, the frequency of strategies used, and the helpfulness mean with standard deviation.

### Helpful time management strategies

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For those who used the time management strategies, their perception of helpfulness was rated high, and all the items were rated either slightly helpful or very helpful. Among the categorical means, the pedagogical time management strategies were rated the highest ( $M = 4.00$ ,  $SD = 0.35$ ), and the social time management strategies were rated the lowest, though they averaged to be moderately helpful ( $M = 3.49$ ,  $SD = 0.21$ ). Managerial strategies was rated at  $M = 3.72$ ,  $SD = 0.27$ , and technical strategies at  $M = 3.55$ ,  $SD = 0.33$ . Among the 24 individual strategies, establishing clear and specific expectations ( $M = 4.32$ ) was rated the highest, followed by organizing content into modules or units ( $M = 4.28$ ), which were both pedagogical time management strategies. Using the LMS calendar functionality ( $M = 3.22$ ) was rated the lowest, with the second lowest being offering online synchronous sessions ( $M = 3.25$ ). All the strategies used by the instructors were rated above 3.00, which was the rating for slightly helpful. These strategies can be perceived to have assisted the instructor in managing time effectively in online teaching. In addition to the closed-ended items, the respondents were asked to identify some time management strategies that were helpful but not included on the list. Eleven categories of strategies were recommended to be effective in managing time with a frequency of 5 or more. Some of them were scheduling time for online course facilitation, grading and feedback strategies, front-end organization, and reusing the content and design (see Table 3 for the various strategies recommended as most helpful by the instructors in the open-ended question).

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**Table 2.** Time management strategies descriptive statistics

	Strategy not used (%)	Strategy used (%)	Strategy used (n)	Helpfulness Mean	Helpfulness SD
<b>Managerial strategies</b>					
Posting or sending periodic course announcements	2	98	251	4.13	.93
Providing collective feedback	7.8	92.2	236	3.57	1.06
Reusing feedback from previously used or saved feedback	36	64	164	3.52	1.24
Scheduling time to facilitate course	18	82	210	3.84	1.01
Scheduling time to learn and apply new strategies	40	60	154	3.52	1.01
<b>Pedagogical strategies</b>					
Scheduling time to design course	61	39	100	3.52	1.09
Using existing materials such as OER or publisher resources	22	78	200	3.89	1.05
Creating clear and consistent navigation	9	91	233	4.13	.91
Organizing content into modules or units	65	35	90	3.35	1.13
Creating a course orientation (video or text, quiz or scavenger hunt)	78	22	56	3.39	1.12
Establishing clear and specific expectations (to-do list, rubrics, etc.)	41	59	151	3.36	1.10
Establishing a grading system that the LMS grade center supports.	56	44	113	3.22	1.26
<b>Technical strategies</b>					
Using LMS-embedded tools to create multimedia content such as lecture videos, podcasts.	61	39	100	3.52	1.09
Using LMS features for assessment (quizzes, assignments, exam, etc.).	22	78	200	3.89	1.05
Using LMS grade book to allow student to track grades	9	91	233	4.13	.91
Using collaborative tools (wikis, blogs, Google drive, dropbox, etc.)	65	35	90	3.35	1.13
Using technology to provide feedback (audio or video)	78	22	56	3.39	1.12
Using LMS data/reports to track student engagement and participation	41	59	151	3.36	1.10
Using the LMS calendar functionality for automatic reminders and notifications	56	44	113	3.22	1.26
<b>Social strategies</b>					
Having students participate in small group discussions	42	58	148	3.44	1.19
Establish peer to peer interaction through group activities such as group projects or students moderated discussion	50	50	128	3.58	1.16
Require students to provide feedback through peer evaluation	68	32	82	3.43	1.20
Offering online synchronous sessions for assistance (office hours/help sessions)	26	74	190	3.25	1.35
Using multiple channels of communication	10	90	230	3.78	1.09

