6-1-2015

Online Education for K-12, the Growing Job Market: Are Education Majors Ready?

Kathryn Kopel
Western Oregon University

Follow this and additional works at: http://digitalcommons.wou.edu/honors_theses

Part of the Online and Distance Education Commons

Online Education for K-12, the Growing Job Market:
Are Education Majors Ready?

By

Kathryn A. Kopel

An Honors Thesis Submitted in Partial Fulfillment
of the Requirements for Graduation from the
Western Oregon University Honors Program

Dr. Marie LeJeune,
Thesis Adviser

Dr. Gavin Keulks,
Honors Program Director

Western Oregon University

June 2015

Chapter 1: Introduction

Abstract

Innovation as well as a desire for more may be seen as twin influences in the field of education today. Out of this dichotomy online education for grades K-12 has emerged. Its many forms include everything from "flipped classrooms" to online classes or homework that supplements conventional classrooms to completely online charter schools (Wolk, 2011). Just four years ago there were already state-wide virtual charter schools in 20 states. These schools were often funded through rulings by state legislatures (Watson, 2008). There is also a growing concern over whether the majority of teacher candidates will need to be ready to use online supplements or even to teach entirely online (Natale, 2011).

Future educators may need to be skilled in meeting the needs of students through the online medium, which may or may not be substantially different from the skill set needed for a physical classroom. How does a teacher candidate become qualified to teach online effectively? What are universities doing to prepare undergraduate and graduate students for teaching online? What do administrators and principals of online schools look for in their teachers? What do the teachers themselves have to say about this new facet of the education job market? What about the views of the students themselves in how effective online teachers meet their needs? This study offers an overview of literature on virtual or online schools. Additionally, action research was conducted to interview various contributors to online education, including teachers, administrators, and college professors. The results of surveys and interviews conducted with hiring staff on online schools, online teachers, and university faculty of online education training in Oregon's public education system are analyzed and reported as well.

Purpose

Online education offers another option for students with any need that they or their families feel are not easily met by conventional schooling. However, in order for it to serve students well, online schools need effective online teachers. Increasing awareness about the qualities of an effective online teacher will make it more likely that support will grow in preparing future educators to meet the needs of this student population.

Design

The primary information for this study comes from interviews and survey responses conducted with administrative staff and teachers of completely online and public schools in Oregon. These surveys yielded valuable, detailed accounts and insight into the nature of online education and the students it serves, as well as how to serve them. They are available to read in Appendix A.

The survey for administrative staff was 10 questions long, seven of which were on a numbered scale. The last three questions were open-ended and asked for a longer written response. Participants answered questions about difference or similarities between online and conventional classrooms and desired qualities in new hires for teaching. They were also asked about what kind of support their school offered their online educators.

The survey for online educators contained some similar themes, but the focus was more on what teachers did or did not need to do in order to obtain the job and serve students well. They also were asked about their perception of support given to them by their school in the areas of online teaching.

Both surveys were conducted online through Google forms. This digital format allowed greater ease of access for the participants to answer questions at their own pace, and at a time of their own choice. There were some reported design errors, for example, one

participant mentioned that at first the buttons for the numbered scale did not work, but then reported figuring out how to use it, so perhaps the survey could have been designed differently.

The interview questions were primarily the same for each party, just worded slightly differently depending on their position. They are available to read in the addendum. (See Appendix B). The questions provided similar responses to the surveys, but offered more opportunity for depth. Participants described their daily routines in their careers, discussed their students and the needs of their students. Principals elaborated on what they look for in a new teacher, and teachers elaborated on their challenges in their job and what helps (or would help) them to better succeed. Follow-up questions discussed cyber bullying and other topics.

In order to include more perspectives, staff of university programs preparing future educators for teaching online as well as adults who were previously online students were contacted. A few professors and one graduated student agreed to be interviewed. It was hoped that through interviewing them, more would be revealed about current options for collegiate preparation for this career as well as the students' perspective on successful (or what would be successful) online education.

Chapter 2: Literature Review

Comparing and Contrasting Preparation for Online and Conventional Classrooms

Teaching online includes challenges and assets not seen by brick-and-mortar classroom teachers. How does one facilitate engaging discussions without being in the same room as the students? How does one connect with students and facilitate students to communicating with each other when none of them are in the same building? How will effective teaching come through a computer screen, or realistic feedback in active learning? The questions continue. The "…problem in online learning is more than the lack of audio and kinesthetic clues: the very environment of a classroom is nonexistent" (Weiss,48, 2000). Instead of a classroom, the online teacher and students interact in an Online Learning Environment (OLE). Learning takes place in a unique way here, and as does teaching.

Becoming prepared to teach students in a physical classroom means one needs a different skill set than an effective teacher in the OLE. Undergraduates are typically trained extensively in the ways of the physical classroom, with all required courses within their college or university's Education Department pertaining to dealing with physical presence, classroom management, etc. and study underneath physical classroom teachers. But they are not typically exposed to any extensive skill building required to effectively teach online. The pains from this lack of preparedness were addressed in a study concerning community college professors' reactions to teaching online classes: "Faculty members have experienced problems with lack of training, support, release time, and respect for distance-education courses" (Haber, 267, 2008). Similar studies for the lack of preparedness in online K-12 teachers are very rare; however public online schools like K12 Online do need to give new hires six weeks of training before they can begin teaching.

Community college, university or other forms of higher education professors are not the only ones who need the skills of an effective online teacher. The surge in K-12 student enrollment into online schools, public as well as private, creates a demand for enough effective online teachers to meet their needs. The U.S. Department of Education (U.S. DOE) stated in 2002-2003 school year that 36 percent of school districts had students enrolled in online education courses. According to a 2010 US DOE report regarding the effectiveness of online education, 28 states had online high schools in 2007. It also explained that online schools are only one facet of the growth of online teaching practices, as more teachers in physical classrooms are teaching components of their lessons online in order to accommodate for larger class sizes. (U.S. D.O.E., 2010) Therefore, those who will teach online in the future are of a growing number. Also, they are not the only ones who would benefit from learning online teaching methods.

