



What's Happening

November 2015

Professional experiences of online teachers in Wisconsin: Results from a survey about training and challenges

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Key findings

Wisconsin Virtual School, a state online learning program that offers supplemental online courses to partner districts in Wisconsin, administered a survey to its teachers to learn more about their training experiences and challenges. All respondents reported participating in training or professional development related to online instruction. The most frequently reported professional challenges concerned student engagement with and perseverance in online courses.



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Summary

Online teaching presents unique challenges that are unlike those of traditional face-to-face environments (Dawson & Dana, 2014; Kennedy & Archambault, 2012). But only four states and the District of Columbia require teachers to participate in training or professional development related to online instruction (Watson, Pape, Murin, Gemin, & Vashaw, 2014). Recognizing that research consistently demonstrates the importance of high-quality teaching to student outcomes (Chetty, Friedman, & Rockoff, 2014; Rockoff, 2004) and that little guidance is available about what kinds of training and professional development online teachers should receive, members of the Regional Educational Laboratory (REL) Midwest Virtual Education Research Alliance identified a need for better information about online teachers' experiences with training and professional development.

To address this need, Wisconsin Virtual School,¹ a state online learning program that offers supplemental online courses to partner school districts in Wisconsin, surveyed its teachers in fall 2014 to gather information about the preservice training and professional development in which they participated, the challenges they encounter while teaching online, and their perceived needs for additional training. The REL Midwest study team, in collaboration with the Virtual Education Research Alliance, developed the survey based on items from *Going Virtual!* (Dawley, Rice & Hinck, 2010; Rice & Dawley, 2007; Rice, Dawley, Gasell & Florez, 2008), among other survey instruments, and validated it through cognitive interviews and expert reviews. The survey responses were analyzed for this report.

Wisconsin Virtual School serves approximately 5,300 students, requires that teachers participate in training prior to teaching online, and offers ongoing, multifaceted professional development for all its online teachers, including a summer workshop and professional learning communities. Ninety-one percent of the 54 teachers responded to the survey. The following are the key findings:

- All Wisconsin Virtual School teachers reported participating in training or professional development related to online instruction either before or while teaching online, and 83 percent reported participating in training or professional development within the past year.
- More teachers reported participating in training or professional development while teaching online than reported participating in training or professional development before teaching online or during preservice education.
- The most frequently reported types of training were a multiday workshop or conference (90 percent) and ongoing training sessions (77 percent).
- More than half the teachers (52 percent) reported participating in training or professional development that covered at least six of the nine practice areas in the survey, including technical skills, such as using technological tools and customizing an online course, and online pedagogical skills, such as facilitating an online course and using assessments and student data.
- The most frequently reported challenges concerned student perseverance and engagement, and the least frequently reported challenges concerned working conditions, such as feeling isolated from colleagues, and professional practices, such as setting course expectations.
- Teachers reported that they preferred unstructured professional development to structured professional development for addressing challenges related to student perseverance and engagement.

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Why this study?

The use of supplemental online courses by elementary and secondary schools has grown rapidly in many parts of the United States for more than a decade (Watson et al., 2014). This growth has been accompanied by legislative changes in 28 states during the past two years designed to increase opportunities for students to enroll in online courses or clarify current legislation regarding online learning. Online courses are offered by a broad range of online learning programs that are coordinated by school, district, and state education institutions, as well as by nonprofit and for-profit vendors (Molnar, 2014; see box 1 for definitions of key terms).

Despite the spread of online learning, there is little guidance at the state level on training for online teachers. As of 2014, only four states and the District of Columbia require teachers to participate in training or professional development related to online instruction (Watson et al., 2014).² Further, the responsibilities of online teachers, and even whether an online teacher is available to students, vary across online learning programs (Clements, Stafford, Pazzaglia, & Jacobs, 2015).

Online teaching presents unique challenges that are unlike those of traditional face-to-face environments (Dawson & Dana, 2014; Kennedy & Archambault, 2012). Knowledge and skills unique to online teachers include developing or customizing online courses and facilitating student engagement and learning in an online environment. Effective use of multiple technologies is also a key skill for online teachers (Dawson & Dana, 2014; Kennedy & Archambault, 2012). Professional organizations recommend that online teachers use a range of Internet-based tools to communicate with students, foster collaboration, and support learning, including interactive whiteboards and applications for recording and posting demonstrations (International Association for K–12 Online Learning, 2011; National Education Association, n.d.; Southern Regional Education Board, 2009).

Recognizing that research consistently demonstrates the importance of high-quality teaching to student outcomes (Chetty et al., 2014; Rockoff, 2004) and that little guidance is available about what kinds of training and professional development online teachers should receive, members of the Regional Educational Laboratory (REL) Midwest Virtual Education Research Alliance identified a need for better information about online teachers' experiences with training and professional development.

To address this need, Wisconsin Virtual School surveyed its teachers to gather information about the preservice training and professional development in which they participated, the challenges they encounter while teaching online, and their perceived needs for additional training. The REL Midwest study team, in collaboration with the Virtual Education Research Alliance, developed the survey. The survey responses were analyzed for this report. (See appendix A for a copy of the survey and box 2 and appendix B for a description of survey development and research methods.)

Wisconsin Virtual School is a state online learning program with 54 teachers serving approximately 5,300 students in more than half of Wisconsin's 424 public school districts (Watson et al., 2014; Wisconsin Department of Public Instruction, 2014). Over the course of planning and collaborating on this study, the study team learned that Wisconsin Virtual School's leadership expects its online teachers to be actively involved in planning

This report analyzes survey responses from Wisconsin Virtual School teachers in fall 2014 about the preservice training and professional development in which they participated, the challenges they encounter while teaching online, and their perceived needs for additional training

Box 1. Key terms

Online learning program. An organized offering of courses delivered primarily over the Internet (International Association of K–12 Online Learning, 2011).

Online teacher. The person who is responsible for instruction in an online course (International Association of K–12 Online Learning, 2011).

Practice areas. Knowledge and skills related to online instruction, including technology, professional practice, facilitation, online course customization, digital etiquette, assessment and data use, online course development, classroom management or leadership, and support for students with special needs.

Professional development and training. Defined in this study as activities aimed at increasing teachers' capabilities in K–12 online instruction. Professional development can be structured or unstructured (see definitions below).

Professional learning community. A group of teachers who meet several times a year to share knowledge and expertise with the goal of improving teaching practice and student performance.

State online learning program. An online learning program created by legislation or by a state agency, administered by a state education agency, or funded by a state appropriation or grant for the purpose of providing online learning opportunities across the state (International Association of K–12 Online Learning, 2011).

Structured professional development. Professional learning aimed at increasing teachers' capabilities in K–12 online instruction that occurs in a structured format, such as attending a workshop or graduate course.

Unstructured professional development. Professional learning that occurs outside a structured format, such as mentoring, online forums, and Internet searches.

Wisconsin Virtual School. A state online learning program that offers supplemental online courses to students enrolled in traditional brick-and-mortar schools. It was created through a partnership between the Wisconsin Department of Public Instruction and Cooperative Educational Service Agency 9. It has been in operation since 2000 and serves as Wisconsin's Web Academy, as called for by 2007 Wisconsin Act 222 (Watson et al., 2014). It partners with school districts throughout the state to offer online courses to middle and high school students.

instruction, assessing learning, and communicating with students. To foster teachers' abilities in these areas, it requires teachers to participate in training prior to teaching online and conducts ongoing multifaceted professional development for all its online teachers, including a summer workshop and professional learning communities.

