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Letter from the Editor

Melissa Layne, Ed.D.

Spring 2015 Issue

Spring is here, and for many of us, the weather is getting warmer, the days are longer, and plants and flowers are beginning to emerge from Mother Earth. Following the cold, dreary winter season, spring is a welcome seasonal change symbolizing brightness, growth and new developments.

Our spring issue also captures the essence of newness, progress, and change. For example, we have officially reached our 2-year anniversary mark--which in the world of publishing, is a notable accomplishment, as this symbolizes potential longevity for the journal. Second, we have also added several new interactive components including drop-down boxes, accordions, slideshows and lightboxes. Third, we have incorporated a new section entitled, “*3 Questions for an Online Learning Leader*” whereby we interview an expert in the field of online learning by asking questions around current hot topics. Lastly, we have also designed a fresh, new website that reflects our mission and further models innovative thinking around online teaching, learning, and scholarship. We also continue to expand our editorial reviewer board with world-renowned experts who have proven themselves as leaders in online scholarly research.

Although this issue of the journal is not themed, as you peruse the articles within, you will certainly notice several commonalities. Before revealing these commonalities, allow me to take the opportunity to briefly highlight the contents of each exceptionally written and insightful article.

Our first article, *Strategies for Virtual Learning Environments: Focusing on Teaching Presence and Teaching Immediacy* is written by Misha Chakraborty and Fredrick Muyia Nafukho, Texas A & M University. The purpose of this study was to establish factors identified in previous studies that positively affect learners’ engagement in virtual learning environments. The literature review highlights teacher presence and teacher immediacy in online class settings, thereby providing practitioners with proven strategies and best practices on the importance of instructor involvement in an online environment.

The second article, *Students’ Perceptions of Online Course Quality: How Do They Measure Up to the Research?* is authored by Penny Ralston-Berg, Penn State World Campus, Janet Buckenmeyer, Coastal Carolina University, Casimir Barczyk, and Emily Hixon, Purdue University Calumet. The authors of this study investigated how students’ perceptions of online course quality compared to those put forth in the Quality Matters rubric. Three

thousand one hundred sixty students currently taking an online college-level course completed a survey that asked them to rate the importance of each QM standard restated from the student perspective. Students' ratings of each item were compared to the ranking of each item received by QM (3-Essential, 2-Very Important, or 1-Important).

Our third article, *Faculty Training and Student Perceptions: Does Quality Matter?* authors Jun Sun and Ramiro de la Rosa, from the University of Texas – Pan American, explores the relationship between faculty training in Quality Matters standards and the online course quality as perceived by students. Interestingly, whether a faculty member has participated in Quality Matters training before teaching an online course was surveyed and furthered served as the independent variable in the study.

Next, authors João C. R. Caetano, of the University of Alberta, Lisbon Portugal, and Nicolas Lori, Faculty of Medicine, University of Coimbra, Coimbra, Portugal present *Digital Information Networks and the Future of Online Learning* whereby they reflect on the development possibilities for universities that offer online teaching opportunities in Europe. The authors specifically focus on the extent to which European universities address the developmental needs established by governmental and non-governmental agencies, international economic agencies (e.g. European Union (EU), Organization for Economic Co-operation and Development (OECD)), and by European associations that are invested in education and skills-training (e.g., European Association of Distance Teaching Universities (EADTU)).

Next, we debut our new, recurring section, *3 Questions for an Online Learning Leader*. This regular section will showcase the responses from an online leader addressing current hot topics in the field of online teaching, learning and scholarship. In this issue, we feature President and CEO of American Public University System, Dr. Wally Boston.

Our Featured Article, *Assessing the Degree of Homogenous Online Teaching Textbook Infancy from 1999 to 2007 Using the Immediacy Principle*, by Erik Bean is a quantitative content analysis study aimed toward examining whether independently authored online education textbooks published in the infancy of online teaching development from 1999 to 2007 including scholarly studies including a teaching technique dubbed *immediacy*. Taking into account the burgeoning field of online education and its efficacy, a secondary purpose of the study was to examine the effective transformation of scholarly knowledge to practice.

Our final article written by Carmen Elena Cirnu, *The Shifting Paradigm: Learning to Unlearn*, poses important questions around data and the valuable knowledge we can gain if we choose to use it wisely. Cirnu poignantly asks, “in order to be able to fully benefit from the enormous amount of data openly available and also of the competitive advantages that new learning may provide, do we need to learn to unlearn in order to bypass the biases already acquired? Do we need to free our minds first to be able to go further? Cirnu further

asserts that because the knowledge-learning-power paradigm is changing, the tendency is that it is the *unlearning* that aids in relevant knowledge-power extraction.

Any compilation of articles within an academic journal tends to embrace various ontological and epistemological beliefs and assumptions. For example, each article within this issue came to me in the form of a manuscript--along with other manuscripts representing personal and institutional studies and experiences. Were the commonalities easy to spot? Upon first receiving these articles in manuscript form, I immediately noticed keywords such as, *immediacy, faculty and student perceptions of quality, teacher/instructor presence, and transforming research into professional development*. These common threads seem to indicate a common denominator and a research focus on faculty. Perhaps this focus is the result of a shift in scholarly research that reflects the notion that now that we know more about *students'* perception of online learning, it's time to shift our focus to the *instructor*. Although I may receive input from colleagues that this implication is far too general, I do indeed notice patterns between all of the articles disseminating perceptions, outcomes, and experiences and shared on a global scale that continue to provide our respective societies with rich, much--needed knowledge.

Respectfully,

Dr. Melissa Layne, Editor-in-Chief for *Internet Learning Journal*

**The figures labeled as *Interactive* may be viewed by downloading the *Internet Learning Journal* app from the iOS App Store.

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Strategies for Virtual Learning Environments: Focusing on Teaching Presence and Teaching Immediacy

By Misha Chakraborty and Fredrick Muyia Nafukho, Texas A & M University

ABSTRACT

Given advancements in technology, online learning environments have evolved from less engaging modes of delivering course content to creating a platform where learners have the opportunities to engage in active learning experiences. It is therefore beneficial to examine the views and perspectives of researchers, who view online courses as indispensable in modern educational systems and have contributed useful strategies and ideas of creating engaging online classes. The purpose of this study was to establish factors identified in previous studies that positively affect learners' engagement in virtual learning environments. The focus of the literature review was to highlight teacher presence and teacher immediacy in online class settings. Both hard copy and online searches generated relevant articles depicting various online class engagement strategies. The findings of the study suggest that teaching presence and teaching immediacy can influence learners' cognitive and affective learning experiences. The paper has implications for professional education in online teaching and learning and for educators in general. The authors identify future research areas that should contribute to the progression of the field of online learning literature in terms of teacher presence and teacher immediacy.

Keywords: Online learning, teaching presence, teaching immediacy, students' learning, motivation.

INTRODUCTION

A recent survey report revealed that online student enrolment has increased drastically in past few years. "More than 6.7 million students were taking at least one online course during the fall 2011 term, an increase of 570,000 students compared to the previous year" (Allen & Seaman, 2014, p. 7). The survey also revealed that 32% of students are taking at least one online class and 77% of academic leaders rate online learning outcomes as equal or superior to that of a traditional class setting. These findings are a significant development in the academic environment. Online learning is growing at a faster rate than the overall enrollment in the higher education sector. As noted, "For the past eight years online enrollments have been growing substantially faster than overall higher education enrollments" (Allen & Seaman, 2014, p. 4). In a report entitled: *Grade Change: Tracking Online Education in the United States*, it is revealed that the number of students taking at

least one online course increased by over 44,000 to a new total of 7.1 million (Allen & Seaman, 2014). Similar trends in growth are evident in organizational settings, where online training is becoming an integral part of the success strategy (Fagan, 2014):

[E-learning] is part of the biggest change in the way our species conducts training since the invention of the chalkboard or perhaps the alphabet. The development of computers and electronic communications has removed barriers of space and time. We can obtain and deliver knowledge anytime anywhere. (Horton, 2000, p. 6).

Online classes are consistently imparting and improving knowledge of learners separated by geographical distances. The limitless expansion beyond geographical boundaries attract a large pool of talent without incurring travel and physical expenses related to traditional face-to-face classes (Li & Irby, 2008). According to Palloff and Pratt (2007) the increase in the number of people using Internet is directly related to the greater demand of online classes. The increasing demand of technology by diverse learners separated by geographic distances is noticed by non-profit and for-profit organizations. As a result, institutions like National University, which is the second largest non-profit institute in California, offers 60% of their courses online with most of their traditional classes including online components (Silverstone & Keeler, 2013). Mgutshini (2012) summarizes this scenario related to online class environments:

Developments in computing, particularly with respect to the use of the Internet, have fueled an unprecedented growth in the use of technology-based environments within education. Notably, both distance-learning institutions, as well as conventional academic institutions have integrated a range of electronic learning environments, such as virtual discussion rooms, podcasts, virtual simulations and Twitter boards into their curricula. A number of reasons for these developments have been offered. Web-based strategies are seen as representing a revolutionary progression in learning through the flexibility of occurring anywhere, at any time and at a lesser cost than face to- face alternatives (p. 1).

Because the rapidly changing nature of technological innovation impacts the delivery of course content, the face of content delivery also changes (Calis, 2008; Chakraborty & Nafukho, 2014). Emerging technological innovations are creating scope to create interactive and flexible online learning environments. However, the shift from interactive and familiar, traditional classroom settings to virtual environments may be challenging to both the instructor and the learner. The challenges identified in the literature include: a) very limited supervision from the instructor (Mgutshini, 2012); b) inefficient use of technology (Bonk & Graham 2006); and c) lack of communication (Yang, Yeh & Wong, 2010).