While one may find plentiful scholarly information available about teaching online in the context of higher education, it is much more difficult to come by non-affiliated, peer-reviewed articles and books pertaining to teaching grades K-12 online. There is scarce information available to those who want to research better ways to teach this growing population of student.

> "Although there are numerous handbooks addressing teaching online, there is little research on successful online teaching in the K-12 arena. Much of the existing research focused on teaching online is rooted in face-to-face content, not focused on content areas, built upon a post-secondary audience, or fails to use data from the teachers themselves to triangulate findings"
>
> (DiPietro, Ferdig, 1, 2008.

Undergraduate education majors who are doing their own research will not find substantial information that directly pertains to them. Self-education is not necessarily the answer to

becoming prepared for the Online Learning Environment. Ideally, they would be able to take workshops, or better yet, learn through college.

At Western Oregon University, there is one undergraduate course and a graduate program designed to establish or sharpen technology skills to be used in the classroom – either brick-and-mortar or virtual. The undergraduate course, Education 270, supports future brick-and-mortar educators in establishing and applying "Web 2.0" skills and more. The graduate program, Information Technology (an optional endorsement of the Masters of Science in Education degree) is intended for a different audience, often comprising of working professionals who are being asked or volunteering to expand their educational skills to the online environment. Some of these masters students are teachers; online, conventional, or both. Some have a career in curriculum design rather than teaching.

Such a program is not very common yet. The Information Technology program is only about five years old, and this type of program remains rare despite growing demand. Others do exist, however, such as Teaching with Technology program at Oregon State University. OSU's webpage describing the program state that it has a STEM (Science Technology Engineering and Math) focus "international renown."

Such programs may continue to appear at more universities, as it seems that the online classroom does indeed have a distinct skill set that comes with its nature that is inherently different from conventional classrooms.

Unique Qualities of Online Education

If one agrees that future online educators need to be taught a different skill set than for the physical classroom, the next question to answer is how to best prepare for the OLE. What skills are needed of the online K-12 teacher? What would college courses in online education preparation offer to future educators? Meredith DiPietro, Richard E. Ferdig, Erik

W. Black, and Megan Preston of the University of Florida published interviews with K-12 online teachers in the *Journal of Interactive Online Learning* in 2008. Teachers interviewed each had three or more years of teaching experience and taught online through the Michigan Virtual School (MV). These teachers utilized skills that focused on building a healthy Online Learning Environment (OLE) through community building, encouraging a personal learning experience, and more.

There are skills to be learned that are exclusive to teaching online as opposed to in a brick-and-mortar classroom. Among the many strategies and goals revealed from the extensive interview, excellent time management, organization of information, careful pre-design of a class online environment all are necessary.

> "MV teachers motivate students by clearly organizing and structuring content. This practice represents a synthesis of statements made by participants that emphasized the need for courses to implement effective strategies of instructional design. Participants talked about the importance of content based instructional design in relation to effectively meeting the needs of students, as well as providing a motivational element to support course completion."
>
> (DiPietro, Ferdig, 22, 2008)

The teacher is not physically present to deliver content "on the fly" or in an organization that can change at any moment, as physical classroom teachers have the option of doing. A webpage may be the first thing a student might see in an online class. It should not, however, be the only thing to interact with, as the same study by Di Pietro and Ferdig also emphasizes teacher-student and student-student interaction being essential to the active, collaborative learning that can take place online.

Many teachers interviewed by DiPietry and Ferdig had overall positive things to say about the experience of teaching online and had plenty of specific advice to share with the

researchers. For example, one interviewee highlighted assessment as strength in the online education, even if one must approach assessment different than in a physical classroom:

"I really feel that the assessments are much better online …In an online environment you have many ways to be able to assess a student, discussion boards. I am sure you are familiar with those, is really good for students who may not be good test takers but [sic]are able to talk about what they are learning, so having them do that in a discussion board environment is a fabulous way to assess students."

(DiPietro, Ferdig, 21, 2008)

This teacher supports synthesizing information over test results. Every bit of communication, formal or informal, is in written form when online and thus is able to be assessed for synthesized knowledge. Every part of every discussion can be read and evaluated for how well the student is using his or her own ideas or ideas and information from research; proper implementation, phrasing in own words, etc. A teacher might assign a public reflection journal every week, as well as online debates with assigned partners, or public forums for students communicate for work on a collaborative project. Google documents, Wiki pages, and similar technology allow students to all edit and contribute to one online document at the same time. They could all co-author an informational poster, for example. These are all ways to assess synthesized knowledge that is easily collaborative and presentable in an Online Learning Environment.

Standards for Educational Technology

Some believe that standards specific to online teachers would be appropriate on a national scale. However, national educational technology standards do already exist, and may be easily implemented for use in all online teaching. They are intended standardize all forms

of educational technology. This can mean, for example, using a blog in a conventional classroom or a group chat in an online classroom.

On the international level, standards for teachers as well as students have been put into place. They are called the International Society for Technology in Education standards, and a set for teachers as well as a set for students exist. Among the listed standards for teachers include such tasks as "Promote and Model Digital Citizenship and Responsibility" and Facility and Inspire Student Learning and Creativity." The students are required to "…use digital media and environments to communicate and work collaboratively…"(ISTE, 2008) among other tasks. These standards are laid out as overall tasks numbered and with subsets of skills lettered, just like Common Core standards. Oregon State has Educational Technology standards, also laid out in this common format. They reflect the national standards, of course.