This study addressed the following research questions:

- What percentage of online teachers at Wisconsin Virtual School participate in training or professional development related to K–12 online instruction? What was the timing, total duration, format, and content of this training?
- What challenges did Wisconsin Virtual School online teachers face when teaching in online environments?
- What type of training or professional development, if any, did Wisconsin Virtual School online teachers indicate would help them overcome their challenges? When did they think it should be delivered?

Box 2. Data, methods, and sample

Virtual Education Research Alliance members identified the need for a survey to collect information about online teachers' preservice training and professional development, professional challenges, and support needs. Study team members drew items from *Going Virtual!* (Dawley et al., 2010; Rice & Dawley, 2007; Rice et al., 2008) and other surveys to develop a survey that addressed these issues (Akiba, 2012; Clements et al., 2015; Russell, O'Brien, Bebell, & O'Dwyer, 2003; Strizek, Tourkin, & Erberber, 2014). The survey was validated through a multistep process that included cognitive interviews with online teachers, reviews by a teacher advisory board and Virtual Education Research Alliance members, and reviews by researchers with survey expertise.

The survey consists of 19 closed-ended questions (see appendix A). The first six questions capture background information about the online teachers—for example, years of experience and grade level taught—and the remaining questions capture information about their training and online teaching experiences, as well as their recommendations on training and professional development.

In fall 2014 Wisconsin Virtual School leadership distributed the survey to its 54 online teachers; 49 teachers (91 percent) responded to the survey. Respondents were instructed to consider all training or professional development related to K–12 online instruction while teaching in face-to-face or online environments and during preservice education. The study team analyzed the responses of the 48 teachers who indicated that they taught an online course during the 2013/14 or 2014/15 school year (see appendix B for a detailed description of the data and methodology).

Of the the 48 respondents who taught an online course during the 2013/14 or 2014/15 school year, 96 percent taught in a traditional face-to-face classroom before teaching online and 56 percent were simultaneously teaching in a traditional face-to-face classroom and an online course (see table C1 in appendix C). Teachers reported an average of seven years of online teaching experience (see table C2 in appendix C). Ninety-eight percent of teachers reported teaching online high school courses, 48 percent reported teaching middle school courses, and 6 percent reported teaching elementary school courses (see table C3 in appendix C).

The primary audience for this report is policymakers and educators in Wisconsin. This report provides information about the range of professional learning experiences for one group of online teachers along with their reports of the challenges they face teaching online. Although specific to one online learning program that provides ongoing professional training for its teachers, the findings reported here include information about how online teacher training can vary in timing, duration, format, and content. In the current climate, where few states have specific requirements about training for online teachers, these findings may also interest policymakers, district and school administrators, and parents in other states, districts, and schools. Administrators of other online learning programs can reflect on the findings as they review the training they currently offer their online teachers and consider what challenges their teachers may face that could be addressed through training and professional development. Traditional brick-and-mortar schools that enroll students in online courses can use the information in this report to think about the training they expect their teachers to have before teaching online.

Other online learning programs may also want to use the survey instrument developed for this study (see appendix A). Wisconsin Virtual School administrators are using the

data they collected to inform decisions about modifying the content and format of their training for online teachers. Because the training offered to online teachers around the country is likely to vary greatly, other online learning programs might benefit from using the survey with their own teachers to learn about the training they have participated in and the challenges they face in their professional practice.

What the study found

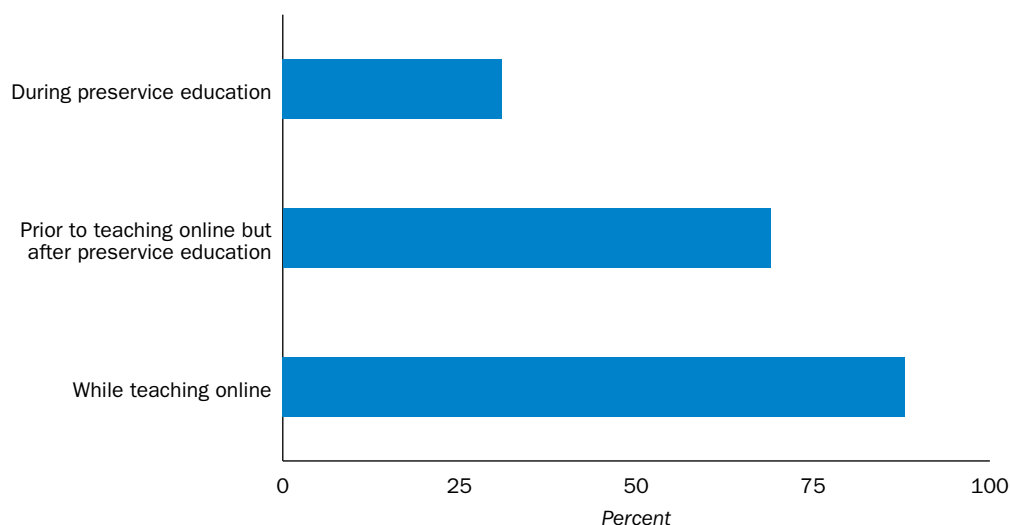
All Wisconsin Virtual School teachers who responded to the survey reported participating in training or professional development related to online instruction. Eighty-three percent reported participating in training or professional development within the past year. The most frequently reported professional challenges were related to student engagement with and perseverance in online courses. Respondents reported that additional professional development could help them address these challenges. These findings are discussed in more detail in the following sections.

More than 85 percent of Wisconsin Virtual School teachers reported participating in training while teaching online, and their training covered a range of practice areas in online instruction

More teachers reported participating in training or professional development while teaching online than reported participating in training or professional development before teaching online or during preservice education. When asked if they had participated in training related to online instruction, 88 percent of teachers reported participating in professional development while teaching online, 69 percent reported participating in professional development before teaching online but after preservice education, and 31 percent reported that online instruction was covered during their preservice education (figure 1).

Eighty-eight percent of teachers reported participating in professional development while teaching online, 69 percent reported participating in professional development before teaching online but after preservice education, and 31 percent reported that online instruction was covered during their preservice education

Figure 1. Most Wisconsin Virtual School teachers who taught an online course in 2013/14 or 2014/15 reported participating in professional development while teaching online



Note: Respondents include 48 of the 54 online teachers who taught at Wisconsin Virtual School during the 2013/14 or 2014/15 school year (see table C7 in appendix C for details).

Source: Authors' analysis based on the 2014 Wisconsin Virtual School survey data.

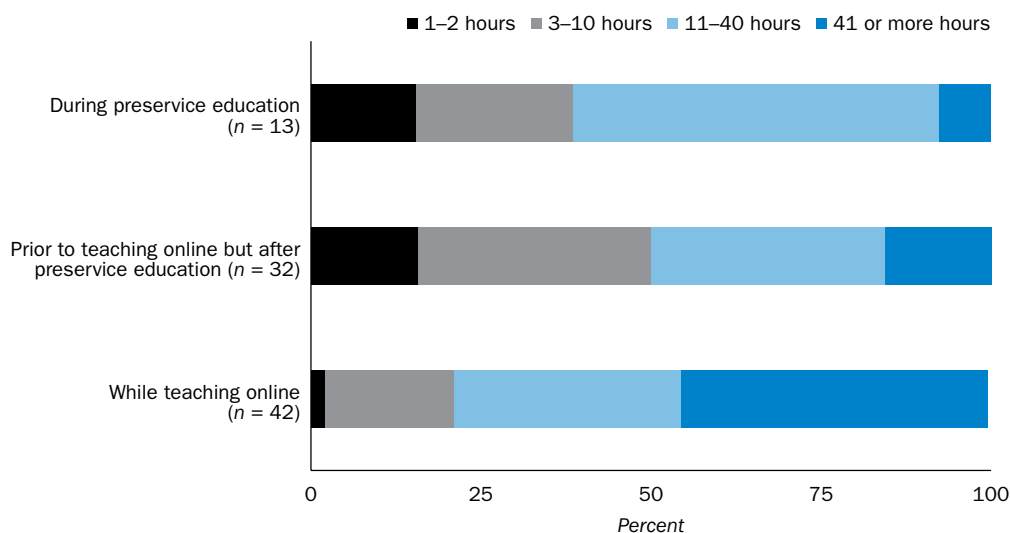
Seventeen percent of teachers reported participating in training during all three periods, and 44 percent reported participating both before and while teaching online (see table C7 in appendix C).

