Evaluating the Need for Electronic Learning in Classrooms

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Abstract

In this study, the researchers sought to explore the use of electronic learning (e-learning) by students of secondary institutions and by teachers in the secondary classroom. The researchers sought to answer the question of how well prepared at the secondary level current students of post-secondary institutions were for the e-learning demands of higher education. The researchers wanted to find out if this study would provide insight into whether access to e-learning accelerates adjustment of secondary school students into post-secondary schools and if current secondary use of e-learning technology was insufficient to prepare students for college level work. Researchers conducted the study with 76 post-secondary students (N = 76) from a randomly selected, diverse sampling of current college students who had attended any state high school within the last five years. After collecting the data, the researchers analyzed the data using descriptive statistics and determined there was a relationship between teacher preparation in using e-learning at the secondary school level and student preparation for college level e-learning. Finally, researchers provided ethical considerations and social work implications to empower individuals at the micro and macro levels regarding e-learning.

Keywords: Electronic Learning, Blended Learning, Digital Literacy, Distance Education, High School, ICT anxiety, Mobile Learning, Online Learning, Secondary Education.

Introduction

Electronic learning (e-learning) includes a wide variety of communication technologies in the classroom, such the Internet, social media networks, CD-ROMs, DVDs, smartphones, and interactive whiteboards. The researchers wanted to show that it is important to provide this kind of learning in high schools to prepare students to succeed and excel in college classes with the use of twenty-first-century technology.

Supporting this same goal, the National Council for Accreditation of Teacher Education (NCATE) has adopted target standards for preparing educators "who are able to use educational technology to help all students learn," calling such ability "a vital component of teacher preparation" (NCATE, 2015). Rubrics for four of the six standards specify expectations that future teachers learn how to use technology and how to integrate it into the classroom (NCATE, 2015).

This study, though, asks how well teachers have used their learning to teach students and how well schools have been able to implement technology in the classroom at the secondary school level. For example, in a study of 27 school districts in the state of Texas, Golsan and Alexander (2014) found anecdotal evidence of computers in the classroom going unused and interactive whiteboard technology that the district had purchased still sitting in closets, as well as campuses providing only once-a-week computer technology lab time.

This study used survey data from 76 former high school students (N = 76) in assessing how well their prior learning experiences in secondary school contributed to the ease of transition to post-secondary institutions. In addition, the survey included questions concerning the evaluation of teacher knowledge and use of e-learning technology in the classroom.

Purpose

The purpose of this study is to evaluate the use of e-learning and teacher use of e-learning technology in the secondary classroom from the perspective of current students of post-secondary institutions. The researchers want to see if there is a need for expansion of e-learning in secondary schools for students to be better prepared for post-secondary education.

Problem Statement and Objectives

Access to e-learning appears to make a difference in college readiness of traditional students. Therefore, this evidence-based research will present data showing the need for more e-learning availability to secondary students and teacher training in e-learning technologies and teaching techniques. Lack of teacher training or inability of trained teachers to implement technology to enhance classroom instruction could be one of the problems.

Hypotheses

The researchers hypothesize that students entering post-secondary institutions for the first time are unprepared for the use of technology in the classrooms due to insufficient e-learning use at the secondary school level. In addition, the researchers hypothesize that educator use of e-learning in the classroom at the secondary school level is insufficient to prepare students for post-secondary school.

Literature Review

This literature review informs the current research study by evaluating the factors that influence educators' decisions on whether to adopt e-learning in their secondary classroom environments. Literature tends to focus on either the educator's perspective or the student's perspective; therefore, the following review is split accordingly.