However, training to meet standards is not always easy to come by. Some argue that this responsibility should fall on public colleges. "State or federal standards should be expressed to teacher preparation institutions and professional development providers." (Cavanaugh, Clark, 2007). The authors of this book emphasize the need of new online teachers to have mentors and practice utilizing appropriate media and proven teaching methods in order to meet educational technology standards. Overall, classical teaching methods for any classroom must be applied in a unique way in order to teach a successful OLE. A hypothetical teacher, Susie, is discussed by author Sharon Johnston in this compilation. Susie is an experienced brick-and-mortar classroom teacher who is designing an online course for AP English for the first time. She uses "…the learning theories and development models of Robert Gagne, John Keller, Harold Bloom, Jay McTighe, and Grant Wiggins..." (Johnston, 2007). So there are indeed plenty of crossover skills and education between conventional and online classroom preparatory courses, even if their application

may not be immediately obvious to the online classroom from the perspective of some college students or professional educators.

Present and Emerging Traits of High Quality Online Education

Online education is a relatively new field of education. Much research is still being conducted to better understand its nature, its effect on students, its quality, and how to do it well. Online education is still a somewhat controversial issue.

The International Society for Technology in Education published a book in 2007 entitled *What Works in K-12 Online Learning*. It is a compilation of 24 authors, and edited by Cathy Cavanaue, and Robert Blomey. The purpose of the book was to pool together rich experiences in effectively teaching for the OLE in order to outline the needs of the OLE and their students, as well as how to better equip administrators and teachers in order to serve these online students with quality education. One of their chief concerns is teacher quality, which is often considered the biggest factor in student success: "Because most K-12 online courses are moderated in part or in full by a teacher, teacher preparation and professional development in online instructional practices are significant elements of effective virtual courses." (Cavanaugh, Clark, 2007). They also identify that competent online teacher teaches different than a competent brick-and-mortar teacher, because, "…online teachers need to work differently in time and space." (Cavanaugh, Clark, 2007). The teacher needs to lay out clear expectations and deadlines (allowing for flexibility or extensions) along with study guides, relevant material (both teacher-generated and teacher-chosen references help) and time sheets.

The online teacher must make use of a meticulously designed curriculum ahead of time, foster relationships and learning in guided online conversations, and foster extensive collaboration. "Interaction is at the heart of online learning" (Cavanaugh, Clark, 2007).

Administrative practices can also help foster interaction, by offering a designated "home room" teacher so students – someone a student may speak to at any time about any question. Administration may also provide an in-person help desk at an office, or other roles to aide 24/7 interaction and availability to answer questions. They can even keep track of online interactions themselves to record student participation, like recording the number of times a student clicks on a course homepage and comparing that to the grade. There is almost always a correlation between a higher number of clicks and a higher grade. It is all part of providing immediate feedback and assistance to the student (Cavanaugh, Clark, 2007).

Robert Gagne wrote about Nine Events of Instruction, which is analogous to cycles or outlines of lesson plans and unit plans taught in conventional classroom teaching preparation degrees. The first event, the attention grabber, can be achieved online in a similar way as a textbook can: through a provocative image, quote, or video. Other steps include Stimulating Recall of Prior Learning can be achieved through a simple true/false timed quiz, and Providing Feedback, which may be formally addressed in an email with grades or informally through instant messaging. Keller's Motivation Model comes in an acronym: ARCS. Attention, Relevance, Confidence, and Satisfaction – all represent essential techniques to keep students motivated. Motivation has been identified as one of the key factors to online student success, because they manage their own time in an online course. Bloom's Taxonomy is always useful in designing activities that correlate to different levels of thinking, and deciding what percentage of which each type should exist in a particular course. McTighe and Wiggins' *Understanding By Design* is a lesson plan designing technique that begins with general questions to be answered to the course and what means the teacher will use to answer them with the students. Online, the applications are often through student discussion, creative projects, and online testing (Johnston, 2007). The hypothetical teacher

Susie used all of these classical methods and techniques to design her online course, and will need to start fresh in a completely new way if she were to teach a different audience. Knowing how to apply these ideas in a meaningful way to each online audience would be a challenge that mentoring or education from experience online teachers could help with.

Even if there are not many sources available for effectively teaching grades K-12 online many practices that online professors use may also be applied to youth students. Damien Hutchinson of Deakin University published information portraying the big picture of designing and managing an effective OLE as an online teacher. It opens a window into what it really means to proactively teach online. The figure below was published with the rest of his work, "Teaching Practices for Effective Cooperative Learning in an Online Learning Environment (OLE)" through the Journal of Information Systems Education, Vol. 18(3).
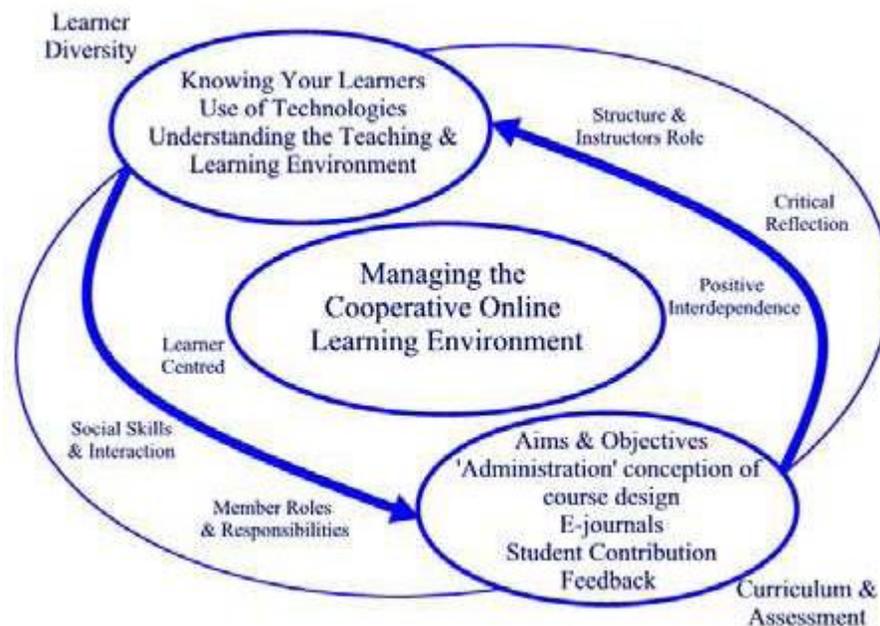

Fig, 1 (Hutchinson, 2007)

Hutchinson's illustration outlines a constantly adjusting feedback loop that powerfully manages an OLE. The course's curriculum and assessment are influenced by the target audience, or the students with their unique characteristics and reasons for taking this course.