Teachers reported spending the most time participating in training or professional development while teaching online. Forty-five percent of teachers reported participating in 41 or more hours of professional development while teaching online (figure 2). In contrast, 8 percent of teachers reported participating in 41 or more hours of training related to online instruction during their preservice education. Among teachers who participated in training or professional development before teaching online but after preservice education, half spent 10 or fewer hours engaged in these activities.

Teachers reported participating in a variety of professional development or training activities before or during the 2014/15 school year. The most common professional development experiences include attending a multiday workshop or conference (90 percent; table 1) and participating in ongoing training sessions (77 percent). The least frequently reported types of professional development included observing a colleague (17 percent), independently reviewing online discussion forums, websites, or blogs (27 percent), and receiving support from an administrator (27 percent). Teachers reported participating in training and professional development activities encompassing a variety of online and face-to-face formats. Blended professional development, which combines online and face-to-face components, was the most frequently reported (77 percent) followed by fully online activities that were facilitated by a leader or instructor (63 percent; see table C11 in appendix C).

Teachers reported spending the most time participating in training or professional development while teaching online

Figure 2. Forty-five percent of Wisconsin Virtual School teachers who taught an online course in 2013/14 or 2014/15 and who participated in professional development while teaching online reported 41 or more hours of professional development



Note: Respondents include 48 of the 54 online teachers who taught at Wisconsin Virtual School during the 2013/14 or 2014/15 school year (see table C9 in appendix C).

Source: Authors' analysis based on the 2014 Wisconsin Virtual School survey data.

Table 1. Wisconsin Virtual School teachers who taught an online course in 2013/14 or 2014/15 reported participating in a variety of professional development or training experiences

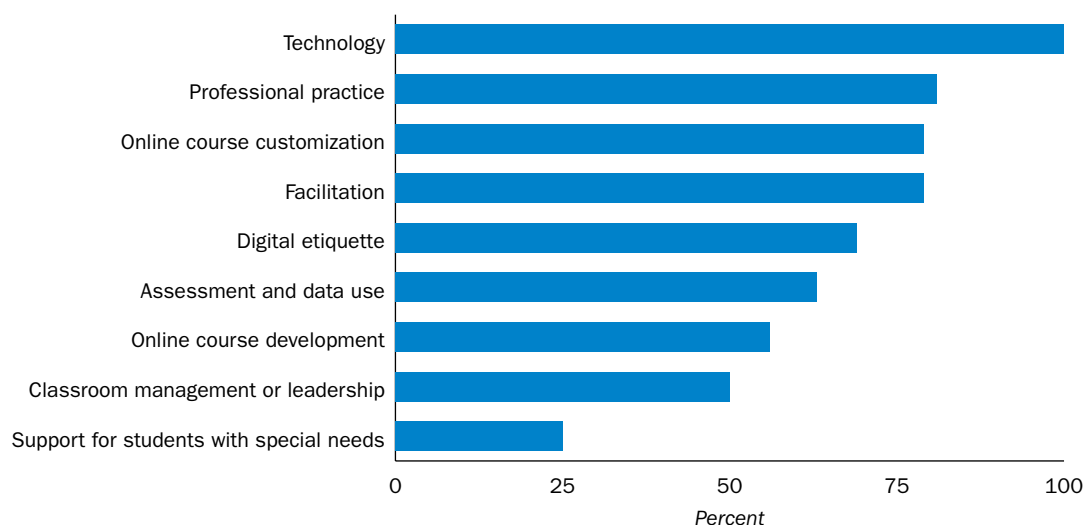
Type of training or professional development	Number	Percent
Multiday workshop or conference	43	90
Ongoing training sessions	37	77
Limited or one-time session	24	50
Postsecondary course or certificate	20	42
Professional learning community	20	42
Peer coaching or mentoring	20	42
Advice from a colleague	18	38
Independent review of online discussion forums, websites, or blogs	13	27
Administrator support	13	27
Observation of a colleague	8	17

Note: Respondents include 48 of the 54 online teachers who taught at Wisconsin Virtual School during the 2013/14 or 2014/15 school year.

Source: Authors' analysis based on the 2014 Wisconsin Virtual School survey data.

At least 50 percent of teachers reported participating in training or professional development in eight of the nine practice areas in the survey: technology (100 percent), professional practice (81 percent), facilitation (79 percent), online course customization (79 percent), digital etiquette (69 percent), assessment and data use (63 percent), online course development (56 percent), and classroom management or leadership (50 percent; figure 3). In contrast, 25 percent reported participating in training focused on supporting students with

Figure 3. More than half the Wisconsin Virtual School teachers who taught an online course in 2013/14 or 2014/15 reported participating in training or professional development in practice areas ranging from technology to classroom management or leadership



Note: Respondents include 48 of the 54 online teachers who taught at Wisconsin Virtual School during the 2013/14 or 2014/15 school year (see table C13 in appendix C for details).

Source: Authors' analysis based on the 2014 Wisconsin Virtual School survey data.

special needs. Fifty-two percent of teachers reported participating in training or professional development that covered at least six of the nine practice areas.

Wisconsin Virtual School teachers' most frequently reported challenges were related to student perseverance and engagement; their least frequently reported challenges were related to working conditions and professional practices

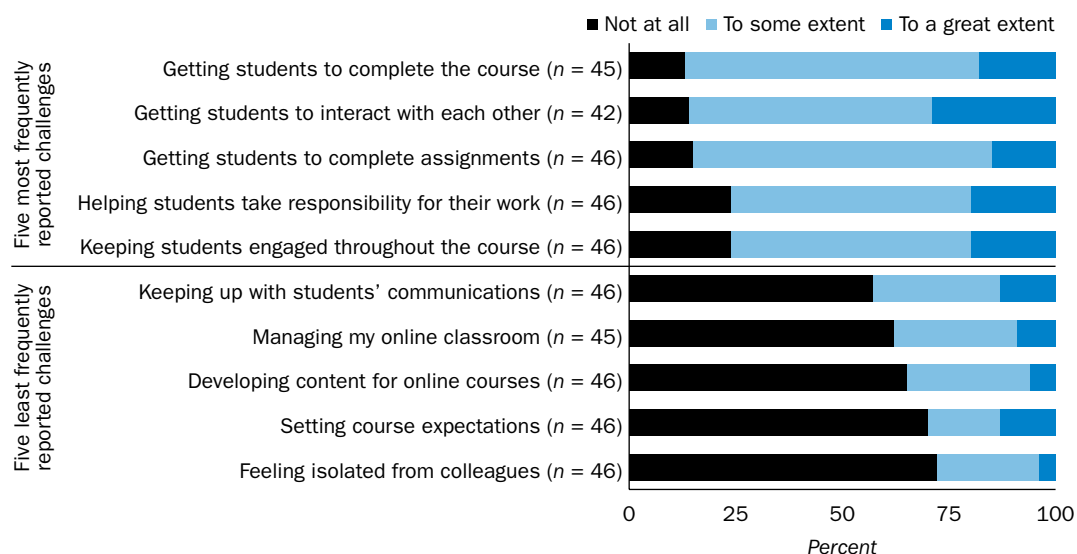
The challenges teachers reported most frequently included getting students to complete the course (87 percent indicated at least some challenge), to interact with each other (86 percent), and to complete assignments (85 percent; figure 4). Two other challenges reported by more than three-quarters of teachers included helping students take responsibility for their work (76 percent) and keeping students engaged throughout the course (76 percent). Teachers reported fewer challenges related to working conditions, such as feeling isolated from colleagues (28 percent), and professional practices, such as setting course expectations (30 percent), developing content for online courses (35 percent), managing their online classroom (38 percent), and keeping up with students' communications (43 percent; see tables C15 and C16 in appendix C for the frequencies of all potential challenges included in the survey).