**Table 3.** Open-ended categories and frequencies of helpful time management strategies with sample quotes

Categories	Frequency	Sample quotes
Schedule time for online class facilitation	20	<ul style="list-style-type: none"> <li>● Blocking times throughout the day to focus on the class. Rather than 1 large block of time I will make 2 or 3 smaller blocks of time. By doing this, students perceive by presence better.</li> </ul>
Grading & feedback strategies	13	<ul style="list-style-type: none"> <li>● Designing assignments to be auto-graded when applicable and appropriate</li> <li>● Audio/video recording feedback has saved a lot of time over typing feedback, and my students say they engage with it more.</li> <li>● Reusing content (video lectures) from previous courses. Using publisher content for assignments to avoid re-inventing the wheel.</li> </ul>
Reusing the content and design	11	<ul style="list-style-type: none"> <li>● Online teaching is all about the front-end organization of a course and design of materials</li> </ul>
Front-end organization	11	<ul style="list-style-type: none"> <li>● Online teaching is all about the front-end organization of a course and design of materials</li> </ul>
Reminder & announcements	9	<ul style="list-style-type: none"> <li>● Reminder emails about completing course component and chapter tutorial assignments prior to taking the chapter quiz and unit tests. Weekly review/check-in conducted on Sundays.</li> <li>● Perhaps overly simplistic, but using a digital calendar that syncs across devices. I use Google Calendar personally. I also create shared to-do lists in Google Keep that I share with my students.</li> </ul>
Using calendars	9	<ul style="list-style-type: none"> <li>● Providing FAQ for students.</li> <li>● Use of discussion forums to answer questions, force students to participate in them (for credit).</li> </ul>
FAQ & discussion forums	7	<ul style="list-style-type: none"> <li>● Provide a course schedule with assignment due dates.</li> <li>● Setting guidelines for email communication from students</li> <li>● Make sure that students have the correct expectations. For some activities, I will give them individual feedback, but for others not.</li> </ul>
Creating a course schedule Specific guidelines & clear expectations regarding communication	7	<ul style="list-style-type: none"> <li>● Limiting navigation and access to all course elements via a single interface—the home page.</li> <li>● Limiting the number of LMSs and applications that my online students must use has been helpful. When I was first teaching online, I tried to use a variety of tools, but students did not want to learn each one. Since our publisher's LMS has great features, I have tried to put as much of the course on the publisher's LMS as possible so that the students only have to look in one place</li> </ul>
Simple course design	6	<ul style="list-style-type: none"> <li>● Embedding YouTube videos to supplement content</li> </ul>
Using OER	6	

### ***Time management strategies not used or least helpful***

Along with the Likert scale items, the instructors had an option to identify strategies that they did not use (see Table 2). Varying percentages (in the 2%–78% range) did not use some of the time management strategies on the instrument. Of the instructor respondents, 78% did not use technology to provide feedback (audio or video), and 77% did not use existing materials such as OER or publisher resources to manage their time. Though many did not use those two strategies, those who did use them considered them helpful, using technology to provide feedback ( $M = 3.39$ ) and using existing materials such as OER or publisher resources ( $M = 3.32$ ).

In addition, 68% of instructor respondents did not use the strategy of requiring students to provide feedback through peer evaluation and 65% did not use collaborative tools (e.g., wikis, blogs, Google Drive, Dropbox). Similarly, although not used these strategies were still rated as helpful, requiring students to provide feedback through peer evaluation ( $M = 3.43$ ) and using collaborative tools ( $M = 3.35$ ).

In the open-ended questions, the respondents were asked to identify some strategies that were least helpful but not included on the list. Seven categories of strategies were recommended with a frequency of 3 or more as least helpful. Some of the least helpful

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**Table 4.** Categories and frequencies of least helpful time management strategies with sample quotes

