Going Virtual! 2010

The Status of Professional Development and Unique Needs of K-12 Online Teachers

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Research

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EXECUTIVE SUMMARY

Going Virtual! 2010 is a follow-up report to the Going Virtual! Research series started in 2007. The purpose of the series is to describe current trends on the status of professional development for K-12 online teachers, as well as identify the unique needs and challenges faced by these instructors.

In fall 2010, a national survey was conducted with 830 total respondents representing online teachers from virtual schools, supplemental online programs, and brick and mortar programs offering online courses. The investigators used an interpretive research design to continue identification of the unique needs and status of professional development for K-12 online teachers.

Summary of Findings

Demographics

- The boundaries of virtual schools and programs are blurring and blending. For example, respondents report schools serving multiple purposes as full-time schools, state supplemental programs, or full-time brick and mortar schools who use supplemental online instruction.

- Online teachers are highly experienced teachers, with 56% reporting 6-15 years of total overall teaching experience, and 24% reporting 16+years of teaching experience.

- 12% of brand new online teachers have never taught face-to-face.

- 99% of respondents are credentialed teachers.

- 60% of respondents hold a Master's degree or higher.

Professional Development in Online Instruction

- 25% of brand new online teachers reported receiving no training. That percentage decreased dramatically within the first five years (12%).

- Most common type of training: Ongoing training sessions received the highest number of responses (81%) followed closely by workshops (77%).

- 94% of respondents reported receiving professional development from their school or organization, only 30% from universities.

- Only 12% of brand new online teachers reported receiving college or university training, compared to 43% of teachers with 6-10 years experience.

Preferred Professional Development

- The most highly preferred form of professional development is fully online facilitated (53%), and in a workshop format (49%).

- Graduate courses are most appealing for participants with 0 - 10 years experience (30% - 39%) and least preferred for participants with over 10 years experience (56%).

Social Networking & Personal Learning Networks

- Facebook™ was the highest mentioned social network for personal learning (n=29).

- 52% of respondents report they have been trained in the use of social networks for PD.

- Social networking is the least desired skill (26%) where respondents want or need training.

Topics Covered in Online Teaching Professional Development

- The majority of respondents (86%) have received training regarding the field of online teaching and learning, while 16% want or need training on this topic.

- *Psychology of online learning* (online disinhibition, flaming, cyber-bullying, etc.) (44%) was the highest rated foundational area in which additional training was desired.

- *Meeting the needs of students with disabilities in the online classroom* (64%) was the highest rated facilitation strategy in which additional training was desired.

- The majority of teachers have had training in most technology skills, especially LMS (93%) and Communication Technologies (90%).

- Approximately half of respondents indicated training in *design tools* (55%) and social networking (52%). Respondents indicate *design tools* (40%) as the area in which they are most interested in receiving training.

- More than half of respondents (58%) design none or very little of the learning activities used in their online courses.

- 43% of respondents want training on instructional design principles for online lessons.

- A majority of teachers reported receiving training in various aspects of digital etiquette, behavior and assessment concepts (85%).

GOING VIRTUAL! RESEARCH SERIES

The Going Virtual! Research series began in 2007 to help provide empirical data to better understand the professional development needs of K-12 online teachers (Dawley, 2007; NEA, 2006; Rice, 2006; Rice & Dawley, 2007) and followed with additional research in 2008 to look at the unique needs and challenges of K-12 online teachers. The following publications have resulted from this work:

- The Status of Professional Development for K-12 Online Teachers, 2007
  http://edtech.boisestate.edu/goingvirtual/goingvirtual1.pdf

- Identifying the Unique Needs and Challenges of K-12 Online Teachers, 2008
  http://www.inacol.org/research/docs/goingvirtual2.pdf

- Rice, K. & Dawley, L. (2009). The status of professional development for K-12 online teachers: Insights and implications. *Journal of Technology and Teacher Education, 17*(4), 523-545.

- The Unique Needs and Status of Professional Development of K-12 Online Teachers, 2010 http://www.inacol.org/research/docs/goingvirtual3.pdf

In this year's report, we follow-up on research completed in 2007 and 2008 to collect comparative data on the status of professional development and unique needs of K-12 online teachers, as of 2010.

BACKGROUND

As virtual and blended K-12 education continues to grow across the globe, digital environments and emerging technologies are providing new opportunities for formal and informal learning. The increase in the use of professional learning communities is just one example of changes we are experiencing in teacher professional development opportunities. State initiatives for online teacher preparation, such as the acceptance and use of online pre-service field experiences, the development of state standards for K-12 online teachers and a proposed K-12 online teaching endorsement in Idaho, are among others.

In the wake of this growth and expansion, policymakers are proactively seeking recommendations to establish funding priorities and policies in K-12 teacher education. In December 2009, the Summit to Redefine Teacher Education for Digital Age Learners was hosted on the campus of University of Texas, Austin, by Drs. Paul Resta and Tom Carroll. "The urgency of this need is what brought 100 leaders from state legislatures, state certification boards, education professional associations, teacher unions, teacher education institutions, schools, the business community and federal government to the Austin Summit. They worked intensively over three days to identify the needed changes and articulate specific recommendations for their implementation."

> The outcomes of the summit resulted in a *Call to Action* presented to Congress in June 2010. A final summit report of the Call to Action is available at http://www.redefineteachered.org/

A brief, included below, was presented during the summit to illuminate and discuss trends in K-12 online teacher education in particular.

Patrick, S. & Dawley, L. (2009). *Redefining teacher education: K-12 online–blended learning and virtual schools.* Brief prepared for *the Summit on Redefining Teacher Education for Digital Age Learners*, Austin, TX: The University of Texas.

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Redefining Teacher Education:
K-12 Online-Blended Learning and Virtual Schools

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The Issue: Teacher Preparation for Online Learning

The exponential increase in online learning in both regular and virtual classrooms is driving the need to incorporate new pedagogical content knowledge and strategies in preservice and inservice teacher education. Compared to many countries, the United States is behind in preparing K-12 teachers to teach online. Very few teacher education programs in the U.S. offer a curriculum for online teaching, leaving districts, states, and virtual schools to train online teachers. This approach creates inconsistencies in training outcomes across programs, and organizations must expend additional resources to provide professional development (PD) that classroom teachers would normally receive through other channels, such as a university. New models of teacher education are evolving as a result of the strong demand and slow response to this need. The disconnect is growing wider between traditional teacher education programs and the skills, pedagogical content knowledge, and dispositions required to teach online. Although several states have adopted online teaching standards and created new areas of endorsement in response to the demand, there is a need for a wide-scale call to integrate online teaching requirements into teacher development across all levels, and to explore new models of collaborative teacher PD.

Background, Considerations & Trends

Online learning is a solution to close achievement gaps, improve student progress toward proficiency, increase graduation rates, and improve the distribution of high-quality teachers for students, regardless of geography or distance. According to a 2008 Sloan Consortium report, more than 75% of schools and districts say they need online learning to offer courses not otherwise available. Systemic challenges in K-12 education support the need for online teaching and learning as a central strategy for reform to address teaching shortages and to increase access to college-prep curriculum. Only 40% of high schools offer Advanced Placement courses. The most valuable and often scarcest resource in education is good teachers. For example, in the State of Georgia, there are 440 high schools, but there were only 88 highly qualified, licensed physics teachers in the schools in 2007. The Georgia Virtual School was created as the only way to address large-scale systemic needs for changing the distribution of licensed teachers, by providing physics to every high school online.