The challenges teachers reported most frequently included getting students to complete the course, to interact with each other, and to complete assignments

Wisconsin Virtual School teachers indicated that they preferred unstructured over structured professional development for addressing challenges related to student perseverance and engagement

More teachers preferred unstructured professional development, such as mentoring and participating in online forums, than preferred structured professional development, such as

Figure 4. The five most and five least frequently reported challenges among Wisconsin Virtual School teachers who taught an online course in 2013/14 or 2014/15



Note: Respondents include 42–46 of the 54 online teachers who taught at Wisconsin Virtual School during the 2013/14 or 2014/15 school year (see tables C15 and C16 in appendix C for the frequencies of all potential challenges included in the survey). Excludes teachers who selected not applicable.

Source: Authors' analysis based on the 2014 Wisconsin Virtual School survey data.

attending graduate courses and workshops, aimed at increasing their capabilities in K–12 online instruction for addressing the top five challenges (figure 5). For example, 51 percent of teachers reported that they believed unstructured professional development would help them develop strategies to support students’ completing an online course, compared with 28 percent who thought structured professional development would help address that challenge. For each of the top five challenges, however, between 9 percent and 21 percent of teachers indicated that additional professional development was not necessary.

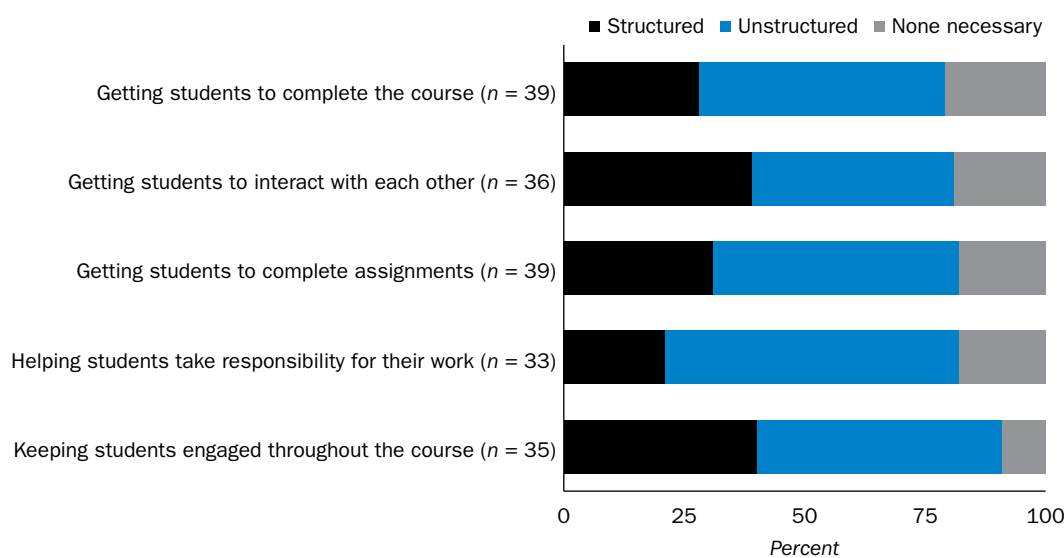
Teachers did not report a consistent preference on the timing of training (during preservice education, before teaching online but after preservice education, or while teaching online) across the practice areas. For example, more than half the teachers indicated that all practice areas except for online course customization and online course development should be covered before teaching online but after preservice education. Similarly, more than half indicated that all topic areas except facilitation and digital etiquette should be covered while teaching online. Technology was the practice area in which the greatest proportion of teachers (67 percent) reported that professional development or training should be covered during preservice education. At most a third of teachers recommended that teachers participate in training or professional development on any practice area during all three time periods (see table C18 in appendix C).

Fifty-one percent of teachers reported that they believed unstructured professional development would help them develop strategies to support students’ completing an online course, compared with 28 percent who thought structured professional development would help address that challenge

Implications of the study findings

Little is known about the kinds of training online teachers participate in before and during teaching online. A 2010 national survey is one of the few sources of information about the

Figure 5. Wisconsin Virtual School teachers who taught an online course in 2013/14 or 2014/15 indicated that they prefer unstructured professional development to help address their greatest challenges



Note: Respondents include online teachers who taught at Wisconsin Virtual School during the 2013/14 or 2014/15 school year and indicated that these were challenges that they faced “to some extent” or “to a great extent.” The question was not asked of the respondents who indicated that these were not challenges. The number of respondents ranged from 33 to 39 (see table C17 in appendix C for details).

Source: Authors’ analysis based on the 2014 Wisconsin Virtual School survey data.

training of online teachers (Dawley et al., 2010).³ The current report provides additional information for one online learning program about the range of training that the online teachers participated in, as well as insight into the kinds of challenges they face.

The findings from this study are broadly consistent with previous research, but there are important differences. Wisconsin Virtual School requires teachers to participate in training before teaching online and offers multiple forms of ongoing professional development. Therefore, all Wisconsin Virtual School teachers reported participating in training or professional development, compared with 85 percent reported in Dawley et al. (2010). Further, 83 percent of Wisconsin Virtual School teachers participated in training or professional development in the last year. Because Dawley et al. (2010) is a national survey, the training requirements of the participating online programs likely vary. Furthermore, a higher percentage of Wisconsin Virtual School teachers than of teachers in the national study reported participating in training using each method of delivery: for example, 77 percent compared with 53 percent for blended professional development, and 63 percent compared with 53 percent for fully online facilitated. The differences in the findings may reflect the emphasis that Wisconsin Virtual School places on providing multiple and ongoing professional training opportunities for its teachers.

The findings from this study are broadly consistent with previous research, but there are important differences with respect to participating in training and professional development

The finding that Wisconsin Virtual School teachers' most frequently reported challenges were related to student perseverance and engagement led Wisconsin Virtual School leadership to consider ways to help online teachers better engage students in online courses. Strategies for engaging students in online courses may also need more attention in preservice training and should be considered when designing and evaluating online learning programs.

Although the findings from this study are intended to inform the efforts of Wisconsin Virtual School to modify and expand its professional development, other state online learning programs, state departments of education, and employers of online teachers may also wish to examine the training and professional development provided to online teachers in their jurisdictions. These other entities may want to administer the survey to their teachers and consider the following:

- When are teachers receiving training to teach online, if at all?
- How should preservice programs integrate online teacher training into preservice education?
- What structures and policies may be necessary for online teacher professional development?
- What training or professional development is available to online teachers related to student perseverance and engagement?
- Do the existing training and professional development opportunities meet their teachers' needs?
- Are different types of training opportunities available to meet the varied needs of online teachers? That is, are teachers offered both unstructured and structured professional development?

Limitations of the study

This study provides information about Wisconsin Virtual School teachers' training and online teaching experiences that is based on the responses of the 91 percent of its teachers

who completed the survey. Although other online learning programs, departments of education, and schools that enroll students in online courses may use this information to guide and reflect on their own practices, the results are not generalizable to any other teachers or programs. Wisconsin Virtual School has a variety of professional development opportunities for teachers that may be different from those of other state programs. The findings from this study should not be used to make inferences about the professional development and online teaching experiences of educators at other online learning programs. Those online learning programs would need to administer the survey to their teachers to determine the experiences of their teachers and whether they match or differ from those of Wisconsin Virtual School teachers.