Categories	Frequency	Sample quotes
Reusing same feedback and grading by hand	8	<ul style="list-style-type: none"> <li>● Reusing previously provided feedback to each student to save time.</li> <li>● Very impersonal and ineffective</li> </ul>
Discussion boards	6	<ul style="list-style-type: none"> <li>● Grading by hand, then typing in grade book.</li> <li>● Discussion boards are a waste of time</li> </ul>
Videos	5	<ul style="list-style-type: none"> <li>● Creating video or podcasts.</li> </ul>
Striving to be always present	5	<ul style="list-style-type: none"> <li>● Attempting to be as available as possible, 24x7</li> </ul>
Synchronous sessions	4	<ul style="list-style-type: none"> <li>● Hosting synchronous lectures</li> </ul>
Overuse of technology	3	<ul style="list-style-type: none"> <li>● Strategies that involve too much technology have not been helpful.</li> </ul>
Group projects	3	<ul style="list-style-type: none"> <li>● I have specifically students thank me in final evaluations for not requiring group work as many are working full time and the time component of group work complicates their ability to progress.</li> </ul>
Procrastination	3	<ul style="list-style-type: none"> <li>● Procrastination is the silent killer</li> </ul>

305 time management strategies shared include reusing the same feedback and grading by hand, monitoring discussion boards, creating videos, and striving to be always present in the online course. **Table 4** provides the various strategies recommended as least helpful by the instructors in the open-ended question.

### **Demographics and time management strategies**

310 Differences in instructor perception of helpfulness of time management strategies with respect to gender, academic rank, level taught, years teaching, years teaching online, if training was required, and primary level taught were examined using MANOVA. Statistically significant results of MANOVA (Wilks' Lambda) were followed by ANOVA. Results from ANOVA showed significant differences if training was required to teach online and primary level taught. For the years teaching online, Tukey Post-hoc analysis was conducted to identify the differences between the groups for the primary teaching level.

315 Instructors who had responded that training was a requirement to teach online ( $M = 4.16$ ) had a significantly higher perception of the technical time management strategies compared to those who did not ( $M = 3.75$ ).  $F(1, 178) = 7.13, p = .01$ , partial  $\eta^2 = .05$  (medium effect).

### **Discussion**

320 The purpose of our study was to identify the time management strategies that online faculty were or were not using and to identify strategies that faculty perceived as most and least helpful. The intent was that by highlighting these two sets of strategies, a new online faculty member can access guidance on what is the most efficient use of their time in developing and facilitating an online course.

### **Helpful strategies**

325 With this focus on the intersection between content and pedagogical knowledge coupled with an understanding of technological tools, it is not surprising that our study found that the pedagogical strategies for time management were rated higher than managerial,

social, and technical strategies. Among the 24 time management strategies, seven were rated above 4.00. Among these seven, five were pedagogical, one was managerial, and one was technical. In the section below, we discuss the top five strategies recommended from closed-ended questions and top two strategies from open-ended comments that were rated as helpful. 330

### ***Setting expectations***

The pedagogical strategy rated as being most helpful was the creation of clear and consistent expectations (Borgemenke et al., 2013; Trammell & LaForge, 2017). Design elements can be provided to support learners to take control of their learning by setting clear expectations, and this reduces the number of questions by the learner. Providing to-do lists including the various tasks the learners are expected to complete as well as grading rubrics for activities and assignments makes the expectation clear to the learner and in turn results in fewer questions for the instructor. This strategy may take more time during the initial design of the course but will save time during facilitation and future iterations of the course. 335 340

### ***Organizing content***

Organizing content into modules or units (Borgemenke et al., 2013; Dykman & Davis, 2008a; Li & Irby, 2008; Trammell & LaForge, 2017) was rated a helpful time management strategy. Borgemenke et al. (2013) suggested utilizing course modules or units within an online course to structure the overall course navigation and provide consistency in design. Although this strategy may take additional planning time at the outset, it makes it easier for students to find the information that they need and can aid in increasing facilitation time spent by the instructor by reducing the number of questions from students (Dykman & Davis, 2008b; Renes & Strange, 2011). 345 350

### ***Clear and consistent navigation***

Intuitive navigation is critical to an online course. Learners may be easily confused and spend time searching or asking questions when the course navigation is unclear. Instructors may also need to spend extra time responding to questions about the location of content and activities. Pierce (2015) recommended keeping the navigation predictable, simple, consistent, and hierarchical among several techniques for navigation usability. 355

