10-31-2014

Online Professional Development for Child Care Providers: Do They Have Appropriate Access to and Comfort with the Internet?

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With the expansion of online trainings today, Extension professionals have an opportunity to reach child care providers in more convenient ways. However, having convenient, reliable Internet access can be a barrier to online training for some child care providers, especially those with limited financial resources. This study investigated child care providers' ability to access online training through convenient, reliable Internet access by asking 494 child care providers in Georgia about their access to and comfort with the Internet. Participants completed a brief 12-question survey that included questions about their Internet access and use for both personal and professional purposes (i.e., whether or not they have Internet access, where they have access, how often they use it, and how comfortable they feel using it). The majority of child care providers reported having Internet access (89.68%) and feeling comfortable using the Internet (68.62%), and therefore, have the technological resources to participate in online professional development.

Keywords: child care, online; professional development, Internet access, Internet comfort, Extension

Introduction

In 2012, there were about 1.3 million child care providers in the United States (Bureau of Labor Statistics, 2014). Although specific educational requirements vary from state to state, all state child care licensing regulations require some professional development training for child care providers each year. In Georgia, for example, child care providers are required to complete 10 hours of task-focused training annually in early childhood education, child development, or subjects relating to the job assignment. Many other states require more hours of professional development.

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Extension professionals in many states provide continuing education opportunities to meet the professional development needs of child care providers working in both center-based and home-based child care. The continuing education of child care providers is crucial to the quality of child care. Child care providers with a background in child development provide more sensitive and responsive care to children, and children whose caregivers are well-educated tend to be healthier and show better social and emotional adjustment (Burchinal, Cryer, Clifford, & Howes, 2002; Marshall, 2004; Whitebook, 2003). Some challenges can make the opportunities for continuing education difficult, including lack of money, accessibility, and scheduling problems (Olsen, Donaldson, & Hudson, 2010). Many of these barriers to continuing education can be overcome through the expansion of online professional development training that child care providers can complete on their own schedules (Olsen et al., 2010).

For the last 13 years, the Pew Research Internet Project (2014) has studied how the Internet impacts the lives of Americans. Not surprisingly, 87% of Americans report using the Internet in their everyday lives for a variety of purposes (Pew Research Internet Project, 2014). Those that do not use the Internet most commonly cite they do not use it because they find it unnecessary (Zickuhr & Smith, 2012).

With today's technological advances, online professional development trainings, seminars, and courses are gaining popularity over traditional face-to-face instruction in many professions. The Pew Internet and American Life Project surveyed presidents at colleges and universities throughout the United States and found that 77% of these universities offer online courses (Parker, Lenhart, & Moore, 2011). Since online courses can be either synchronous (everyone is online at a designated day/time to participate in video streaming, chat, etc.), asynchronous (materials are available online for participates to access on their own schedule), or a combination of both, these courses are more accessible and flexible, while still being comparable to traditional face-to-face instruction in terms of rigor and educational experience (Parker et al., 2011). The National Center for Education Statistics Fast Facts found that 20.4% of college students chose some kind of online course in 2007-2008 (U.S. Department of Education, 2011), and some colleges and universities are even moving to entirely online degree programs (e.g., Western Carolina University's Birth-Kindergarten Program in the Human Services Department).

Online education is also available as an option for many child care providers. Ohio State University and Johns Hopkins University, with support from the U.S. Department of Agriculture (USDA) and the Department of Defense (DoD), are developing a virtual child care lab school system as a primary training tool for child care providers on military installations (USDA & DoD, 2011). The virtual lab school will house customizable trainings for military child care programs around the world. Within Cooperative Extension, Texas A&M University and the Better Kid Care project at Penn State University are providing self-paced online training tailored specifically for child care providers (Penn State Extension, 2014).

Despite the popularity of the Internet and online education across the United States, an assessment team with the national eXtension initiative found some Extension professionals believe their audiences are unable to use technology for online professional development opportunities (Diem, Hino, Martin & Meisenbach, 2011; Zickuhr & Smith, 2012). Other Extension agents report their audiences are resistant to the use of technology and are not open to participating in online professional development opportunities when they are available (Seger, 2011; Zickuhr & Smith, 2012). Since developing interactive online courses for child care providers requires a significant investment of Extension funds and staff time, it is important to understand more about child care providers' access to technology and their comfort with using the Internet in order to determine whether online education is a viable option to meet their annual professional development requirements.