Appendix A. Survey on online teacher training and challenges

The following survey was administered by Wisconsin Virtual School to its teachers in fall 2014.

Q1. Did you teach an online course during the 2013/14 school year, or are you teaching an online course in the 2014/15 school year?

- Yes
- No

If yes, then continue to Q2.

If no, then close survey.

Q2. Please respond to the each of the following questions.

	Yes	No
Did you teach in a traditional face-to-face classroom prior to teaching online?	<input type="checkbox"/>	<input type="checkbox"/>
Are you currently teaching in a traditional face-to-face classroom?	<input type="checkbox"/>	<input type="checkbox"/>

Q3. How many years have you taught online?

Please enter only numbers.

Q4. What grade levels have you taught online?

Please select all that apply.

- Elementary school courses (K–5)
- Middle school courses (6–8)
- High school courses (9–12)

Q5. What subject areas have you taught online?

Please select all that apply.

- Math
- Science
- English/Language Arts
- History/Social Studies
- Other, please specify _____
- Vocational/Technical
- World Languages
- Health/Physical Education
- Fine Arts

Q6. What type of courses have you taught online?

Please select all that apply.

- Required core courses (not for credit recovery)
- Advanced Placement (AP) courses
- Credit recovery courses
- Dual credit/college courses
- Elective courses (not core, not AP, and not dual credit/college courses)
- Other types of courses, please specify _____

The remaining questions ask you about professional development and training related to online instruction. Professional development and training includes both *structured* (e.g., graduate course, workshop) and *unstructured* (e.g., mentoring, online forums, internet search) professional learning activities aimed at increasing your capabilities in K–12 online instruction. Please consider all professional development related to K–12 online instruction that you received while teaching (face-to-face or online) and during preservice education.

Q7. Have you ever participated in any structured or unstructured professional development or training specifically focused on online instruction?

- Yes
- No

If yes, then continue to Q8.

If no, then skip to Q16.

Q8. When did you receive professional development or training in online instruction?

Please select all that apply.

- During preservice education
- Prior to teaching online, but after preservice education
- While teaching online

Q9. When did your most recent professional development or training in online instruction occur?

- Less than 1 year ago
- 1–2 years ago
- 3–4 years ago
- 5–7 years ago
- 8–10 years ago
- 11+ years ago

Q10. How many total hours of professional development and training have you participated in that focused on online instruction? Please consider both structured and unstructured professional development.

	Total number of hours						N/A
	1-2 hours	3-5 hours	6-10 hours	11-20 hours	21-40 hours	41+ hours	
During preservice education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prior to teaching online, but after preservice education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
While teaching online	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q11. What was the format of the professional development and/or training that you participated in that focused on online instruction?

Please select all that apply.

- Limited/one-time session
- Multi-day workshop/conference
- Ongoing training sessions
- Post-secondary course/certificate
- Professional learning community
- Peer coaching/mentoring
- Observation of a colleague
- Independent review of online discussion forums, websites, or blogs
- Participation in an online course (not about online instruction)[†]
- Administrator support
- Advice from a colleague
- Other, please be specific _____

Q12. Was the professional development and/or training that you participated in online, face-to-face, or blended?

Please select all that apply.

- Fully online, facilitated
- Fully online, non-facilitated (i.e., self-paced)
- Fully face-to-face
- Blended (i.e., combination of face-to-face and online)

Q13. Which of the following entities provided the professional development and/or training that you participated in focused on online instruction?

Please select all that apply.

- Wisconsin Virtual School (WVS)
- Wisconsin eSchool Network
- Wisconsin Collaborative Online Network (WCON)
- Wisconsin Digital Learning Collaborative (WDLC)
- Cooperative Educational Service Agency (CESA)
- Commercial Vendor (obtained independently)
- State virtual school in another state
- Postsecondary institution (e.g., community college, preservice teacher education, 4-year college/university)
- Your school or district
- Another district
- Other, please specify _____

Q14. Have you participated in professional development and/or training in any of the following areas related to online instruction?

	Yes	No
Technology	<input type="checkbox"/>	<input type="checkbox"/>
Facilitation	<input type="checkbox"/>	<input type="checkbox"/>
Online course development	<input type="checkbox"/>	<input type="checkbox"/>
Online course customization	<input type="checkbox"/>	<input type="checkbox"/>
Assessment and data use	<input type="checkbox"/>	<input type="checkbox"/>
Special needs	<input type="checkbox"/>	<input type="checkbox"/>
Classroom management/leadership	<input type="checkbox"/>	<input type="checkbox"/>
Digital etiquette	<input type="checkbox"/>	<input type="checkbox"/>
Professional practice	<input type="checkbox"/>	<input type="checkbox"/>

Q15. Please indicate whether you agree or disagree with each of the following statements.

	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree
The professional development and/or training in which I have participated prepared me to teach online.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am satisfied with the professional development and/or training in which I have participated.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would benefit from additional professional development or training in online instruction.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q16. To what extent do you encounter the following challenges related to your online instruction?

	To a great extent	To some extent	Not at all	Not applicable
Technology				
Navigating the technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using multiple forms of media in my courses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using collaboration tools	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Helping students with technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Keeping up with changing technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Facilitation				
Interacting with students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Keeping up with students' communications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Getting students to interact with each other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Engaging students' parents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online course development				
Developing content for online courses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online course customization				
Customizing content for online courses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supplementing content for online courses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assessment and data use				
Assessing students in an online setting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using data to modify my instructional methods	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q17. To what extent do you encounter the following challenges related to your online instruction?

	To a great extent	To some extent	Not at all	Not applicable
Classroom management/leadership				
Managing my online classroom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Setting course expectations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Helping students take responsibility for their work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Keeping students engaged throughout the course	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Getting students to complete the course	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Getting students to complete assignments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Special needs				
Supporting students with special needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Digital etiquette				
Ensuring students use technology responsibly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Professional practice				
Feeling isolated from colleagues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Managing my time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Balancing my workload	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other				
Other challenges, please specify.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If “To a great extent” or “To some extent” is selected for at least one challenge in Q16 or Q17, then continue to Q18.

If “Not at all” or “Not applicable” is selected for all challenges, then skip to Q19.

If no responses are provided for Q16 and Q17, then skip to Q19.

Q18. What type of professional development or training do you think would best help you address the challenges that you face in online instruction?

Please select all that apply.

Only challenges where “To a great extent” or “To some extent” was selected in Q16 and Q17 will be displayed.

	Structured professional development (e.g., graduate course, workshop)	Unstructured professional development (e.g., mentoring, online forum, Internet search)	No professional development necessary
Technology			
Navigating the technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using multiple forms of media in my courses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using collaboration tools	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Helping students with technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Keeping up with changing technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Facilitation			
Interacting with students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Keeping up with students' communications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Getting students to interact with each other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Engaging students' parents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online course development			
Developing content for online courses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online course customization			
Customizing content for online courses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supplementing content for online courses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assessment and data use			
Assessing students in an online setting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using data to modify my instructional methods	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Classroom management/leadership			
Managing my online classroom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Setting course expectations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Helping students take responsibility for their work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Keeping students engaged throughout the course	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Getting students to complete the course	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Getting students to complete assignments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Special needs			
Supporting students with special needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Digital etiquette			
Ensuring students use technology responsibly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Professional practice			
Feeling isolated from colleagues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Managing my time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Balancing my workload	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other			
Other, [text from Q17]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q19. For each of the following online instructional practice areas, when do you think online teachers should receive professional development or training?