Educator Perspective

Traditional secondary students may have many reasons for not being prepared for a smooth transition into a post-secondary educational environment; lack of e-learning is one of those reasons. Professors expect students today to be adept at using computers post-graduation from high school upon entering college. Secondary educators cannot help but be aware of technology's increased role in today's society. However, many teachers are hesitant to adopt e-learning for their secondary classroom environments. Mac Cullum, Jeffrey, and Kinshuk's (2014) research study found that critical factors affecting educators' intentions to implement mobile learning were perceived ease of use, perceived usefulness, information and communication technology (ICT) anxiety, digital literacy, and teaching self-efficacy. Adopting the newest technology into educators' secondary classrooms has the potential to help students transition into post-secondary educational environments and achieve success at a faster rate. Pursuing this further, research literature confirmed that the technology acceptance model (TAM) provided a valuable tool for modeling educators' adoption of mobile learning. According to Mac Cullum et al. (2014), mobile learning or e-learning technologies are not being accepted or adopted by educators because of perceived lack of usefulness and ease of use. These two factors are part of what is known as the TAM. *Perceived usefulness* is the extent to which the use of new technology is viewed as being able to benefit or enhance performance on the job (Waheed & Jam, 2010, p. 332). An educator who views e-learning positively and as beneficial will be more inclined to adopt it into the classroom environment. *Perceived ease of use* is defined as the measure of the degree an educator believes a particular technology is free from effort (Mac Cullum et al., 2014, p. 145). As is true for perceived usefulness, an educator who views e-learning technology as uncomplicated will be more likely to institute it into the curriculum.

In addition, the research indicated the negative role of ICT anxiety in digital literacy, teaching self-efficacy, and perceptions of mobile learning. The study highlighted that digital literacy has a

distinct role on acceptance. Specifically, basic ICT literacy and advanced mobile literacy each play a separate but vital role on acceptance. The findings also differentiated between digital literacy and the ability to use technology within the classroom.

The study highlighted the notion that educators not only need to be digitally literate but also be able to implement the technology in the classroom. Ability and attitudes played a strong role in acceptance of e-learning or mobile learning. This research fills the current gap in mobile learning adoption and addresses an often-overlooked area of research addressing educators' adoption (Mac Cullum et al., 2014, p. 153-154).

ICT anxiety deters some educators from adopting new technology. ICT anxiety is a feeling of discomfort, apprehension, and fear of coping with ICT tools or uneasiness in the expectation of negative outcomes from computer-related operations (Mac Cullum et al., 2014, p. 146). Additionally, if the educator has a low digital literacy, then the result will be less e-learning in the classroom. Research has proven that as an educator, self-efficacy beliefs have a tremendous influence over the thought processes and emotions about e-learning in the classroom environment.

Mac Cullum et al. (2014), further found that teaching self-efficacy was another critical factor for educators' behavior intentions to implement mobile learning. Teaching self-efficacy is the educators' beliefs about their own abilities to enhance the learning of students (Dickstein, 2013). Educators need training that is more effective in order to increase their self-efficacy.

According to Freeman (2011), "professional development has been shown to not only enhance educator skills and develop new instructional methods, but also impact student achievement" (p. iv). There is a direct correlation of professional development that involves student success, the practices in the classroom, and the training of educators. In recent years, increasing demands have been placed on secondary educators to merge e-learning into classroom instructional practices. This has sent educators, especially those educated prior to the recent technology revolution, hustling to learn the new skills required to meet these demands (Dupre, 2012, p. 1). An

e-learning environment has become part of the secondary educational classroom environment. Unspecialized secondary educators are expected to provide a classroom atmosphere that promotes 21st century e-learning or mobile learning skills (Dupre, 2012).

In fact, e-learning can no longer be considered a supplement to education but rather an essential part of student learning. Dupre's research study proposed ways for educators to receive web-based training in order to complete professional development requirements to teach e-learning. The author suggested that "traditional methods of delivering professional development have not kept pace with the rapidly changing needs of educators" (Dupre, 2012, p. 5). The combination of web-based training and traditional training makes learning flexible and efficient for educators and saves school districts 20% to 90% of time commitment over traditional methods of professional development (Dupre, 2012). Pye's study examined how school principals encouraged their teachers' use of e-technology and the increase or decrease of that use. That study found that local school administration had to be supportive of educators in order for e-learning to be effective (Pye, 2013, p. i).