Online Learning Growing Rapidly

Online learning has grown 30% in the past decade. K-12 online learning has grown from 50,000 enrollments in 2000 to more than 2,000,000 enrollments in 2009. According to the Sloan Consortium, 70% of school districts offer students at least one online course. In higher education, one-in-five college students

takes an online course with an estimated four million online course enrollments. Blended K-12 online education options are also expanding (see figure below), with students participating in site-based online labs, hybrid courses, and part-time and full-time virtual options offered by a variety of providers, including charter schools, districts, state supplemental programs, corporations, and colleges.
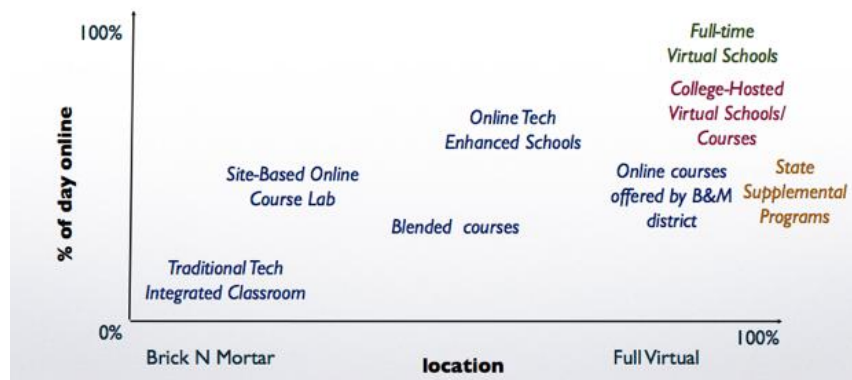
K-12 Online Education Options, Dawley. Image revised Nov. 2010

The growth in online learning is also creating new professional opportunities for teachers unbounded by geography that mirror the rest of the 21st century workforce, including telecommuting and part-time professional job opportunities.

Research Shows Online Instruction is More Effective
Online learning is an innovation with an evidence-base of effectiveness in improving student achievement and educational outcomes for K-12 students. In June 2008, the U.S. Department of Education released a meta-analysis of over 1,000 controlled studies comparing online and face-to-face instruction. The conclusion was clear. "...on average, students in online learning conditions performed better than those receiving face-to-face classes." These findings also held true for blended learning conditions compared to face-to-face. The reasons for the increased performance included increased learning time, innovative curriculum and pedagogy, opportunities for collaboration and reflection, and learner control over interactions with the media.

Global Strategies in K-12 Online Teaching
The World Future Society predicts that virtual learning is one of the top ten breakthroughs that will transform life around the world in the next 20-30 years (changing which populations have access to the highest-quality education and teachers worldwide). Today, many countries are training new teachers in Colleges of Education to teach online. In an international survey of K-12 e-learning, conducted by the International Association for K-12 Online Learning, Patrick and Powell found that Singapore trains every preservice teacher to teach online, including blended learning models in the classroom, and 100% of secondary schools use online learning. Since SARS in 2005, Singapore has used e learning for continuity of learning—and has during the recent H1N1 flu pandemic—ensuring that teaching and learning continues for healthy students and faculty during physical school shutdowns.

China is expanding their online course offerings in K-12 education in the next 10 years by training teachers to teach online, with the ultimate goal of reaching 100 million more students. Mexico trains every new teacher to use digital curriculum. The International Baccalaureate (IB) program began offering an IB Diploma Programme Online in 2008, training "master" teachers to teach online and offering "gold standard" online IB courses to students in 125 countries. Other countries are using online teaching and learning as a central strategy for modernizing their education system and increasing access to the best courses and teachers.

The United States is falling behind, with few programs providing preservice training for online teaching and the new pedagogical approaches made possible through virtual learning. While universities have a long history of providing online courses and preparing faculty, most Colleges of Education (COE) are not scaling this innovation within their teacher education programs or providing curriculum for preparing teachers to teach online. The rapid pace of scaling and technological innovation can make it difficult for COEs to remain responsive to trends because their work is framed by federal and state policy and professional and content standards and accreditation, and because they operate within the administrative confines of higher education.

National Quality Standards for Online Teaching
Teacher preservice education and professional development has historically been a main mission of higher education (NFIE, 1996), with Colleges of Education operating in response to state and national standards. In 2008, the International Association for K-12 Online Learning released National Quality Standards for Online Teaching, completing a literature review and research survey and endorsing the Southern Regional Education Board's Quality Standards for Online Teaching. The quality criteria highlight good teaching practice skills and methods (both online and blended with face-to-face) and are used as an overall evaluation tool in these areas: 1) academic credentials; 2) information technology skills; 3) interactive and collaborative strategies; 4) online classroom management and communication skills; 5) legal and ethical issues in online learning; and 6) experience in online learning. In 2006, the National Education Association (NEA), the nation's largest teachers union, published the NEA Guide to Teaching Online Courses that states that Colleges of Education should train every new teacher to teach online and reads, " . . . now that online education holds out the promise of quality instruction on a range of diverse subjects to even the most remote locales, the absence of required preservice training in online teaching skills must change…Preservice teachers should also take at least one required online course on pedagogy and practice in online courses." The online teaching quality standards from iNACOL, SREB, and NEA are guiding teacher education programs to develop curriculum for online teaching. Yet only 50% of virtual school administrators at this time report using PD guidelines developed outside their own organization.

Going Virtual! Research Series
Over the last three years, Rice & Dawley have surveyed over 1,000 K-12 online teachers, trainers, and administrators to examine the national status, needs, and challenges of teacher professional development specific to virtual learning. Current K-12 virtual teachers are very experienced teachers, with 73% reporting six or more years of teaching experience. They also report a broad continuum of online teaching PD opportunities. Some had very limited training to meet short-term needs (less than 10 hours of training, 22%), while others had more opportunities and resources and, as a result, had more transformational forms of training (45+ hours of professional development, 46%). It is a core tension reported in evolving PD models.

In the current context, schools and organizations involved in the management and delivery of virtual programs have developed or outsourced PD programs designed to meet specific needs of their particular teaching context. These contextual factors might include philosophical beliefs about how teacher training should occur, situation-specific needs of the school or program (such as a full-time or part-time program),

and the use of state or self-developed guidelines. Less than half of respondents (42%) reported taking college coursework in online teaching, the majority of training falling upon the hiring organization.

This approach to PD can also create inconsistencies across programs and schools, thus potentially affecting teacher quality, student and parent satisfaction, and learning outcomes. These evolving and varying contexts imply that standards and state policies for online teacher PD need to be broad in scope to allow for individualization according to contextual needs. The majority of administrators reported they did not follow national standards and guidelines in online teaching, implying the need for administrators to have awareness, input, and access to national standards. For other detailed findings from this research series, see http://edtech.boisestate.edu/goingvirtual/goingvirtual.htm.

Case Studies
Boise State University is experiencing strong enrollment growth and demand with its College of Education program to train new teachers to teach online, and is working with the Idaho Digital Learning Academy, the state virtual school, to design a statewide teacher training portal. Boise State University also prepares all of Connections Academy teachers nationwide to teach in a full-time virtual school. American University is partnering with K12 Inc. to train new virtual teachers across the nation. University of Central Florida has a teaching internship program with the Florida Virtual School to allow preservice teachers to student teach in online courses. Michigan State University is providing online internships in partnership with Michigan Virtual High School. The Education Development Center (EDC) is working with several state virtual school programs to provide online and blended professional development on online teaching to new and in-service teachers.

Bellwether State Policies
Thirty-four states have state virtual schools employing online teachers.
Twenty-one states allow full-time virtual schools. Forty-eight states have policies or programs for K-12 online learning and virtual schools. Both Idaho and Georgia have "online teaching" endorsements for teacher licensure through the State Education Agency. Teachers in these states have new professional opportunities and as more districts use online learning and blended teaching models—the "best of both worlds"—the demand for colleges of education to gear up the methods to manage a new instructional model that takes advantage of these innovations will continue to grow.

Key Questions

1. How can we create meaningful online teaching standards that are broad enough to cover the wide range of needs in various virtual learning contexts?
2. What supports are required for Colleges of Education to redefine teacher education by adopting standards and preparing all new teachers for online teaching and virtual learning professional opportunities?
3. What emergent forms of teacher education are evolving as a result of the shift toward school-based, blended and online training, and how can Colleges of Education partner with organizations to enhance these efforts? In other words, how can Colleges of Education step outside the box to rethink quality teacher education, and support it new ways?
4. With rapid advances in technology continuing at an exponential rate, how can we redefine teacher education, leveraging the capabilities of the technology itself, such as developing innovative communities of practice, shared inquiry, and global networked professional development opportunities?

