K–12 Distance Educators at Work: Who’s Teaching Online Across the United States

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Abstract
Due to the current proliferation of virtual schools, a growing number of teachers are facing the challenge of teaching online. This study examines the demographic nature and experiences of K–12 online teachers. Findings show that online teachers are experienced in the traditional classroom, as indicated by their years of experience and the level of their advanced degrees. These teachers seek a better means to engage with students, a greater sense of community, and the ability to teach without the constraints of traditional teachings, such as a bell schedule or issues of classroom management. Data also suggest that aspects of teaching online, such as the number of classes/students, student motivation, and lack of support, can be overwhelming at times. Through this study, we are able to gain a better understanding of the educators themselves, including specific advantages and challenges of teaching in an online environment. (Keywords: Distance education, online education, virtual schooling, teacher preparation, K–12)

INTRODUCTION
Although modes and methods of teaching remained much the same during the 20th century, the development of recent technology has vastly changed the way we communicate, learn, and engage with one another. As a result, the 21st-century educational landscape has also been altered. One of these changes has been the addition of online distance education, specifically the proliferation of virtual schools in K–12 settings. These programs allow students to complete entire levels of schooling via the Web. In the case of virtual high schools, students are able to earn their diplomas through online distance education programs. Clark (2001) defined a virtual school as “an educational organization that offers K–12 courses through Internet or Web-based methods” (p. 1). To incorporate this mode of education, various formats have emerged from a variety of sources, including state, local, private, and nonprofit agencies. The extent of online content offered within these types of schools varies. Although certain virtual schools have been created to include curriculum that is entirely online, others have incorporated specific distance education courses that are offered in addition to their traditional classes held in “brick and mortar” buildings (Roblyer & Marshall, 2002–2003).

In all of their various inceptions, virtual schools can be viewed as part of the online distance education movement in which the Internet is used to provide
education to students. Virtual schools offer an organized set of courses leading to the completion of various grades, using the Internet as the primary means of communication. According to Russell (2004), “They emerged in the closing years of the 20th century, and can be understood as a form of schooling that uses online computers to provide some or all of a student’s education” (p. 2). Schools have the option of joining a larger nonprofit organization, such as Virtual High School Global Consortium (VHS, http://www.govhs.org), founded in 2001, while others develop courses either on their own or as part of other entities, such as an independent school district, a state-sponsored school, or a virtual charter school. Because virtual schools are mostly sponsored by states or local educational agencies, implementation varies widely, including the amount to which students complete learning activities via the Web.

Due to different implementation models, many terms have emerged to describe different types of online distance education within virtual schooling, including “e-learning,” “hybrid courses,” “asynchronous learning,” and “Web-based learning,” adding to the confusion of researching this particular field. However, in a recent report regarding online distance education, Allen and Seaman (2006) developed specific definitions:

- **Online**: Course where most or all of the content is delivered online. At least 80% of seat time is replaced by online activity.
- **Blended/hybrid**: Course that blends online and face-to-face delivery. Between 30 and 79% of the content is delivered online.
- **Web-facilitated**: Course that uses Web-based technology to facilitate a face-to-face course. Between 1 and 29% of the content is delivered online.

Various examples of online education can be found under each of these models. For example, Arizona Virtual Academy, now run as part of the nationwide online distance education provider, K12™, offers a completely online learning experience for students from grades K–12. For the 2006–2007 school year, Arizona Virtual Academy served 3,046 students from across the state of Arizona (Arizona Department of Education, 2008). Students attend this program full time and can complete their grade levels online. Similar programs are found in Alaska, Arkansas, California, Colorado, Florida, Georgia, Hawaii, Idaho, Indiana, Kansas, Minnesota, New Jersey, Nevada, Ohio, Oregon, Pennsylvania, South Carolina, Texas, Utah, Washington, Wisconsin, and Wyoming.

Other programs, such as Odyssey Charter School in Las Vegas, Nevada, combine online learning experiences with a requirement of meeting face-to-face in a blended or hybrid approach. In this model, the Web is used to deliver a majority of the content, but students also meet with their teachers at their home for grades K–7, or, for upper grades (8–12) they attend a one-day-a-week, 4-hour course on campus. With the hybrid model, the student is still enrolled full time in the program but attends the course in a combination of online and face-to-face formats.

Finally, many schools have seen the growing trend of online education and have begun to offer a portion of their face-to-face courses online in either a Web-facilitated or blended model. Typically, students participating in these
programs receive a majority of their instruction in a face-to-face environment but have a portion of their class online. For example, part of Texas Tech’s Outreach and Distance Education program offers standalone online content to K–12 students to supplement their traditional school curriculum.

Within each of these models, K–12 online education has emerged as a growing and legitimate form of schooling in the 21st century. To date, research in this area has focused on student characteristics, student achievement, and predictive measures for student success in online environments (Cavanaugh, Gillan, Kromrey, Hess, & Blomeyer, 2004; Rice, 2006; Roblyer & Marshall, 2002–2003). Little is known about the population of educators who teach online, their characteristics, preparation, and whether or not they differ from the general population of those who teach in traditional settings. The current study surveyed K–12 online teachers from across the nation to describe the population of those teaching in online environments. These teachers were surveyed with regard to general demographic information including age, race, gender, ethnicity, educational background, and years of teaching experience. Online teachers were also asked open-ended questions regarding their overall experience and how they came to teach in an online environment. Using a survey methodology, this study gathered data to begin examining the population of K–12 online distance educators.