Student Perspective

The research literature showed that students are often well versed in Internet and social media use, but not all students are prepared upon entering the post-secondary school system in the United States to use the classroom technologies that are required (Madden, Lenhart, Duggan, Cortesi, & Gasser, 2013). Classroom technologies such as WebCT, Blackboard, and DesireToLearn, the top three Learning Management Systems (LMS) used in the distance education environment may be a required part of the post-secondary learning environment (Galy, Downey, and Johnson, 2011). Each institution chooses the LMS it will use for managing data between instructors and students. These require the student to post to instructor-managed forums, upload assignments,

view videos, and, often, to create their own videos and upload them. These tasks may be things students may have never done before entering a post-secondary institution.

In addition, students want to use their personal devices in the secondary schools because they are used to turning to the Internet for answers instead of a book, which can become a battle because of school policies forbidding the use of personal devices in the school (Nowell, 2014). Along this same line, Nowell (2014) stated "mobile phones and Web 2.0 tools (i.e., blogs, wikis, video sharing websites, podcasts, and social media networks) have been labeled as disruptive to the learning process and sometimes banned from schools altogether" and that even though we are in the 21st century, our schools often seem to expect teaching to be done the same way it was in the early 20th century. Students want rewarding learning experiences and improved social aspects to learning that the use of mobile technologies can provide (Martin, McGill, & Sudweeks, 2013). Students find authoring assignments such as writing and blogging using the computer to be the most motivating.

The *digital divide*, a term referring to the ability or inability to access digital technology according to various social or economic categories, seems to be a major concern in the United States. A Pew Research survey of 2,462 teachers in middle and high schools found that, although 54% stated that their students had good access to e-learning at school, only 18% said that their students had good access to e-learning tools at home (Purcell, Heaps, Buchanan, & Friedrich, 2013). Nowell (2014) stated that teachers have concerns about student access to technology and that there are "visible differences" between those who have computers at home and those who do not.

Plus, students perceive advantages in the use of technology in the classroom such as taking notes using an "iPad or something in class" to better organize notes and not worry about lost papers. Nowell (2014) also highlighted the teachers' perspective that it is the "schools' responsibility to equally prepare economically disadvantaged students with the technology and media literacy skills necessary to compete." In addition, more studies are needed to "aid policy-makers in un-

derstanding the role technology plays in classroom learning, the teacher-student relationship, and combatting the growing digital divide" (Nowell, 2014). Purcell et al. (2013) supported this in their survey results, which showed teachers thought that students in the lowest incomes had the least ability to access "digital tools" both at home and at school.

Schools need to encourage students to think of the role of digital technology in their education, not just as a social tool. Nowell (2014) discussed the difference between students' perceptions of social media and the possibilities of social media in education and that students often do not make a connection between the two. The author used Twitter as an example of teachers connecting with students about school events to encourage rapport and build up the student-teacher relationship. Furthermore, multimedia tools such as podcasts can be accessed by a variety of student devices and increase motivation of student learning (Martin et al., 2013).

According to Seet and Quek (2010), students preferred more extensive access to computers after class hours in the school, better online social communication with their fellow students, and strong instructor support and guidance when web-based issues came up. Instructor support as well as social communication were found to be strong predictors of student attitudes in the learning environment. Secondary schools that are not equipped, do not have the necessary teacher training in place, and do not encourage e-learning may be keeping students from knowledge needed to be successful at the post-secondary level.

In evaluating the factors that impact educators' decisions to adopt e-learning in their secondary classroom environments, the foregoing literature conclusively confirms that implementation of e-learning is affected by several factors. These factors include digital literacy, ICT anxiety, ICT teaching, self-efficacy, perceived usefulness, and perceived ease of use. Professional development of educators and decisions of school administrators play pivotal roles on the implementation of e-learning. And, while students want rewarding learning experiences to prepare them for using technology outside of school or in post-secondary institutions, educators must acknowledge that

e-learning is vital to overall educational objectives. In addition, both students and teachers need to be encouraged to see technologies as more than an easy way for students to connect socially with their peers.

