

FROM ONLINE STUDENT TO ONLINE INSTRUCTOR: ASSISTIVE STRATEGIES

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ABSTRACT

With the influx of online learning opportunities, online students and instructors are faced with a variety of challenges. Online students face the same challenges as do face-to-face learners, but by facing them in an online context, the interpretations of those challenges can lead to the success or failure of their overall educational experience. Similarly, online instructors must use the experience they accumulate and transform that into an online environment. This study used the participatory case study methodology to document a female graduate student's experience with the challenges for online students, and then used those challenges to develop virtual implementation strategies for online instructors.

INTRODUCTION

Thanks to the rise in online enrollment (Allen and Seaman (2010), today's student is not limited to participating in physical classrooms at the collegiate level. As a result of online enrollment, virtual universities began to increase, therefore creating new opportunities for both students and instructors. In 1995, Western Governors University was one of the first to offer all of their course instruction online (Xu and Morris, 2009). Over more recent years, online courses have dramatically increased in the United States (Seok, Kinsell, DaCosta & Tung, 2010). Allen and Seaman (2010) reported that there are over 5.6 million students in an online course during the 2009 fall term, which is a 1 million student increase over the previous year. In fact, Rudestam (2004) stated "the physical classroom no longer defines the learning environment. The learning environment is found wherever learning takes place, from homes and offices to cyberspace, including the World Wide Web and electronic libraries and databases" (p. 428). Students have the capabilities to have their entire college experience in a virtual environment, including research projects, laboratory experiments and even personality inventories.

When enrolling in an online university, advisors instill excitement in new students. Monaco and Martin (2007) suggested that this is the op-

portunity to provide education in an engaging way that facilitates discovery within students. Universities discuss the convenience of taking classes online, the cost-effectiveness compared to a "brick and mortar" or traditional university, and the quality of their form of education. In fact, Murphrey (2010) mentioned one attractive trait to students is the "anytime, anywhere" convenience (p. 212). Gustafson (2007) talked about the pressure that students can be under and how online education can relieve some of that pressure. For the most part, they are correct in their assumptions. Taking online courses is convenient, especially for adults who work full-time and have families. Participating in online courses is cost-effective, taking into consideration the economy, distance to traditional universities, and what families would have to pay in daycare or taking time off of work to attend class.

One of Guerin, Arcand and Durand-Bush's (2010) recommendations for future research was to lead students into enhancing their learning experiences through in-depth personal accounts of their educational context. Therefore, this study uses a participatory case study approach (Creswell, 2007) to outline three challenges that female graduate online student faced, an explanation of the transition from online student to online faculty, and three strate-

gies for online instructors to use in assisting their students and developing themselves as faculty members.

REVIEW OF LITERATURE

This research focuses on a participatory case study of an online student and their transition from online learner to online instructor following graduation. The online student is a female graduate student who earned her doctoral degree through a virtual university. This research explored the challenges that student faced in an online environment and how to use those experiential challenges to develop strategies to improve the pedagogy of online instruction.

According to the *Online Classroom* (2004), online learning can mean different things to different people. Lee, Carter-Wells, Glaeser, Ivers and Street (2006) used the metaphor *community* to describe many of their virtual scenarios. They believed that this community is no longer limited by proximity of a geographical nature and are difficult to define because of that. This community can also be an experience of virtual communication from a variety of locations based on the learning management system offered by the institution (Meloni, 2011). Chang (2003) developed several ideas on what online learning could give students, such as an active knowledge construction, information sharing and to distribute that knowledge to others. From a purely academic standpoint, Lee et al., stated that “each academic online community represents a unique entity in terms of its course content, learning objectives, community norms, students, faculty, and administration” (2006, p. 14).

The online student has chosen the virtual-learning environment due to numerous factors, including transportation costs to-and-from an on-ground course, child care, leaving work early, and convenience (Lassitter, 2009). Puziferro and Shelton (2009) have developed a profile of the online student, which consists of a student who has at least one or more of the following characteristics:

1. Delayed entrance or later return to higher education,

2. Attends part time,
3. Works full time,
4. Is considered financially independent,
5. Has dependents other than self,
6. Is a single parent,
7. Has a General Equivalency Diploma or a GED (p. 17).

An online educational experience is not without challenges. Students who are not technologically-savvy may find computers intimidating, initially navigating online courserooms can be scary, and many students feel completely overwhelmed with the online environment. In fact, Vonderwell and Turner (2005) knew that online learning and teaching requires a restructuring of student and instructor roles. Learners with the goal of becoming an online instructor upon graduation, especially masters-level and doctoral learners, should use this awareness of challenges and strategies in preparation and consideration of becoming an online instructor.