### ***Periodic announcements***

Posting or sending periodic course announcements (managerial strategies) were also rated as helpful by respondents. This not only helps with instructor presence but also helps clarify each week's tasks and answer questions before they arise. Orlando and Howard (2018) discussed the importance of sending periodic course announcements for the learners to be successful. Martin et al. (2018) listed sending announcements as one of 12 facilitation strategies in online courses. When periodic announcements are sent, it not only helps the learner be successful but also helps in saving time for the instructor by reducing further questions and clarifications. 360 365

### ***Online gradebook***

Additionally, using the LMS gradebook (technical strategies) was rated helpful for time management. Ko and Rossen (2017) recommended the use of online gradebook in online courses. Using the online gradebook assists the instructor in keeping all the grades in one place and tracking ungraded assignments and the due dates of upcoming assignments. It also provides an opportunity for students to review their grades periodically to track their performance without direct communication with the instructor. 370

An open-ended question sought the most helpful time management strategies of the instructors. Not surprisingly, pedagogical strategies such as scheduling time for online course development and utilizing grading and feedback strategies were mentioned most frequently. This aligns to research done by Trammell and LaForge (2017), who identified a practice within online education of using course shells to standardize the structure and delivery of courses within a program. 375

### ***Scheduling time for course facilitation***

This can present a challenge when it comes to online teaching because faculty may not be accustomed to designated specific times to facilitate the course and other activities can take priority on the calendar if time has not been blocked out specifically for course facilitation. 380

### ***Utilizing grading and feedback strategies***

Similar to using the online gradebook that was rated high in the closed ended question, grading requires time management. Using a variety of assessments—some with auto-grading—and reusing feedback are strategies that can be used to manage time in grading and providing feedback. 385

Although these strategies have been reported by several researchers, including Borgemenke et al. (2013) and Renes and Strange (2011), as being effective online instructional strategies, there is limited empirical support as to whether they are effective time management strategies. However, Cross and Polk (2018) suggested having faculty set a schedule, including response time expectations, and communicate it clearly to students. They also suggested automating as much as possible through technology, such as reusing content and using timed or automated announcements or email messages to save time. 390 395

### ***Strategies not used or perceived least helpful***

We also explored time management strategies that online faculty members were not using. The top three that were not used were using technology to provide feedback, using existing materials such as OER or publisher resources, and requiring students to provide feedback through peer evaluation. 400

### ***Using technology to provide feedback***

About 30% of the respondents were not leveraging technology to provide feedback in either video or audio form. Although technology is helpful in various aspects, instructors might perceive providing feedback in non-text format to be time-consuming and hence may not use this strategy in their online course. Among those who rated these, some still found it to be slightly helpful. Audio and video feedback can be time-savers and have the 405

added benefit of providing more personalized feedback since learners can hear and see the instructor (Leibold & Schwarz, 2015).

### *Using existing resources*

Instructors were using OER or publisher resources to manage their time. And while 30% of instructors who responded reported they were not using either of these strategies, the findings indicated those who used the strategies found them to be slightly helpful for time management in course design and development because they adapted the content instead of creating it from scratch. Not adopting OER or publisher content can be attributed to unfamiliarity with the tools available for online instruction and may be linked to the lack of adequate training or preparation and lack of experience in teaching in online environments (Power & Morven-Gould, 2011; Renes & Strange, 2011; Roy & Boboc, 2016; Schmidt et al., 2016; Windes & Lesht, 2014).

### *Peer evaluation*

Requiring students to provide feedback through peer evaluation was another strategy that about 26% of instructors rated as one that they were not using. There could be various reasons why this strategy may not be applicable to all online courses. Although peer evaluation is very helpful in graduate-level courses (Landry et al., 2015), undergraduate students may not be prepared to provide quality evaluations. Again, although these strategies were not used by many of the respondents, those who were using them rated them as helpful for time management.

Conversely, some of the less helpful time management strategies from the open-ended comments were reusing the same feedback and grading by hand.