Conceptual/Theoretical Framework

E-learning is a relatively new concept being introduced to today's generation of students. As a new concept, it will take time to adjust to its implementation and practice to better comprehend why it benefits our current generation and generations to come. The purpose of implementing e-learning in classrooms is to improve the educational systems and give students an upper hand in furthering their education. The Social Cognitive Theory can be used to explain the way e-learning influences students' ways of learning.

"Bandura's Social Cognitive Theory stresses the idea that much human learning occurs in a social environment. By observing others, people acquire knowledge, rules, skills, strategies, beliefs, and attitudes" (Schunk, 2012). Therefore, when e-learning is introduced into classrooms, students will not have a difficult time comprehending this new concept. A classroom is a great example of a social environment in which human learning can occur.

An instructor also plays a role in the implementation of e-learning in the classroom. The Triadic reciprocal model of causality shows the relation between person, environment, and behaviors and how these three concepts influence each other. Students' behaviors and classroom environments influence one another in many ways. Consider a typical instructional sequence in which the teacher presents information and asks students to direct their attention to the board provided by Schunk (2012):

> Environmental influence on behavior occurs when students look at the board without much conscious deliberation. Students' behaviors often alter the instructional environment. If the teacher asks questions and students give the wrong answers, the teacher may reteach some points rather than continue the lesson (p. 118).

When introducing e-learning, the Triadic reciprocal model of causality explains why it is more beneficial to introduce this concept to a classroom rather than one individual. Within classrooms, there will be the support a student may need to understand e-learning.

Not only does Bandura's Social Cognitive Theory explain why introducing e-learning into a classroom is beneficial for students, it also explains why e-learning has a positive effect on learning. According to Bandura's theory, much human learning occurs vicariously or without overt performance by the learner at the time of learning. One common source of vicarious learning is observing or listening to models who are live or in-person. However, e-learning is also a form of vicarious learning. E-learning involves learning via the use of a television, computer, video-tape, or DVD. Vicarious sources accelerate learning over what would not be possible if people had to perform every behavior for learning to occur (Schunk, 2012). Therefore, e-learning has the positive effect of accelerating the time of comprehension a student takes to obtain new knowledge.

Methods

Participants

Participants in the study were randomly selected and consisted of 76 English-speaking students who currently attend a college or university. The subjects' ages ranged from 18 to 22 years. The median age was 20 (22.4%) and the average age was 19 (27.6%). Of the 76 participants, 26 (34%) had been out of secondary school a year of less, 19 (25%) for two years, 13 (17%) for three years, and 18 (23.7%) for four years. The participants' backgrounds included Caucasian, African American, Hispanic, and Asian. Each subject participated in the research study voluntarily.

Materials

Researchers gathered participants by handing out flyers to students and requesting their participation in the research. Each student then signed an informed consent form. Informed consent forms contained information about procedures, benefits and risks of participating, how to acquire the results of the research, voluntariness of participation, and ways to contact the researchers. The purpose of the study was also on the consent form. Additional materials included the use of a cross-sectional quantitative survey of 10 questions.

The surveys were numbered from 1 to 76 and no personal identifying information was included on the survey to maintain the anonymity of each participant during the research project. Three questions had a closed-ended format to document the students' use of computers before and during high school and whether they felt there was a need for it at the secondary level. Four questions utilized a Likert-type scale to measure the participants' attitudes regarding their and their secondary teachers' preparation in the use of computers in the classroom as well as their comfort level with computers. The last three questions measured participants' use of e-learning in various classes, length of time since last attending secondary school, and what kind of community their school was located in.