Online classes offer learners the unique opportunity to reflect and research before responding to issues being discussed in class, which is different in face-to-face classes, where learners have to respond to issues sometimes without much reflection and research. (Christie, Garrote & Jurado, 2009). With the increased use of computers, cell phones, the Internet, and other wireless devices, today's learners are more connected than ever before, yet disconnected at the same time--especially from the interruptions created by mobile device (La Roche & Flanigan, 2012). It becomes the responsibility of the course instructor to communicate with the disconnected or distracted students to increase their interaction with the course content and give them a sense of community. As La Roche and Flanigan (2012) pointed out, "The creation of a meaningful learning environment is the key to enhancing the educational experience. It is generally agreed that engaged students learn more and retain more of what they learn" (p. 47).

The Value for Learner Engagement in Virtual Learning Environments

Engagement, motivation and learning are important in both educational and organizational settings. Online classes, online learning and teaching professional development require the formation of a positive environment, where learners are capable of creating inclusive learning experiences (Keller, 2008). In this study, as mentioned earlier, the term 'organization' is used in a broader context to include both for-profit and non-profit institutions or companies.

Ally, (2004) proposed that in the global context, many multinational companies are delivering online training to their employees. Lip, Morrison and Kuprtitz (2014) proposed that "For private sector organizations, one of the most significant benefits of online instruction has been just-in-time delivery of training when employees need learning to effectively address performance problems in the workplace" (p. 28). Engaging learners in the virtual environment is identified as a challenge in organizations. Similarly, in the higher education sector, the focus is to minimize the disadvantages associated with online learning while enhancing the positive effects.

The field of human resource development advocates for equipping learners with tools that promote and support overall learning, growth and development (Nafukho, Amutabi, & Otunga, 2005, Nafukho, Wawire & Lam, 2011). The core components of human resource development, i.e. career development, training and development and organization development, focus on improving performance at both organizational and individual levels (Swanson & Holton, 2008). Therefore, performing a search for suitable **teaching presence strategies** and **teaching immediacy** will help improve learning and performance at the individual level, and also will help organizations achieve a confident and skilled workforce.

THEORETICAL FRAMEWORK

It is obvious that an instructor's role in an online class environment is a significant factor for learners' successful and positive learning experiences. Teaching presence and teaching immediacy are found to be significant factors in traditional face-to-face class settings (Witt, Wheelless, & Allen, 2004). It is important to study the influences of these two important factors in an online class environment (Baker, 2010). Tudorache, Iordache and Iordache (2012) portrayed electronic learning or elearning as "a type of education where the medium of instruction is computer technology. No in-person interaction may take place in some instances. E-learning is used interchangeably in a wide variety of contexts" (p. 389). La Roche and Flanigan (2012) defined student engagement as activities that involve students' 'active cognition processes' (p. 47). Hence, creating and delivering instruction and learning activities and assignments aimed toward involving learners in online class environments is required for student engagement in an online class context. Teaching presence or instructor's presence is denoted by the role of instructors in online class environments. Designing and facilitating are ways to ensure cognitive and social learning experiences (Anderson, 2000). Again, teaching immediacy is defined in this paper as an instructor's availability as perceived by the learners (Baker, 2010).

Although authors such as Duderstadt (2012) are doubtful about the possibilities of deriving universal strategies to engage online students, Cull, Read, and Kirk (2010) optimistically found the significance of deriving and following common strategies to engage students online.

The challenge of keeping our students engaged and motivated is common across grade levels, subject matter, and all types of institutions and courses. Online courses, however, present a special concern. With students and faculty in contact only via the Internet several new challenges arise (para 1).

Grandzol and Grandzol (2006) coined that empirical evidence of best practices are the most effective in finding out strategies that help create engaging and interesting online courses. Again, Garrison, Cleveland-Innes and Fung (2010) advocated for theoretical foundation of online learning literature. "It is argued here that to advance our understanding of online learning in higher education, a coherent theoretical framework must guide investigations into the research and practice of web-based online teaching and learning" (p. 31).

Different studies highlight the importance of forming a learning community among students. Researchers suggest that a sense of community is beneficial for the students'

emotional and cognitive development (Grandzol & Grandzol, 2006). Essential to the online education experience is what various researchers have termed ‘community of learners’, ‘knowledge-building communities’, ‘virtual learning communities’, or ‘communities of inquiry’. This concept urges course design such that students can contribute to the evolving knowledge base of the group, while developing underlying social networks within their course.

Researchers have found a significant relationship between students’ sense of community and students’ perceived learning (Arbaugh, 2014; Boston, 2014; Rovai, 2002; Thompson et al., 2005). Garrison suggests that teaching presence in online learning environments is an important factor influencing learners’ experiences. “The consensus is that teaching presence is a significant determinate of student satisfaction, perceived learning, and sense of community” (Garrison, 2007, p. 67). Researchers acknowledge that teaching presence is positively related to students’ success, students’ perceived learning and sense of community (Meyer, 2003; Swan et al., 2005; Vaughan, 2004).

In this article, online learning is defined as a medium where content is delivered via the Internet. The terms online learning, e-learning, computer-based learning, distance learning and virtual learning are used synonymously in this paper. Rourke, Garrison and Archer (2001) defined teaching presence as “the design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educational worthwhile learning outcomes” (p. 2). Teaching immediacy is denoted through the accessibility and availability of the instructor to the students.

PURPOSE AND RESEARCH QUESTIONS

An extensive review of literature revealed that the recent trend in literature started to shift focus from solely finding whether online education is comparable to traditional face-to-face classes (Vroeginday, 2005). The recent work concentrates on providing strategies to engage online learners. In many professional and educational organizations, online classes are made mandatory and as a result, learning is crucial for online users. The changing learning environment along with evolving sophisticated technology necessitates following suitable strategies to engage today’s learners in both educational and professional settings. The literature review assembles the strategies of teaching presence and teaching immediacy that are advocated in empirical studies performed in last 11 years. Perry and Edwards (2014) proposed that although the online literature has increased in volume, “the literature remains lacking in terms of studies focused on what makes some online educators more effective than others” (p. 1).

The purpose of this literature review is twofold: First to present the existing research addressing teaching presence and teaching immediacy in online environments, and second to identify and explore the effect of teaching presence and immediacy on students' motivation and learning highlighted in the identified review of the literature. The literature review intends to address the following research questions:

1. What role does teaching presence play on online learners' perceptions regarding virtual learning environments?
2. What role does instructors' immediacy play on online learners' experience?

METHODOLOGY

Search Process

A systematic literature review (Ridley, 2012) was conducted to address the above-mentioned research questions. The literature search was carried out on the basis of three overlapping domains: 1) teaching presence and/or teaching immediacy in online or virtual environments within educational setting. The Venn diagram below depicts the literature search process. The shaded area denotes the section of interest i.e., learners' optimal learning experiences.

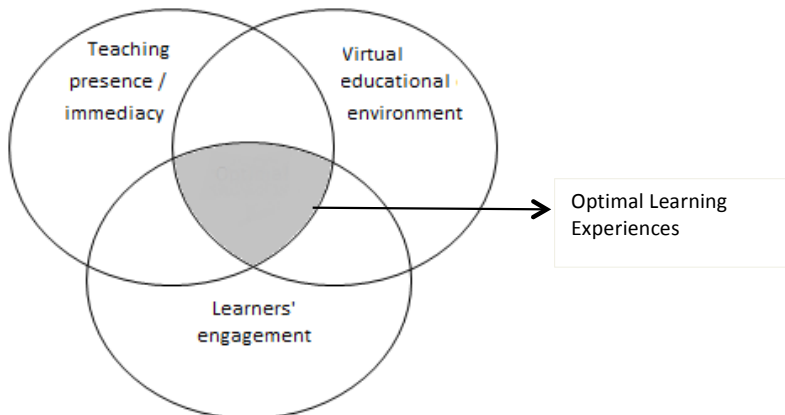


Figure 1. A Venn-Diagram illustrating the literature search process and area of interests.

Data Collection

To generate as many relevant publications as possible, the authors of this study reviewed hard copy journals and conducted online searches through various databases. The databases used included Academic Search Complete (Ebsco), Social Sciences Full Text (Wilson), ProQuest Education Journals, ProQuest Dissertation and Thesis, ProQuest Central, Social Sciences Citation Index (ISI), ERIC (Ebsco), SAGE Full Text Collection (CSA), Google Scholar, Emerald, and SAGE. The following keywords were used: Teaching presence, instructors' presence, teachers' immediacy, learners' affective learning, cognitive learning, learner's motivation, online learning, virtual learning, elearning, distance education, online training, e-training, virtual training, online class engagement, students' satisfaction and learner engagement.

The keyword searches yielded the following journals: *CyberPsychology and Behavior*, *Information and Communication Technologies in Tourism*, *Journal of Social Issues*, *Journal of European Industrial Training*, *Journal of Organizational Behavior*, *Personality and Individual Differences*, *Journal of Computer-Mediated Communication*, *Advances in Developing Human Resources*, *Business Horizon*, *AAOHN Journal*, and *Applied Psychology*.

The initial search resulted 3563 articles. Considering the change in technology and as a result change in approach towards online courses, articles published within ten years (2003 to 2013) were included in the literature review. Applying the criteria, the search was narrowed to 50 articles. After reading the abstracts, 30 articles were selected for this article. The following criteria were used to select articles for this study:

1. Articles that discuss teaching presence or teaching immediacy and related the concept(s) to students' motivation.
2. Articles published within 2003 to 2014. Nevertheless, older publications are included for concept building and to support or refute arguments presented in this paper.
3. Empirical studies that identified teaching presence and teaching immediacy as online instructional strategies.
4. Published in peer-reviewed journals

In this article *teaching presence*, *instructor presence* and *teaching immediacy/teachers' immediacy* are used to convey the same notion.