### *Reusing same feedback*

Although reusing the same feedback from previous years may be considered to save time for instructors, this was rated as least helpful and considered it to be impersonal and ineffective. However, Lewis and Abdul-Hamid (2006) suggested creating a feedback bank of frequently used feedback, cutting and pasting appropriate comments, and then constructing personalization around the reused comments. This strategy could save time and be personal.

### *Grading by hand*

Understandably so, grading by hand would not be an efficient time management strategy. As our study highlighted, 76% of respondents indicated that they were using a grading system that was supported by the LMS grade center. As instructors leverage more of the LMS features to facilitate their course, they will also find it efficient to track grades and utilize the grade center functions.

With these latter time management strategies, instructors must find the right balance between effectively managing their time and also creating engagement opportunities for the students (Gray & DiLoreto, 2016). Also, though some of these strategies mentioned in the closed-ended survey were not used by some instructors, they were still considered slightly helpful by those who were using them. In addition, the strategies perceived as least helpful in the open-ended responses had low frequencies. These results have to be interpreted carefully.



### ***Demographic factors***

The final research question explored the relationship between faculty demographic factors and their perceptions of time management strategies. The findings suggest that there are significant differences based on instructor training required to teach online and based on primary level taught. Those who were required to complete training prior to teaching online reported having higher perceptions of technical time management strategies when compared to those who had not completed any training. This further substantiates the need to focus on online faculty development and that the transition from face-to-face to online instruction requires a specialized set of skills which requires training and additional resources (Baran et al., 2013; Herman, 2012).

### ***Implications***

Our study has several implications for online instructors. First, pedagogical components of online course instruction require time and attention. Although many of these components, such as consistent course navigation and a clear, well-outlined syllabus, require significant upfront time investments from instructors, the overall benefits will be a more seamless instructional experience. Students will understand expectations and what success looks like in their course, which may decrease time spent during facilitation of the course. Strategies such as peer evaluation and synchronous sessions may not be as effective time management strategies for online instructors. Student schedules and availability influence the effectiveness of these strategies. Often, students enroll in asynchronous courses for convenience due to personal or work demands. These demands may interfere with a student's ability to schedule time to work together for peer evaluation. There also is a learning curve for peer evaluation, which may present additional time constraints and demands both on the instructor and the students. Scheduling a synchronous meeting for an asynchronous course can also be difficult, particularly for students expecting that the course will enable them to complete their assignments on a flexible schedule. These are just a few of the reasons that these specific strategies may not be utilized as much for online instructors.

Our study also has implications for instructional designers who assist instructors in designing online courses. For many of these time management strategies, there is an initial upfront time investment. Instructional designers will need to explain to novice online faculty that this upfront time investment will yield more efficiency throughout their course facilitation. The first iteration of a course may appear to involve significantly more time invested in course development, but with each subsequent iteration online instructors will see more effective time utilization. Our study provides the empirical support that instructional designers can share with these novice instructors to encourage them to devote the time in leveraging these different strategies.

### ***Limitations and future research***

There were some limitations to this survey-based research study. First, the response rate to the survey was only 10%. Second, the findings on time management strategies are from self-reported data. There could be a response bias from the respondents. Thirdly, the survey does not include an exhaustive list of all the time management strategies. Fourth, the respondents included strategies that were on the instrument to open-ended items

though we requested strategies that were not on this list. Finally, online learning contexts vary globally. It is vital to interpret the results with caution as these time management strategies may not be generalizable to all contexts and settings. 490

Future research studies could use this survey in various contexts. Future validation studies of the instrument will also be beneficial to confirm if the instrument measures these strategies as designed. Future research should strive to include strategies that are not included in our study and interview faculty who teach online to identify what strategies support them in their context. 495