Current Status of Distance Education in the K–12 Setting

To understand the scope of virtual schools, it is helpful to gain an overall picture of the current status of online K–12 education in the United States. In a national survey of 2,305 public school districts in the 50 states and District of Columbia, Setzer, and Lewis (2005) found that during the 2002–2003 school year, approximately one third of public school districts (36%) had students enrolled in online distance education courses. Of the total enrollments in online distance education courses, 68% of students attended high schools, 29% attended combined or ungraded schools, 2% attended middle or junior high schools, and 1% attended elementary schools (Setzer & Lewis, 2005). In fact, the most recent national data show that, of a survey of 867 school districts, 69.8% of the districts reporting had at least one student who had taken an online course in 2007–2008, with an additional 12.3% planning to have at least one student take an online course within the next three years. (Picciano & Seaman, 2009). According to the researchers, “These data clearly reflect that the vast majority of American school districts are providing some form of online learning for their students and more plan to do so within the next three years.” (Picciano & Seaman, 2009, p. 9). An estimated 600,000–700,000 K–12 public school students were engaged in online learning in 2005–2006, and this figure increased to approximately 1,030,000 students during the 2007–2008 school year (Picciano & Seaman, 2007, 2009). This represents a 47% increase in enrollments in two years, and these figures are expected to increase as more school districts explore the potential advantages of offering online classes, including addressing growing student populations, dealing with the challenges of limited space, scheduling conflicts, failed courses, and meeting the needs of
specific groups of students by allowing them to take courses for credit recovery or Advanced Placement, and/or courses that are beyond a limited geographical area (Setzer & Lewis, 2005).

The proliferation of distance education programs in K–12 settings has resulted in the emergence of virtual schools. These programs, such as Arizona Virtual Academy, which offers K–12 online, allow students to complete entire levels of schooling via the Web. In the case of virtual high schools, students are able to earn their diplomas via online distance education programs. Virtual schools have been in existence since the proliferation of the Internet in the mid-1990s, and they continue to grow at a significant pace, with 72% of school districts planning to expand distance education courses in the future (Setzer & Lewis, 2005).

With the growing population of K–12 online students and teachers, it remains to be determined if the characteristics of this group of teachers differ from the notion of what it means to be a teacher in a traditional classroom. The current understanding of what teachers should know and be able to do is based on a traditional classroom setting. However, as the number of virtual schools increase, so too do the number of teachers entering the field of online distance education. Research that focuses on teachers’ knowledge of content, pedagogy, and technology as it pertains to teaching in an online environment is going to become increasingly central to the quality of K–12 online distance education and how teacher education programs address the needs of this group of educators.

This study describes the population of those teaching in K–12 online environments through data collected via a national survey. Although a variety of types of virtual schools exist, this study focused primarily on those schools that are sanctioned by states, either through a charter, local education agency, university, or state program. These schools fall under jurisdictions similar to their traditional counterparts, and therefore are required to hold teachers to the same state licensing and highly qualified standards. Although states have a great deal of discretion in setting these requirements, they must include a college degree, demonstration of subject-matter knowledge, and meeting any state licensure/certification requirements (No Child Left Behind Act, 2001). Online teachers who met these criteria were surveyed with regard to general demographic information including age, race, gender, ethnicity, educational background, and years of teaching experience. Through the gathering of these data, the current study sought to answer the following research questions:

What are the demographic characteristics of those teaching in online K–12 distance education programs in the United States?

What are online educators’ overall impressions and experiences with teaching in a virtual environment?

METHODOLOGY

The population surveyed consisted of teachers throughout the United States who taught or had previously taught at least one online class with K–12 students in a state-sanctioned virtual school. This study focused on teachers from
virtual schools sponsored by states, universities, lead educational agencies (LEAs, such as individual school districts), or virtual school consortia. A non-random purposeful sample was used to gather as many online teacher responses as possible. This technique is described by Patton (1990) as the process of selecting specific information-rich cases from which the investigator can learn significant information central to the research. In this case, criterion sampling was used to select participants based on predetermined characteristics—specifically, educators who currently teach at least one class in a state-sanctioned K–12 virtual school. To find e-mail addresses of K–12 online teachers, the researchers conducted searches for specific state-sponsored schools identified by Keeping Pace with K–12 Online Learning (Watson, 2005; Watson & Ryan, 2006), an annual report on K–12 online learning in the United States. Typically, these schools have faculty/staff links on their Web sites that list the names and e-mail addresses of the teachers, administrators, and staff at that particular location. We collected a total of 2,262 e-mail addresses from K–12 online teachers from state- and university-sponsored virtual schools.

Because an appropriate instrument measuring the intended variables did not exist in the literature, and many of the questions were of a general demographic nature, we developed a questionnaire (see Appendix A, page 387). The variables measured in the survey consisted of general background information such as educational level, number of years of teaching experience (both in traditional as well as online environments), and basic demographic information (e.g., age, gender, and ethnicity) (see Appendix). The survey also captured qualitative data by asking open-ended questions, including:

- Describe the career path that led you to teaching online. Was this type of teaching always a goal?
- What led you to your current position?
- Describe your overall experience with teaching online K–12 students.

Data gathered from these open-ended questions allowed the researchers to more fully describe this particular teaching population and the unique challenges they face.

Of the of 2,262 e-mail addresses that we gathered, 413 bounced back as undeliverable. Forty-eight of these e-mail addresses had typographical errors that we corrected and resent successfully. As a result, we deployed the survey to 1,795 online teachers employed at virtual schools from across the nation using Dillman’s (2007) Tailored Design survey methodology. We gathered a total of 596 responses from 25 different states, representing an overall response rate of 33%. Participants represented the following states: Alaska, Arkansas, Arizona, California, Colorado, Connecticut, Florida, Georgia, Idaho, Illinois, Kansas, Minnesota, North Carolina, North Dakota, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Texas, Utah, Virginia, Washington, and Wisconsin. Of these states, the majority of responses came from Pennsylvania (14.4%), Idaho (13.6%), Arizona (10.2%), and Nevada (9.1%). The next section describes data gathered from this study, followed by a discussion of findings and their implications.
RESULTS

Participants were predominantly female, with 456 responses (77%) versus 139 (23%) male, and were between the ages of 26 and 35 (201, 34%) and 36 and 45 (172, 29%). The mean age range was 36–45 (Figure 1).