	Recommended timing of professional development or training <i>Please select all that apply</i>		
	During preservice education	Prior to teaching online, but after preservice education	While teaching online
Technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Facilitation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online course development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online course customization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assessment and data use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Special needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Classroom management/leadership	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Digital etiquette	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Professional practice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix B. Data and methodology

This appendix describes the survey development process, data collection methods, and data analysis for the study.

Survey development process

Members of the Regional Educational Laboratory (REL) Midwest Virtual Education Research Alliance identified the need for better information about online teachers' experiences with training and professional development, including the type of professional development specific to online teaching in which they participated; the utility of the professional development in which they participated; the challenges they currently face when teaching in online environments; whether professional development could help them overcome their challenges; and if so, the format and timing of the professional development they think would be beneficial. To address this need, REL Midwest and the Virtual Education Research Alliance collaborated to develop and validate a survey that online learning programs and states can use to gather information about online teachers' preservice training and professional development and where they think that more support is needed.

The survey was developed through a four-step process:

1. Systematically searching for surveys.
2. Aligning items to the research questions and modifying or developing items.
3. Receiving feedback from stakeholders on the draft survey.
4. Conducting cognitive interviews and finalizing the survey.

Step 1: systematically searching for surveys. The study team reviewed surveys to collect items that could be modified to address each of the research questions. The study team first examined items from a survey of online teachers, *Going Virtual!*, that was administered in 2007, 2008, and 2010 (Dawley et al., 2010; Rice & Dawley, 2007; Rice et al., 2008). Next, the study team searched the Education Resources Information Center (ERIC) and Google Scholar for additional surveys published from January 2005 through May 2014 related to online teachers' professional development experiences, using ERIC thesaurus descriptors for online learning, such as online courses and online learning, combined with descriptors for training, such as preservice teacher education and professional development. In addition to identifying surveys related to professional training for online teachers, the study team reviewed surveys for face-to-face teachers described in the *Compendium of Student, Teacher, and Classroom Measures Used in NCEE Evaluations of Educational Interventions* (Malone et al., 2010) used in previous studies of teacher professional development (Bennison & Goos, 2010; Holmes, Singer, & MacLeod, 2010; Kirby, McCombs, Naftel, & Murray, 2003; U.S. Department of Education, 2012; University of Chicago Consortium on School Research, 2012).

Step 2: aligning items to the research questions and modifying or developing items. The study team reviewed the surveys to determine whether they included items aligned to the research questions and then mapped relevant items to the research questions. In addition, the questions used to gather information about teachers' backgrounds, such as subjects and grades taught, as well as the response options for the entities that provided professional development, were adapted from a previous REL Midwest survey that gathered information about how and why schools use online courses (Clements et al., 2015). After

reviewing the items, the study team adapted items from the surveys to better address this study's research questions or to make them relevant to teaching online or to teaching in Wisconsin. The study team developed three new items that were not included in existing surveys: one that clarified that the respondent was in the population of interest, one on whether the online teacher also had face-to-face teaching experience, and one on perceptions of online teacher professional development.

Step 3: receiving feedback from stakeholders on the draft survey. The study team met with Virtual Education Research Alliance members, who provided oral and written feedback on draft items. In addition, an advisory board of current online teachers in Iowa and Wisconsin was assembled to assist with survey development. The advisory board convened to share their training and support experiences related to the research questions and then reviewed the draft survey and suggested revisions. Feedback from the advisory board helped ensure that the questions captured the range of online teacher experiences.

Step 4: conducting cognitive interviews and finalizing the survey. The study team conducted one-on-one cognitive interviews with four online teachers identified by Virtual Education Research Alliance members. The cognitive interviewing methodology used standardized probes to elicit feedback from participants about the survey's language, clarity, relevance, and comprehensiveness (Beatty & Willis, 2007). The goal of the cognitive interviews was to reduce sources of potential response error by identifying and correcting problems in the survey questions before conducting a large-scale survey. Interviews were recorded and transcribed for analysis. To organize participant feedback, a coding system was applied to the cognitive interview data. The study team revised the survey in response to the feedback from the cognitive interviews, including survey length, item clarity, and response options for survey items. Ten items were revised to address the feedback from the cognitive interviews. The revised draft survey was then sent to Virtual Education Research Alliance members and the advisory board members for final review. The final version of the survey was then provided to Wisconsin Virtual School to administer to its teachers.

Data collection methods

Wisconsin Virtual School directors administered the survey electronically through a secure online survey system. The survey was administered over three weeks at the beginning of the 2014/15 school year.

In alignment with U.S. Department of Education (2002) statistical standards for surveys administered to the entire population, the target response rate for this survey was 90 percent. To improve response rates, Wisconsin Virtual School directors sent two reminder e-mails.

Data processing and analysis

After Wisconsin Virtual School collected survey data from 49 online teachers, the study team calculated the unit nonresponse rate, which was 9 percent. According to the U.S. Department of Education (2002) statistical guidelines, a nonresponse rate of 9 percent does not warrant a nonresponse bias analysis. The study team also calculated nonresponse rates for each survey item. All items had nonresponse rates of less than 15 percent, so the study team did not conduct an item nonresponse bias analysis or apply item-level nonresponse weights, in accordance with the U.S. Department of Education (2002) recommendations.

Of the 49 online teachers who responded to the survey and provided informed consent, one indicated that he or she did not teach an online course during the 2013/14 or 2014/15 school year and was excluded from all analyses. The study team summarized the data for the remaining 48 online teachers by calculating totals, means, minimums, maximums, and frequencies, as appropriate.

Appendix C. Supplementary tables

This appendix contains the detailed results for each survey question.

Table C1. Did you teach in a traditional face-to-face classroom prior to teaching online? Are you currently teaching in a traditional face-to-face classroom?

Item	Responses		Total number of respondents
	Number	Percent	
Currently teaching in a traditional face-to-face classroom	27	56	48
Taught in a traditional face-to-face classroom prior to teaching online	45	96	47
Currently teaching in a face-to-face classroom and taught in a face-to-face classroom prior to teaching online	26	55	47

Note: Respondents include 48 of the 54 online teachers who taught at Wisconsin Virtual School during the 2013/14 or 2014/15 school year. Percentages do not sum to 100 because respondents could choose more than one option.

Source: Authors' analysis based on the 2014 Wisconsin Virtual School survey data.

Table C2. How many years have you taught online?

Item	Minimum	Maximum	Mean	Standard deviation	Total number of respondents
Years teaching online	0	14	7	4.5	48

Note: Respondents include 48 of the 54 online teachers who taught at Wisconsin Virtual School during the 2013/14 or 2014/15 school year. The minimum is zero because some teachers were in their first year of teaching.

Source: Authors' analysis based on the 2014 Wisconsin Virtual School survey data.

Table C3. What grade levels have you taught online?

Grade level	Responses		Total number of respondents
	Number	Percent	
Elementary school courses	3	6	48
Only elementary school courses	1	2	48
Middle school courses	23	48	48
Only middle school courses	1	2	48
High school courses	47	98	48
Only high school courses	25	52	48

Note: Respondents include 48 of the 54 online teachers who taught at Wisconsin Virtual School during the 2013/14 or 2014/15 school year. Percentages do not sum to 100 because respondents could choose more than one option.

Source: Authors' analysis based on the 2014 Wisconsin Virtual School survey data.

Table C4. What subject areas have you taught online?