Data Management

The authors relied on Garrard's review matrix to conduct an extensive review of the relevant literature. The column headers include 'authors and year', 'purpose', 'participants', 'research methodology', and 'major findings'. The major findings section includes information about related theories and notes, positive points and gaps identified. Quotes from the articles were used whenever possible to avoid distortion of information. The tables help organize information from various relevant research articles highlighting purposes and significance of the selected articles. The initial search resulted 1650 articles. After going through the abstract and applying the stated criteria to the abstract, a total of 25 articles were included in this literature review. A sample of the literature matrix is presented in Appendix A.

FINDINGS AND DISCUSSIONS

Instructor's Presence

In face-to-face classes instructors can interact with students and receive verbal and nonverbal cues to understand learners' level of engagement. In online classes learners often look for a similar type of 'virtual visibility' from their instructors or facilitators (Cull, 2010).

Timely feedback enhances the student/Instructor relationship and contributes to a healthy classroom dynamic. The online student has an expectation of immediate feedback for any and all concerns. They may feel isolated; therefore the Instructor has to manage the online environment differently than a face-to-face classroom (Silverstone & Keeler, 2013, p. 19).

Anderson (2008) identified ways to denote teaching presence in online class environments. Paying attention to "creating or repurposing" (p. 347) contents like lecture notes, adding teachers' comments, posting video lectures, including personalized inputs etc. can ensure a personal touch from the teacher and enables students to actually relate to the teacher or the instructor. Anderson also tied this practice to student motivation:

This design category of teaching presence also includes the processes through which the instructor negotiates timelines for group activities and student project work, a critical coordinating and motivating function of formal online course design and development, and a primary means of setting and maintaining teaching presence (p. 348).

Garrison (2007) posed that teaching presence played a significant role in creating an online learning community. The author noted, "teaching presence must consider the dual

role of both moderating and shaping the direction of the discourse. Both are essential for a successful community of inquiry” (p. 32). Garrison cautioned that instructors need to understand when they need to facilitate or direct online discussions, as they both are essential to use effectively in order to create a learning-focused online community. Various authors including Baker (2010), Garrison and Arbaugh, (2007), and Juwah (2006) viewed teacher’s function as managerial, social, organizational or technical depending on the role they are playing in their classroom.

The relation between teaching presence and students’ perceived learning is established in literature (Chesney & Marcangelo, 2010; Lori, 2013; Shea, Pickett & Pelz, 2004). Wu and Hiltz (2004) conducted a study where students asserted that interactions with the instructor help them engage in learning-oriented online discussions. Garrison (2005) stated that teaching presence is crucial to enhance critical thinking in students. The leadership role of instructors is often crucial in deciding cognitive content quality in the class activities. As Garrison noted “...we find the leadership role of the instructor to be powerful in triggering discussion and facilitating high levels of thinking and knowledge construction” (p. 137).

Instructor’s Immediacy

Anderson (1979, cited in 2008) first recognized that immediacy of a teacher affects students’ affective learning and therefore, students’ achievement. Anderson, however, did not find any relation between instructor’s immediacy and cognitive learning. Recent research highlighted a positive relationship between students’ cognitive learning and teachers’ presence (Baker, 2010; Witt, Whelees & Allen, 2004).

Vonderwell (2003) pointed out that pattern of feedback given to the learners during one academic semester: in the beginning of the semester, usually it is very regular. Then as the semester progress, the amount of feedback and their timeliness decreases. Timely and constructive feedback can play significant role in ensuring learners’ engagement.

Baker (2010) advocated for the relationship between instructor’s immediacy and learner’s cognitive and affective learning. It was established that verbally explicit immediate feedback influenced learners’ self-perceived cognitive and affective learning and therefore, increased engagement in online class environment. The trend of offering online classes compels us to explore strategies to engage learners in online class environment. The literature review focuses on the following variables: instructor’s presence and instructor’s immediacy in increasing learners’ cognition, motivation and affective learning.

Student engagement in online learning has been described as an expanding industry' (Becker & Posner, 2012; Kim & Hoop, 2013; Rowe & Asbell-Clarke, 2007). The flexibility available in online classes is one of the reasons for its increasing popularity in both educational and professional settings. Online interactions are recognized and welcomed in literature. Garrison et al. (2005) emphasized the importance of interactions in educational setting. These interactions can be enhanced through the use of innovative and appropriate technology.

Interaction is seen as central to an educational experience and is a primary focus in the study of online learning. The focus on interaction in online learning emerges from the potential and properties of new technologies to support sustained educational communication (p. 134).

It is the responsibility of the online class provider to offer interesting and engaging learning environments where the learners not only learn the content, but also have a positive and safe experience. "The proliferation of offerings and options in online education programs exacerbates the need for research into the nature and effectiveness of teaching and learning in such environments" (Kim & Hoop, 2013, p. 79). The online interaction is describes as sine qua non in online class environment, however, interactions alone cannot guarantee cognitive development and content learning quality in online class environment (Garrison, 2005).

Anderson (2008) proposed that instructors play a crucial role in facilitating online discussions to welcome new perspectives and critical thinking that are related to the actual content of the course. Researchers (e.g. Cheng, Paré, Collimore & Joordens, 2011; Hew and Cheung Levin 2011; Ioannou, Demetriou & Mama (2014) proposed guidelines to make online discussions engaging in order to create online environment suitable to cause positive learning endeavor for the learners. The guidelines are presented in Table 1:

Table 1 *Online Discussion Facilitation Guidelines*

Strategies	Application
The discussion goes on for at least a week	The learners will get time to reflect on the content shared in the posts
The syllabus shows ground rules to follow in discussions	Learners understand the expectations
Ask students related questions to stimulate discussions	The questions asked by the instructors will help students be engaged
The instructor adds positive comments to the students	Encourages learners to get engaged in the discussion

Strategies	Application
Encourage learners to relate their own experiences	The learners can learn from their experiences and also will also play attention to the discussions if they know that the experiences are used later.
Ask learners to post at least two responses to peers: Hence encourage contribution	Ensures peer learning and contributes to social learning
Ask learners to relate discussion posts with text, videos, lecture, slides and other resources provided	Encourages learners to utilize the course resources
Ask learners to summarize their discussion threads	Provides learners to reflect on their and others' comments

Kam and Hoop (2013) proposed that “learners can share data from their experiments, discuss the common pattern in their results, question discrepant data, challenge misconceptions, and form evidence-based conclusions” (p. 80). An online class should provide the learners the opportunity to discuss, question, criticize and challenge in order to achieve learners’ cognition, motivation and affective learning.

McCroskey (2006) suggested that instructor’s communication can have significant impact on learners’ affective learning. Instructors can play role in directing class discussions in the right direction. Their positive and constructive feedback in timely manner can reduce learners’ anxiety and concerns. If practiced effectively, the asynchronous class discussion can produce more affective learning as compared to that of synchronous discussions (Cleveland-Innes & Ally 2007). Moore and Kearsley (1996) proposed transactional theory where the authors emphasized the transactional distance between learners and instructors. Classes with only lectures and no communication contain large transactional distance. While, classes that indulge interactions are perceived to have low transactional distance.

Bloom (1956) asserted the importance of instructor’s emotional responses to influence learning. The lower level (knowledge, comprehension and application) and higher level (analyze, synthesize and evaluate) of thinking are achieved through careful and planned facilitation. Burill (2011) advocated that providing meaning to learning is the effective way of practicing Bloom’s Taxonomy in increasing students’ motivation and learning. Baker (2010) and Russo and Benson, (2005) proposed positive relation between instructor’s presence and affective learning of the students. Some studies (Baker, 2010; Ni, 2004) evidenced positive relationship between instructor’s immediacy and learners’ affective learning.

Miltiadou and Savenye (2003) proposed that motivation plays significant role in deciding whether a student will succeed in a class environment. Therefore, the instructors need to pay attention on students' motivation. Researchers Palloff & Pratt (2003) suggested that motivation plays a vital role in online class environment as it depends on learners' self-directed learning pace.

Role of Instructors in Online Class Environments

Caudle (2013) proposed that “teaching presence is more involved than designing and facilitating a community; it also includes caring for the affective domain and mediating interactions” (p. 119). Based on the information received from the available literature, the following unique roles of instructors are highlighted:

Course Facilitator. According to Silverstone and Keeler (2013), clear instructions in facilitation increase learner and instructor interactions. Instructor's presence and immediacy in providing feedback are also capable of creating learner and instructor interactions. In a study conducted by Silverstone and Keeler (2013) the concept of "Emergency help line" was introduced. The students were given an email address that was solely created to address students' concerns.

Subject Matter Expert. Silverstone and Keeler (2013) proposed that in online classes instructors can attempt to encourage creating information repository and sharing information: “when managed effectively, discussion forums can encourage learners to share information, build on the ideas of others, and construct understanding about the changing world of technology” (Silverstone & Keeler, 2013, p. 18). Being at ease with the technology being used help increase interactions with the actual content for the learners. According to Cottrell and Donaldson (2013) accessibility to resources increases the interactions between learners and content.

Manager. Students learn in different ways and therefore, online class environments should consist of various measures like, lectures, videos, handouts, graphics, and activities to satisfy learners with different learning style (Silverstone and Keeler, 2013). Kim and Hoop (2013) advocated the importance of social interactions and learning by thinking and doing. Learners' previous experiences can facilitate their learning.