In addition, 534 (91%) of respondents were white/Caucasian, 16 (3%) were Hispanic, 11 (2%) were black/African American, 7 (1%) were Asian/Pacific Islander, 13 (2%) were of mixed racial background, 3 (<1%) were Native American, and 16 (3%) were of another background, including those who indicated that they preferred not to answer the question regarding race.

Education Level

Although 37 respondents (6%) did not indicate a response for the area of their bachelor’s degree, 559 (92%) reported having a bachelor’s degree. Examining the areas of their bachelor’s degrees revealed that, of the K–12 online teachers who responded to the survey, 5 (1%) had bachelor’s degrees in early childhood education, 77 (14%) were in K–12 education, 89 (16%) were in elementary education, 127 (23%) were in secondary education, and 261 (47%) indicated a particular content area (Figure 2, page 369). Of the content areas that were reported, major areas included English (including literature), science (including biology, botany, chemistry, and zoology), social studies (including American Studies, history, and political science), and mathematics.

Of the K–12 online teachers who responded to the survey, 380 (62%) indicated that they had earned a master’s degree, and 7 (2%) reported they were currently working toward their master’s degrees. Of the 62% with master’s degrees, 148 (48%) were education (M.Ed.) degrees, including those in curriculum and instruction, while 73 (19%) reported having a degree in a particular content area, such as mathematics, science, social studies, or English. Interestingly, 50
(13%) had master’s degrees in educational technology, and 3 participants (<1%) indicated having a master’s degree in distance education. It may be that those involved in teaching online have a stronger interest in issues related to educational technology and that this background better prepares them for teaching in an online environment. Another major area for graduate degrees held was educational leadership/administration, with 34 (9%) teachers (Figure 3, page 370).

Only 18 respondents (3%) indicated that they had earned a doctoral degree in education, administration, or the content areas of science or public affairs. One individual reported earning a doctoral degree in online education, and another person reported having a doctorate in life studies. Eight K–12 online teachers (1%) indicated that they were currently working on their doctoral degrees.

In addition to undergraduate and graduate degrees, 43 participants (7%) indicated that they had additional certifications in a variety of teaching areas, including administration, special education, and content areas such as English, science, and social studies. Two respondents (<1%) stated that they had specific certifications in online teaching. Five teachers (1%) indicated that they had two master’s degrees related to education, and one (<1%) had three master’s degrees including an MEd, an MA in administration, and a master’s of business administration (MBA).

**K–12 Online Teachers**

In analyzing the major roles of those who responded to the current study, 318 (54%) stated that they were regular full-time teachers, and 212 (36%) reported that they were part-time teachers who also taught either at another
online school or in a traditional, face-to-face environment. Thirty-five (6%) reported having another role in addition to teaching within their school, such as an administrator, curriculum specialist, instructional designer, or staff developer. Three (<1%) indicated that they were “combined” teachers or long-term substitutes. Twelve (2%) indicated an “other” response representing primarily additional roles they had within the school such as customer service, mentor, learning coach, or special education facilitator (Figure 4).

Teaching Field

We also gathered data about online teachers’ main teaching fields (Figure 5, page 373). Traditional subjects that were reportedly taught online were evenly distributed among mathematics (80, 13%), science (84, 14%), language arts/reading (101, 17%), social studies (86, 14%), and humanities (69, 12%). These major fields accounted for 74% of responses (Figure 5, page 373). Teaching fields classified as “other” accounted for 26% of responses and included elementary, all subjects, special education, PE/Health, business, computers, or a combination of two or more major areas, such as language arts combined with mathematics.

Within the “other” category, K–12 online teachers reported teaching all subjects (6, 4%), elementary classes (54, 36%), business (16, 11%), computers (13, 9%), special education (16, 11%), a combination of fields (12, 8%), and PE/health (19, 13%). Additional fields represented by 14 teachers (9%) included mentoring, driver’s education, study skills, and agriculture.

Grade Levels Taught

K–12 online teachers reported the specific grades they taught online. The majority of online teachers surveyed reported teaching at the high school level.
Specific Classes Taught Online

Specific classes reportedly taught online within the field of English/language arts include American literature, British literature, composition, writing, journalism, publications, mythology, science fiction/fantasy, and creative writing. Mathematics courses were made up of pre-algebra, algebra I and II, geometry, precalculus, calculus, trigonometry, and consumer mathematics. Online courses taught within the field of social studies consisted of U.S. government, politics, civics in cyberspace, world history, geography, economics, and global studies. Science classes included general science, physical science, life science, biology, marine biology, environmental science, physics, astronomy, earth science, chemistry, biotechnology, and anatomy. Elective courses consisted of a variety of foreign languages (e.g., Spanish, German, Latin, Chinese, and French) as well as business law, art and music history/appreciation, driver’s education, computer applications, and study skills.
Years of Teaching Experience

K–12 online teachers responding to the survey had an average of 14 years of teaching experience in both traditional and online environments. The minimum number of years of experience was 1 year, and the maximum number was 50 years. Experience specific to the current school, representing online teaching, was lower, with an average of 4 years. The minimum was 0 years of experience (the 2007–2008 school year was the first year of teaching online). The maximum number of years of experience was 32, although it was noted that this number also included years of experience with distance education as well as online distance education.