AP English students, for example, are taking the course for different reasons than Abstract Alegbra students, and likely think differently. The content is designed in anticipation of the students, and the two influence each other over the whole course as it is in session. The teacher facilitates assignments as illustrated in the upper right corner of the diagram. The students' actions are in the lower left corner of the diagram, which affect future and present actions of the teacher in facilitating student-student and student-content interactions as well as changing curriculum design either now or for future classes. Pre-planning is crucial, with clear expectations and overall aim, but some flexibility based on student feedback is important as well. Hutchinson found that asking students directly for feedback on the course to be essential. (Hutchinson, 2007)

Online teachers face challenges unique to the Online Learning Environment and as such need skills unique to it as well. They need to have superb organization, know how to design a curriculum using online means of conveying teaching, and how to facilitate meaningful interaction through web tools. They need to use classic methodology as adapted to their online audience. They not only need knowledge but practice and mentoring. Overall, there is an astounding literature gap facing those who are seeking to better teach K-12 students online. There are a few key sources, however, that may inspire future research. One may learn from the techniques of online professors, but teaching college students will always be substantially different than teaching high school, middle school, or elementary school students. There is not yet a plethora of college courses to take as a student pertaining directly to online pedagogy, but they do exist at the graduate level. There is a great need to better preparing future educators to better teach online students, and the means to meet that need is underway.

Chapter 3: Results

Diverse Perspectives

In order to gain a more rounded and personal understanding of the nature of online education, requirements of this career, preparation for it, and effective service towards online students, I sought a variety of perspectives. More specifically, I wanted to learn how the people who hire, who teach, those who prepare others to teach, and finally, those who learn online to weave together a tapestry-narrative of online education.

I contacted all principals or directors of online school systems of completely online and public K-12 schools in Oregon through email, meaning about six separate entities. This includes charter schools, mainstream public online schools, some of which were high school-only and some of which served K-12. I explained the purpose of the study and invited them to an online survey and asked if I may contact their online educating staff to email them about a survey as well. I also explained that at the end of each survey, there was an invitation to a confidential interview. Two principals agreed to complete the survey and to let me contact their staff for further research. Of these principals, one agreed to be interviewed.

All online educators of each of these schools were contacted in a mass email, with about six educators total at each school. Online schools do not need as many teachers as conventional school do. Of these teachers, one responded. This teacher agreed to complete the survey and to an interview.

I also contacted the leaders of programs designed to prepare Master's students to use technology in education, including the skills to become an online teacher. Three professors agreed to be interviewed, one of whom coordinates the Information Technology Program at Western Oregon University. This is a Master's program that has courses designed to help

adults better understand how to teach online classes effectively, along with other topics related to information technology. The director herself as well as two of her staff members agreed to be interviewed. Two of them chose to be interviewed over the phone, and one chose to conduct the interview over email.

I already had contacts with two adults who previously were online students in the public K-12 online school system in Oregon. When asked, they agreed to be interviewed in person, confidentially. Both had experienced online education at the high school level.

Between all these roles, a complex picture of online education arose. Members of different online schools had very different experiences, and many people who have careers involved with online education commented that the nature of their job is rapidly changing.

Online Principals

One of the online principals who conducted the survey will be referred to as the pseudonym "Richard Downy." When asked if his school provides training for how to teach online, he indicated "neutral." Downy also felt 'neutral' about whether or not this form of training and the learning taking place on the job are all a teacher needs to know in order to do their job. He indicated that it is not necessary for a teacher to first received a university-level education about teaching online in order to become a new hire, but that it is necessary to have some form of prior experience teaching online. According to Downy's survey responses, the online teaching skill set is distinct from that of conventional teaching, and that the skills from conventional teaching do not easily transfer to the online environment.

The other online principal who conducted the survey is Dr. Todd Schweitz, of the Oregon Virtual Academy High School. Some of his responses happened to align with Downy's, and some did not. Dr. Schweitz 'strongly agreed' that his school offers training to his staff about effectively teaching online, and agreed that this training is all a new hire needs

in order to be successful. He indicated that new hires do not necessarily have to have collegiate level education or prior experience in teaching online. Dr. Schweitz indicated that online teaching does *not* have a separate skill set from conventional teaching, but at the same time, conventional classroom skills do not carry over easily.

Dr. Schweitz agreed to be interviewed. He has a variety of perspectives on online education; his daughter went through online high school, he used to be an online teacher, and now he is an online principal. He earned a Doctorate of Education at George Fox University after earning a Master's in Fine Arts of Education at Western Oregon University. He has been the principal or Oregon Virtual Education for four years.

As a principal, his day-to-day work has quite the variety of tasks and communication both over email and phone, but he says he prefers the phone for certain purposes. His daily tasks include but are not limited to: distributing flyers, observing teachers, coordinating with the counselor and registrar to help students keep on track for graduation. "For the most part," Dr. Schwietz said, "I do what you would expect high school principals do, only in a different type of environment." And the online school is indeed a different environment than a brick and mortar school, according to Dr. Schweitz.

Dr. Schweitz feels he works very closely with his teachers, even though he only meets them physically a few times a year for professional development. He attributes this to the fact that he observes them and gives feedback frequently. Automatically a 'screencast' (a video of what is happening on a computer screen) of each class is recorded. If Dr. Swchietz doesn't have time to conduct and observation live, he can watch the class session later and still give feedback.