Design and Procedure

For the purpose of this study, the researchers used a non-experimental and correlational design to determine the relationship between teacher training in e-learning technology and students' preparation for use of e-learning technology at the collegiate level. Teachers' training in e-learning is the pseudo-independent variable and the students' preparation level is the dependent variable in this study. The questionnaire was designed to show that a bivariate correlation existed between the two variables. "Bivariate correlation tests whether the relationship between two variables is linear. As one variable increases, the other also increases or as one variable decreases, the other variable decreases" (Jgarczynski, 2014).

Moreover, the researchers hypothesized that educators' use of e-learning technology at the secondary level was insufficient to prepare students for e-learning at the college level. Another pseudo-independent variable was the teacher's use of e-learning in high school classrooms. The cross-sectional survey used closed-ended questions to evaluate this phenomenon by asking the students if they actually used e-learning in high school and which courses required them to use e-learning.

The participants were selected by using a simple random sampling method. College students aged 18-22 were approached as they departed campus and were provided consents and surveys. After the consents were signed, the participants completed the questionnaires with the maximum time noted for completion being fifteen minutes. Each participant was allowed time to debrief following the survey and each was provided an opportunity to ask the researcher questions.

Data Analysis and Results

Observations

The results of our cross-tabulation analysis in Table 1 show that of the 76 students who took the survey, 16 (21%) stated their teacher was well prepared and of those 16, 7 stated they were well prepared and 9 stated they were somewhat prepared. Forty-one students (53%) stated their teacher was somewhat prepared and of these, 25 students (33%) stated they were somewhat prepared with only 9 (12%) stating they were well prepared, and 7 students (9%) either not prepared or did not use. Only 1 student stated they were well prepared for college with a teacher who was not prepared to teach e-learning. The cross-tabulation analysis in Table 1 also showed that of the 76 students who took the survey, 17 (22%) felt well prepared for e-learning at the college level, 43 (57%) felt only somewhat prepared for college while 13 (17%) felt they were not prepared for college and 3 (4%) stated they did not use e-learning at the secondary school level. These results show that most students felt their teachers were somewhat prepared but not well prepared to teach

or use e-learning technology in the secondary school environment. Pearson correlation coefficients were calculated to examine the relationship between student perception of e-learning preparation in high school and student perception of their teachers' preparation for teaching e-learning. Results found a positive correlation of .433 ($p < .01$) with a 2-tailed level of significance.

In addition, student responses were sorted by type of school community: metropolitan, suburb of a larger city, and rural. All 76 students responded to this question and of these, 17 (22%) felt well prepared for college, 43 (57%) felt somewhat prepared, 13 (17%) felt they were not prepared and 3 (4%) did not use e-learning at the secondary level. For the 27 metropolitan students 7 (26%) felt well prepared for e-learning in college, 14 (52%) felt somewhat prepared, 5 (18%) felt they were not prepared, and 1 did not use e-learning at the secondary level. For the students from the suburbs (28 total), 6 (21%) felt they were well prepared, 18 (64%) felt somewhat prepared, 3 (11%) felt they were not prepared, and 1 did not use e-learning. For the rural students (21 total), 4 (19%) felt they were well prepared, 11 (52%) felt they were somewhat prepared, 5 (24%) felt they were not prepared, and 1 did not use e-learning at the secondary school level. The majority of students, 43 (56%), reported that they felt somewhat prepared for using e-learning in college. Although fewer students reporting they were from rural communities reported they felt well-prepared (4) compared to students from suburb and metropolitan communities (6 and 7 respectively), the difference was not large enough (+ or – 3) to state a definite need for expansion of e-learning in rural communities or not and no correlation was found between community and level of preparedness for e-learning among the students.