Since the primary requirement to attend online trainings is Internet access (Olsen et al., 2010), the purpose of the present study was to investigate access to and comfort with the Internet among child care providers in Georgia. We anticipate moderate availability and comfort with the Internet and variations in Internet use and comfort based on age. Specifically, we hypothesize those ages 60 or older will be the least comfortable using the Internet and will be less likely to access the Internet for professional development trainings.

Materials and Methods

Participants were a total of 494 child care providers attending conferences and face-to-face professional development trainings offered by county Extension agents in Georgia between October 2010 and March 2011. An informational letter and survey were distributed to all attendees at their conference registration or at the beginning of their training. Those who chose to complete the survey dropped it in a drop box before leaving the conference or training.

Participants completed a brief survey that included questions about their Internet access and use for both personal and professional purposes (i.e., whether or not they have Internet access, where they have access, how often they use it, and how comfortable they feel using it). Participants also provided basic demographic information (i.e., age, race, and highest level of education completed).

Results

Study participants came from 37.11% of Georgia counties and all four Cooperative Extension districts. More than 86% of participants were between ages 18 and 59, and more than half identified themselves as African American. Most participants had a high school diploma/GED or had attended but not completed college or technical school. Table 1 summarizes demographic characteristics of the study participants.

Table 1. Demographic Characteristics of Participants

Characteristic	*n*	*%*
Age (N = 483)		
Less than 18	3	.62
18 to 29	105	21.74
30 to 39	105	21.74
40 to 49	107	22.15
50 to 59	100	20.70
60 or older	63	13.04
Ethnicity (N = 491)		
African American	262	53.36
Asian	6	1.21
Caucasian	196	39.92
Hispanic	19	3.87
Other	8	1.63
Education (N = 489)		
Elementary school	1	.20
Some high school	23	4.70
High school diploma/GED	167	34.15
Some college/tech school	184	37.63
Associate's degree	49	10.02
Bachelor's degree	41	8.33
Master's degree	24	4.82

Descriptive statistics (means and percentages) were used to determine average scores on all survey questions. A majority of participants in this survey (89.68%) reported having Internet access. Of those who reported having Internet access, most have access at home (88.26%) and use it at least daily (71.72%). Participants were also asked to rank their frequency of Internet use on a scale of 1 to 6 (with 1 being *Once a year or less* and 6 being *At least once a day*). Table 2 (on the next page) shows participants' reported Internet accessibility and frequency of use.

Participants were also asked to rate their comfort with using the Internet on a scale of 1 to 4 (with 1 being *Not at all comfortable* and 4 being *Very comfortable*). Of the 486 participants who answered this question, 49.18% reported that they were *Very comfortable* with using the Internet, 20.58% reported being *Pretty comfortable*, and 22.02% reported being *Somewhat comfortable*. Only 4.73% participants who answered this question reported that they were uncomfortable using the Internet.

Table 2. Child Care Providers' Self-Reported Internet Access and Use

Characteristic	*n*	*%*
Internet Accessibility (N = 443)		
Home	391	88.26
School	71	16.03
Work	169	38.15
Phone or other mobile device	125	28.23
Other	20	4.51
Frequency of Internet Use (N = 435)		
At least once a day	312	71.72
At least once a week	71	16.32
At least once a month	20	4.60
Once every few months	16	3.68
A few times a year	8	1.84
Once a year or less	5	1.15
Never	3	.69

Tables 3 and 4 show the means and standard deviations for comfort and frequency of internet use as a function of age and education, respectively. ANOVAs comparing means between groups were also conducted to evaluate differences in Internet access and comfort between participants of different ages and levels of education (Table 5). Not surprisingly, participants between ages 18 and 29 were both the most comfortable using the Internet and used it the most often. In contrast, participants ages 60 or older were the least comfortable using the Internet and used it the least. Participants with a graduate degree were most likely to report being comfortable using the Internet and to use it the most often; those who only completed some high school were the least likely to report being comfortable using the Internet and used it the least often.

Table 3. Means and Standard Deviations for Comfort and Frequency of Internet Use as a Function of Age

Age	Comfort		Frequency	
	M	*SD*	*M*	*SD*
Less than 18	3.67	.577	5.67	.577
18 to 29	3.73	.542	5.75	.612
30 to 39	3.34	.853	5.71	.804
40 to 49	3.10	1.09	5.41	1.26
50 to 59	2.51	1.18	4.98	1.51
60 or older	2.37	1.21	4.33	2.12

Table 4. Means and Standard Deviations for Comfort and Frequency of Internet Use as a Function of Education