Academic domain	Responses		Total number of respondents
	Number	Percent	
World languages	13	27	48
Vocational/technical	5	10	48
Math	7	15	48
Science	6	13	48
English/language arts	6	13	48
History/social studies	6	13	48
Health/physical education	4	8	48
Fine arts	2	4	48
Other	6	13	48

Note: Respondents include 48 of the 54 online teachers who taught at Wisconsin Virtual School during the 2013/14 or 2014/15 school year. Percentages do not sum to 100 because respondents could choose more than one option.

Source: Authors' analysis based on the 2014 Wisconsin Virtual School survey data.

Table C5. What type of courses have you taught online?

Academic objective	Responses		Total number of respondents
	Number	Percent	
Elective courses (not core, not Advanced Placement, and not dual credit/college courses)	26	54	48
Required core course (not for credit recovery)	22	46	48
Credit recovery courses	16	33	48
Advanced Placement courses	15	31	48
Dual credit/college courses	2	4	48
Other types of courses	2	4	48

Respondents include 48 of the 54 online teachers who taught at Wisconsin Virtual School during the 2013/14 or 2014/15 school year. Percentages do not sum to 100 because respondents could choose more than one option.

Source: Authors' analysis based on the 2014 Wisconsin Virtual School survey data.

Table C6. Have you ever participated in any structured or unstructured professional development or training specifically focused on online instruction?

Item	Responses		Total number of respondents
	Number	Percent	
Participated in professional development or training focused on online instruction	48	100	48

Note: Respondents include 48 of the 54 online teachers who taught at Wisconsin Virtual School during the 2013/14 or 2014/15 school year.

Source: Authors' analysis based on the 2014 Wisconsin Virtual School survey data.

Table C7. When did you receive professional development or training in online instruction?

Timing of professional development or training	Responses		Total number of respondents
	Number	Percent	
Overall			
During preservice education	15	31	48
Prior to teaching online but after preservice education	33	69	48
While teaching online	42	88	48
Combinations	0		
Only during preservice education	2	4	48
Only prior to teaching online but after preservice education	3	6	48
Only while teaching online	9	19	48
During preservice education and prior to teaching online	1	2	48
During preservice education and while teaching online	4	8	48
Prior to teaching online and while teaching online	21	44	48
During preservice education, prior to teaching online but after preservice education, and while teaching online	8	17	48

Note: Respondents include 48 of the 54 online teachers who taught at Wisconsin Virtual School during the 2013/14 or 2014/15 school year.

Source: Authors' analysis based on the 2014 Wisconsin Virtual School survey data.

Table C8. When did your most recent professional development or training in online instruction occur?

Timing of most recent professional development or training	Responses		Total number of respondents
	Number	Percent	
Less than 1 year ago	40	83	48
1–2 years ago	5	10	48
3–7 years ago	3	6	48

Note: Respondents include 48 of the 54 online teachers who taught at Wisconsin Virtual School during the 2013/14 or 2014/15 school year. Percentages may not sum to 100 because of rounding.

Source: Authors' analysis based on the 2014 Wisconsin Virtual School survey data.

Table C9. How many total hours of professional development and training have you participated in that focused on online instruction?

Timing of professional development or training	1–2 hours		3–10 hours		11–40 hours		41+ hours		Total number of respondents
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
During preservice education	2	15	3	23	7	54	1	8	13
Prior to teaching online but after preservice education	5	16	11	35	11	34	5	16	32
While teaching online	1	2	8	20	14	34	19	45	42

Note: Respondents include 48 of the 54 online teachers who taught at Wisconsin Virtual School during the 2013/14 or 2014/15 school year. Percentages may not sum to 100 because of rounding.

Source: Authors' analysis based on the 2014 Wisconsin Virtual School survey data.

Table C10. What was the format of the professional development and/or training that you participated in that focused on online instruction?

Type of professional development or training	Responses		Total number of respondents
	Number	Percent	
Multiday workshop or conference	43	90	48
Ongoing training sessions	37	77	48
Limited or one-time session	24	50	48
Postsecondary course or certificate	20	42	48
Professional learning community	20	42	48
Peer coaching or mentoring	20	42	48
Advice from a colleague	18	38	48
Independent review of online discussion forums, websites, or blogs	13	27	48
Administrator support	13	27	48
Observation of a colleague	8	17	48

Note: Respondents include 48 of the 54 online teachers who taught at Wisconsin Virtual School during the 2013/14 or 2014/15 school year. Percentages do not sum to 100 because respondents could choose more than one option. The item “Participation in an online course (not about online instruction)” was excluded from the results because the question asked about professional development or training that focused on online instruction, which may have caused confusion for respondents.

Source: Authors’ analysis based on the 2014 Wisconsin Virtual School survey data.

Table C11. Was the professional development and/or training that you participated in online, face-to-face, or blended?

Format of professional development	Responses		Total number of respondents
	Number	Percent	
Fully online, facilitated	30	63	48
Fully online, nonfacilitated (self-paced)	13	27	48
Fully face-to-face	22	46	48
Blended (combination of face-to-face and online)	37	77	48

Note: Respondents include 48 of the 54 online teachers who taught at Wisconsin Virtual School during the 2013/14 or 2014/15 school year. Percentages do not sum to 100 because respondents could choose more than one option.

Source: Authors’ analysis based on the 2014 Wisconsin Virtual School survey data.

Table C12. Which of the following entities provided the professional development and/or training that you participated in focused on online instruction?

Professional development entity	Responses		Total number of respondents
	Number	Percent	
Wisconsin Virtual School	45	94	48
Postsecondary institution (for example, community college, preservice teacher education, four-year college or university)	18	38	48
Cooperative Educational Service Agency	17	35	48
Wisconsin Digital Learning Collaborative	15	31	48
Your school or district	13	27	48
Commercial vendor (obtained independently)	6	13	48
Wisconsin eSchool Network	6	13	48
State virtual school in another state	5	10	48
Wisconsin Collaborative Online Network	5	10	48
Another district	4	8	48

Note: Respondents include 48 of the 54 online teachers who taught at Wisconsin Virtual School during the 2013/14 or 2014/15 school year. Percentages do not sum to 100 because respondents could choose more than one option.

Source: Authors' analysis based on the 2014 Wisconsin Virtual School survey data.

Table C13. Have you participated in professional development and/or training in any of the following areas related to online instruction?

Topic of professional development or training	Responses		Total number of respondents
	Number	Percent	
Technology	48	100	48
Professional practice	39	81	48
Facilitation	38	79	48
Online course customization	38	79	48
Digital etiquette	33	69	48
Assessment and data use	30	63	48
Online course development	27	56	48
Classroom management or leadership	24	50	48
Support for students with special needs	12	25	48
At least six practice areas	25	52	48

Note: Respondents include 48 of the 54 online teachers who taught at Wisconsin Virtual School during the 2013/14 or 2014/15 school year. Percentages do not sum to 100 because respondents could choose more than one option.

Source: Authors' analysis based on the 2014 Wisconsin Virtual School survey data.

Table C14. Perceptions of professional development

Item	Agree		Somewhat agree		Neither agree nor disagree		Somewhat disagree		Disagree		Total number of respondents
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
The professional development and/or training in which I have participated prepared me to teach online.	40	85	7	15	0	0	0	0	0	0	47
I would benefit from additional professional development or training in online instruction.	32	68	11	23	4	9	0	0	0	0	47
I am satisfied with the professional development and/or training which I have participated.	42	89	5	11	0	0	0	0	0	0	47

Note: Respondents include 47 of the 54 online teachers who taught at Wisconsin Virtual School during the 2013/14 or 2014/15 school year.

Source: Authors' analysis based on the 2014 Wisconsin Virtual School survey data.

Table C15. To what extent do you encounter the following challenges related to your online instruction?