RESEARCH DESIGN AND METHODS

For this study, the investigators used an interpretive research design to survey K-12 online teachers on 1) their unique needs, and 2) the status of professional development in their own work contexts. Questions were adapted from prior GoingVirtual! surveys. This descriptive data is intended to provide practical information for policymakers establishing professional development policies, standards, and funding priorities, and for administrators and instructional designers who create professional development programs. It also allows for the identification and creation of categories of understanding not currently existing in the research base that can later be studied through more empirically structured research approaches.

A non-random purposive sample of 830 K-12 online teachers from public schools, virtual programs, and organizations from across the U.S. agreed to participate in a survey delivered via the web. Seven hundred and thirty two respondents (88.2%) completed all items on the survey. The respondents represent a cross section of teachers, representing 40 states, teaching students in 25 countries including the United States, and including participants from more than 25 virtual school management companies or organizations. See Appendix A for a complete list of participant school and program affiliations, as well as a detailed breakdown of school and program locations.

The primary research questions addressed were:

1. What is status of professional development of K-12 online teachers?
2. What are the unique needs of K-12 online teachers?

Participants were enlisted through a variety of means. A link to the survey was posted twice on the discussion forum for the International Association for K-12 Online Learning (iNACOL). The iNACOL clearinghouse was searched and individual emails were sent to online K-12 school and program administrators from virtual schools and programs across the U.S.

The survey was structured into four sections: 1) School and model affiliation, 2) experience and education of respondents 3) professional development opportunities (i.e. types of training, who provided, preferred delivery method) and 4) unique needs of K-12 online teachers.

DEMOGRAPHICS

School or Program Model Affiliation

In the past, research associated with K-12 online teaching has considered the influence on the teacher of contextual factors associated with a particular school or program affiliation. However, this distinction is becoming more and more difficult to articulate. In this survey, respondents were asked to choose one of three options with the following definitions:

1. *Virtual schools* typically host full-time students and serve as the crediting institution. They generally hire full-time teachers. Teachers may work from home or be required to meet in a central facility. Fifty percent of respondents reported teaching in virtual schools.

2. *Supplemental* online programs are those in which students attend online part–time and earn credit from their originating institution. They generally hire teachers part-time, and often these teachers also work in brick and mortar schools. Thirty-eight percent of respondents reported teaching in supplemental programs.

3. *Brick and mortar* online programs include those in which online courses are housed within traditional educational environments, and use teachers from their existing faculty to teach an online course or two. In all cases, teachers may or may not be required to develop their own curriculum, courses may be fully facilitated or self-paced, and the program or school may have varying or set enrollment dates. One percent of respondents reported teaching in brick and mortar online programs.

The Blurring Boundaries of School Models

In addition to our defined categories, 81 respondents indicated that they taught in some form of blended or hybrid program. These ranged from schools offering both full-time and supplemental online programs to brick and mortar schools with supplemental options and everything in-between. The data should be viewed with caution because even within a particular school or program, individual teachers indicated different categories depending on their particular teaching situation. Although boundaries can be blurred, there are important distinctions between virtual schools, supplemental programs, "brick and mortar" online programs and blended programs, and thus their design and purpose can influence the professional development needs of their teachers.

SCHOOL OR PROGRAM MODELS REPRESENTED

	Response Count	Response Percent
Virtual School (students attend full time and move through grades)	417	50.4%
Supplemental Online Program (students attend part-time and/or receive credit from another institution)	318	38.4%
Blended (some combination of full-time and supplemental or supplemental and Brick and Mortar)	81	9.8%
Brick and Mortar Program (brick and mortar school offering online courses)	12	1.4%
*Total Respondents	828	100%

*Note: Not all respondents answered all questions.

ORGANIZATIONAL TYPE REPRESENTED

	Response Count	Response Percent
Statewide and State-Led	540	66.0%
Single District	104	12.7%
Multi-District	91	11.1%
Statewide but not State-Led	36	4.4%
Consortium	26	3.2%
National and/or Global	12	1.5%
Private/Parochial	5	0.6%
Post Secondary or University	4	0.5%

*Note: Respondents may have chosen more than one response.

Experience and Education of Survey Respondents

Overall the teaching workforce in online education is relatively experienced, with only 2% brand new to teaching and 14% new to online teaching. Fifty six percent of teachers have between six to fifteen years of total teaching experience, with 24% reporting 16 or more years of teaching experience. The majority of respondents have been online teachers from one to five years (69%) but we are seeing an increase in years of experience as the field progresses.

By cross tabulating years of total teaching by years of teaching online, 12% of the teachers new to teaching online have never taught in a face-to-face classroom.

TOTAL YEARS TEACHING EXPERIENCE SORTED BY YEARS TEACHING ONLINE (799)

	Years Teaching Online			
Total Teaching Experience	0 Years (just hired) (n=110)	1 – 5 Years (n =554)	6 – 10 Years (n = 120)	10 + Years (n = 15)
0 (just hired)	**11.8%**	0.0%	0.0%	0.0%
1 – 5 years	28.2%	20.6%	0.0%	0.0%
6 – 10 years	30.9%	34.3%	19.2%	0.0%
10-15 years	14.5%	25.6%	30.8%	25.7%
16-20 years	4.5%	9.2%	17.5%	20.0%
20+ years	10.0%	10.3%	32.5%	53.3%

In addition to experience, over half of the teachers reported their highest degree as a master's degree or better (60%). Additionally, 52 respondents indicated they were working on an advanced degree or had additional hours beyond their indicated degree. Ninety-nine percent of respondents are credentialed teachers.

	Response Percent (n=803)
Bachelor's	39%
Master's	53%
Master's Plus	4%
Doctorate	3%

TEACHING CREDENTIALS

	Response Percent (n=813)
Elementary	32%
Secondary	85%
Online Endorsement	5%
Other Special Endorsement (Reading, Special Education, Early Childhood	21%
No Credential	1%

Note: Percentages will not calculate to 100 because of multiple certifications. Other Endorsements included: Administration (3), Gifted (8), NBCT (8), ESL (13), Special Education (6), and Middle Grades (11).

Grade Levels and Subject Areas Served by Survey Respondents

Respondents represent all grade levels across K-12 as well as non-grade specific roles such as guidance counselor and ESL instructor. The majority of this year's respondents teach at the high school level. When examining responses to subject areas taught, the majority of teachers reported teaching Mathematics followed by English/Language Arts, History/Social Sciences, and Science.

GRADE LEVELS SERVED BY TEACHERS (n=809)

GRADE LEVELS
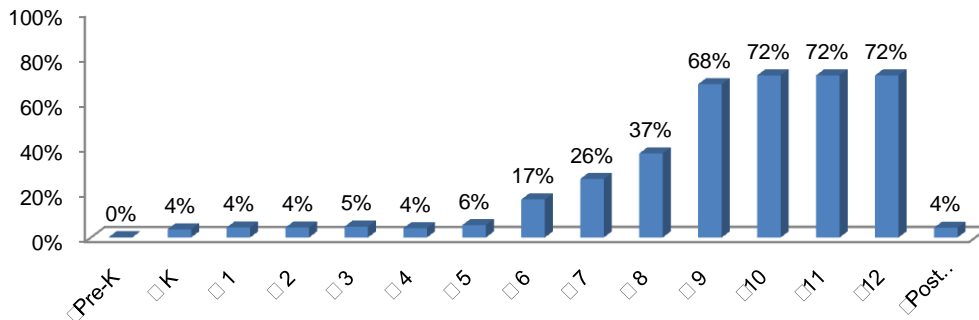
SUBJECT AREAS TAUGHT

	Response Percent (n=785)
Mathematics	26%
English/Language Arts	21%
History/Social Sciences	18%
Science	16%
PE/Health	11%
Foreign Languages	9%
General Elementary	7%
Business	6%
Economics	5%
Special Education	4%
AP	4%
Arts/Music	3%
Multidisciplinary/Integrated	2%
Journalism	1%
Dual Credit	1%
Home Sciences	1%

Note: Percentages will not calculate to 100 because of multiple subject areas taught (n=785).
Other responses included: ESOL/ESL (3), Technology and Computer Science (11),
Advisory/ Counseling (5), Study Skills/Test Prep (5) Career Education (5), and
Driver's Education (17).