Comparison of Teaching Field and Educational Background

This study found that the vast majority of the online teachers responding (485, 87%) were teaching classes specifically related to the areas they reported for their educational background. Ten percent of teachers (55) were outside their area of expertise, and 3% (18) of responses did not provide enough detail to make a determination. The highest rates of online teachers educated within their field included those in the area of language arts (78, 14%), followed closely by those in social studies (76, 14%) and science (74, 13%). Another 56 online educators (10%) were teaching within their field in the humanities, including foreign language and the arts. In contrast, 55 online teachers (10%) indicated that they taught in a field other than one in which they were prepared. This was particularly evident in the area of mathematics, which represented 45% of those teaching outside their field. It appears that the ongoing struggle

Table 1: Percentage of Teachers by Grade Level Taught

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<thead>
<tr>
<th>Grade Level Taught</th>
<th>Number of Respondents</th>
<th>Percentage of Total</th>
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<tbody>
<tr>
<td>Prekindergarten</td>
<td>5</td>
<td>&lt;1%</td>
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<tr>
<td>Kindergarten</td>
<td>78</td>
<td>3%</td>
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<tr>
<td>1st</td>
<td>81</td>
<td>3%</td>
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<tr>
<td>2nd</td>
<td>81</td>
<td>3%</td>
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<tr>
<td>3rd</td>
<td>93</td>
<td>4%</td>
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<tr>
<td>4th</td>
<td>141</td>
<td>6%</td>
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<tr>
<td>5th</td>
<td>100</td>
<td>4%</td>
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<td>6th</td>
<td>122</td>
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<td>12th</td>
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for traditional schools to find qualified math teachers is also felt by online schools. These findings could be related to the current era of No Child Left Behind (2001) and the push for educators to become highly qualified in the areas in which they teach. It is likely that virtual schools also feel the impact of this requirement, especially those that are overseen by states and school districts, which are funded by public dollars.

Nature of K–12 Online Schools and Classes

We also gathered data about the characteristics of K–12 online school and the nature of specific classes as part of the current study. The majority of participants (223, 38%) reported teaching at a state-sanctioned, state-level virtual school, with 132 (31%) teaching at a virtual school operated in conjunction with a lead educational agency. Additional responses included virtual school consortia (64, 11%), a private virtual school (47, 8%), and other virtual school (53, 9%). Those that selected “other” responded that they worked at a virtual charter school, a school that encompasses elements of a state-level and district-level virtual school, or a nationally accredited online school (Figure 6, page 374).

The nature of the online classes was captured through a variety of elements, including the number of online classes taught, the format of those online classes (the amount of instruction taking place online), and the extent to which instruction happened in real time (synchronous) versus offline. A total of 467 respondents (80%) indicated that all of their classes were taught online, whereas 38 (7%) taught half of their courses online and 50 (9%) taught less than half of their courses online. The remaining respondents indicated that none of

![Figure 5: Main Teaching Field](image-url)
their courses was currently taught online, although correlating these responses with those from the first question found that, although these teachers did not currently teach online, they had done so in the past. These online teachers had moved on to mentoring online teachers, helping students as a content-area learning coach, serving in an administrative role, or teaching as independent contractor on an as needed basis.

In examining the amount of instruction taking place online, 80% reported teaching their entire class online, with the majority of face-to-face instruction replaced by online activity. Hybrid classes with 30–79% of the class taught online were reported by 7% of online teachers. Finally, 13% indicated that their classes were Web-facilitated, with 1–29% of instruction taking place online. In addition, 81% of online teachers reported that their instruction took place asynchronously, as there was no specific time that their students were required to be online to receive instruction. Twelve percent of online teachers responded that there were certain specific times when their students had to be online to receive brief instruction, whereas 6% stated that instruction took place synchronously and that their students were required to login at predetermined times to receive complete instruction.

Number of Students and Classes Taught

K–12 online teachers responding to the survey reported teaching an average of 97 students. However, there was a wide variance in responses, from no current students to up to 2,000 students. Although 2,000 seems rather large, this number was indicated by a teacher who also served as a guidance counselor who taught such classes as character education, career exploration,
and academic development. It may be that this individual counted all of the
students with whom she came into contact, resulting in a larger number than
what would be expected. Several teachers also indicated that the number of
students they taught varied or was difficult to determine. One teacher indicated
that the number of students she taught was impossible to determine because her
students enrolled at any point in time and worked at their own pace.

In reviewing the wording of the question regarding the number of students,
the intention was to seek the number of current students per teacher. However,
the question asked, “What is the number of students you teach online? Count
each student only once.” As such, it lacked a specific timeframe (i.e., number of
students per quarter, semester, year), and this may have resulted in some confu-
sion. Despite this, one theme related to this item was the large volume of stu-
dents that online teachers are being asked to serve. Because there are no physical
constraints, such as the number of desks that would fit in a typical classroom,
online teachers are being asked to take on larger numbers of students, and this
has the potential to impact the quality of the class, as one teacher noted in her
response: “I teach 210–250, though fewer would be far more effective.”

In addition to the number of students, 152 (28%) reported teaching one
group of students, whereas 121 (22%) taught seven or more groups of stu-
dents. Eighty-nine (16%) taught two groups of students, 64 (12%) taught
three groups of students, 57 (10%) taught four classes, and 32 (6%) taught five
classes, and 37 (7%) taught six classes.

In addition to the groups of students taught online, surveyed teachers also
reported the primary author of the content used to teach online, selecting as
many sources as appropriate. A total of 219 (38%) responding K–12 online

Figure 7: Percentage of Online Content Authorship
teachers indicated that they were the authors themselves, whereas 240 (42%) reported using a content provider such as Apex Learning, K–12 curriculum, or Virtual High School. A curriculum specialist was cited as the primary author by 114 (20%) of online teachers, whereas 92 (15%) cited a colleague. Forty-two (7%) selected “other” as the primary author, and this included collaborations among various individuals such as the teacher together with a curriculum specialist or colleague. Other sources indicated included Web resources, traditional texts, online consortiums, and textbook publishers (Figure 7, page 375).