RESEARCH QUESTIONS

This study sought to determine the challenges faced by online students and to use those challenges to develop assistive strategies for the future development of online instructors. Due to the exploratory nature of the research conducted, a qualitative, participatory case study approach was used to examine and document the intentional sample of a self-selected participant in an online graduate program at a virtual university. Specifically, two research questions guided this study:

1. When examining an online graduate student, what challenges, if any, do they face?
2. If there are challenges, how can those obstacles turn into assistive strategies for future online instructors?

Exploring the experiences of an online graduate student, this study aims to draw on the interactional challenges between online graduate students and online graduate instructors. It also aims to take those challenges, if any, and

use them to develop tools and techniques for instructors who are interested in teaching in an online environment.

METHODS

This research uses a qualitative methodology to answer the research questions. Gelo, Braakmann and Benetka (2008) described a qualitative approach will consider reality as socially and psychologically constructed, and that the aim is to understand the behavior and culture of a human or group. Dooley (2007) suggested that a meaningful case study would include items that readers would find in a detailed story, such as a setting, main characters, events and even conflicts.

More specifically, a participatory paradigm (Creswell, 2007) is a type of case study method in which researchers are actively involved as participants (Guerin, et al., 2010). Guerin et al.'s, (2010) innovative study allowed the "researcher's personal narrative" to reveal their lived experiences that are described as "complex and rich" (p. 1063).

For this particular participatory case study, the data included observations and reflections of the online graduate student, following suit of Murphrey's (2010) case study of experiential eLearning. This documentation included reflections of understanding areas of online learning, such as communication patterns of the student/instructor dynamics, misinterpretations, and the emotional aspects of being an online graduate student.

The participant was a 36 year old female student completing her third year of an online graduate psychology program. Her course of study for the Doctor of Philosophy was General Psychology and her dissertation topic focused on anxiety and types of instruction. The data was collected through student and instructor email transcript logs. While the raw data was not fully presented in this study, it was used to triangulate the data and validate the findings. The analysis of email interactions between student and instructor took place between January, 2009 and July, 2010.

Throughout that time period, there were 186 relevant email exchanges between student and instructor. Of those 186 emails, 75 were student-driven and 111 were instructor-driven. The final component of her dissertation course, which was 20 weeks, the participant documented challenges she experienced, such as communication patterns with her instructor, noted any misinterpretations between student and instructor, and recorded emotional aspects, such as an anxiety and depression.

These challenges were recorded in a narrative form. Narratives help to join together events over time to put into story-form, which helps people make sense of experiences and events (Murray, 2003). Guerin, et al. (2010) reported that the analysis of the narratives is guided by the goal of the researcher. The goal of this research was to explore challenges that a graduate student faces in an online educational environment. When conducting data analysis of the narratives, the constant comparative method was used, this can be described by Corbin and Strauss (2008) as comparing incidental data for similarities and differences.

FINDINGS

After analyzing the email transcript narratives, there were three themes that were represented as challenges for the online student: communication, misinterpretation and emotional aspects.

Theme 1: Communication

As described by the participant, the most challenging issue during the study was the lack of personal contact with the instructor. In traditional classes, students are face-to-face with their instructor for every class, unless it is a distance-learning or hybrid course. Even then, there are times in which the physical presence of the instructor occurs. The participant documented that there were up to five weeks in which there was no electronic contact with her instructor, despite the student sending numerous emails. Electronic contact in this text is defined as an email initiated by the online learner or instructor, asking questions pertaining to coursework or procedural items.

In this study, examples of communication challenges, as documented by the participant, includes evidence of time expectations, policies and procedures, and the instructor's comments to the student. For time expectations, the student disclosed that her definition of a reasonable time to respond to an email was forty-eight hours. After the five week lapse in time in which the student sent numerous emails and didn't get responses, the student contacted the university to request an explanation of faculty response-time expectations. The student was told that the required time-frame for an instructor to respond was up to two weeks after the student had sent an email.

Another example of a communication challenge was the comments made to the student by the instructor, such as "I'll review your materials soon", "I'll get back to you on this next week," and after fifteen days with no contact "I'm back and will review this in the next few days." The student reported that many times, the student would counter-email to get even further clarification of the instructor's comments.