PROFESSIONAL DEVELOPMENT

Professional Development in Online Instruction

How many teachers received PD? Eighty-seven percent of respondents reported receiving professional development (PD) specifically for K-12 online instruction, 13% had none. Although 25% of brand new online teachers reported receiving no training. That percentage decreased dramatically within the first five years (12%).

Is it required? Seventy-four percent indicated that training was required by their school or program, 17% reported that it was not required and 9% did not know.

Few respondents (8%) indicated that training in K-12 online teaching methods was required by the state in which they were employed with the remainder almost evenly divided between *no* (47%) and *don't know* (45%).

Types of training? Teachers were asked to indicate the types of professional development activities in which they participated related to online instruction. O*ngoing training sessions* received the highest number of responses (81%) followed closely by *workshops* (77%).

A finding that may be obvious is that the more years of experience you have teaching online, the higher the percentage of respondents that had participated in a greater variety of training experiences.

The most common type of professional development for participants with 10-20 years experience was workshops (93% -100%). Contrast that to teachers with 0 to 10 years experience whose most common form of PD was ongoing training sessions (80% - 87%)

PROFESSIONAL DEVELOPMENT OPPORTUNITIES RELATED TO ONLINE INSTRUCTION (n=769)

Category	Percentage
Ongoing training sessions	81%
Workshop(s)	77%
Professional learning community	66%
Peer coaching/ mentoring	62%
Limited, one-time sessions	46%
Graduate courses	35%
Graduate certificate	9%
None	1%
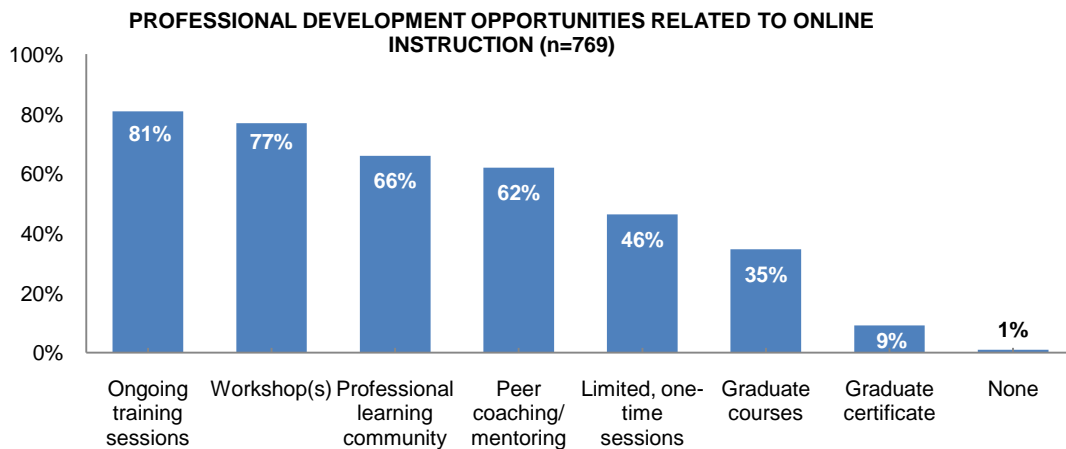
In open-ended comments, teachers also reported pursuing additional PD options such as participating in orientation, training courses, online BITE sessions, conferences, online learning, and social networking.

Who provided the training? Ninety-four percent of respondents reported receiving PD from their school or organization, 30% received PD from universities, and 23% used self-led approaches such as social networking. In open-ended comments, 8 respondents reported receiving training from a corporate vendor.

Only 12% of brand new online teachers reported receiving college or university training compared to 43% of teachers with 6-10 years experience. This could be an indicator that the more experience you have with online teaching, the more likely you are to seek out university-based training. The same finding applies to the use of personal learning networks, with more experienced online teachers pursuing self-led training.

WHO PROVIDED THE TRAINING?

	0 Years (just hired) (n=101)	1 – 5 Years (n = 522)	6 – 10 Years (n = 112)	10 + Years (n = 14)
My program, school or organization	95.0%	93.9%	95.5%	71.4%
My District	13.9%	16.7%	23.2%	21.4%
College or University	11.9%	30.7%	**42.9%**	21.4%
Self-Led (i.e. PLN)	12.9%	22.6%	33.0%	**50.0%**

Formal vs. informal training? Professional development involved both formal (i.e. graduate courses and district workshops) and informal (self-led) instruction. Twenty six percent of respondents reported spending over 45 hours in informal professional development and 48% spent more than 45 hours in formal professional development.

HOURS OF INFORMAL PROFESSIONAL DEVELOPMENT IN ONLINE INSTRUCTION (n=756)
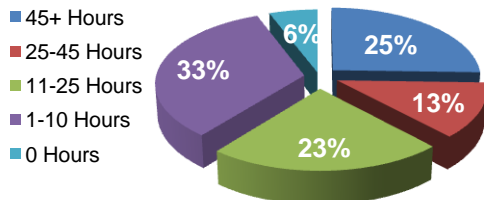
HOURS OF FORMAL PROFESSIONAL DEVELOPMENT IN ONLINE INSTRUCTION (n=762)
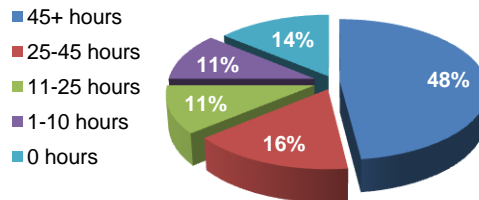
Professional Development Delivery Methods

How is PD delivered? The most commonly used professional development delivery methods are equally divided (53% each) between fully online (facilitated) and blended (face-to-face & online).

HOW WAS PD DELIVERED? (n=701)
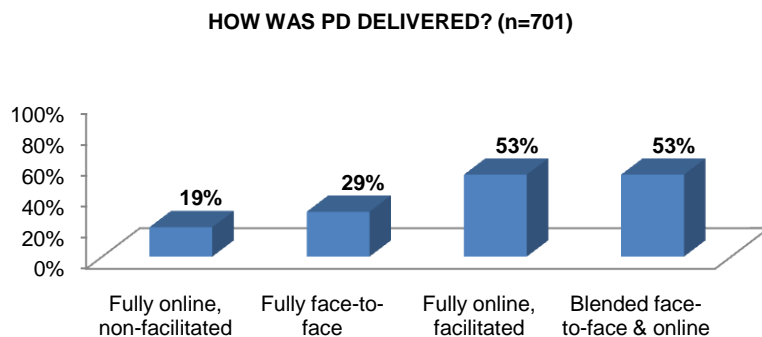
Preferred Professional Development Methods

What PD delivery methods are preferred by online teachers? Over half (53%) of respondents prefer fully online facilitated professional development. The least preferred form of delivery is fully face-to-face (45%). Graduate courses are most appealing for participants with 0 - 10 years experience (30% - 39%) and least preferred for participants with over 10 years experience (56%).

PREFERRED DELIVERY METHODS (n=754)

	Most Preferred	Preferred	Somewhat Preferred	Least Preferred
Fully online, facilitated	**53%**	26%	15%	6%
Fully online, non-facilitated	19%	33%	20%	28%
Fully face-to-face	9%	20%	26%	**45%**
Hybrid or Blended (a mix of online and face-to-face)	36%	22%	32%	10%

What PD types are preferred by online teachers? Almost half (49%) of respondents prefer a workshop format for professional development. This was true across all years of online teaching experience. The least preferred method was a graduate certificate approach. This could be explained by the large percentage of respondents who currently have Master's degrees.