The classes are called 'live sessions' and take place on a screen that has an interactive whiteboard and a chat box that everyone in the class can see. These are what Dr. Schweitz observes. Dr. Schweitz, using both his experience as a principal and as a teacher, elaborated

upon how teaching takes place in live sessions. For the majority of the week in each class, student-teacher communication for each course consists of one on one communication through email, written chat boxes, and video chats. The student may use these for help with assignments. Each class also has live sessions, usually twice a week for 40 minutes each. Students may ask for permission to add something to the virtual white board, ask questions in the communal chat box, and more. A teacher may break up students into small groups with 'breakout sessions,' which means that they may place students into smaller chat rooms to enhance discussion. All of this supports the many assignments the students complete during the rest of the week.

Dr. Schweitz has heard people criticize live sessions before. He is told that they do not allow enough instructional time. However, he believes that the efficiency of online teaching more than makes up for that. "We can do so much more," Dr. Schweitz said, "in a smaller amount of time in a virtual environment." He further explained that there is no time spent on passing out papers, transitions, or classroom management. From both his experience as a principal and as a former online teacher, he said, ""I am not dealing with any classroom management issues – never!" In addition to these factors, one may argue that this set-up leaves more time for students and teachers to communicate one on one than any conventional setting. "Students have a lot of access to teachers," said Dr. Schweitz. The quality of education, then, is not merely a question of the amount of time in instruction but also of the ratio of time spend on each aspect of teaching.

The live sessions are not my any means the only artifacts being constantly recorded in Oregon Virtual Academy. In addition to all live sessions, every email, forum message, and essentially anything written within their customized system is archived. In Dr. Schweitz' own words:

"It's a very transparent system which I really like, for a couple reasons. One, it allows parents instant access to what's going on in the classroom. They see every assignment turned in, assignments are name-stamped, and time-stamped … It gives protection for the teacher as well as some protection for the students, too."

This transparency can be considered a powerful asset towards holding everyone accountable to professional behavior, even between students.

When asked if he deals with any cyberbullying problems, Dr. Schweitz explained that it "doesn't really come up" as any sort of issue at all. As an example, he described a recent all-school online assembly in which all students could comment in a school-wide chat box and submit videos of special talents they had ahead of time. He described how easy it would be to say something derogatory in that situation, but all the comments were "kind and supportive." He speculates that this may be because of the background that online students sometimes have. Sometimes online students switched to online school because of bullying, and perhaps that don't want to see it continue here. He also commented that students with autism tend to do well in this setting because "they are away from all the things that might trigger them." He was excited to see students with autism submit videos for the school assembly talent show of their singing, and more. For some students, online school is sort of like their "last chance" in public education, so they may have incentive to behave. The respect between students may be traced back to the archiving of all communication, the diverse motives of students for enrolling, and the nature of the online environment itself better matching a students' personal needs.

This does not mean that Dr. Schweitz thinks online school is easier for students than conventional school. As a parent, he remembered that when his daughter enrolled in Oregon Connections Academy, she began with a GPA higher than when she graduated from that high school. He says this is not because of any lack of work or talent in his daughter, but

rather because online school is much more rigorous than conventional school, with a heavy load of assignments.

When hiring an online teacher, Dr. Schweitz looks for someone who would fit the online environment well. "Good educators are good educators in any environment," said Dr. Schweitz. However, he also said, "our environment is so unique and different that it's not good for everybody." This may sound a little contradictory, he explained that the reality is that some people work well from home and some do not. And at the same time, a teacher's passion for education, a lively presence, and skills in clear communication and support, scaffolding or grouping techniques will be just as valuable online or in person.

Organization, communication, and the ability to quickly learn how to use tools of technology are key traits an online teacher needs, according to Dr. Schweitz. When working at home, organization allows time to be spent in a productive way all day. Effective communication within the online environment is a base upon which all online teaching is based on. New, digital tools are being created all the time, so it is more important to learn how to use them quickly rather than already know how to use them. "We don't have the time to teach somebody tech skills," said Dr. Schweitz. One might say you need to be 'technologically literate' to perform well at this job.

Dr. Schweitz said that the job market for online education is rapidly changing, even over the past few years. It's a "new world." Recently he has begun receiving applications from candidates who actually have experience teaching online. He used to not be able to find anyone with prior experience. He has also taken interest in what few collegiate-level online courses are emerging now that help prepare for online education. He expressed a desire for there to already be a more widespread and prevalent emphasis on preparedness for teaching online because it would make is easier to find valuable new hires. "I really think teacher prep programs in the state, and really, everywhere in our country, need to have some

emphasis on virtual education because that is the hiring sector in Oregon anyway. It really is," said Dr. Schweitz. Although they are hiring more, according to Dr. Schweitz, online schools do not typically pay their teachers as much as public conventional schools do, so he expects a lot of applicants to be fresh out of college. In his perspective, this means it is all the more important to gain the ability to teach online while in college.

In light of the school format and culture that Dr. Swetiz described of Oregon Virtual Academy, it follows logically that he would look for these traits and abilities in a new hire. Excellent organization, communication, technological literacy, and any possible prior experiences or education in online education as well as aspects of traditional training that apply to all types of education each help a new hire become more successful at teaching in an online school.

Online Teachers

The online teacher who chose to conduct the survey and be interviewed will be referred to as Donald Brown, a pseudonym, to protect his identity. Donald Brown has had 24 years of teaching experience; 8 years as an online teacher at his current job, and 14 years before that as a conventional classroom teacher. He has earned a Master's in Fine Arts of Teaching. "I had no training in online coursework," said Brown, "I took online courses, but I was pretty old school." He found the transition to an online classroom abrupt. "It was a big challenge," commented Brown, "but I did OK with it." Traditional training and extensive classroom experience did not always carry over to the new environment well, and he needed to rely on other things to succeed.

When answering the survey, Brown indicated that he had 'strongly disagreed' with having had training in how to teach online through his school that he works for. He 'disagreed' that such training would provide everything that an online teacher would need to

know. Brown also indicated that he had no training through a university, or prior experience in teaching online. He indicated that he does not think that both kinds of training is necessary in order to be hired, but that they are necessary to perform effectively on the job. When asked about similarities between online and conventional classrooms, Brown wrote about common desire to see 'learning gains' in students, as well as to give personalized and differentiated education. But a difference that he noted was that he only has segments of time to connect with students rather than "all day, every day."