Course Designer. Nagel and Kotzé (2010) coined the importance of using technology effectively to achieve learners' engagement in online class environment. Nevertheless, technology should not become the sole focus of the class. In the context of nurse education, Cottrell and Donaldson (2013) advocated that technology in many cases, acts as a medium to deliver content to the learners. It does not aid in the content itself. “The concept of

teaching and learning is driven by the pedagogical principles of teaching and learning rather than technology itself, which captures the principles of effective e-learning” (Cottrell and Donaldson, 2013, p. 221). Hence, learners should be provided with clear instructions and navigation guides to get them acquainted with the learning management system that is used to deliver the course.

Offir, Barth and Shteinbok, (2003) included the following roles for instructors: social (positive environment through interactions), procedural (addressing administrative and technical issues related to the lesson or course), expository (providing resources), explanatory (answering questions), cognitive task engagement (enabling learners to process content), and learning assistance interactions (ensuring retention) (p. 71). In their attempt to measure presence in online environments, Witmer, and Singer (1998) included two set of factors: Control factors (indicating authority) and sensory factors (indicating support). The control factors include degrees of control, anticipation of events, mode of control, physical environment modifiability and last but not least, immediacy of control (p. 229). Data in Table 2 reveals the various roles instructors are expected to play in online class environments as demonstrated in various research studies. The table also presents the specific responsibilities associated with the roles.

Table 2 Role of Instructors in Online Class Environments

Role Of Instructor In Relation To Teaching Presence And Teaching Immediacy	Responsibilities
Mentor	<ul style="list-style-type: none"> • Understanding learners’ personal learning goals • Helping them achieve their goals
Facilitator	<ul style="list-style-type: none"> • Encouraging learners to be involved in the class and owning learning content • Encouraging learners to be involved
Designer and Developer	<ul style="list-style-type: none"> • Designing courses to meet the learning styles of learners (visual, auditory and kinesthetic) • Organizing course content and information in a user-friendly way
Manager or supervisor	<ul style="list-style-type: none"> • Resolving conflicts among learners • Ensuring a safe environment for the learners to share their experiences and

	views
Technical Assistant	<ul style="list-style-type: none"> • Answering technical questions regarding class sites • Troubleshooting technical hitches to ensure smooth access to learners
Model or Ideal figure	<ul style="list-style-type: none"> • Modeling ideal online class etiquette • Presenting ideal class behavior by creating examples
Devil's Advocate	<ul style="list-style-type: none"> • Questioning to spark critical thinking • Ensuring learning reflection through assignments and class activities
Counselor	<ul style="list-style-type: none"> • Helping learners overcome any learning related difficulty (i.e. isolation) • Discussing with learners to understand learning outcomes
Explorer	<ul style="list-style-type: none"> • Trying new ideas and tools in online classes in terms of assignments and activities • Using innovative techniques to ensure learners engagement (keeping track of recent research and findings)
Moderator	<ul style="list-style-type: none"> • Acting as the negotiator in group conflicts • Acting as a representative of learning; perspectives present outside the class environment
Researcher	<ul style="list-style-type: none"> • Performing searches to get acquainted with the new development in online class research areas • Adding new aspects to online classes for effective delivery of content
Administrator	<ul style="list-style-type: none"> • Indicating class rules and expectations • Ensuring learners follow class etiquette
Repository	<ul style="list-style-type: none"> • Acting as resources to learners in answering their queries • Providing learners with links and instructions regarding available resources

Implications to Human Resource Development (HRD) Research and Practice

This literature review contributes toward proposing strategies for online class environments, where the instructors and learners are capable of gaining positive learning experiences. Strategies can be beneficial in both educational and professional settings. Strategies are also helpful in designing and delivering effective online trainings in companies. “E-learning is considered an effective means to reduce training expenses and improve service quality of organizations” (Ho & Kuo, p. 24).

The field of human resource development provides training and development as one of the core components to ensure development at both individual and organizational levels (Werner & DeSimone, 2011). The findings of this study act towards strengthening the relationship between instructors and learners to ensure optimal learning experiences in virtual classrooms.

CONCLUSIONS AND FUTURE RESEARCH

Existing research on the role of teaching presence and teaching immediacy in online learners’ motivation and learning was explored in this study. To achieve the purpose of this study, relevant articles were extracted and reviewed using the Literature Review Matrix developed by Garrard (2007). Anderson et al. (2001) argued that teaching presence can be achieved through designated “student” facilitators (i.e. it can be evenly distributed among students, who can play a facilitator’s role in leading specific discussions or assignments). Anderson (2008) further argued that online discussions and discourse provides learners with the opportunity to engage in critical reflection and set up a platform where students can freely express their views--even when they disagree with the instructors. Prensky (2000) preferred to call the process as power of reasoning. As Anderson (2008) correctly noted when talking about involving students in discourse:

In fulfilling this component of teaching presence, the teacher regularly reads and responds to student contributions and concerns, and constantly searches for ways to support understanding in the individual student, and the development of the learning community as a whole. (p. 351).

This study has limitations. Each limitation, however, opens opportunities for future research areas. The study examined previous studies and proposed connections between teaching presence and students’ learning, and teaching immediacy and learners’ motivation and cognition. Quantitative and qualitative studies are needed to confirm the findings in this paper. Important demographic variables such as age, gender, ethnic background and

socioeconomic status were not explored in this study, therefore providing an opportunity to expand the research in this area.

REFERENCES

- Arbaugh, J. B. (2014). System, scholar or students? Which most influences online MBA course effectiveness? *Journal of Computer Assisted Learning*, 9(1), 9-21. doi: 10.1111/jcal.12048
- Arbaugh, J. B., & Hwang, A. (2006). Does “teaching presence” exist in online MBA courses?. *The Internet and Higher Education*, 9(1), 9-21. doi:10.1016/j.iheduc.2005.12.001
- Anderson, T., Rourke, L., Garrison, D. R., & Archer, W. (2001). Assessing teaching presence in a computer conferencing context. *Journal of Asynchronous Learning Networks*, 5(2), 1-17. Retrieved from: <http://hdl.handle.net.lib-ezproxy.tamu.edu:2048/2149/725>
- Anderson, T. (Ed.). (2008). *The theory and practice of online learning*. London: Athabasca University Press.
- Allen, I. E. & Seaman, J. (2014). *Grade change: tracking online education in the United States*. Retrieved from <http://www.onlinelearningsurvey.com/reports/gradechange.pdf>
- Ally, M. (2004). Foundations of educational theory for online learning. *Theory and practice of online learning*, 3-31.
- Aslanian, C., & Clinefelter, D. (2012). *Online college students 2012: Comprehensive Data on Demands and Preferences*. Retrieved from <http://www.learninghouse.com/files/documents/resources/Online%20College%20Students%202012.pdf>
- Baker, S. C., Wentz, R. K., & Woods, M. M. (2009). Using virtual worlds in education: Second Life® as an educational tool. *Teaching of Psychology*, 36(1), 59-64. doi:10.1080/00986280802529079
- Baker, C. (2010). The Impact of Instructor Immediacy and Presence for Online Student Affective Learning, *Cognition, and Motivation*. *Journal of Educators Online*, 7(1), n1. Retrieved from: <http://files.eric.ed.gov/fulltext/EJ904072.pdf>

- Berge, Z.L., & Collins, M. (1995). (Eds.) *Computer-mediated communication and the online classroom*. Cresskill, NJ: Hampton Press.
- Bernard, R. M., Abrami, P. C., Borokhovski, E., Wade, C. A., Tamim, R. M., Surkes, M. A., & Bethel, E. C. (2009). A meta-analysis of three types of interaction treatments in distance education. *Review of Educational Research*, 79 (3), 1243-1289. doi: 10.3102/0034654309333844
- Boling, E. C., Hough, M., Krinsky, H., Saleem, H., & Stevens, M. (2012). Cutting the distance in distance education: Perspectives on what promotes positive, online learning experiences. *The Internet and Higher Education*, 15(2), 118-126. doi:10.1016/j.iheduc.2011.11.006
- Brooks, D. (2012, May 4). *The campus tsunami*. The New York Times, p. A29.
- Bullen, M. (1998). Participation and critical thinking in online university distance education. *Journal of Distance Education*, 13(2), 1-32. Retrieved from: <http://ijede.ca/index.php/jde/article/view/140/394>
- Campbell, D. E. (2014). The Influence of Teacher Immediacy Behaviors on Student Performance in an Online Course (and the Problem of Method Variance). *Teaching of Psychology*, 41(2), 163-166. doi: 10.1177/0098628314530351
- Caudle, L. A. (2013). Using a Sociocultural Perspective to Establish Teaching and Social Presences Within a Hybrid Community of Mentor Teachers. *Adult Learning*, 24(3), 112-120. doi: 10.1177/1045159513489112
- Chakraborty, M., & Nafukho, F. M. (2014). Strengthening student engagement: What do students want in online courses?. *European Journal of Training and Development*, 38(9), 782–802. Retrieved from: <http://dx.doi.org.lib-ezproxy.tamu.edu:2048/10.1108/EJTD-11-2013-0123>
- Chen, S. (2007). Instructional design strategies for intensive online courses: An objectivist-constructivist blended approach. *Journal of interactive online learning*, 6(1), 72-86. Retrieved from: <http://www.unhas.ac.id/hasbi/LKPP/Hasbi-KBK-SOFTSKILL-UNISTAFF-SCL/Mental%20Model/konstruktivisme2.pdf>
- Chen, P. S. D., Lambert, A. D., & Guidry, K. R. (2010). Engaging online learners: The impact of Web-based learning technology on college student engagement. *Computers & Education*, 54(4), 1222-1232. doi:10.1016/j.compedu.2009.11.008