Challenge related to online instruction	To a great extent		To some extent		Not at all		Total number of respondents
	Number	Percent	Number	Percent	Number	Percent	
Technology							
Navigating the technology	8	17	19	41	19	41	46
Using multiple forms of media in my courses	7	16	18	42	18	42	43
Using collaboration tools	7	15	23	50	16	35	46
Helping students with technology	10	22	25	54	11	24	46
Keeping up with changing technology	9	20	21	46	16	35	46
Facilitation							
Interacting with students	7	15	15	33	24	52	46
Keeping up with students' communications	6	13	14	30	26	57	46
Getting students to interact with each other	12	29	24	57	6	14	42
Engaging students' parents	3	8	21	53	16	40	40
Online course development							
Developing content for online courses	2	6	9	29	20	65	31
Online course customization							
Customizing content for online courses	5	12	22	52	15	36	42
Supplementing content for online courses	6	14	20	47	17	40	43
Assessment and data use							
Assessing students in an online setting	6	13	17	38	22	49	45
Using data to modify my instructional methods	5	12	17	40	21	49	43

Note: Respondents include 31–46 of the 54 online teachers who taught at Wisconsin Virtual School during the 2013/14 or 2014/15 school year. Excludes teachers who selected not applicable. Percentages may not sum to 100 because of rounding.

Source: Authors' analysis based on the 2014 Wisconsin Virtual School survey data.

Table C16. To what extent do you encounter the following challenges related to your online instruction?

Challenge related to online instruction	To a great extent		To some extent		Not at all		Total number of respondents
	Number	Percent	Number	Percent	Number	Percent	
Classroom management/leadership							
Managing my online classroom	4	9	13	29	28	62	45
Setting course expectations	6	13	8	17	32	70	46
Helping students take responsibility for their work	9	20	26	57	11	24	46
Keeping students engaged throughout the course	9	20	26	57	11	24	46
Getting students to complete the course	8	18	31	69	6	13	45
Getting students to complete assignments	7	15	32	70	7	15	46
Support for students with special needs							
Supporting students with special needs	4	10	18	45	18	45	40
Digital etiquette							
Ensuring students use technology responsibly	2	5	21	50	19	45	42
Professional practice							
Feeling isolated from colleagues	2	4	11	24	33	72	46
Managing my time	3	7	21	46	22	48	45
Balancing my workload	4	9	21	46	21	46	46
Other							
Other challenges	1	25	2	50	1	25	4

Note: Respondents include 4–46 of the 54 online teachers who taught at Wisconsin Virtual School during the 2013/14 or 2014/15 school year. Excludes teachers who selected not applicable. Percentages may not sum to 100 because of rounding.

Source: Authors' analysis based on the 2014 Wisconsin Virtual School survey data.

Table C17. What type of professional development or training do you think would best help you address the challenges that you face in online instruction?

Challenges related to online instruction	Structured professional development only		Unstructured professional development only		Both structured and unstructured professional development		No professional development necessary		Total number of respondents
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Technology									
Navigating the technology	13	50	5	19	2	8	6	23	26
Using multiple forms of media in my courses	10	42	9	38	1	4	4	17	24
Using collaboration tools	12	40	13	43	1	3	4	13	30
Helping students with technology	12	35	16	47	2	6	4	12	34
Keeping up with changing technology	15	50	11	37	1	3	3	10	30
Facilitation									
Interacting with students	4	19	12	57	1	5	4	19	21
Keeping up with students' communications	3	17	8	44	1	6	6	33	18
Getting students to interact with each other	14	39	15	42	0	0	7	19	36
Engaging students' parents	3	13	14	58	1	4	6	25	24
Online course development									
Developing content for online courses	6	60	1	10	1	10	2	20	10
Online course customization									
Customizing content for online courses	12	48	6	24	2	8	5	20	25
Supplementing content for online courses	11	44	5	20	1	4	8	32	25
Assessment and data use	0		0		0		0		
Assessing students in an online setting	6	27	8	36	2	9	6	27	22
Using data to modify my instructional methods	6	29	10	48	1	5	4	19	21
Classroom management or leadership									
Managing my online classroom	2	13	6	40	0	0	7	47	15
Setting course expectations	3	23	6	46	0	0	4	31	13
Helping students take responsibility for their work	7	21	20	61	0	0	6	18	33
Keeping students engaged throughout the course	14	40	18	51	0	0	3	9	35
Getting students to complete the course	11	28	20	51	0	0	8	21	39
Getting students to complete assignments	12	31	20	51	0	0	7	18	39
Support for students with special needs									
Supporting students with special needs	7	28	7	28	1	4	10	40	25
Digital etiquette									
Ensuring students use technology responsibly	4	19	9	43	1	5	7	33	21

(continued)

Table C17. What type of professional development or training do you think would best help you address the challenges that you face in online instruction? (continued)

Challenges related to online instruction	Structured professional development only		Unstructured professional development only		Both structured and unstructured professional development		No professional development necessary		Total number of respondents
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Professional practice									
Feeling isolated from colleagues	5	45	2	18	1	9	3	27	11
Managing my time	6	26	6	26	0	0	11	48	23
Balancing my workload	6	25	6	25	0	0	12	50	24
Other									
Other	0	0	2	33	0	0	4	67	6

Note: Respondents include 6–39 of the 54 online teachers who taught at Wisconsin Virtual School during the 2013/14 or 2014/15 school year and selected “to a great extent” or “to some extent” for each challenge in the previous question. Percentages may not sum to 100 because of rounding.

Source: Authors’ analysis based on the 2014 Wisconsin Virtual School survey data.

Table C18. For each of the following online instructional practice areas, when do you think online teachers should receive professional development or training?

Practice area	During preservice education		Prior to teaching online but after preservice education		While teaching online		All time periods		Total number of respondents
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Technology	30	67	26	58	25	56	15	33	45
Facilitation	19	42	29	64	19	42	7	16	45
Online course development	10	24	20	48	21	50	2	5	42
Digital etiquette	22	50	24	55	20	45	7	16	44
Assessment and data use	9	21	23	53	30	70	6	14	43
Support for students with special needs	17	40	22	52	25	60	8	19	42
Classroom management or leadership	18	43	25	60	22	52	8	19	42
Professional practice	20	47	24	56	26	60	11	26	43
Online course customization	7	16	19	44	28	65	1	2	43

Note: Respondents include 42–45 of the 54 online teachers who taught at Wisconsin Virtual School during the 2013/14 or 2014/15 school year. Percentages do not sum to 100 because respondents could choose more than one option.

Source: Authors’ analysis based on the 2014 Wisconsin Virtual School survey data.

Notes

1. Wisconsin Virtual School was created through a partnership between the Wisconsin Department of Public Instruction and Cooperative Educational Service Agency 9. It has been in operation since 2000 and serves as Wisconsin's Web Academy, as called for by 2007 Wisconsin Act 222 (2008; Watson et al., 2014). Wisconsin Virtual School partners with school districts throughout the state to offer online courses to middle and high school students (Wisconsin Virtual School, n.d.).
2. Kansas, Maryland, Vermont, Virginia, and the District of Columbia have a professional development requirement for online teachers. Two other states, Texas and Wyoming, require professional development for teachers who teach through the state online learning programs (Texas Virtual School Network and Wyoming Switchboard Network). In addition, Minnesota requires teacher preparation programs and professional development programs to address skills related to teaching in digital environments, and North Carolina requires licensure renewal to integrate digital skills.
3. The national sample of teachers who participated in the Dawley et al. (2010) survey was a nonrandom, purposive sample.
4. This item was excluded from the results because the question asked about professional development or training that focused on online instruction, which may have caused confusion for respondents.

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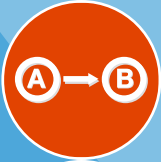
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