Brown is assigned to elementary home-schooled students. According to Brown, his role is better described as a "facilitator of learning" rather than a teacher. He tutors his students when requested to do so, manages educational resources, and meets with each student at least once a month, monitors their progress, and aids parents in teaching their own children. He commented that it was a "big change" to have only 8 students but all in different grades after he had taught over 30 students in one grade. A small class size was one of many new attributes of his new teaching job.

He still finds that giving individual attention to each student is challenging. Although his class size shrank he only usually sees each students once a month, meeting in a public place such as a local library on weekends for a few hours. The rest of the month he monitors students' progress through tools like online games they play and state assessments they turn in. Brown described that in a physical classroom, he is assessing the students constantly and adjusting his instruction as needed. However, with these few and limited assessments, he does not have as much to go off of. As aforementioned, he is available to tutor students (which would provide more opportunities for informal assessments and instruction adapted to student needs) but he is not often requested to do tutoring by the parents. He does email them regularly, and spend most of his day communicating with parents and school staff.

Working with the parents, who are the ones giving all direct instruction to the students, is what Brown felt least prepared for. His student are long-tome homeschoolers, meaning the parents have already been teaching them for years. "They have done things their own way for a long time," said Brown. However, they also seek support from Brown for educational resources about all sorts of topics from all subjects.

He struggles to support parents in finding the resources they want. In a physical classroom, he would be using the resources himself and be supplied with some optional and some mandatory tools from the school. In this virtual setting, he finds himself grasping at straws sometimes to help parents find what they need for their particular lesson. Brown expressed that he wished his virtual school offered more resources that he could pass along. They have interactive programs, of course, but the parents are asking for a bigger variety of supplies.

There is another way that Brown helps support parents. The parents of his students tend to have very little familiarity with state standards, and yet he is still required as a public educator to conduct state assessments. When he first started his job, he did not anticipate this complication. "I didn't know what needed to be communicated to the parents," said Brown. When he began pressing parents about the requirement of annual writing samples and more he "shocked a lot of people." They did not know he would bring up state assessments, much less expect them to follow through with those.

In the process of pursuing the state assessment work samples that he is required to collect and grade, he turned off a lot of parents. He got at least 1 work sample from each student that first year, but with resistance from parents, that was all state assessments those students accomplished. "Some people don't follow through, and I am very by the book," Brown said. In grades 1-3, state assessments may not seem important to many people, but each assessment is intended to help the student succeed on the high school state

assessments. Every year a student missed state assessments, it may become harder to succeed on high school state assessments required for earning a diploma.

This lack of coordination also makes it harder to students to succeed on state assessments even if they do take them regularly. The curriculum that the parents teach may or may not align with the Common Core standards that the assessments are aligned with. As Brown describes:

> "By the time they get to high school their education is superior to the brick and mortar classroom – that's my opinion. They have very strong skills. But because the homeschool population is not using the same standards and certainly not in the same sequence, when you asses them it's going to be a fail for them and a big discrepancy."

Essentially, the struggle is not necessarily over the quality of education these students are receiving right so much as the fact that the state assessments do no match what they are learning thanks to the dissonance between the parents and the online school their students are using. This causes unnecessary stress for the students and potentially makes it more difficult for them to earn a high school diploma. Brown would like to have more support from his school in dealing with this divide.

In order to really have an edge in the online teaching job market, Brown advises that an applicant should "Know the range of programs that are out there and how to use them." Reading Egg, Odyssey Ware, and Mobi Mac were a few he mentioned.. According to Brown, a self-described hands-on learner, "You need repeated experiences" rather than a single training session to learn how to use it to its full potential. He also commented that he is still discovering new things about Odyssey Ware after using it for more than a year. He said he would appreciate more in-service training sessions in how to use these tools for effective online education.

Professors in Information Technology

The three professors who help students at the Master's level learn how to use technology for education agreed to be interviewed for this study. One chose to be identified: Dr. Mary Bucy of the Information Technology Program at Western Oregon University. She both teaches for and leads that program. Two chose to remain anonymous, and will be referred to as Denise Helm and Lucy Buchanan. They teach either in person or online, depending on the course. Much of what they each had to say held common themes, so their individual voices will be woven into a single narrative.

Dr. Mary Bucy has earned a PHD in Education with a focus in online education at Oregon State University. The Information Technology program she leads is designed to help graduate students learn how to use technology for education in general.

Just like the other professors, some of her students are preparing to become online educators, but her students have diverse career goals. Many are becoming instructional designers, a career of designing curriculum. Many already teach in a conventional school and soon will be expected to teach an online course or otherwise teach online in addition to their teaching in-person. Still many others are providing online training programs for corporations for new hires to use. "More and more people are being asked to teach online," said Dr. Bucy. She expressed that the demand online education in general is growing, in its diverse forms.

All three professors know little about the hiring rate of their students who aimed to become online teachers, partly because of these diverse career goals. They each seemed to estimate that they likely got hired to teach online if that was their goal, but not that many entered their program for that reason.

Dr. Bucy does not currently teach full-time because of her leadership responsibilities, but has done so before. Teaching full time in her program means teaching three courses per

term. She says she "has no typical days" but has taught a wide variety of courses. Some topics taught include but are not limited to: Designing a Moodle web page, using Web 2.0 tools, information literacy (how to locate, evaluate, and use electronic materials), and media literacy (analyzing how mainstream media influences us and our culture).

Her students create a Final Portfolio: a digital artifact that shows their learning and is align with the National Educational Technology Standards (see the Literacy Review: Standards for Educational Technology to read more about these standards). The artifact comprises of a website and three essays.

To Dr. Bucy, one of the most important thing to keep in mind as she teaches is student engagement by "creating a course that is personally meaningful to students." She tries to account for each student's career goal and background as she teaches a course. Dr. Bucy also makes heavy use of hands-on projects that will create something useful to the students. This could be a podcast, a blog, or another digital and creative project. She prefers these over assigning readings.