- Cheng, C. K., Paré, D. E., Collimore, L. M., & Joordens, S. (2011). Assessing the effectiveness of a voluntary online discussion forum on improving students' course performance. *Computers & Education*, 56(1), 253-261. doi:10.1016/j.compedu.2010.07.024
- Chesney, S. & Marcangelo, C. (2010). There was a lot of learning going on using a digital medium to support learning in a professional course for new HE Lecturers. *Computers and Education*, 54 (2010), 701–708. doi:10.1016/j.compedu.2009.09.027
- Christensen, C. M., & Eyring, H. J. (2011). *The innovative university: changing the dna of higher education from the inside out*. San Francisco, CA: Jossey-Bass.
- Clayton, K., Blumberg, F., & Auld, D. P. (2010). The relationship between motivation, learning strategies and choice of environment whether traditional or including an online component. *British Journal of Educational Technology*, 41(3), 349-364. doi: 10.1111/j.1467-8535.2009.00993.x
- Cole, P.G., & Chan, L.K.S. (1994). *Teaching Principles and Practice* (2nd ed.). New York, NY: Prentice Hall.
- Cooper, H. M. (1982). Scientific guidelines for conducting integrative research reviews. *Review of Educational Research*, 52(2), 291-302. doi: 10.3102/00346543052002291
- Denzin N.K. (1989). *Interpretive Interactionism*. London, UK: Sage Publications.
- Duderstadt, J. Atkins, D. & Houweling D. (2002). *Higher education in the digital age: Technology issues and strategies for American colleges and universities*. Westport, CT: Praeger.
- Ekwunife-Orakwue, K. C., & Teng, T. L. (2014). The impact of transactional distance dialogic interactions on student learning outcomes in online and blended environments. *Computers & Education*, 78, 414-427. doi:10.1016/j.compedu.2014.06.011
- Fagan, M. H. (2014). Exploring a sociomaterial perspective on technology in virtual human resource development. *Advances in Developing Human Resources*, 16(3), 320-334. doi: 10.1177/1523422314532094
- Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior*, 26(4), 331-362. doi: 10.1002/job.322

- Garrison, D. R. (2007). Online community of inquiry review: Social, cognitive, and teaching presence issues. *Journal of Asynchronous Learning Networks*, 11(1), 61-72. Retrieved from: <http://files.eric.ed.gov/fulltext/EJ842688.pdf>
- Garrison, D. R. & Arbaugh, J. B. (2007). Researching the community of inquiry framework: Review, issues, and future directions. *Internet and Higher Education*, 10, 157–172. doi:10.1016/j.iheduc.2007.04.001
- Garrison, D. R., Cleveland-Innes, M., & Fung, T. S. (2010). Exploring causal relationships among teaching, cognitive and social presence: Student perceptions of the community of inquiry framework. *The Internet and Higher Education*, 13(1), 31-36. doi:10.1016/j.iheduc.2009.10.002
- Gikandi, J. W., Morrow, D., & Davis, N. E. (2011). Online formative assessment in higher education: A review of the literature. *Computers & Education*, 57(4), 2333-2351. doi:10.1016/j.compedu.2011.06.004
- Garrard, J. (2007). Health sciences literature review made easy: The matrix method. 2nd ed. Sudbury (MA): Jones and Bartlett.
- Grabe, M., Christopherson, K., & Douglas, J. (2005). Providing introductory psychology students access to online lecture notes: The relationship of note use to performance and class attendance. *Journal of Educational Technology Systems*, 33(3), 295-308. doi: 10.2190/G5RF-DMWG-WV1G-TMGG
- Gregori, E., Torras, E., & Guasch, T. (2012). Cognitive attainment in online learning environments: matching cognitive and technological presence. *Interactive Learning Environments*, 20(5), 467-483. doi:10.1080/10494820.2010.531026
- Gump, S. E. (2004). Keep Students Coming by Keeping Them Interested: Motivators for Class Attendance. *College Student Journal*, 38(1), 157. keep-students-coming-by-keeping-them-interested-motivators <https://www.questia.com/library/journal/1G1-115034788/keep-students-coming-by-keeping-them-interested-motivators>
- Fredricks, J.A., Blumenfeld, P.C., & Paris, A.H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74, 59–109. doi: 10.3102/00346543074001059
- Horton, W. (2000), *Designing web-based training*. New York: John Wiley and Sons. doi: 10.1111/1467-8535.00081

- Han, H., & Johnson, S. D. (2012). Relationship between students' emotional intelligence, social bond, and interactions in online learning. *Journal of Educational Technology & Society, 15*(1), 78-89. Retrieved from:
<http://www.new.ifets.info/index.php/ifets/article/view/14>
- Harasim, L.N., Hiltz, S.R., Teles, L., and Turoff, M. (1995). *Learning networks: a field guide to teaching and learning online*. Cambridge, MA: The MIT Press.
- HCC. (2009). *Distance learning committee*. Retrieved from
<http://flightline.highline.edu/distlearn/online.defn.htm>
- Hew, K. F., & Cheung, W. S. (2011). Higher-level knowledge construction in asynchronous online discussions: An analysis of group size, duration of online discussion, and student facilitation techniques. *Instructional Science, 39*(3), 303-319. doi: 10.1007/s11251-010-9129-2
- Hughes, J. A. (2004). Supporting the online learner. In T. Anderson & F. Elloumi (Eds.), *Theory and Practice of Online Learning* (pp. 367-384). Canada: Athabasca University.
- Ioannou, A., Demetriou, S., & Mama, M. (2014). Exploring factors influencing collaborative knowledge construction in online discussions: Student facilitation and quality of initial postings. *American Journal of Distance Education, 28*(3), 183-195. doi:10.1080/08923647.2014.926780
- Jackson, G. B. (1980). Methods for integrative reviews. *Review of Educational Research, 50*(3), 438-460. doi: 10.3102/00346543050003438
- Johnson, S. D., Aragon, S. R., & Shaik, N. (2000). Comparative analysis of learner satisfaction and learning outcomes in online and face-to-face learning environments. *Journal of interactive learning research, 11*(1), 29-49. Retrieved from:
http://www.editlib.org/lib-ezproxy.tamu.edu:2048/index.cfm?fuseaction=Reader.ViewAbstract&paper_id=8371&from=NEWDL
- Juwah, C. (2006). *Interactions in online education: Implications for theory and practice*. Lawrence Erlbaum, New York.
- Keller, J. (2008). First principles of motivation to learn and e3-learning. *Distance Education, 29*(2), 175-185. doi:10.1080/01587910802154970

- Kinlaw, C. R., Dunlap, L. L., & D'Angelo, J. A. (2012). Relations between faculty use of online academic resources and student class attendance. *Computers & Education, 59*(2), 167-172. doi:10.1016/j.compedu.2011.12.028
- Kim, J. (2012). Influence of group size on students' participation in online discussion forums. *Computers & Education*. doi:10.1016/j.compedu.2012.10.025
- Kvale, S. (1996). *InterViews: an introduction to qualitative research interviewing*. Thousand Oaks, CA: Sage.
- LaPadula, M. (2003). A comprehensive look at online student support services for distance learners. *The American Journal of Distance Education, 17*(2), 119–128. doi:10.1207/S15389286AJDE1702_4
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Newbury Park, CA: Sage.
- Lewis, J. A. (2009). Redefining qualitative methods: believability in the fifth moment. *International Journal of Qualitative Methods, 8*(2), 1-14. Retrieved from: <http://ejournals.library.ualberta.ca/lib-ezproxy.tamu.edu:2048/index.php/IJQM/article/view/4408/5403>
- Loukkola, T., & Zhang, T (2010). Examining Quality Culture: Part 1 – Quality Assurance Processes in Higher Education Institutions. European University Association. http://www.eua.be/pubs/Examining_Quality_Culture_Part_1.pdf
- Mausner, C. (1996). A kaleidoscope model: Defining natural environments. *Journal of Environmental Psychology, 16*(4), 335. doi:10.1006/jevp.1996.0028
- Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2010). *Evaluation of Evidence-Based Practices In Online Learning: A Meta-Analysis And Review Of Online Learning Studies*. Retrieved from <http://ifap.ru/library/book440.pdf>
- Mishler E. G. (1986). *Research Interviewing: Context and Narrative*. Harvard University Press, Cambridge, MA.
- Moore, M. G., & Kearsley, G. (1996). *Distance education. A systems view*. Belmont, CA: Wadsworth.

- Moore, A., Masterson, J. T., Christophel, D. M., & Shea, K. A. (1996). College teacher immediacy and student ratings of instruction. *Communication Education, 45*, 29-39. doi:10.1080/03634529609379030
- McCance, T. V., McKenna, H. P., & Boore, J. R. (2001). Exploring caring using narrative methodology: an analysis of the approach. *Journal of Advanced Nursing, 33*(3), 350-356. doi: 10.1046/j.1365-2648.2001.01671.x
- Murray, M., Pérez, J., Geist, D., & Hedrick, A. (2012). Student interaction with online course content: Build it and they might come. *Journal of Information Technology Education: Research, 11*(1), 125-140. Retrieved from: <http://www.editlib.org/lib-ezproxy.tamu.edu:2048/p/111496/>
- Meyer, K. A. (2003). Face-to-face versus threaded discussions: The role of time and higher-order thinking. *Journal of Asynchronous Learning Networks 7*(3), 55–65, 2003
- Mason, R. (1991). Moderating educational computer conferencing. *DEOSNEWS, 1* (19): 91-00011.
- Nagel, L., & Kotzé, T. G. (2010). Supersizing e-learning: What a CoI survey reveals about teaching presence in a large online class. *The Internet and Higher Education, 13*(1), 45-51. doi:10.1016/j.iheduc.2009.12.001
- Offir, B., Barth, I., Lev, J. & Shteinbok, A. (2003) Teacher–student interactions and learning outcomes in a distance learning environment, *Internet and Higher Education, 6*, 65–75. doi:10.1016/S1096-7516(02)00162-8
- Offir, B., Bezalel, R., & Barth, I. (2007). Introverts, extroverts, and achievement in a distance learning environment. *American Journal of Distance Education, 21*(1), 3-19. doi:10.1080/08923640701298613
- Oliver, R. (2001). Assuring the Quality of Online Learning in Australian Higher Education. In M. Wallace, A. Ellis & D. Newton (Eds). *Proceedings of Moving Online II Conference* (pp. 222-231). Lismore: Southern Cross University.
- Palloff, R. M., & Pratt, K. (2007). *Building online learning communities: Effective strategies for the virtual classroom*. John Wiley & Sons.
- Paul, R., & Elder, L. (2014). *Critical thinking: Concepts and tools*. Berkeley, CA: The Foundation for Critical Thinking.