In addition to basic descriptive information that was gathered as part of the current study, online teachers were also asked to describe their overall experience with teaching online in an open-ended format. Participants were presented with the sentence starter “My experience with online teaching can be described as…,” from which they could begin their answer. We gathered a total of 495 responses; however, 13 (3%) of these responses discussed the nature of the participant’s position, covering aspects of how long and in what roles the teacher had taught rather than a descriptive narrative of his/her experience. Because these data were captured by previous questions in the survey, we discarded responses that were not of an impressionistic, descriptive nature. We then coded the remaining 482 responses according to overall impression, including positive and negative aspects of teaching K–12 online distance education. Overall, 305 (63%) comments were positive toward their online teaching experience, and 38 (8%) were negative. Comments that were characterized as having both positive and negative elements accounted for 139 (29%) of responses.

The majority of K–12 online teachers reported having a positive overall experience and shared a number of benefits, including not having to deal with the
frustrating aspects of the traditional classroom such as classroom management. Within the positive category, there were 26 distinctions (59%) with overall impressions such as positive, rewarding, good, enjoyable, wonderful, fulfilling, great, excellent, and exciting. For example, one teacher described her experience as “wonderful,” citing the ability to work with student individually and to actually “teach”:

My experience with online teaching can be described as wonderful! I love teaching online. I am able to work with students on an individual level. I can assist them at the level they need. Also, the organization I work for believes that the student is at the center of all we do. Teacher training is amazing. I now expect so much more of myself and other educators. I wish all teachers could experience a situation like this. We are able to teach! What a great feeling.

Another teacher discussed her overall experience as being positive and explains that she loves everything about her position, including not having to worry about classroom management:

My experience with online teaching can be described as...100% positive! I love every aspect of this job. Online school is not for every student (or teacher) but is wonderful for those of us it fits. Online school requires much more discipline on the part either of the student or the parent (who we call the learning coach). All classroom management problems and discipline problems have been taken out of my hands. I can only encourage, offer limited incentives, and inform. So the student/parent must be the source of motivation.
Figure 8 (page 376) displays the percentage of positive comments by category for the open-ended question “Describe your overall experience with teaching online K–12 students.”

Other teachers did not have a favorable experience with online teaching and expressed their frustration with the overwhelming nature of the position. This was described by one individual as “disappointing”:

My experience with online teaching can be described as disappointing due to lack of support, the number of errors in the curriculum, lack of student discipline to complete assignments at an appropriate time, low pay, difficult programs and lack of technical support, the number of different classes (5) made it difficult to prepare effectively, poor student effort to improve, lack of support from student’s schools, no little parent involvement, lack of application to AP Exams in May.

Another teacher described the experience as “challenging,” in a frustrated tone:

My experience with online teaching can be described as...challenging. I don’t believe that the role of an online teacher has been defined at this time. For example, high school teachers are often expected to carry student loads far and above that that would be allowed in a traditional classroom—especially at the high school level—because the technology can replace certain roles a traditional teacher fills. However, individualized communication with these students is disproportionate to the time a traditional teacher spends in communication.

Other negative categories coded from the primary data included challenging, frustrating, difficult, negative, not as good as face-to-face instruction, overwhelming, formal (inflexible), and terrible. Figure 9 (page 377) displays the percentage of negative comments by category for the open-ended question “Describe your overall experience with teaching online K–12 students.”

Four categories have elements of both positive and negative characteristics, and this “mixed” distinction accounted for 29% of responses. The four categories included challenging but rewarding (74, 56%), learning experience or learning curve (42, 30%), mixed (17, 13%), rollercoaster (i.e., ups and downs) (4, 3%), and similar to face-to-face teaching (2, 1%).

“Challenging but rewarding” was a phrase used by many of the K–12 teachers to express both their concern about the position, including that it was time consuming and not suited for all students, as well as the perceived benefits, such as the ability to work one on one with students and to get to know them and their families better than they would in a traditional classroom. This was exemplified by one teacher’s response:

My experience with online teaching can be described as...challenging and rewarding. I have the opportunity to work with families
who have an interest in their child’s education. I have found that to be refreshing. I also work with inner city students without worrying about teaching and living in the inner city. I find working with them to be very rewarding. There are many challenges though. I work harder now than ever before. No two years are ever the same.

Other respondents in this category expressed their overall experience with K–12 online distance education as “mixed” or a “mixed bag,” again reflecting an overlap between positive and negative reactions. However, the value judgments are missing in this category. It simply denotes a mix between advantages and disadvantages of online teaching. For example, one teacher explains:

My experience with online teaching can be described as a mixed bag. I have taught remedial to AP courses, so I have run the gamut. The motivated students do well, the unmotivated do not and are harder to contact than in face to face school. Otherwise it is pretty much the same. Also I have far more one on one time with my online students than with my face-to-face kids.

Another category having both positive and negative elements is learning experience. This classification has beneficial aspects, such as growing and gaining confidence in one’s skills. It also has challenging characteristics including becoming frustrated, especially with having to learn various types of technology. On the positive side, one teacher writes:

My experience with online teaching can be described as a learning experience! I have learned so much about computers/software/trouble-shooting. I would have never thought I could do so much on a computer. If you had asked me 8 years ago to even try to complete some of the work I now do I would have been flabbergasted! So, I learn and the students learn and we try to keep it educational, but still fun. This is a great teaching environment for teachers who are self-motivated, willing to learn, and who are good with doing a lot of work independently.

On the down side of learning experience, another teacher explains:

My experience with online teaching can be described as...a learning experience. I’ve experienced difficulties with an online textbook and had students experience technical difficulties, but I’m learning a lot.

Other teachers in this category describe their learning experience as a “learning curve”:

My experience with online teaching can be described as a steep learning curve. The teaching skills/practices are basically the same. It is the technology and software that have been a challenge to learn. I find it a terrific opportunity to try new ideas with my students because the computer opens up a whole new world to them. Many of them (3rd & 4th graders) are better at it than I am!
The term rollercoaster was used by a few teachers to describe the highs and lows of the online classroom. Teachers reporting that this characterized their overall experience described it as having its ups and downs and used the analogy of a rollercoaster to convey this sentiment:

My experience with online teaching can be described as...a rollercoaster. Just like in face-to-face teaching the students are always ups and downs that come along. Our virtual classes have rolling enrollment which makes creating a group dynamic with classroom interactions a challenge. Many of my students are at-risk and just getting them to enter the course and continue working is a challenge, but I know the ones that do make it through that is one more student that I helped to be successful instead of dropping out.