Theme 2: Misinterpretation

The participant then narrated her experiences of misinterpretation of course information. The participant found that email communications were not without misinterpretation. Online learners learn early on from their peers that their written communication skills must be not be vague or left up to interpretation. For this study, the misinterpretation of information caused lengthy online discussion forums and justification of answers on behalf of the participant. The instructor made comments, followed by a variety of emoticons, disclosure of personal information, provision of questions or comments that contradicted themselves with prior questions and comments.

An example of misinterpretation was in the selection of topics for dissertation. The participant stated that the instructor assigned a specific university form to guide her in the process of the requirements of doctoral procedures. After completing said form, the instructor accepted it conditionally. Due to misinterpretation, the deadline for form submission had passed

and the participant had to enroll in additional coursework. From a financial standpoint, this "misinterpretation" cost the participant another two ten-week terms at the university, at roughly \$2500 per term. Therefore, the participant calculated the misinterpretation cost an additional \$5000 and be finished with the process twenty weeks later. The participant in this research found this to be the most costly of all misinterpretations.

Another form of misinterpretation the participant documented was the disclosure of personal information shared by the instructor. On several occasions, the instructor would reveal personal information such as "I'm having a lot of pain and severe headaches", "my family has been moving" and discussed private information about a parent. The participant stated that she felt at times she was unsure as to what to do with that information or how to proceed.

Theme 3: Emotional Aspects

The third challenge faced by the participant fell within the category of affective (emotional) responses. The participant found that by being an online student, it was challenging to express how important completing any program was to a faculty member, simply because emotions have difficulty in being displayed via email.

The participant reported that she experienced anxiety during the doctoral process, especially with online learning. Examples of the student's anxiety took form in such comments to her instructor as "I'm having anxiety about it all", "I have still not heard from you. At this point, I'm growing worried" and "I'm getting nervous since I haven't heard from you in several weeks". The participant reported that the instructor did not address the emotionality of the comments, nor addressed the concern of anxiety levels within doctoral students.

CONCLUSIONS

Based on the participatory case study by the online graduate student, it was determined that the three challenges faced by an online graduate student included communication concerns, misinterpretation of information, and the

need to address emotional aspects. The online learning experience can be challenging, from a learner's perspective (McKnight, 2010), and online students should be aware of the pitfalls and learn to prevent such challenges.

Communication challenges are not specific to email interactions. Depending on the institution, there can be minimally-two contacts per month requirement, as are outlined by faculty contracts (McKnight, 2010). However, this isn't always explained to learners prior to registering for the program, and students may experience some anxieties. Balter, et al., (2009) recognized the age of the millennial student as growing up with instant communication, which is one of the reasons many students will pursue an online education. If communication patterns aren't established within the initial interactions between student and instructor, it can lead to student drop-out or negative perceptions of the institution.

As a master's and doctoral learner, taking comprehensive exams online, scheduling phone conferences, selecting dissertation material, as well as meeting the university's deadlines leaves online learners wanting more support and communication with their instructors. After all, they are chairpersons, in committees, instructors, and representatives of the university. Students don't register for online coursework with the assumption that they will receive contact from their instructor on a monthly basis.

The challenge of misinterpretation can be addressed throughout the entire tenure of the student-instructor relationship. The welcoming email sets the tone for the entire course, for both the instructor and the online student (Sull, 2009). But, it is difficult to determine an online instructor's facial expressions, tone of voice, body language and various other communication skills. Even through phone conversations, information can be misinterpreted.

As for the challenge of emotional aspects, students experience frustrations when there miscommunications, or a lack of clear expectations (Hogan, McKnight & Leigier, 2006). Lassiter (2009) has found that several emotions take forms of unproductive behavior, such as shyness, virtual bullying, and a lack of connectedness

or non-responsiveness, even over-stimulation, which can lead to confusion. Many students experience anxieties when becoming taking online courses, but the physical manifestations of anxieties such as shaking, heart palpitations, and stomach discomfort (Beck et al., 1988) cannot be conveyed to instructors when they are hundreds of miles away.

The psychological manifestations of anxiety, which include excessive concern, apprehension and difficulty controlling worry (Spielberger, 1983) cannot be physically conveyed to the instructor, but can be interpreted through electronic contact. Hurd (2007) suggested that if there is a physical absence of an instructor, it could intensify a learner's anxiety in this type of setting. As an online student, it can produce anxiety when there is no reassurance by instructors. Sull (2009) recommended preparing for student anxiety concerns, even though there is no physical contact, before they enroll in the course.