- Perry, B., & Edwards, M. (2014). *Exemplary online educators: Creating a community of inquiry*. Retrieved from:
<http://184.168.109.199:8080/xmlui/bitstream/handle/123456789/2226/ED490370.pdf?sequence=1>
- Prensky, M. (2000). *Digital game-based learning*. New York: McGraw-Hill.
- Reissman C.K. (1993) *Narrative Analysis*. London: Sage Publications.
- Rennie, F., & Morrison, T. (2012). *E-learning and social networking handbook: Resources for higher education*. UK: Routledge.
- Robinson, C. C. & Hullinger H. (2008). New benchmarks in higher education: Student engagement in online learning. *Journal of Education for Business*, 84 (2), 101–108
doi:10.3200/JOEB.84.2.101-109
- Shea, P., Sau Li, C., & Pickett, A. (2006). A study of teaching presence and student sense of learning community in fully online and web-enhanced college courses. *The Internet and Higher Education*, 9(3), 175-190. doi:10.1016/j.iheduc.2006.06.005
- Simonson, M., Smaldino, S., Albright, M., and Zvacek, S. (2000). *Teaching and Learning at a Distance: Foundations of Distance Education*. Upper Saddle River, NJ: Merrill.
- Swan, K., & Shih, L. F. (2005). On the nature and development of social presence in online course discussions. *Journal of Asynchronous Learning Networks*, 9(3), 115-136.
Retrieved from: <http://anitacrawley.net/Articles/Swan%20and%20Shih2005.pdf>
- U.S. Department of Education. (2010). Evaluation of Evidence-Based Practices In Online Learning: A Meta-Analysis And Review Of Online Learning Studies. Retrieved from:
<http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf>
- Ward, M., & Newlands, D. (1998). Use of the Web in undergraduate teaching. *Computers and Education*, 31(2), 171-184. doi:10.1016/S0360-1315(98)00024-4
- Welsh, E. T., Wanberg, C. R., Brown, K. G., & Simmering, M. J. (2003). E-learning: emerging uses, empirical results and future directions. *International Journal of Training and Development*, 7(4), 245-258. doi: 10.1046/j.1360-3736.2003.00184.x

- Wua, J., Tennyson, R., Hsia, T. & Liao, Y. (2008). Analysis of E- learning innovation and core capability using a hypercube model. *Computers in Human Behavior*, 24, 1851–1866. doi:10.1016/j.chb.2008.02.008
- Wu, J. H., Tennyson, R. D., & Hsia, T. L. (2010). A study of student satisfaction in a blended e-learning system environment. *Computers & Education*, 55(1), 155-164. doi:10.1016/j.compedu.2009.12.012
- Vonderwell, S. (2003). An examination of asynchronous communication experiences and perspectives of students in an online course: A case study. *The Internet and Higher Education*, 6(1), 77-90. doi:10.1016/S1096-7516(02)00164-1
- Xie, K., Miller, N. C., & Allison, J. R. (2013). Toward a social conflict evolution model: Examining the adverse power of conflictual social interaction in online learning. *Computers & Education*, 63, 404-415. doi:10.1016/j.compedu.2013.01.003
- Yang, Y. F., Yeh, H. C., & Wong, W. K. (2010). The influence of social interaction on meaning construction in a virtual community. *British Journal of Educational Technology*, 41(2), 287-306. doi: 10.1111/j.1467-8535.2009.00934.x
- Yang, Y. F. (2011). Engaging students in an online situated language learning environment. *Computer Assisted Language Learning*, 24(2), 181-198. doi:10.1080/09588221.2010.538700
- Paulsen, M. P. (1995). Moderating educational computer conferences. In Berge, Z. L. & Collins, M. P. (Eds.). *Computer-mediated communication and the on-line classroom in distance education*. Cresskill, NJ: Hampton Press.
- Thompson, T. L. & C. J. MacDonald. (2005). Community building, emergent design and expecting the unexpected: Creating a quality eLearning experience. *The Internet and Higher Education* 8(3), 233– 249. doi:10.1016/j.iheduc.2005.06.004
- Rovai, A. P. (2002). Sense of community, perceived cognitive learning, and persistence in asynchronous learning networks. *The Internet and Higher Education* 5(4): 319–332. doi:10.1016/S1096-7516(02)00130-6
- Swan, K. and L. F. Shih. (2005). On the nature and development of social presence in online course discussions. *Journal of Asynchronous Learning Networks* 9(3). Retrieved from: <http://anitacrawley.net/Articles/Swan%20and%20Shih2005.pdf>

- Vaughan, N. D. (2004). *Investigating How A Blended Learning Approach Can Support An Inquiry Process Within A Faculty Learning Community*. Doctoral dissertation, University of Calgary.
- Rymier, A. B. F. (2012). Teacher Immediacy. *International Guide to Student Achievement, 11*, 425-480.
- Styer, A. J. (2007). *A Grounded Meta-Analysis Of Adult Learner Motivation In Online Learning From The Perspective Of The Learner* (Doctoral dissertation), Capella University, Minneapolis, Minnesota. Retrieved October 28, 2013, from *ProQuest*
- Wallace, R. M. (2003). Online learning in higher education: A review of research on interactions among teachers and students. *Education, Communication & Information, 3*(2), 241-280. doi:10.1080/14636310303143
- Werner, J., & DeSimone, R. (2011). *Human resource development*. Cengage Learning.
- Witt, P. L., Wheelless, L. R., & Allen, M. (2004). A meta-analytical review of the relationship between teacher immediacy and student learning. *Communication Monographs, 71*(2), 184-207. doi:10.1080/036452042000228054
- Witmer, B. G., & Singer, M. J. (1998). Measuring presence in virtual environments: A presence questionnaire. *Presence: Teleoperators and virtual environments, 7*(3), 225-240. doi:10.1162/105474698565686

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Appendix A

Literature Review Matrix

No.	Lead Author	Year	Purpose	Participants	Methodology	Findings
1	Arbaugh	2014	The purpose of this study is to examine whether course technologies, learner behaviors or instructor behaviors (teaching presence) best predict online course outcomes so that administrators and support personnel can prioritize their efforts and investments.	634 students and 18 instructors	Quantitative: survey questionnaire	Teaching presence and perceived learning shows strongest relationship
2	Boston	2014	Explores “the relationship between indicators of the Community of Inquiry Framework and student persistence”.	28877 students at American Public University System (APUS)	Quantitative: Linear regression was utilized to analyze the relationship between a linear combination of the independent variables	Social presence and teaching presence are important predictors for students re enrollment (retention)
3	Campbell	2014	“The goal was to identify the effects of a set of specific teacher activities on objectively determined learning	132 students enrolled in an online critical thinking class	Quantitative	High presence was not associated with activity in class discussion, homework performance,

No.	Lead Author	Year	Purpose	Participants	Methodology	Findings
			outcomes” (p. 41)			or tests over the assigned readings
4	Ekwunife-Orakwue	2014	The purpose of this study is to measure how student interactions in online and blended learning environments impacted student learning outcomes, as measured by student satisfaction and student grades.	342 students enrolled in online classes in	Quantitative: student satisfaction survey instrument	“Students may interact with course contents more frequently than they interact with their instructors and other learners. This raises the question of the role instructors should play in promoting greater dialogue with students, and among students, especially to reduce feelings of isolation and detachment that may contribute to perceived distance”.
5	Cadle	2013	The study describes how the author “established teaching and social presences within a 3-month community of practice comprising four educators and mentor teachers”.	Qualitative: Narrative Approach	Teachers (4) mentoring pre-service teachers enrolled in the university's early childhood teacher education program	“This study provides insight into the many roles a facilitator adopted to establish teaching and social presences within a community of practice”.
6	Gregory	2012	“The purpose of this article is to show some evidence of the	4 participants for qualitative observation; quantitative data	mixed method approach: Observation and statistical	“A teacher who is planning online

No.	Lead Author	Year	Purpose	Participants	Methodology	Findings
			<p>mutual influence of the students' technological behaviors and the students' cognitive factors in online learning environments – including teacher and instructional design factors”.</p>	<p>was analyzed using 88 participants, 2130 electronic communications and 268 learning products.</p>	<p>analysis</p>	<p>individual work should bear in mind that, in this type of activity, students show a tendency to approach the teacher personally to ask for explanations, express doubts or make comments in relation to the course content”. “a teacher planning online collaborative group work needs to consider the composition of the group as it is likely that the students will only interact with members of their own group and not with the rest of the class and they will interact, to a lesser extent, with the teacher”</p> <p>Hence, learner and teacher interaction depends on planned students’</p>

No.	Lead Author	Year	Purpose	Participants	Methodology	Findings
	Shea	2006	“The goals of this research were to enhance understanding of online pedagogical processes in the service of improving the quality of instruction and learning in a large asynchronous learning environment— thus in many ways this mode of inquiry may be seen as action research”.	1067 participants from 32 colleges	Quantitative survey method	assignments. “There is a clear connection between perceived teaching presence and students' sense of learning community”.
7	Kupczynski	2010	The purpose of the study is to “to explore student perceptions of the impact of the indicators of Teaching Presence on their success in online courses”.	643 students (362 students enrolled in a variety of classes related to certificate or AA programs at South Texas College; The second group of students consisted of 281 students enrolled in courses at West Virginia University's College of Human Resources and Education).	Mixed Method that is Descriptive statistics, odds ratios and open ended questions	“feedback indicator as being most important to course success; regardless of learner level, the need for presentation of clear, concise objectives, instructions and general participation guidelines should be a cornerstone of online course development”

Students' Perceptions of Online Course Quality: How Do They Measure Up to the Research?