Finally, two individuals described K–12 online teaching as being similar to that of the traditional, face-to-face classroom. They highlighted the pros and cons and saw similar issues that a teacher has to face in both environments:

My experience with online teaching can be described as very similar to the traditional teaching experience: students still have the same issues, colleagues are still helpful and cooperative, and administrators are still harried and demanding. Differences are: online students are more prone to procrastination—I had to develop new methods for keeping them moving; plagiarizing is easier for students—I have to be more aware of the possibility of copying and pasting; technical problems are more of an issue—students are directed to technical help either at their local school or the virtual high school staff; students think a computer-based course will be easier—I have an extensive syllabus that dispels that notion at the outset.

DISCUSSION

There are many similarities between K–12 online teachers responding to the current study and a national sample of 63,135 traditional teachers from across the United States (Strizek, Pittsonenger, Riordan, Lyter, & Orlofsky, 2006) responding to the National Center for Educational Statistics’ School and Staffing Survey. According to these data, the average age for a traditional teacher in the United States is 42.5. Of responding traditional teachers, 25% were male and 75% were female. In terms of racial background, traditional teachers are 83% Caucasian and 17% minorities, a group that is comprised of 8% African American, 6% Hispanic, 2% Asian, <1% Native American, and <1% mixed racial background. These demographic data are consistent with those reported by K–12 online teachers. The areas in which online teachers differed from their traditional counterparts included full-time versus part-time employment, years of experience, and levels of education.

Ninety-one percent of traditional teachers taught in regular, full-time positions, whereas only 3% taught in part-time roles and the remainder taught in combined and substitute positions (Strizek et al., 2006). This is compared with 54% of surveyed online teachers in full-time positions and 36% working in the
field part time. In addition, 18% of traditional teachers had three or more years of teaching experience, and 82% had four or more years of experience. With online teachers, this figure was even more pronounced, with 10% teaching for three years or fewer, and 90% having four or more years of experience. Interestingly, online teachers responding to the current study who worked in a full-time capacity had an average of 12 years of both face-to-face and online teaching experience, with 3.9 years of online teaching experience. Those teaching online in a part-time role had an average of 16 years of overall teaching experience and 4.3 years of online teaching experience.

Another area in which those surveyed from traditional teaching environments as opposed to online ones differed was level of education. Although the attainment of bachelor’s degrees was identical by percentage (92%) for both groups, online teachers reported a higher incidence of master’s degrees, at 62% versus 41% of traditional teachers. Also, 13% of online teachers reported having degrees and certifications beyond or in addition to a master’s degree, as opposed to 7% of traditional teachers (Strizek et al., 2006).

The similarities and differences in demographic characteristics between traditional and online teachers tell only one part of the story. A more detailed profile is achieved by closely examining the open-ended responses provided by respondents to the current study. Although many cited the ability to stay at home with their children as the predominant reason for becoming involved with online teaching, 14% expressed their desire for a new and innovative way of teaching and a better way to connect with students. This, combined with 5% who were overwhelmed with the demands of traditional teaching and 3% who felt that online teaching was the future of education, depicts a portrait of online teachers who have taught in the traditional classroom and find online teaching a better way to engage with the content and students. Many of these teachers see themselves as pioneers in a growing, ever-changing, and still developing field. One teacher summarized:

My experience with online teaching can be described as fulfilling. I really feel that I can help each student individually. This is extremely challenging in a traditional classroom. I also enjoy the pioneering atmosphere in which we are helping create a new vision of education, a wonderful opportunity to explore the new and growing area of online education. My experience began as just a job, but has grown into a career which I have become passionate about. I feel that I am making a positive difference in the lives of the students that I come in contact with as I am able to help them achieve their educational goals.

Another 3% of online teachers reported that they were retired, and 2% reported that they were planning to teach online during their future retirement from the traditional classroom. This was a surprising result and represented the most seasoned and experienced teachers among the sample, with up to 40 years of traditional teaching. These individuals want to continue in the field that they
love while being able to have the flexibility to enjoy their retirement, including travel. They also can continue to make connections with students, which is particularly rewarding. One retiree wrote:

My experience with online teaching can be described as very good. We have lots of support and a couple of training type sessions per year. There is far less stress because we lack face to face interaction and that seems to free both sides to be more open. Students still try to pull off some plagiarism and cheating, but usually I can catch that. I love that my time is free and as a retired person, I can walk the dogs etc and still make a little money working in the field I love. I am particularly happy when I “connect” with a student and do a little encouragement and/or career counseling.

From the comparison to their traditional counterparts, as well as an examination of their open-ended responses for becoming involved with online distance education, it seems that those teaching in online environments are surprisingly experienced in the traditional classroom, as indicated by their years of experience and their levels of advanced degrees. The profile of an online teacher, as depicted from this study, includes those who are seeking a means to engage with students, parents, and content via the Internet in order to meet a variety of needs including a greater sense of community; a better, albeit different, connection with students and parents; and the ability to teach without the constraints of a bell schedule or having to contend with issues of classroom management. From the descriptions of their experience with online teaching, they also appear to be innovative, adventurous, and willing to take on a challenge. Three percent of respondents expressed that they wanted to pursue online teaching to be able to combine their love of technology and teaching, and two specifically believed that their experiences with online teaching had made them better face-to-face teachers, as expressed in this comment:

My experience with online teaching can be described as exciting and challenging. Science is one of the most difficult courses to teach in an online environment. It is also probably the most criticized by content face to face teachers. I have had to be more creative with my instruction as well as how I create my assessments. My online instruction has made me a more effective face to face teacher.