Making the Transition: Assistive Strategies for Future Online Instructors

Upon graduation, many online students, as did the participatory case study participant, will pursue academic careers in online instruction. Ash (2010) found that initially, curiosity may attract online instructors, but the ability to create and maintain relationships online is what keeps instructors. The participant was given the opportunity to teach online courses and developed recommendations for other instructors, which were based on her experiences as an online student. When the opportunity to become an online instructor presents itself, those who have participated in that process should use what they have learned throughout their online experience to help promote student retention in an online environment, as well as ease their anxieties as online learners. As an online instructor, there are some recommendations for improvement in online instruction.

Become Virtually Real

Essentially, students want to feel valued within the classroom setting-virtual or otherwise. Warren, Reid & Krendl (1996) suggested that

educators should pay more attention to the interaction between instructors and their students, because one of the most defining elements of this type of education is the lack of face-to-face contact. As an online instructor, spend the first week of the course introducing oneself and sending a personal welcome to each student. Although time consuming, limited amounts of personal disclosure can be a good thing, as long as the content is appropriate and relevant to the coursework. Monaco and Martin (2007) suggested that motivation and commitment can be increased simply having frequent and quality contact between online instructor and student.

Inform them that the challenges they face is understood. If the online instructor was once an online student, or has participated in online courses, that is valuable information that online students can appreciate. Validating students through emails can be achieved through making individualized comments on their discussion posts, timely follow-up, and answering every email. Often students will reply with comments such as “You are the only instructor who has ever emailed me back within 24-hours”, or “It sounds like you know how I feel” (McKnight, 2010). Allowing students to know that there have been similarities with the instructor’s education or professional experience and theirs can ease anxieties or apprehensions, creating a commonality.

Be Strengths-Based

Many times, students will have enrolled in online classes that have limited online communication skills. Rather than inform the student in a public forum that their writing has several challenges, take that opportunity for a more private discussion. Using a strengths-based approach helps students to focus on the positives of their work and avoid dwelling on the negatives. Hurd (2007) suggested that the isolated context and a lack of face-to-face interaction with an instructor may intensify emotional responses. Sull (2009) encouraged online faculty to end any response with a positive note. Help the student to realize that although an academic error may have been made, it is not a reflection of them or their personality, but as a way to improve their student-persona.

This strategy also works with instances of suspected plagiarism, either intentional or otherwise. Plagiarism, according to Hogan, et al., (2006) is “the act of using another’s work for one’s own, without giving proper credit” (p. 35). Online course sites are designed so that instructor’s can access many students’ material at once. Online instructors can pull up one student’s discussion, compare with another, and then see which student submitted first. Using a strengths-based approach to this issue can let the student know that plagiarism is a breach of academic integrity, and show them the comparisons of submissions, time stamps, and ways to help them utilize their originality.

For example, the participatory case study participant described her experience as an instructor in an online psychology course. A student had emailed her reporting that another student had copied their work. Since this was a confidential email, the participant could monitor the situation, check time entries and compare the work. Within the next week, there was a similar occurrence with the same two students. The participant contacted the suspected student, copied both discussions, citing where the other student had posted several days prior, and how it appeared that plagiarism was an issue. The participant offered to help the student to explore her originality and offered suggested as to how to resolve the issue, such as be the first student to post a discussion each week, use different resources as the other students, and seek consultation as needed. This issue did not occur again in the course.

Timely Feedback

Online instructors not only spend hours teaching over the internet, but many have teaching loads or assignments in physical classrooms as well. Balter et al. (2009) reported that the “internet, instant messaging, and text messaging have encouraged impatience and expectations of an immediate response among their users, compared with previous generations” (p. 455). It is imperative to establish early in the online environment that you will attempt to respond as timely as possible. Hogan, et al., (2006) reported that interaction, especially with students, is imperative for success. Monaco and

Martin (2007) stated “do not allow too much time to pass between the time the student turns in the assignment or test and the time evaluative results are returned” (p. 45). Instructors can elect to implement a 24-hour timeline, informing students that every 24-hour period, checking emails from students. Emails are the lifeline to the students. Instructors should respond to everyone, even if it is a simple “Thank you” or “You’re welcome”. Instructors should be aware of their institution’s policies and procedures regarding feedback time-limits.

Timely feedback is also imperative to grading assignments. In several online courses, there is typically a weekly assignment, due at the end of each week. Make it a priority to have each assignment graded within 24-hours of when it was due, or inform students that you do all grading of assignments on a certain day of the week. Providing feedback is important when grading assignments, because students will often submit an assignment with a post that says “I hope I did this right” or “I had trouble with this assignment”. Validating their work, if it is congruent with the grading rubric, or offering suggestions for improvement, if it is not congruent with the grading rubric, can encourage students to either continue submitting quality work, or intensify their efforts.