A key skill Dr. Bucy wants to teach is how to create an easy-to-navigate visual display out of a webpage. She says she wants to create a great model webpage for her students so that they may "just sit down and get engaged immediately." This is to save the cognitive costs of taking a course for actual learning instead of wasting it on navigating a web page. One might compare this to the skill of creating clear expectations for classroom management in a conventional classroom so that the student may focus on learning instead of figuring out what behaviors are appropriate.

A third priority in Dr. Bucy's online courses are to have plenty of high quality online discussions. These do not work the same way as in-person discussions, according to Dr. Bucy. She described how the pacing is different on a forum rather than in person, and that a different 'subset' of a given class is more likely to speak up online than in person. Peer-

review of student-made projects is an example of an application of group discussion she uses frequently, so that students may learn from each other.

Meanwhile, Denise Helm shares that sentiment. She wants to make sure her education is individualized for all learners. "They come from all kinds of backgrounds," said Helm. She gave an example of a student who already knew the technology skills but little about teaching, and a student who knew how to teach but little about technology. She aims to keep all her students engaged by linking the course to their personal and professional goals.

In addition to that, Helm wants to emphasize the purpose behind technology for education, not merely the skills themselves. "I try to teach my students not just how to use it," Helm said, "but why." She expressed that this was one of the most important parts of the program she teaches through.

Dr. Lucy Buchannan also stated that the reasons for using certain technology were valuable to teach rather than the technology itself. "I help them understand the relationship between the tools they use and the purpose of using it—why do you use it, how, and what do you expect your audience to learn from your design," said Dr. Buchannan.

Dr. Buchanan shared that the most important thing to keep in mind to her are the "Course's goals and objectives" and the "student's needs." This follows the theme of individualized and personalized education being a priority for these three professors. Dr. Buchanan's other priority, the course goals and objectives, are largely considered to be a top priority among all educators.

Dr. Buchannan also shared that she values teaching her students how to create their own online curriculums. While some online education comes with a curriculum pre-packaged for the instructor, other instructors create their own curriculum. "As you can easily see," said Dr. Buchanan, "the first type of teaching doesn't require as high qualifications as

the second type, but I wouldn't see the first type as the best practice in online education."

Dr. Buchanan values freedom for instructors to create their own curriculum in order to teach more effectively. Each of the professors felt that their courses were quite valuable to preparing to teach online. "I think we've seen lots and lots of bad online courses," said Dr. Bucy, "because people [teachers] just don't know what their options are." With collegiate education, options may be discovered far earlier than while on the job.

In addition to that, Helm discussed how online education can create more freedom for students, hence why it is important to have high quality online educators. "There are a lot of barriers to traditional education," said Helm. She named time and geography as a couple of hindering factors for students. Helm gave a specific example that was passed on to her form a professor while she herself was earner her Instructional Design Certificate. A student in a public K-12 conventional school in a wheelchair felt that she was receiving good grades because of pity. Her disability was physical one – but others seemed to perceive her as mentally disabled. When she enrolled into online school, no one saw her wheelchair. She felt that a barrier had been broken. This reflects one of the many reasons why students may choose to enroll into an online school.

Dr. Buchannan shared another reason why online education preparation courses are important. "We live in world of information," she said. "Being able to present information in a way that is compressive and effective is especially important as educators." This skill applies to all forms of education.

The professors expressed a variety of things that inexperienced or untrained online teachers tend to overlook. Details about how to communicate with students that you never actually see, for example. "If the only time they hear from the teacher is when something is going wrong, they feel like they're doing everything wrong," said Dr. Bucy. She considers frequent teacher-student communication and feedback to very extremely important.

Some things translate well to online teaching from conventional teaching, and some things do not. Dr. Buchanan listed the following positive traits that carry over well: "Interpersonal skills, patience, and clarity of presenting information, and organization of course materials." Helm shared that an instructor's passion and expertise will show no matter what medium is used – a video, standing at the front of the class, a blog, anything.

However, Helm also said, "You don't want a virtual environment to try and copy what is happening in a face to face environment … But it's also not so different that you have to abandon everything you know and gained from a physical classroom." For example, when each professor was asked how they design their courses, they all said that they begin with a standard and break it down into objectives, just like training for tradition education. Helm assured that it is better to not "get hung up over the differences" but at the same time to take online education for the unique environment that it is while remembering universal educational techniques.

Online Students

Mark, an adult who was once an online student, agreed to be interviewed. He took an online geometry course over the summer after 7th grade to supplement his homeschool education. He and his family were planning for him to "skip 8th grade" and get ready for 9th grade math, so they enrolled him into this 9th grade level online course that had a curriculum that was apparently endorsed by his local high school.

Mark said that he already knew most of the material being covered in this course. He took it more to assess his mathematical abilities. He remembers thinking, "If you can do this, you will be prepared for next year – which was honors algebra. As a freshman." He felt confident about his abilities entering this course, and he recalls being successful in it.

This online course, "Box For Math," had no online instructor. When asked if an online teacher would have been helpful to him, Mark expressed that he did not need one. "At first it was difficult," said Mark, "because you just get this big long list of lessons." But as Mark described: "I felt like I really had what I needed because my parents could also help. That was kind of the whole homeschool point." He thought that having an online instructor would have made his experience "more difficult." It would have made him feel uncomfortable, as if a stranger was watching what he was doing on his screen, and putting extra pressure or expectations on him.

Instead, Mark had a set of lessons to click through and complete one at a time. "It was kind of choice overload," said Mark. After he finally expressed his concerns to his parents, he stopped procrastinating because his father set goals with him for how much to accomplish each day on a calendar. After that hurdle was overcome, the rest of the experience sounded enjoyable for him according to his description.

The lessons were like a "big interactive slide show" that he could complete at his own pace. They included animations, questions to answer, and more. His favorite were the interactive multimedia pieces. He gave an example of a sliding scale he could use to place a value for a coefficient into a function and see the effects of it on the parabola. Mark said he learns best by doing things, so he appreciated this exploration.