By Penny Ralston-Berg, Penn State World Campus, Janet Buckenmeyer, Coastal Carolina University, Casimir Barczyk, Purdue University Calumet, and Emily Hixon, Purdue University Calumet

ABSTRACT

The Quality Matters (QM)TM rubric presents a set of research-based standards on which to judge the quality of online courses. The authors of this study investigated how students' perceptions of online course quality compare to those put forth in the QM rubric. Participants in this study $n = 3,160$ included students currently taking an online college-level course were invited to rate the importance of each QM standard restated from the student perspective. Students' ratings of each item were compared to the ranking of each item received by QM (3-Essential, 2-Very Important, or 1-Important). The student rating for each item was at least 1.0 indicating that students do value the QM criteria as important to their success in an online course. Items related to having clear instructions for getting started in the course and ease of navigation were rated highly by both QM and students. However, students did not value items related to the importance of interacting with peers and the instructor at the same high level indicated in the QM rubric. Other findings related to practical differences between student and QM ratings of rubric items are discussed.

INTRODUCTION

The number of students taking online courses has risen dramatically. In 2013 alone, the number of additional students taking an online course continued to grow at a rate far in excess of overall enrollments with 7.1 million students taking at least one online course (Allen & Seaman, 2014). That is, about one-third of all eligible postsecondary course enrollment is in online courses.

Quality Matters (QM) is a continuous improvement program available to higher education institutions whose purpose is to ensure the design quality of online and blended courses. Since the inception of the QM program, its leaders began sponsoring research focused on the impact of Quality Matters - both its rubric and its review process, which involves analyzing the design of a peer's course and providing recommendations for improvement of that course's design. The review process culminates with a determination as to whether (or not), the course design meets the thresholds established for quality (Shattuck, Zimmerman, & Adair, 2014).



To view *Quality Matters Overview (2013)* video go to <https://www.qualitymatters.org>

In a previous study, Ralston-Berg (2014) used the Quality Matters criteria to examine students' perceptions of quality in online courses. Ralston-Berg queried whether "students agree that items presented in the QM Rubric indicate quality?" Hixon, Buckenmeyer and Barczyk (2015) extended her work by examining how students rate the QM criteria for courses in general. The current study extends both studies by measuring the perceptions of students on the quality of their online courses and determining practical significance of the findings.

LITERATURE REVIEW

Quality Matters is considered the gold standard in terms of online standards development (Maryland Online, 2014).^A QM originated from a grant project entitled "[Fund for the Improvement of Postsecondary Education](#)" (FIPSE), and is a faculty-centered, peer review-based process designed to certify the quality of online and hybrid courses. Empirical evidence demonstrating impact on student learning support the eight research-based standards and elements that became Quality Matters. Its framework emphasizes navigability, interaction, and instructional alignment. Specifically, the eight standards included in the QM rubric include: (1) Course Overview and Introduction, (2) Learning Objectives, (3) Assessment and Measurement, (4) Instructional Materials, (5) Learner Interaction, (6) Course Media & Technology, (7) Learner Support, and (8) ADA Compliance. Each standard includes a number of indicators, each of which is ranked in importance and assigned a weight, ranging from 3 (Essential) to 1 (Important). To view the standards, please refer to the interactive QM Research Library <https://www.qmprogram.org/qmresources/research/>.

^A The materials found on this website may not be used without the express written consent of MarylandOnline. Terms of Use. © 2014. MarylandOnline. All rights reserved.

There are many researchers who have explored students' perceptions of quality in online courses (e.g., Chitkushev, Vodenska, & Zlateva, 2014; Paechter & Maier, 2010; Robins, Simunich, & Kelly, 2013; Young & Norgard, 2006). The perception of students is important to consider since student satisfaction is widely linked with various education outcomes. As reviewed by and cited in Ralston-Berg and Nath's (2008) research, student satisfaction has been shown to impact college performance (Bean & Bradley, 1986; Organ, 1977; Schwab & Cummings, 1970), achievement motivation (Donohue & Wong, 1997), college student achievement (Centra & Rock, 1971; Lavin, 1985), student retention (Tinto, 1993; Astin, 1993), and student attrition (Bean, 1983; Tinto, 1993). Other research projects examining students' perceptions of the QM criteria specifically have been sponsored by Quality Matters (Iyengar, 2006; Mott, 2006; Bowen & Bartoletti, 2009, all as cited in Shattuck's (2012) study.

Overall, researchers investigating students' perceptions of the QM criteria report that students perceived the elements incorporated in the QM rubric to be important. For example, You, Hochberg, Ballard, Xiao & Walters (2014). investigated the differences between students' and QM peer reviewers' perceptions of essential (ranked as a 3) QM standards in online courses, whereby students either did not see or did not value the standard related to clearly stated learning objectives within the course. While their findings asserted general similarity between students' and QM reviewers' ratings, it was suggested that student satisfaction with the instructor or with the online course might have affected their evaluations.

In an earlier study, Ralston-Berg and Nath (2008) found that students valued QM standards rated as essential (3) and very important (2), but they were not as likely to value less those standards marked as important (1). They also found that the more students were satisfied with their online courses, the more likely they were to value all QM standards. A similar result was confirmed in Ralston-Berg's (2011) study.

Hixon, Buckenmeyer and Barczyk's (2015) study extended the work of Ralston-Berg (2014) whereby they determined that quality as defined by QM, applies to traditional and blended courses as well as to online courses. Students generally valued those items ranked as essential and important by QM. Surprisingly, interaction and collaboration in courses were not highly valued by students in courses, although QM rates these as essential. While research confirms the value of these elements in courses, students do not appreciate their value for learning.

The authors of the current study build on previous research by Ralston-Berg (2014) and Hixon, Buckenmeyer, and Barczyk (2015) and aim to determine whether the differences between students' perceptions of what is valued in a course and QM's ratings for what is

considered a quality-oriented course are practically significant. Understanding these differences has the potential to help institutions of higher learning with the development and promotion of quality course offerings. Further, understanding how students perceive course experiences can provide suggestions for instructors on how to promote improved learning outcomes (Rodriguez, Ooms, & Montanez, 2008).

METHOD

Participants

The participants in this study included $n = 3,160$ students who had taken or were currently enrolled in online for-credit courses at one of 31 colleges or universities located in 22 states. All of the participants indicated that they were comfortable or very comfortable with technology. Their ages ranged from 18 to over 65, with the largest group consisting of individuals between the ages of 26 and 44. The sample was comprised of undergraduates ($n = 1,520$), graduate students ($n = 711$) and some for whom class standing did not apply ($n = 300$). The participants represented 25 academic disciplines and had varying amounts of online course experience ranging between 1 and 9 or more completed courses. A majority of the participants were enrolled in four-year institutions and were attending on a part-time or full-time (four or more courses) basis.

Survey Instrument

The survey instrument consisted of 43 items derived from the Quality Matters rubric associated with the 2008-2010 QM Standards.^B The items were structured in student-centered language and they were designed to allow the participants to rate the extent to which each course characteristic contributed to student success.^C Each course characteristic was rated as a four-point Likert-type item where: 0 corresponded to being not at all important – does not contribute to my success; 1 corresponded to important; 2 corresponded to very important; and 3 corresponded to essential – could not succeed without it. When providing their rating to each course characteristic question, participants were instructed to consider only the online course environment. The survey instrument also contained several demographic items and open-ended questions on course quality, however this information and associated outcomes will be presented in a separate study.

^B "Standards and point values of the Fifth Edition of the QM Rubric can be found at <https://www.qualitymatters.org/rubric>. The wording and placement of a few standards has been changed from the 2011-2013 standards used in this study." [for example 6.3.]

^C The adaptation of the QM Rubric standards into the current study's survey was previously approved in 2011 by QM.

Procedure

The survey instrument was administered electronically through a unique URL furnished by a designated contact person at each cooperating institution. The participants received the URL by means of an e-mail message or a link posted to the home page of the institution’s course management system. They also received URLs by means of an announcement in the online course in which they were enrolled. Data were collected from all cooperating institutions and aggregated into a cumulative data file.

RESULTS

To determine how students’ ratings of each QM statement relate to the point values assigned by the 2011-2013 edition of the QM rubric, one-sample *t*-tests were conducted. Additionally, effect sizes were calculated for each item using Cohen’s *d* to indicate the practical significance of the differences. Table 1 shows the survey items that correspond to a QM indicator assigned a point value of “3 – Essential” on the 2011-2013 QM rubric.