FURTHER STUDY

This study provided a participatory account of several challenges experienced by an online graduate student. It explored different aspects of online learning and then took those challenges to develop assistive strategies for improvement of the online teaching profession. As technologies advance, both online students and instructors will be exposed to a plethora of opportunities in the online environment.

Ash (2010) believed that it takes more than just being familiar with technology to be a proficient online instructor. Seok et al., (2010) concurred; reporting online education can bring new challenges to instructors and students. Lee et al., (2006) stated that when comparing communication and technology, “effective and frequent communication on the part of the instructor and positive peer-to-peer communication ap-

peared to be more important than the technology” (p. 27).

It is recommended that faculty who desire to be an online instructor take an online course themselves. Hogan et al., (2006) recommended online-specific instructor competencies to assist new faculty in the development of their efforts for virtual course delivery. Espasa and Meneses (2010) state that “more teacher training should be given” when it comes to providing information to online students (p. 290). The authors continue by encouraging online instructors to obtain professional practice in improving the regulation of feedback. Since online instructors a reflection of their universities they are also representatives to their professional fields as well. In fact, McAllister (2009) felt that the perfect mix of an online instructor is one of academic credentials and professional experience, as well as a learner-centered philosophy. Therefore, one recommendation for future research of this study is to incorporate online course enrollment part of a university’s instructor orientation period.

Solimeno et al., (2008) reported that further studies are needed that focus on emotional responses and alternative learning environments. As the navigation of the courseroom becomes more familiar to seasoned instructors, efforts should be made to become timelier with discussion forums and emails, and must not forget that as instructors, there is an obligation to be a “real person” with students. Exploring the emotional responses as an instructor can prove beneficial to the students. Puziferro and Shelton (2009) recommended developing new values that will support the influx of new online learners. As a result of this study, it is recommended that instructors go a step further and develop awareness for the emotional aspects and anxieties that accompany the navigation of discussion posts, assignment links, and technical difficulties. Experience how the student feels when the online library isn’t working, or when there has been a weather-related disaster and the power is out, rendering helplessness.

To specifically address the challenges experienced by an online graduate student, particular attention should be paid to the themes of communication, misinterpretation and emotional

aspects. To address the challenge of communication, students should be proactive in familiarizing themselves with university policies and procedures to determine what the instructor's requirements are as to communications.

Focusing on the challenge of misinterpretation, future research should be conducted to determine guidelines of professionalism expected of online instructors. In this study, the instructor disclosed personal health information about her family and her own physical symptoms. The participant was confused as to the relevance.

Finally, to examine the challenge of the emotional aspects of online learning, future research should be conducted as to how to alleviate the anxiety experienced by online students. This may include concepts such as learner's guides, guidelines and defined expectations by universities and instructors.