Education	Comfort		Frequency	
	M	*SD*	*M*	*SD*
Elementary school	3.00	---	5.00	---
Some high school	2.38	1.35	4.72	1.99
High school diploma/GED	2.91	1.14	5.24	1.38
Some college/tech school	3.12	1.01	5.32	1.31
Associate's degree	3.20	1.20	5.26	1.67
Bachelor's degree	3.50	.877	5.85	.366
Master's degree	3.63	.711	5.87	.626

Table 5. One-Way Analysis of Variance Summary Table

Source	*df*	*SS*	*MS*	*F*	*p*
Comfort v. Age	5	117.85	23.57	24.42	.000
Frequency v. Age	5	99.27	19.85	12.48	.000
Comfort v. Education	6	31.90	5.32	4.63	.000
Frequency v. Education	6	25.11	4.185	2.37	.029

Discussion

The findings of this study provide important information for professionals who are considering offering online professional development for child care providers. First and foremost, almost 90% of the child care providers surveyed in Georgia reported having access to the Internet at home, work, or on a mobile device. Since such a high percentage of child care providers report having Internet access, participating in online training (through Cooperative Extension and other sources) may be a viable option to meet their annual professional development requirements.

The results from this study indicate that the majority of child care providers both have access to and are comfortable using the Internet, which makes online professional development possible. Based on our findings, we recommend that Extension professionals designing training for child care professionals consider four key factors:

1. **Orientations and technical support are key components of online courses for child care providers.** In our study, child care providers who were older and had less education demonstrated less comfort with the Internet than those who were younger and had higher levels of education. When planning online training, Extension professionals may need to take the time to familiarize individuals who are less familiar with Internet technology and online courses with the specific online training methods and tools being used prior to the beginning of the online course. Providing a self-paced orientation that participants can complete before the course begins is one way to help increase comfort and reduce

challenges related to unfamiliar technology. Providing easy access to technical support throughout the online course experience is also essential to ensuring that all child care providers can navigate online professional development.

2. **Synchronous and asynchronous online training are different, but both can be effective.** Synchronous trainings are scheduled for a specific date/time, and everyone must be online at the same time to attend the training. Asynchronous trainings do not require child care providers to attend an online session at a specified date and time. Extension professionals develop the online training in advance and provide interactive materials (e.g., narrated presentations, videos, quizzes, and assignments) that those participating can access whenever they want during a defined period of time. Both synchronous and asynchronous training designs have benefits and challenges. Synchronous trainings have less time flexibility, but the set schedule and regular meetings ensure that participants complete the training in a timely manner. Asynchronous trainings may be more convenient because they can be completed at any time. However, they may take more time to complete because of the lack of firm deadlines. Creating a series of deadlines and requiring occasional check-in contacts may help ensure that child care providers complete asynchronous courses in a timely manner.

3. **When planning synchronous training, it is important to keep in mind the variations in where child care providers access the Internet.** Most child care providers work between the hours of 6 a.m. and 6 p.m. Approximately 80% of participants in our study reported having Internet access at home, 35% had it at work, 26% had it on their phone, and 14% had it at school. Providers who only have Internet access at home will need to attend online training after work hours. Child care providers who only have Internet access at work may only be able to attend synchronous online at a time when they can leave the classroom, such as during children's nap time or before or after work.

4. **Public library access is unlikely to work for online child care training.** Even though libraries have public Internet access, most child care providers are unlikely to go there to attend online training, possibly because of the time involved in completing an online training or the public nature of library Internet access. In our study, only 4.51% of participants reported having Internet access at the library. The 10.54% of providers who reported not having access to the Internet in the current study either did not know that Internet access was available at the library or did not consider the library a viable option for them to use the Internet.

As in every study, there are some limitations to the conclusions that can be drawn. First, data were collected only in the state of Georgia. This sample may not be representative of other states or of the United States as a whole. It is also important to note that the surveys in this study were

conducted almost four years ago. Internet familiarity and use has continued to increase since these data were collected, and therefore, the study may underestimate child care providers' access to the Internet and willingness to complete online professional development training. More current data may provide further clarification about the feasibility of online training as a strategy for Extension professionals to educate child care providers.

Despite these limitations, the results of this study suggest that online training may be a viable option for ongoing professional development for child care providers because most child care providers have the Internet connectivity and comfort with online technology to attend online training. Extension professionals can play an important role in developing and offering both synchronous and asynchronous online training that takes into consideration the work schedules, educational backgrounds, and adult learning styles and needs of child care providers. Orienting child care providers to the technology tools prior to the beginning of an online course and providing ongoing technical support for providers during online training are strategies to help those less comfortable with Internet technology participate successfully in online training.

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