## Conclusion

Time management strategies for online faculty can be helpful in optimizing efficiency without jeopardizing effectiveness. The results from our study indicate the importance of several time management strategies that may assist online instructors in, for example, providing clear and consistent expectations and well-organized course content. These strategies are consistent with the recommendations of Shi et al. (2006), who recommended six time management strategies for online instructors, and although these strategies are dated, our results still align well with them: (1) write clearly and concisely, (2) organize information in an easy to follow order, (3) be explicit and empathetic about the time requirements in the syllabus, (4) manage asynchronous discussions, (5) take advantage of technical tools available, and (6) utilize other resources. More recently, Raffo et al. (2015) suggested finding a balance of time to devote to four facets of online teaching: course design and development, course delivery, assessment and feedback, and professional development. The recommendations from both Shi (2006) and Roffo et al. (2015) fall mostly under pedagogical and managerial time management strategies. Course design and development aligns with the pedagogical strategies perceived as helpful in the results of our study. Online faculty who invest the time to carefully and thoughtfully design and develop their course may save time during delivery. 500 505 510

## Notes on contributors

**Beth Oyarzun** is a Clinical Assistant Professor of Learning, Design and Technology at the University of North Carolina at Charlotte. She teaches fully asynchronous online learning, design and technology courses. Her research interests include effective online pedagogy, collaborative online learning, and social presence. Additional details can be found at <https://sites.google.com/uncc.edu/bethoyarzun/>. 515

**Florence Martin** is a Professor in Learning, Design and Technology at the University of North Carolina at Charlotte. She teaches 100% online and engages in research focusing on the effective design of instruction and integration of digital technology to improve learning and performance. More details about her can be found at <http://www.florencemartin.net/>. 520

**Robert L. Moore** is an Assistant Professor in Instructional Design and Technology at Old Dominion University. He teaches synchronous distance learning courses, focusing his research on participatory online learning environments, and using learning analytics to examine learner engagement in massive open online courses. Connect with him at <http://www.twitter.com/robmoore3>. 525

## ORCID

Beth Oyarzun  <http://orcid.org/0000-0001-7886-8190>  
 Florence Martin  <http://orcid.org/0000-0002-6055-5636>  
 Robert L. Moore  <http://orcid.org/0000-0002-5645-9297>

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## Appendix: Time management strategies instrument

### Time management strategies in online instruction

The purpose of this survey is to assess the use and helpfulness of time management strategies in online instruction. The survey organizes the time management strategies into the following categories: (1) managerial, (2) pedagogical, and (3) technical and (4) social. If you have used the strategy, please rate the level of helpfulness in regards to time management. If you have not used the strategy, please select “Not used”. 710



Rate the helpfulness of the following time management strategies used in the design and facilitation of online courses	Not used	Not at all helpful	Moderately helpful	Slightly helpful	Very helpful	Extremely helpful
<b>Managerial strategies</b>						
Posting or sending periodic course announcements						
Providing collective feedback						
Reusing feedback from previously used or saved feedback						
Scheduling time to facilitate course						
Scheduling time to learn and apply new strategies						
<b>Pedagogical strategies</b>						
Scheduling time to design course						
Using existing materials such as OER or publisher resources						
Creating clear and consistent navigation						
Organizing content into modules or units.						
Creating a course orientation						
Establishing clear and specific expectations (to-do list, rubrics, etc.)						
Establishing a grading system that the LMS grade center supports.						
<b>Technical strategies</b>						
Using LMS-embedded tools to create multimedia content such as lecture videos, podcasts etc.						
Using LMS features for assessment (quizzes, assignments, exam, etc).						
Using LMS grade book to allow student to track grades						
Using collaborative tools (wikis, blogs, Google drive, dropbox, etc.)						
Using technology to provide feedback (audio or video)						
Using LMS data/reports to track student engagement and participation						
Using the LMS calendar functionality for automatic reminders and notifications						
<b>Social strategies</b>						
Having student moderate discussions						
Having students participate in small group discussions						
Having students work in groups						
Having students peer evaluate						
Having online synchronous for assistance (office hours/help sessions)						
Having multiple channels of communication						



**Instructions:** Please type in your responses to the following questions.

12. What are some time management strategies that you use but not listed here and you have found it helpful? 715

13. What are some time management strategies that you use but not listed here and you have found it least helpful?

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