The profile of an online teacher built from the current study consists of those who are willing and eager to pursue a new and innovative way of teaching that poses a unique set of benefits, especially being able to directly create and adapt content for use with students. This could explain the higher level of education, as these individuals seek out challenge and champion the learning process related to education, content-related areas, educational technology, and even distance education. In addition, in searching for a new way to engage, interact, and connect their content with students, this may imply that teachers had reached the pinnacle of their traditional teaching and sought a different
challenge that also afforded them more flexibility, along with a greater focus on actual teaching. This could also account for the additional years of overall teaching experience for K–12 online teachers responding to the current study.

Implications

This study has important implications for the field of online distance education and its teachers as well as for programs of teacher education who are preparing tomorrow’s educators for the online classroom, whether they realize it or not. The latest prediction is that, in 6 years, 10% of all high school classes will be offered online, and by 2019, this figure will increase to 50% (Christensen & Horn, 2008). This is happening for a variety of social, economical, and political reasons. From the current study, data support that the vast majority of online teachers are coming from traditional classrooms. Thirty-six percent are working in the field part time, and many are teaching both face-to-face as well as online classes. It seems logical that teachers who have a solid foundation in their content and pedagogical knowledge may have an easier transition to the online classroom. This is a consideration that virtual schools will have to make in their hiring processes. Many major virtual schools such as K12™ require 3 years of teaching experience in a specific content area as well as state certification and high qualifications. As the number of students in online classrooms continues to expand, the need for prepared teachers will become increasingly important.

Although teachers are currently coming from the traditional classroom to teach in online settings, as the demand for online teachers increases, more educators will be recruited directly from undergraduate programs. Currently a majority of teacher education programs address teaching with technology in a single, isolated technology course (Hargrave & Hsu, 2000; Kay, 2006). This lone technology course is already stretched wide to cover a multitude of technology-related topics as they pertain to quality teaching. It is unlikely that this type of course, or undergraduate programs as a whole, are addressing the needs of those who will go on to teach in online environments. This puts a huge burden on the virtual schools themselves, which must then provide professional development to get teachers up to speed with the nuances of teaching in an online environment.

Although the majority of teacher candidates will go on to teach in traditional, face-to-face classrooms, they may at some point in the future find themselves teaching an online class. Data from this study suggest that face-to-face teaching is a prerequisite for teaching online, and those who teach both online and face-to-face classes report that their skills from online teaching enhance and improve their traditional classrooms. Updating teacher education programs so that they address not only pedagogical issues in traditional environments, but also aspects of online pedagogy, how classroom management changes in an online setting, and how best to use modern technological tools to convey content and assess student understanding should be the aim of leading and innovative colleges of education.
Limitations

Although a tremendous amount of data can be gained via a national quantitative study, a survey is inherently limited by its items and scales. There are specific questions that could have been asked differently, others that could have been added, and those that could have been omitted. For example, the question regarding age would have been more precise if respondents were asked to enter their specific age or year of birth, and the item regarding the number of students needed to specify a period of time. Although the researchers took every measure to minimize instrument error, it inevitably affects the accuracy of the measured variables. This is the restrictive nature of a one-time survey, and subsequent questionnaires will be informed by these results.

Also, because respondents’ e-mail addresses were gathered via the Web, there could be a bias in those schools that decide to publish their teachers’ information as opposed to those that do not. To combat this, we contacted large consortium groups and, after some confusion, they were allowed to participate. The goal was to cast a wide net among K–12 online teachers to gather as many responses as possible. However, because the study relied on self-report data gathered via an e-mailed survey, there are inherent accuracy issues for which the researchers cannot directly verify the precision of the responses.

As with all methods of data collection, Internet surveys have their own disadvantages (Fowler, 2002), including not having a personal contact associated with the administration of the survey and no incentive to encourage participation. This potentially resulted in a lower response rate (33%) than would occur with other types of surveys. The response rate significantly limits the researchers’ ability to generalize to the overall population of K–12 online teachers. This limited ability to make generalizations is a primary limitation of the current study. Accordingly, it should be noted that the reporting of results from the current study reflected a sample of K–12 online teachers and does not necessarily reflect the population as a whole.

Areas for Future Research

Although this study gathered a large amount of data from a cross-section of K–12 online teachers, there is still a tremendous amount of research to be done regarding this relatively new and burgeoning field. The current study examined the characteristics of the teachers themselves and did not focus on the content of their courses, including course management systems (if any), instructional and interaction methodologies, or assessment strategies used with the classes. These are areas for future study, as there appears to be a disparity between virtual schools that allow their teachers to create their own content and those that use materials developed by a content provider, colleague, or curriculum specialist. From the qualitative data, the teacher’s experience in relation to how much control they had to change their course(s) seemed to be an issue. In particular, a negative aspect that was noted was the inability to change errors within provider content, whereas a positive characteristic was the ability to be creative when creating content. This would be an interesting area to explore, including who provides content, how it is created and adopted, and the instructional strategies that are used along with specific content.
Another area for future research is how the experience of traditional classroom teachers impacts their online teaching. The question of whether or not online teachers should first be required to teach in a face-to-face classroom is also of concern. This could involve how online teachers conceptualize the domains of content and pedagogy, whether or not years of face-to-face teaching experiences lead to the blending of these domains, and how this might impact successful online teaching. The hiring and evaluation of online teachers is a growing area for further policy research.

In addition to the preparation provided by teacher education programs, professional development for online teachers continues to be a major need and area for research. This includes what types of professional development related to content, pedagogy, and technology for teaching in an online environment are the most beneficial, and how the needs of K–12 online teachers compare to those in the traditional classroom. It also has the potential for evaluative research that measures the effectiveness of various types of professional development and offers a set of principled practices for the training of K–12 online teachers.