PREFERRED PROFESSIONAL DEVELOPMENT TYPES (n-745)

	Most Preferred	Preferred	Somewhat Preferred	Least Preferred
Graduate courses	37%	21%	21%	21%
Graduate Certificate	20%	24%	28%	**28%**
Workshops	**49%**	38%	11%	2%
Ongoing training	41%	42%	12%	4%
Limited, one-time session	26%	36%	26%	12%
Peer coaching/mentoring	31%	35%	25%	9%
Self-led (Personal Learning Network)	24%	31%	39%	16%

Customization of Professional Development

A majority of teachers (53%) indicated that their professional development was customized based on their prior experience.

WAS PROFESSIONAL DEVELOPMENT CUSTOMIZED BASED ON PRIOR EXPERIENCE? (n=738)

Response	Percentage
Yes	53%
No	33%
Don't know	11%
N/A (no prior teaching experience)	4%
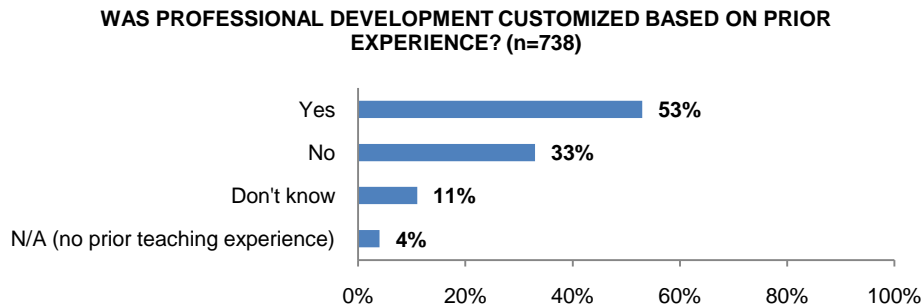
Customizing Professional Development

Respondents reported a large variety of ways in which their professional development was customized (n=225). Many indicated they were allowed to choose the topics of interest through conferences, workshops, online offerings, catalogs, breakout sessions, and webinars. Others were surveyed or polled regarding their needs.

Social Networks Used to Support Personal Learning

In open-ended comments (n=97), teachers reported using a wide variety of social networks to support their personal learning in online teaching. Many larger schools or systems have their own closed social networks or professional learning communities (PLCs), often accessed through a learning management system. Others utilize professional educational communities such as iNACOL, ACTE, ISTE, and ASCD. This highest mentioned social network for personal learning was Facebook (n=29). Other networks mentioned included LinkedIn, Second Life, Twitter, Skype, Diigo, Ning, and PB Wiki.

CONTENT AND CONCEPTS ADDRESSED IN TRAINING

Teachers were asked to provide detailed information about the training they have received and the training they need. Topics were divided into the following categories:

- Foundational Knowledge
- Technology Tools
- Facilitation Strategies
- Online Course Design
- Digital Etiquette

Foundational Knowledge

The majority (86%) have received training regarding the field of online teaching and learning with only 16% wanting or needing this training. *Psychology of online learning* (44%) was the highest rated foundational area in which additional training was desired. The majority of teachers have either had or want training in each of the three areas suggested.

FOUNDATIONAL KNOWLEDGE (N=737)

Category	Neither	Want/need	Have had
Psychology of online learning	12%	44%	48%
Foundational principles, or theories related to online teaching and learning	9%	29%	66%
Knowledge of the field of online teaching and learning	3%	16%	86%

- ■ I neither have had nor want/need training in this area
- ■ I currently want or need training in this area
- ■ I have had training in this area

Facilitation Strategies

Responses regarding training on facilitation are fairly consistent across strategies with between 64% and 88% of the respondents indicating they have had training in each of the areas, 19% to 37% indicating a desire for training in each area, and 2% to 12% indicating that they neither wanted or needed training in each area. *Meeting the needs of students with disabilities in the online classroom* (64%) was the highest rated facilitation strategy in which additional training was desired.

FACILITATION STRATEGIES (n=719)

Strategy	I neither have had nor want/need training in this area	I currently want or need training in this area	I have had training in this area
Meeting the needs of students with disabilities in the online classroom	6%	37%	64%
Promoting student reflection and self-evaluation	6%	34%	66%
Promoting student autonomy, independence and responsibility for learning	6%	34%	66%
Identifying at-risk students	9%	32%	66%
Effective synchronous facilitation	8%	32%	66%
Effective asynchronous discussions	7%	31%	67%
Promoting parental involvement	9%	26%	71%
Managing groups and collaboration in the online classroom	4%	32%	72%
Active listening	12%	15%	75%
Building community within the online classroom	4%	27%	75%
Promoting engagement and interaction in online activities and lessons	2%	28%	78%
Student-centered instructional strategies	3%	24%	81%
Promoting appropriate student netiquette	7%	14%	82%
Differentiated instruction	3%	19%	83%
Management strategies	4%	13%	88%

Technology Tools

The majority of teachers have had training in most technology skills, especially LMS (93%) and Communication Technologies (90%) training. Approximately half of respondents indicated training in *design tools* (55%) and social networking (52%). Respondents indicate *design tools* (40%) as the area in which they are most interested in receiving training. *Social networking*(26%) is the least desirable skill in terms of wanting or needing training.

TECHNOLOGY TOOLS (n=735)

- ■ I neither have had nor want/need training in this area
- ■ I currently want or need training in this area
- ■ I have had training in this area
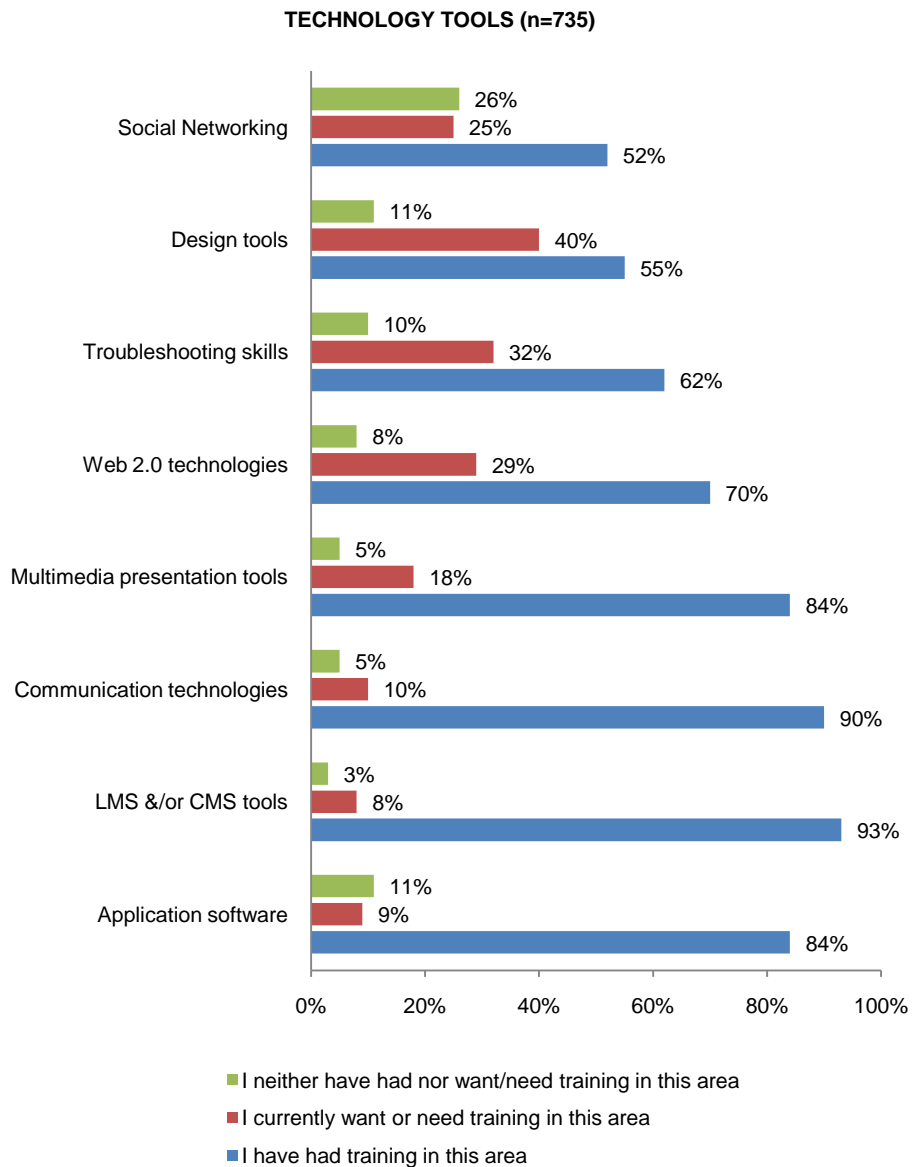
Online Lesson Design and Development