Results of the surveys indicated a majority of students (40) who took 1-3 classes felt they were "somewhat prepared" for e-learning at the college level. Only 17 students out of the 76 surveyed reported they were "well-prepared" for e-learning in college. Out of the 76 students surveyed, 13 reported they were "not prepared" for e-learning in college and all of these students took between

one and four classes. Sixty-five students (86%) stated they had taken at least one class in which e-learning was used or required. Student preparation for college use of e-learning was compared to how often students used e-learning in their secondary school classes using Pearson correlation coefficient. Results found a correlation at .333 ($p < .01$) with a 2-tailed test of significance. This may indicate that students benefit more from a variety of teachers and teaching knowledge and more practice with e-learning technologies in a variety of settings than only the level of teacher preparedness for teaching e-learning would account for.

Implications

The findings were consistent with our hypotheses that student preparation for e-learning in college seems to be correlated with how well prepared teachers are for using e-learning in the classroom. However, because of the subjectivity of the questionnaire, more in-depth research would need to be conducted as to exactly how much teacher training is implemented in the classroom in e-learning that would also be used at the college level. In addition, a majority of students (56%) felt that they were only somewhat prepared for the use of e-learning at the college level. The kinds of e-learning that might be expected at the college level would be the use of Blackboard, posting of assignments directly into it or uploading assignments, creating video using social media and uploading that directly to Blackboard, creating assignments online and posting the link with e-mail, or by using something like Google communities.

Table 1. Cross-tabulation Comparison of Student Perception of Preparation for College Compared to Perceived Teacher Preparation in Using E-Learning in the Secondary Classroom

	Teacher Preparation in Using E-Learning in the Secondary Classroom				
How Well Student Was Prepared for E-Learning in College	Teacher was well prepared	Teacher was somewhat prepared	Teacher was not prepared	Teacher did not use e-learning	Total

Student was well prepared for college	7	9	1	0	17
Student was somewhat prepared for college	9	25	8	1	43
Student was not prepared for college	0	5	8	0	13
Student did not use e-learning	0	2	0	1	3
Total	16	41	17	2	76

Discussion

Strengths and Limitations

This study revealed post-secondary student dissatisfaction with the quality of e-learning provided at the high school level. In addition, this study shows a correlation in the comfort level of students with e-learning in high school, amount of use of e-learning in high school classes, and their current perceptions of preparation for college. The sample size included a random sample from a culturally diverse population of students from a variety of socioeconomic levels. It also incorporated students from multiple majors and interests and did not limit the study to any particular field.

However, the sample was limited by student perceptions of preparation and adaptation to electronic learning from high school through college. This study was also limited by the short, quantitative answers provided by students, limited locations of students interviewed, and the small sample size (N = 76). A future, larger, in-depth qualitative study on both student and teacher perceptions of e-learning technology use in the high school classroom with a follow-up study of the same students after the first year of post-secondary classes may reveal more accurate results. In addition, the literature reviewed by the researchers was limited for studies done in the United States, with much of the prior research done on this subject conducted in other countries. Possibly a study that follows a diverse sample of United States high school students from multiple socioeconomic levels through the first year of their post-secondary education would find a distinct difference in the levels of preparation of both students and teachers based on school funding and computer use.

Ethical Considerations

Ethics in education means granting educational opportunities to anyone on equal basis, disregarding nationality, gender, ideological differences or mental/physical disabilities (Toprak, Ozkanal, Kaya, and Aydin, 2007). One purpose of e-learning is to provide an education for those that cannot learn in the traditional system. Online learning environments have an important potential, owing to their nature to reach international audiences (Toprak et al. , 2007). Therefore, ethics of consideration for e-learning should be a combination of both the traditional ethics of education and online ethics.

Education ethics cover the learning side of e-learning. Following ethical guidelines ensures that students are obtaining the correct and appropriate information to succeed in the subject, as well as providing the proper tools the students may need to comprehend the material that is taught.

Online ethics pertain to the electronic part in electronic learning. This part of ethics is a new one and not completely understood by every person due to web/online use being a fairly new concept. Toprak et al. (2007) commented that "though the instructors may accept the moral basis of their profession, when it comes to teaching online, there may be other issues of concern different from those encountered in teaching face-to-face."