Mark had also already taken elective courses in public conventional middle school, so he was able to compare and contrast this online experience with conventional schooling. "In the online version I felt like the homework was the lecture and the lecture was the homework," said Mark. He really appreciated having it all "blended together" so that he could do something interactive every step of the way and it helped him pay attention.

Mark also felt that, unlike traditional classroom homework, he always had all the necessary resources at his fingertips to complete his assignments. He remarked that he is

aware that some people might consider it "cheating" to always have your resources with you. Mark's retaliation is as follows: "My attitude is that in the real world, you're going to be expected to use all the tools that you need to get the job done." He then gave an example of how a boss at work is not going to say he can't use a calculator.

Mark expressed some surprise at his own success in this course. "Usually I am a social learner," said Mark, and explained that he usually learns better with other people in person. He wonders what would have happened in this online course if it had not been for his parental support. As it happened, he recalls online education being a very good experience for him and he felt ready to attend a conventional classroom teaching 9th grade Honors Algebra afterward.

Chapter 4: Conclusion

Online education is very diverse in terms of types of schools and participating parties and the perspectives within each party, even more so than what I thought before interviewing this wide scope of people. There are some things that most of the participating parties (i.e. principals, teachers, professors, students) have in common in their beliefs about online teaching, and about what makes an effective online educators.

The desired qualities of an online educator depends much on the set up the school, of which there are many varieties. Some are working alongside homeschooled parents, while others are the only instructors for that student. Different administrators look for somewhat different qualities, but they usually prefer that you are a quick learner of technology, very organized, and communicate well online. In addition to that, if you have prior experience or education to prepare for online teaching, that is all the better. It is helpful towards avoiding common pitfalls of first time online educators, such as creating a web page that is difficult for students to navigate.

The professionals involved in this study carry a general consensus that there are both universal educational skills as well as ones needed specifically for effective online teaching. They are not universal as to whether or not a teachers' presence translates well into the online world. Meanwhile, they do seem to all suggest that grouping and questioning techniques and other skills of that nature carry over well form the conventional classroom because they are part of any quality educational experience. Some skills that are specific to online education include creating an organized web page and communicating well over chat boxes, forum posts, emails, video chats, and other online means.

References

Cavanaugh, C., Blomeyer, R., et. al. (2007). What Works in K-12 Online Learning. Eugene, OR: International Society for Technology in Education.

Clark, T. (2008). Online Learning: Pure Potential. Reshaping High Schools, Volume 65, Number 8

Clark, T., Berge, Z. (2005). Inside Charter Schools : The Paradox of Radical Decentralization. 19th Annual Conference on Distance Teaching and Learning.

Dipietro, M, Ferdig, R.E, et. al. (2008). Best practices in teaching K-12 online: Lessons learned from Michigan Virtual School teachers. Journal of Interactive Online Learning, Volume 7, Number 1, Spring 2008, Pages 10-35.

Fuller, B. (2000). Inside Charter Schools : The Paradox of Radical Decentralization. Cambridge, MA: Harvard University Press.

Greenway, R., Vanoureck, G. (2006). The Virtual Revolution: Understanding Online Schools. Education Next Spring 2006

Haber, J., Mills M. (2008). Perceptions of Barriers Concerning Effective Online Teaching and Policies: Florida Community College Faculty. Community College Journal of Research and Practice, Volume 32, Pages 266-283.

Hung, S.W., Cheng, M.J. (2012). Are you ready for knowledge sharing? An empirical study of virtual communities. Computers & Education, Volume 62, March 2013, Pages 8–17.

Hutchinson, Damien. (2009). Teaching Practices for Effective Cooperative Learning in an Online Learning Environment (OLE). Journal of Information Systems Education, Volume 18(3), Pages 357-367.

Jones, Ida M. (2011). Can You See Me Now? Defining Teaching Presence in the Online Classroom Through Building a Learning Community. Journal of Legal Studies Education Volume 28, Issue 1, Pages 67–116.

Marsh, R.M., Carr-Chellman, A.A., Sockman, B.R. (2009). Selecting Silicon: Why Parents Choose Cybercharter Schools. TechTrends July/August 2009 Volume 53, Number 4.

Natale, C.F. (2011). Teaching in the World of Virtual K–12 Learning: Challenges to Ensure Educator Quality. A Report for the Educational Testing Service (ETS) July 15, 2011

Oppenheimer, T. (2003). Flickering Mind : The False Promise of Technology in the Classroom and How Learning Can Be Saved. Westminster, MD: Random House Inc.

Revenaugh, M. (2006). K-8 Virtual Schools: A Glimpse into the Future. Educational Leadership/December 2005/January 2006

United States Department of Education. (September 2010) Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies. Retrieved June 14, 2013 from http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf

United States Department of Education. (January 2012) Understanding the Implications of Online Learning for Educational Productivity. Retrieved June 14, 2013 from http://www2.ed.gov/about/offices/list/os/technology/implications-online-learning.pdf

United States Department of Education. (July 2008) Evaluating Online Learning: Challenges and Strategies for Success. Retrieved June 14, 2013 from http://www2.ed.gov/admins/lead/academic/evalonline/index.html

Watson, J. (2008). Online learning: the national landscape. Threshold Fall 2006 Cable in the Classroom

Wolk, R.A. (2011). Wasting Minds: Why Our Education System Is Failing and What We Can Do about It. Alexandria, VA: ASCD.

Weiss, Renee E. (2002). Humanizing the Online Classroom. New Directions for Teaching and Learning, Volume 2000, Issue 84, Pages 47-51.

Western Oregon University Master of Science in Education: Educational Core Course

Descriptions. Retrieved June 10, 2013, from

http://www.wou.edu/education/teacher_ed/msecourse-desc.pdf

Young, Suzanne. (2006). Student Views of Effective Online Teaching in Higher Education.

The American Journal of Distance Education, Pages 65-77.