CONCLUSION

The field of K–12 online distance education is continuing to expand and grow, specifically through the proliferation of virtual schools throughout the United States. Increasingly, a growing number of educators find themselves teaching in a virtual classroom without walls. Until this study, there was a lack of data concerning the population of educators who teach online, their characteristics, and how they compared to the general teaching population. The purpose of this study was to describe those who teach in K–12 online environments through data collected via a national survey. A total of 596 K–12 online teachers representing 25 states responded to the survey. The gathered data were analyzed to describe a sample of K–12 online teachers from across the United States. Results indicated that the survey respondents were a group of motivated, innovative individuals who were eager and willing to learn and valued the opportunities and advantages that online distance education can provide. This includes being able to connect with their content and students in a more individualized manner, without the constraints and management issues that go hand in hand with a face-to-face classroom. These teachers share similar characteristics to the general teaching population in terms of age, gender, and ethnicity, but they have increased experience and education levels. It is evident through this study that K–12 online teachers are highly experienced, educated, enthusiastic about teaching online, and on the forefront of the 21st-century classrooms of tomorrow.

Contributors

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References


Appendix

**Virtual School Teacher Survey**

Instructions: The following survey items are intended to gather information about your background and preparation as an online educator. Please select the response that best describes your current teaching situation.

1. Do you currently teach at least one class in grades K–12 online?
   - ☐ Yes
   - ☐ No

2. In which state do you currently teach?
   ______________________________

3. What is your gender?
   - ☐ Male
   - ☐ Female
4. What race/ethnicity do you consider yourself?

- [ ] White/Caucasian
- [ ] Black/African American
- [ ] Asian or Pacific Islander
- [ ] Native American or Alaskan native
- [ ] Mixed racial background
- [ ] Other __________________

5. What is your age group?

- [ ] 21–25
- [ ] 26–35
- [ ] 36–45
- [ ] 46–55
- [ ] 55 and above

6. How would you classify the school in which you currently teach?

- [ ] Virtual school operated by a local education-based agency (i.e., a school district)
- [ ] State-sanctioned, state-level virtual school
- [ ] Virtual school consortia, such as Virtual High School (VHS)
- [ ] University-based virtual school
- [ ] Private virtual school
- [ ] Other __________________

7. How do you classify your main assignment at THIS school (i.e., the activity at which you spend most of your time) during this school year? (Check one only.)

- [ ] Regular full-time teacher
- [ ] Regular part-time teacher
- [ ] Regular combined teacher (i.e., your assignment requires you to provide instruction at more than one school, but you work the most hours at this school)
- [ ] Long-term substitute (i.e., your assignment requires that you fill the role of a regular teacher on a long-term basis, but you are still considered a substitute)
- [ ] Other staff who teach regularly scheduled classes (e.g., administrator, library media specialist or librarian, support staff, other professional staff including counselor and social worker)
- [ ] Other (specify) __________________

8. Which best describes the way YOUR classes at this school are organized? (Check one only.)
☐ All of my classes are taught online.
☐ About half of my classes are taught online.
☐ Less than half of my classes are taught online.
☐ None of my classes are taught online.

9. Which of the following best describes the format of your online classes? (Check one only.)

☐ My class is taught online, with at least 80 to 100% of face-to-face contact replaced by online activity.
☐ My class is hybrid, with both online and face-to-face instruction. Approximately 30 to 79% of the class is delivered online.
☐ My class is Web-facilitated, in which Web-based technology is used to facilitate a face-to-face course. Approximately 1-29% of the content is delivered online.

10. Which of the following describes the format of your online teaching?

☐ There is no specific time at which my students are required to be online to receive instruction.
☐ There are certain specific times when my students must be online to receive brief instruction.
☐ My students must login at predetermined times to receive complete instruction.

11. Considering your most recent FULL WEEK of teaching at THIS school: What is your main teaching field?

☐ Mathematics
☐ Science
☐ Language Arts/reading
☐ Social Studies
☐ Humanities (i.e. Art, Foreign Language)
☐ Other (Specify) ____________________

12. Which specific courses do you teach online?___________________

13. Considering the content of your class(es), who is the primary author?

☐ You
☐ A fellow colleague (i.e., another teacher)
☐ Curriculum specialist
☐ Software company
☐ Outside online content provider (i.e., Apex Learning, Virtual High School, etc.)
☐ Other ____________________(please specify)
14. What is the total number of classes you teach online? If you teach 2 or more classes of the same subject (e.g., Chemistry 1) to DIFFERENT GROUPS OF STUDENTS at this school, count them as separate classes (e.g., if you teach chemistry to 2 classes of students and physics to 2 classes of students, you would report 4 classes of different groups of students).

☐ 1
☐ 2
☐ 3
☐ 4
☐ 5
☐ 6
☐ 7 or more

15. What is the number of students you teach online? Count each student only once. ________

16. Including this school year, how many years have you been employed as a teacher? (Include years spent teaching both full and part time, in both public and private schools.) ________

17. Including this school year, how many years have you been employed as a teacher at THIS school? ________

18. Which grades do you currently teach at this school? (Check all that apply.)

☐ Prekindergarten
☐ Kindergarten
☐ 1
☐ 2
☐ 3
☐ 4
☐ 5
☐ 6
☐ 7
☐ 8
☐ 9
☐ 10
☐ 11
☐ 12

19. Do you hold the following degrees or certificates? For each degree or certificate held, please list your major and minor fields of study. If you completed more than one degree or certificate at a level or had a double major or minor, please provide information for all fields of study at that level.
<table>
<thead>
<tr>
<th>Degree or certificate</th>
<th>If yes, record your:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Major field(s) of study</td>
</tr>
<tr>
<td></td>
<td>(Record all that apply)</td>
</tr>
</tbody>
</table>

Bachelor's degree(s)?

Master's degree(s)?

Doctorate degree(s)?

Other degree(s)? (specify)

20. Describe the career path that led you to teaching online. Was this type of teaching always a goal? What led you to your current position?

21. Describe your overall experience with teaching online K–12 students.