More than half of respondents (58%) design none or very little of the learning activities used in their online courses, with only 22% developing at least half of their online content.

Thirty four to sixty six percent of teachers have had some training in various aspects of online course development concepts. The highest reported area of training need was instructional design principles for online lessons (43%).

ONLINE DESIGN (n=711)

ONLINE COURSE DESIGN (n=709)

■ I neither have had nor want/need training in this area
■ I currently want or need training in this area
■ I have had training in this area
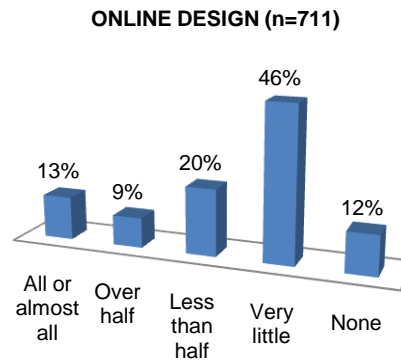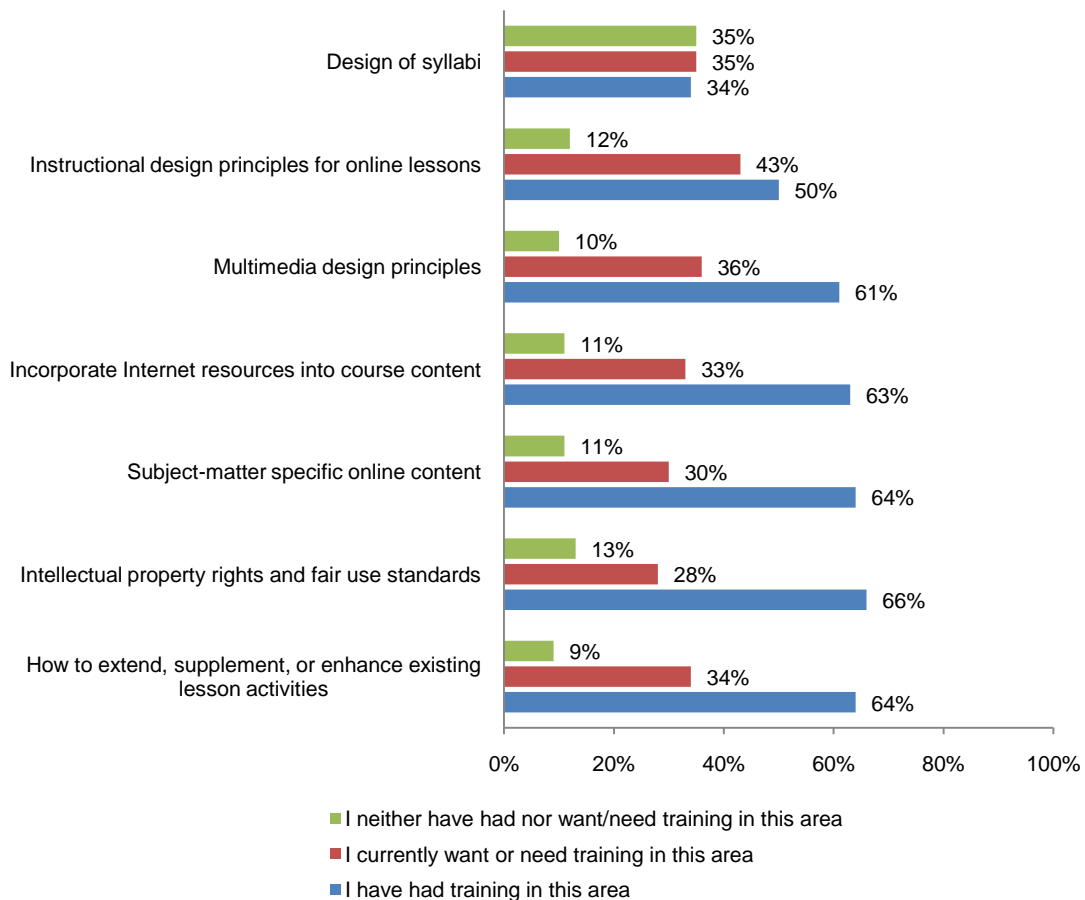
Digital Etiquette, Behavior and Assessment

A majority of teachers reported receiving training in various aspects of digital etiquette, behavior and assessment concepts. Interpreting online assessment data (30%), using student data to inform instruction (29%) and student readiness (34%) are the areas in which the greatest need for training is indicated.

DIGITAL ETIQUETTE, BEHAVIOR AND ASSESSMENT (n=710)

Student readiness
- 13%
- 34%
- 58%

Interpreting online assessment data
- 7%
- 30%
- 70%

Using student data to inform instruction
- 6%
- 29%
- 72%

Choosing appropriate assessment tools
- 9%
- 25%
- 72%

Responsible use of digital materials
- 8%
- 17%
- 79%

Authenticity of student work
- 3%
- 23%
- 80%

Digital etiquette and responsible behavior
- 7%
- 12%
- 85%

■ I neither have had nor want/need trainingin this area

■ I currently want or need training in this area

■ I have had training in this area

Professional Development Needs: By Years of Teaching Experience

In the table below, professional development needs were sorted by total years of online teaching experience. Respondents also provided a total of 99 open-ended comments.

CATEGORIES AND TOPICS WHERE TRAINING IS NEEDED (SORTED BY YEARS OF ONLINE EXPERIENCE)

Category	Topic	0 Years (just hired) (n=99)	1-5 Years (n=506)	6+ Years (n=137)
Foundational Knowledge	Knowledge of the field of online teaching and learning (i.e. standards, terminology, classifications, methods, or trends)	21%	15%	14%
	Foundational principles, or theories related to online teaching and learning (i.e. theory of distance learning)	38%	29%	20%
	Psychology of online learning (i.e. online disinhibition effect, flaming, bullying)	45%	44%	41%
Facilitation Strategies	Student-centered instructional strategies (i.e. authentic learning, inquiry-based learning, project-based learning)	29%	24%	17%
	Differentiated instruction	30%	18%	11%
	Meeting the needs of students with disabilities in the online classroom	**57%**	36%	30%
	Promoting engagement and interaction in online activities and lessons	44%	26%	25%
	Building community within the online classroom	42%	26%	21%
	Managing groups and collaboration in the online classroom	**52%**	30%	25%
	Management strategies (i.e. timely feedback, intervention plans, communication protocols)	20%	12%	10%
	Promoting parental involvement	31%	23%	29%
	Effective synchronous facilitation	40%	30%	30%
	Effective asynchronous discussions	39%	31%	24%
	Identifying at-risk students	39%	31%	27%
	Promoting appropriate student netiquette (web etiquette)	13%	15%	8%
	Active listening	18%	15%	15%
	Promoting student autonomy, independence and responsibility for learning	34%	33%	35%
	Promoting student reflection and self-evaluation	42%	34%	31%