REFERENCES

- Allen, I.E., and Seaman, J. (2010). *Class difference\$: Online education in the United States, 2010*. Needham MA: Sloan Consortium. Retrieved from http://www.sloanconsortium.org/publications/survey/pdf/class_differences.pdf.
- Ash, K. (2010). Teachers make the move to the virtual world. *Education Week*, 30, 32-34. Retrieved from www.eddigest.com
- Bachor, D.G. (2002). Increasing the believability of case study reports. *The Alberta Journal of Educational Research*, XLVII (1), 20-29.
- Balter, R.M., Canter, M.B., Dovidio, J.F., Dudley-Grant, G.R., Eisman, E.J., Nelson, P.D., Norcross, J.C., Porche-Burke, L., Sammons, M.T. (2009). *American Psychologist*, 64(5), 454-463.
- Beck, A.T., Epstein, N., Brown, G., Steer, R.A. (1988). An inventory for measuring clinical anxiety: Psychometric properties. *Journal of Consulting and Clinical Psychology*, 56(6), 893-897.
- Change, C. (2003). Towards a distributed Web-based learning community. *Innovations in Education and Teaching International*, 40(1), 27-42. Oxford, England: Routledge.
- Corbin, J., and Strauss, A. (2008). *Basics of qualitative research* (3rd ed.). Los Angeles, CA: Sage.
- Creswell, J.W. (2007). *Qualitative inquiry and research design* (2nd ed.). Thousand Oaks, CA: Sage Publications.
- Defining and evaluating e-learning. (April, 2004). *Online Classroom*, 5-7.
- Dooley, K. (2007). Viewing agricultural education research through a qualitative lens. *Journal of Agricultural Education*, 48(4), 32-42.
- Espasa, A. and Meneses, J. (2010). Analysing feedback processes in an online teaching and learning environment: An exploratory study. *Higher Education*, 59 277-292.
- Gelo, O., Braakmann, D., and Benetka (2008). Quantitative and qualitative research: Beyond the debate. *Integrative Psychological and Behavioral Science*, 42, 266-290.
- Guerin, E., Arcand, I., and Durand-Bush, N. (2010). A view from the inside: An in-depth look at a female university student's experience with a feel-based intervention to enhance self-confidence and self-talk. *The Qualitative Report*, 15(5), 1058-1079.
- Gustafson, C.R. (2007). When do students complete online exams? *NACTA Journal*, 51(4), 9-16.
- Hogan, R.L., McKnight, M.A., & Leigier, J.T. (2006). Moving from traditional to online instructors: Considerations for improving trainer and instructor performance. *Journal of Human Resource and Adult Learning*, 2(2), 34-38.
- Hurd, S. (2007). Anxiety and non-anxiety in a distance language learning environment: The distance factor as a modifying influence. *System*, 35, 487-508.
- Lassiter, S.A. (2009). Establishing a relationship between virtual instructor and student in the online classroom. *Distance Learning: A magazine for leaders*, 6(1), 53-57.
- Lee, J., Carter-Wells, J., Glaeser, B, Ivers, K., and Street, C. (2006). Facilitating the development of a learning community in an online

- graduate program. *The Quarterly Review of Distance Education*, 7(1), 13-33.
- McAllister, C. (2009). Teaching online: Growth in online education. *Distance Learning: A magazine for leaders*, 6(2), 35-40.
- McKnight, J. (2010). Walking a mile in their shoes: From online student to online instructor. *Innovation Abstracts*, XXXII (7).
- Meloni, J. (2011). Technologies for teaching: Strategies and pitfalls. *The Education Digest*, 23-27.
- Monaco, M., and Martin, M. (2007). The millennial student: A new generation of learners. *Athletic Training Educational Journal*, 2, 42-46.
- Murphrey, T.P. (2010). A case study of eeLearning: Using technology to create and facilitate experiential learning. *The Quarterly Review of Distance Education*, 11(4), 211-221.
- Murray, M. (2003). Narrative psychology and narrative analysis. In P.M. Camie, J.E. Rhodes, & L. Yardley (Eds.), *Qualitative research in psychology: Expanding perspectives in methodology and design* (pp 95-112). Washington, DC: American Psychological Association.
- Puzziferro, M., and Shelton, K. (2009). Challenging our assumptions about online learning: A vision for the next generation of online higher education. *Distance Learning: A magazine for leaders*, 6(4), 9-20.
- Rudestam, K.E. (2004). Distributed education and the role of online learning in training professional psychologists. *Professional Psychology: Research and Practice*, 35(4) 427-432.
- Seok, S., Kinsell, C., DaCosta, B., and Tung, C.K. (2010). Comparison of instructors' and students' perceptions of the effectiveness of online courses. *The Quarterly Review of Distance Education*, 11(1), 25-36.
- Solimeno, A., Mebane, M.E., Tomai, M., & Franciscato, D. (2007). The influence of students and teachers characteristics on the efficacy of face-to-face and computer supported collaborative learning. *Computers and Education*, 51, 109-128.
- Spielberger, C.D. (1983). *Manual for the State-Trait Anxiety Inventory*. Palo Alto, CA: Mind Garden.
- Sull, E.C. (2009). Responding to online student e-mails and other posts. *Distance Learning: A magazine for leaders*, 6(2), 63-66.
- Sull, E.C. (2009). Student engagement, motivation, and rapport. *Distance Learning: A magazine for leaders*, 6(3), 90-94.
- Warren, R., Reid, K.A., & Krendl, K.A. (1996). Building communication environments in distance education. *Paper presented at the Annual Meeting of the Speech Communication Association (82nd, San Diego, CA, November 23-26, 1996)*.
- Vonderwell, S., and Turner, S. (2005). Active learning and preservice teachers' experiences in an online course: A case study. *Journal of Technology and Teacher Education*, 13, 65-84.
- Xu, H., and Morris, L.V. (2009). A comparative case study of state-level virtual universities. *New Directions for Higher Education*, 146, 45-54.