Cultural diversity is one area in which ethics are important in online learning environments according to Khan (2005, p. 293). Acknowledging cultural diversity implies remembering that e-learning allows different students from different backgrounds to be taking the same class. Indeed, geographical diversity will allow different opinions and thoughts from around the country or world. This is in contrast to traditional classroom environments where students are primarily from the same neighborhood and area.

Implications for Social Work

The evaluation of research and data analysis concerning e-learning in classrooms has the potential to impact both students and educators. One concern is ensuring educators receive the appropriate training and support from school administration to be successful in secondary and post-secondary classroom environments. According to Pye (2013, "in order for electronic learning to be effective, the local school administration such as a principal has to be supportive of the educators" (p. i).

Confident, eager, and prepared secondary school educators will be better equipped to teach e-learning to all students. E-learning has the ability to impact secondary school students by enabling them to be more prepared to succeed in post-secondary educational environments and eventually in the ever-competitive U.S. workplace.

The evaluation of e-learning has potential implications on micro, mezzo, and macro levels of social work practice. This research has the potential to impact individuals, families, groups, organizations, and communities by shedding light on the factors that keep educators and students from being successful in the use of e-learning devices.

Social workers need to pay close attention to individual students and educators at the micro level of practice by focusing on how the research can strengthen each individual student and educator in a way that promotes success in secondary and post-secondary educational environments. In addition, social workers could counsel educators on effective ways to become more confident in their use of e-learning devices. More importantly, social workers can help educators focus on building positive beliefs and perceptions about implementing e-learning into their classroom environments.

Professional social workers also play an important role with individual students by helping the students concentrate on the positive reasons why it is important to use e-learning in secondary educational environments and how it better prepares them for post-secondary education and future jobs.

Similarly, at the mezzo level of practice, they could concentrate their efforts on the students within the family environment and educators as a small group in each school. Social workers could advocate on behalf of families that do not have the funds to purchase computers and gain access to internet (Wi-Fi) in order to take online classes from home or to complete and submit homework for traditional secondary educational environments. Additionally, social workers could advocate by requesting that each school structure policies to ensure that all educators receive the appropriate training to help them feel confident and skilled enough to teach technology in their classroom environments. According to Freeman (2011), the professional development of educators has a direct impact on enhancing their skills and teaching methods as well as student achievement (p. iv).

Lastly, at the macro level of social work practice, the social worker is representing the rights of others through advocating (Kirst-Ashman & Hull, 2012). The social worker could focus advocating efforts on how society would benefit from the successful implementation of e-learning in secondary and post-secondary educational environments. Educators who are fully trained and prepared to teach e-learning in secondary educational environments could have a direct effect on students succeeding in a post-secondary educational environment and in the U.S. work place. Students must have better skills and knowledge about e-learning technology in order to succeed in the twenty-first century work place after graduation and in a fast-paced society in which electronic technology is a staple.

Conclusion

This study used survey data from 76 former high school students (N = 76) in assessing how well their prior learning experiences in secondary school contributed to the ease of transition to post-secondary institutions. In addition, the survey included questions concerning the evaluation of teacher knowledge and use of e-learning technology in the classroom. After collecting the da-

ta, the researchers analyzed the data using descriptive statistics and determined there was a relationship between teacher preparation in using e-learning at the secondary school level and student preparation for college level e-learning. The researchers had sought to answer the question of how well prepared at the secondary level current students of post-secondary institutions were for the e-learning demands of higher education. The researchers wanted to find out if this study would provide insight into whether access to e-learning accelerates adjustment of secondary school students into post-secondary schools and if current secondary use of e-learning technology was insufficient to prepare students for college level work. The results of the study indicate that students attending college within the last five years are currently not well prepared for e-learning technology use when they first enter college. In addition, this has implications for secondary school students who do not plan to attend college in that they are not being well equipped for the use of e-technologies used in business and industrial applications in the United States current fast-paced technological society.

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