Category	Topic	0 Years (just hired) (n=99)	1-5 Years (n=506)	6+ Years (137)
Technology Tools	Application software (i.e. word processing, spreadsheets, etc.)	4%	10%	11%
	LMS and/or CMS tools (i.e. gradebook, attendance, communication)	11%	8%	4%
	Web 2.0 technologies (i.e. blogs, wikis)	30%	30%	25%
	Communication technologies (i.e. email, discussion, video conferencing, and instant messaging tools)	9%	10%	8%
	Multimedia presentation tools (i.e. Powerpoint, SnagIt, Camtasia)78.8% (78)	20%	19%	14%
	Troubleshooting skills	42%	29%	31%
	Social Networking	26%	25%	25%
	Design tools (i.e. html editing, Web page creation)	46%	41%	32%
Online Course Design	How to extend, supplement, or enhance existing lesson activities	46%	33%	26%
	Instructional design principles for online lessons	**53%**	46%	27%
	Multimedia design principles (i.e. the appropriate use of text, graphic, audio, and video representations)	39%	37%	28%
	Design of syllabi	30%	38%	25%
	Incorporate Internet resources into course content	44%	33%	19%
	Subject-matter specific online content	42%	30%	18%
	Intellectual property rights and fair use standards.	30%	28%	23%
Digital Etiquette	Digital etiquette and responsible behavior (Netiquette)	7%	15%	5%
	Responsible use of digital materials	13%	18%	15%
	Authenticity of student work (cyber-cheating)	23%	22%	27%
	Choosing appropriate assessment tools	27%	24%	24%
	Student readiness	37%	32%	34%
	Using student data to inform instruction	30%	28%	29%
	Interpreting online assessment data	39%	28%	31%
	Design tools (i.e. html editing, Web page creation)	46%	41%	32%

All teachers reported a high need (41-45%) for more training in the psychology of online learning (online disinhibition, flaming, cyber-bullying, etc.). Highlighted findings from this section include:

0 Years Experience

Brand new online teachers reported highest need for training in:

- Working with students with disabilities in the online classroom (57%)
- Managing groups and online collaboration (52%)

- Instructional design of online learning (53%)

Open-ended comments suggested a need for ongoing training, more in-depth training, and trouble-shooting. A sample of comments is included below:

Would like to develop a more in depth knowledge of the training I have received.

I have experienced some troubleshooting, but I would like more in depth for the technology-based teacher.

More training on encouraging reluctant learners would be helpful. How do you combat "my computer isn't working" besides sending them to tech support?

I feel like have been trained well for online instruction. The trainings that I marked that I did not have and do not want or need are items that I feel I already know from my traditional classroom experience and trainings.

Initial training was good and fairly extensive. I feel a deficiency in knowing how to create or modify a lesson to suit student needs.

1 - 5 Years Experience

Teachers with 1-5 years experience, reported the greatest needs in:

- The area of design, including instructional design principles (46%)
- Design tools (41%)
- Design of syllabi (38%)

Open-ended comments suggested a need for ongoing training, as well as targeted training on instructional strategies and best practices, managing students, and locating online resources. Example comments included:

Higher order thinking and abilities to teach with that type of method online.

How to increase active participation and truly know what students are learning/not learning.

Working with at-risk students from distance learning.

Ways to motivate students to learn.

Using PBL virtually, best practice teaching strategies.

hardware - mics, cameras, scanners, backup drives.

Use of the tools needed for instructional delivery.

Online eportfolio development for online learning -- as reflective learning tools.

Technical Writing Skills -- communicating clearly and effectively in an online environment.

Graphics tablets for math teachers.

Finding relevant online video to support the curriculum.

Although I have had training in some of the areas, reinforcement and review, update of new technology, etc is necessary.

Although I have knowledge of some of the above, more is better as technology is always changing.

Resources for the online teacher.

6 or More Years Experience

Experienced teachers reported fewer training needs than their peers, with highest areas of need in:

- Psychology of online learning (41%)
- Promoting student autonomy (35%)
- Student readiness (34%)

Open-ended comments suggested an interest in learning more about the science of learning, the history of distance education and assessment strategies and tools. Suggestions included:

Motivational strategies to keep students interested and learning and making forward progress.

History of remote study: how teaching and learning via correspondence courses relate to the online experience; how lessons learned there can be applied online to improve the experience.

I would appreciate learning more about the science of learning. For example, current research using fMRI is challenging the concept of multitasking.

More details on use of our platform, Blackboard.

Assessment tools, particularly those which involve student participation, groups, and graphics.

Technology-based assessment strategies, especially at intake.

Additional Open-Ended Comments

Overall, many participants that responded to open-ended comments felt they were adequately trained for online instruction.

> *The training that I received was excellent because it put me in the role of student and my teacher and mentor was a wonderful model of how an online teacher should treat students thoughtfully.*

> *Developing and teaching online is always changing as technology progresses, programs become available, requirements change. Webinars and trainings to fine-tune my skills are always wanted and needed.*

> *Training is good, but can only prepare you partially for the actual online teaching experience. I offer new teachers who also teach the same online course that I do, help/mentoring as they get acclimated to online teaching. I think we need more of this type of assistance for a longer period of time.*

Concerns about training included:

> *I would like the training to count for something. I am asked to attend the same trainings each year even though I earned the certification. I never get a raise or any encouragement to be better at what I do.*

> *The biggest frustration for online teachers and developers is that they do not receive support. They are asked to do much more than teach and quite often must put up with sub par communications from administration. Professional development should be geared toward the staff and how they can assist teachers in an organized and timely manner.*

> *It would be good if we could "do" as we are being shown what to do.*

> *As an extroverted online teacher, I crave face-to-face interaction. While it is a hassle to make time and organize a training that is centrally located and face-to-face, I prefer it over online, impersonal webinars because my job is sometimes lonesome.*

> *When working at home, it is important to "connect" with other teachers.*

> *I have had no formal training prior to starting the virtual school. All has been self-taught and was a result of using technology-based programs in a special education setting very successfully and extending it to virtual environment.*

> *I would like to have training in administration type of issues because my role is not only teacher, but my supervisor leaves a lot of decisions go by the way side and I want to be able to use appropriate steps.*

How to build community when we are limited in what we can use with students - social networking and discussion boards are not an option for us.

Comments about sharing:

We all train one another and share constantly.

Training is good, but can only prepare you partially for the actual online teaching experience. I offer new teachers who also teach the same online course that I do, help/mentoring as they get acclimated to online teaching. I think we need more of this type of assistance for a longer period of time.

I'd give up half of the training that I've completed in exchange for the energy to keep up with a dozen hyperactive high school students who I never get to meet face to face!

The changing nature of training needs:

Developing and teaching online is always changing as technology progresses, programs become available, requirements change. Webinars and trainings to fine-tune my skills are always wanted and needed.

Training is constantly changing based on the current needs of students and changing times. We are encouraged to feel comfortable with change and updating our teaching practices.

APPENDIX A

Participant School and Organization Affiliations
(n=764)

AccelerateU
Agora
Branson School Online
California Virtual Academy
Colorado Online Learning
Connections Academy Schools
DPS Online High School
eCommunity Schools
Electronic Classroom of Tomorrow, ECOT
Federal Way Internet Academy
Florida Virtual Schools
Georgia Virtual Schools
Global School
Hawaii Virtual Learning Network's E-School
Idaho Digital Learning Academy
IDEAL- NM
Illinois Virtual School
Insight Schools
K-12, Inc. Schools
Lakeland high school
Laural Springs School
Louisiana Virtual School
Michigan Virtual School
Minnesota BlueSky Online Charter High School
Mississippi Virtual Public Schools
North Dakota Center for Distance Education
Odyssey Charter School
Palmetto State Ecademy
Richard McKenna Charter High School
Riverside Virtual School
Salem-Keizer Online
Sevenstar Academy
South Carolina Virtual School
TRECA Digital Academy
Virtual Community School of Ohio
Virtual High School Global Consortium
Virtual Learning Academy Charter School
Virtual Pilot School
West Virginia eLearning for Educators
West Virginia Virtual School

Participant Organization and School Affiliations (with more than five responses)

PARTICIPANT ORGANIZATION AND SCHOOL AFFILIATIONS
(with more than five responses)

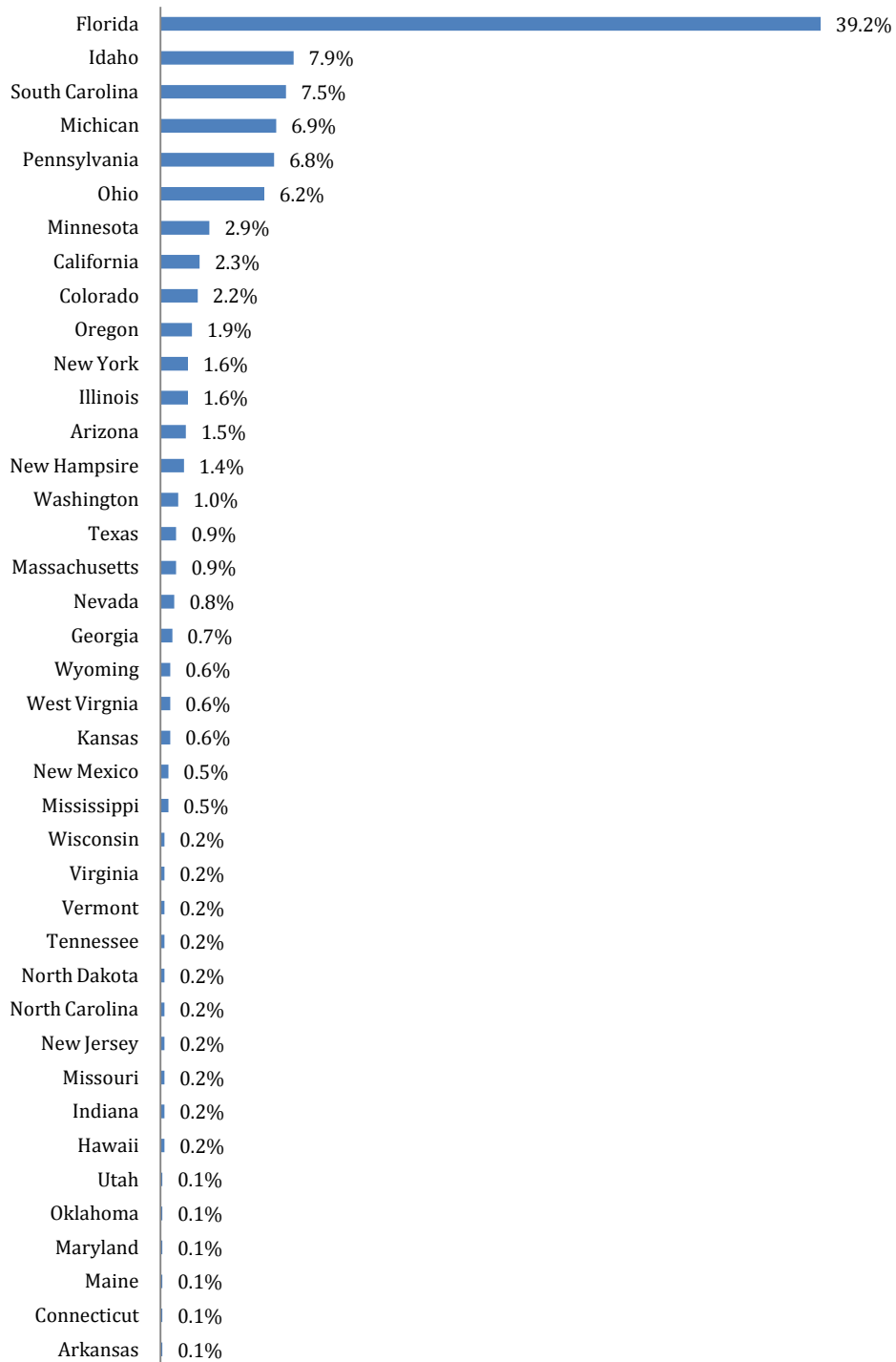| Organization	Percentage
Florida Virtual Schools	43.2%
Connections Academy	22.4%
Idaho Digital Learning Academy	7.7%
Michigan Virtual School	6.2%
K-12, Inc.	5.0%
TRECA Digital Academy	2.6%
South Carolina Virtual School	2.4%
Virtual High School Global Consortium	1.4%
Virtual Learning Academy Charter School	1.0%
Illinois Virtual School	0.9%
AccelerateU	0.9%
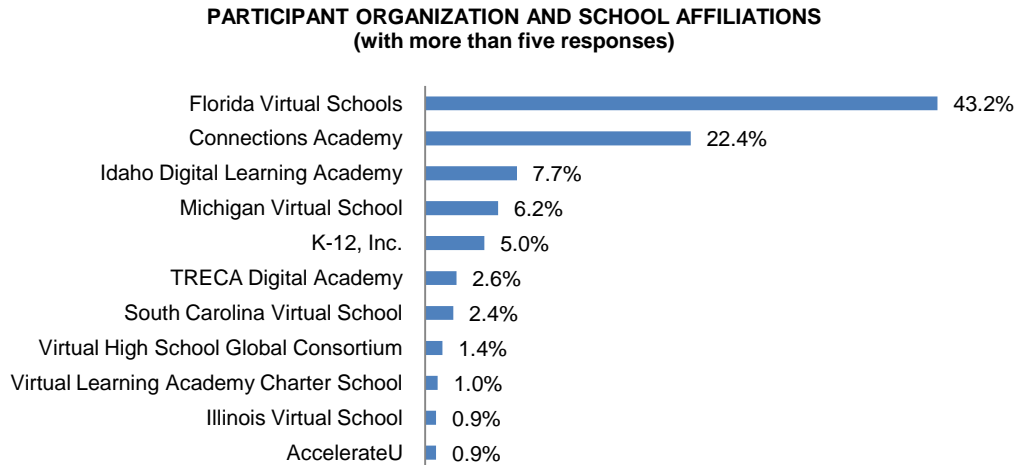
Countries in Which Participants Teach
(n= 9)

China
Brazil
Italy
Philippines
Malaysia
Japan
Australia
Thailand
Norway
Canada
Germany
France
Israel
Uzbekistan
Turkey
Virgin Islands
Dominican Republic
Costa Rico
Honduras
Columbia
Puerto Rico
Korea
Dubai
Mexico

States in Which Participants Teach

IN WHICH STATE DO YOU TEACH? (n=859)

State	Percentage
Florida	39.2%
Idaho	7.9%
South Carolina	7.5%
Michican	6.9%
Pennsylvania	6.8%
Ohio	6.2%
Minnesota	2.9%
California	2.3%
Colorado	2.2%
Oregon	1.9%
New York	1.6%
Illinois	1.6%
Arizona	1.5%
New Hampsire	1.4%
Washington	1.0%
Texas	0.9%
Massachusetts	0.9%
Nevada	0.8%
Georgia	0.7%
Wyoming	0.6%
West Virgnia	0.6%
Kansas	0.6%
New Mexico	0.5%
Mississippi	0.5%
Wisconsin	0.2%
Virginia	0.2%
Vermont	0.2%
Tennessee	0.2%
North Dakota	0.2%
North Carolina	0.2%
New Jersey	0.2%
Missouri	0.2%
Indiana	0.2%
Hawaii	0.2%
Utah	0.1%
Oklahoma	0.1%
Maryland	0.1%
Maine	0.1%
Connecticut	0.1%
Arkansas	0.1%

Note: Total n is greater than the number of survey respondents. Twenty-two respondents listed multiple states which have been included in the totals and nine indicated a home base but that they teach all over the country or the world.