Table 1 *Comparison of participant ratings to QM point values for items ranked “3 - Essential” by QM*

QM #	QM statement	N	Mean	SD	<i>t</i>	<i>p</i>	Mean Diff.	<i>d</i>
1.1	Clear instructions tell me how to get started and how to find various course components.	3154	2.66	0.60	-31.58	.000**	-0.34	0.56
3.3	Criteria for how my work & participation will be evaluated are descriptive & specific.	2984	2.52	0.64	-40.42	.000**	-0.48	0.74
6.3	Navigation throughout the online components of the course is logical, consistent, and efficient.	2685	2.51	0.67	-37.94	.000**	-0.49	0.73
3.2	The grading policy is stated clearly.	2998	2.49	0.65	-43.12	.000**	-0.51	0.79
3.1	Assessments measure the stated learning objectives and are consistent with course activities and resources.	2997	2.48	0.66	-43.46	.000**	-0.52	0.79
2.4	Instructions on how to meet the	3038	2.30	0.77	-49.88	.000**	-0.70	0.91 [§]

	learning objectives are adequate and stated clearly.							
4.1	Instructional materials contribute to the achievement of the course and module/unit learning objectives.	2893	2.29	0.72	-52.62	.000**	-0.71	0.98 [§]
5.3	Clear standards are set for instructor response (turn-around time for email, grade posting, etc.)	2878	2.29	0.78	-48.44	.000**	-0.71	0.92 [§]
2.5	The learning objectives (my expected learning) are appropriate for the level of the course.	3047	2.18	0.77	-59.16	.000**	-0.82	1.07 ^{§§}
4.2	The relationship between the instructional materials and the learning activities is clearly explained to me.	2886	2.17	0.79	-57.08	.000**	-0.83	1.06 ^{§§}
5.3	Clear standards are set for instructor availability (office hours, etc.).	2793	2.16	0.83	-53.32	.000**	-0.84	1.01 ^{§§}
6.1	Tools and media used support the achievement of learning objectives.	2687	2.05	0.83	-59.28	.000**	-0.95	1.14 ^{§§}
7.1	Course includes or links to a clear description of the technical support offered to me.	2676	2.05	0.83	-58.81	.000**	-0.95	1.14 ^{§§}
1.2	A statement introduces me to the purpose of the course and its components	3149	2.04	0.83	-64.97	.000**	-0.96	1.16 ^{§§}
5.1	The learning activities promote the achievement of the stated learning objectives	2825	2.01	0.78	-67.67	.000**	-0.99	1.27 ^{§§}
5.2	Learning activities encourage me to interact with content in the course.	2746	1.96	0.82	-66.82	.000**	-1.04	1.28 ^{§§}
2.1	The course learning objectives describe outcomes that I am able to achieve.	3048	1.84	0.88	-72.79	.000**	-1.16	1.32 ^{§§}

2.3	All learning objectives are clearly stated and written from my perspective.	3041	1.83	0.90	-71.13	.000**	-1.16	1.29 ^{§§}
2.2	The module/unit learning objectives describe outcomes that I am able to achieve and are consistent with the course-level objectives.	3048	1.80	0.89	-74.05	.000**	-1.20	1.34 ^{§§}
5.2	Learning activities encourage me to interact with my instructor.	2799	1.53	0.94	-82.67	.000**	-1.47	1.56 ^{§§}
5.2	Learning activities encourage me to interact with other students.	2710	1.24	0.98	-93.09	.000**	-1.76	1.79 ^{§§}

** $p < .001$, [§] $d > .8$, ^{§§} $d > 1.0$

While each item assigned a point value of "3" by QM was rated significantly less than 3 by participants, there were several items with an effect size less than .8 which indicates low practical significance. The five items where there was not a practically significant difference between participant ratings and QM's rank related to course navigation and assessments and grading (QM 1.1, 3.3., 6.3, 3.2, and 3.1). Participants' high ratings of these items indicate that students place great importance on the inclusion of clear instructions for getting started in a course and consistent and logical navigation, just as does the QM criteria. Similarly, like QM, students greatly value clear articulations of evaluation criteria and the grading policy, as well as the inclusion of assessments that aligned to the other course components.

For all other items ranked a 3 by QM, participants' ratings were statistically and practically lower than the QM rank, with many items having an effect size greater than 1.0, thus indicating high practical significance.

There were also several items where participants' ratings were at least one full point lower than QM's rank of 3 (QM 5.2, 2.1, 2.3, 2.2). Participants' ratings of these items indicate that students do not place as much importance on clearly stated learning objectives that describe achievable outcomes as does the research on which QM's criteria are based. Similarly, participants do not value learning objectives that encourage interaction at the same level as the QM framework.

Table 2 shows the survey items that correspond to a QM indicator assigned a point value of "2 – Very Important" on the 2011-2013 QM rubric. Again, participants' ratings of these items were significantly different than the rank of 2 assigned by QM, with some items rated

higher than 2 and others rated lower than. However, all but one item had an effect size less than .8 indicating low practical significance of those differences. The one item with a practically significant difference (QM 6.4) indicated that students place greater importance on ready availability of required technologies than does the QM framework.

Table 2 *Comparison of participant ratings to QM point values for items ranked “2 – Very Important” by QM*

QM #	QM statement	N	Mean	SD	t	p	Mean Diff.	d
6.4	Technologies required for the course are readily available – provided or easily downloadable.	2681	2.62	0.64	49.65	.000**	0.62	0.94 [§]
3.4	Assessments (quizzes, exams, papers, projects, etc.) are appropriately timed within the length of the course, varied, and appropriate to the content being assessed.	2991	2.49	0.65	41.26	.000**	0.49	0.75
5.4	Requirements for my interaction with the instructor, content, and other students are clearly explained.	2839	2.35	0.76	24.34	.000**	0.35	0.46
7.3	Course includes or links to a clear explanation of how the institution’s academic support system can assist me in effectively using the resources provided.	2662	1.83	0.87	-9.98	.000**	-0.17	-0.19
4.3	All resources and materials used in the course are appropriately cited.	2886	1.79	0.95	-12.14	.000**	-0.21	-0.23
8.2	Course includes equivalent alternatives to audio and visual content.	2668	1.65	1.06	-17.15	.000**	-0.35	-0.33
1.3	Etiquette (or “netiquette”) guidelines for how to behave online are clearly stated.	3150	1.43	0.93	-34.01	.000**	-0.57	-0.61

** $p < .001$, [§] $d > .8$

Table 3 shows the survey items that correspond to a QM indicator assigned the point value of “1 – Important” on the 2011-2013 QM rubric. With one exception, these items were rated significantly higher by students than they were ranked by QM. The item about student self-introductions (QM 1.8) was the only item on the survey to be rated the same by students and QM. This item received the lowest rating by participants, indicating its relative lack of importance to students.

While there was a statistically significant difference for item 7.4 (related to the inclusion of how to access the institution's student support services), the effect size was less than 0.8 indicating low practical significance. Students' rating of this item was more similar to QM's rating than other items assigned a value of 1 by QM.

The analysis of three other items assigned a value of 1 by QM (QM 1.5, 1.6, 1.7) produced a difference that was both statistically and practically significant. Specifically, students gave greater weight than QM to the minimum preparation, prerequisites, and technical skills being clearly stated. Similarly, students rated the item related to the instructor self-introduction markedly higher than the value assigned to that item by QM.

Table 3 *Comparison of participant ratings to QM point values for items ranked “1 – Important” by QM*

QM #	QM statement	N	Mean	SD	t	p	Mean Diff.	d
1.5	Minimum preparation or prerequisite knowledge I need to succeed in the course is clearly stated	3148	2.08	0.82	73.74	.000**	1.08	1.31 ^{§§}
1.6	Minimum technical skills expected of me are clearly stated.	3152	1.99	0.87	63.53	.000**	0.99	1.13 ^{§§}
1.7	The instructor introduces her-or himself.	3141	1.91	0.87	58.88	.000**	0.91	1.05 ^{§§}
7.4	Course includes or links to a clear explanation of how the institution’s student support services can help me reach my educational goals.	2668	1.69	0.93	37.78	.000**	0.68	0.73
1.8	I am asked to introduce myself to the class.	3149	1.00	0.96	.00	1.00	0.00	0.00

** $p < .001$, [§] $d > .8$

DISCUSSION

The results of this study validate the standards and indicators for assessing the quality of online courses included on the Quality Matters rubric. The mean student rating for each item was at least 1.0, indicating that students value the QM criteria as important to a course's success. Students do discriminate among the items with their mean value ratings ranging from 1.00 to 2.66 on a scale of 0 to 3. While students' ratings on all but one item differ in statistical significance from the QM rankings, the practical significance of the differences varies.

Several items were rated highly by both the participants in this study and QM. As is supported by research and considered to be a best practice in online courses (Chen, 2007; Conrad, 2002; Ko & Rossen, 2010), students in this study emphasized the importance of having clear instructions for how to get started in the course and find various course components. In fact, the item related to this (QM 1.1) received the highest rating of all survey items, with 72% of respondents rating it as Essential to their success in an online course. Often times, courses include a "Start Here" or "Welcome" area that provides an obvious starting point for the course. The findings of this study suggest that including such an area or communicating to students in another way exactly what they need to do to get started in the course is something that students view as critical to their success in an online course.

Related to this, participants in this study were in agreement with QM about the importance of a course's navigation being logical, consistent and efficient (QM 6.3). Principles of instructional design support ease of navigation in an online environment as being critical to a successful learning experience (Ko & Rossen, 2010; Swan, 2012). When navigation becomes an issue in a course and students cannot locate necessary course components within a course site, student satisfaction--as well as student learning, are in jeopardy (Miller, 2012). It's possible that participants in this study encountered navigational issues at some point in their educational careers, and therefore fully appreciate the ease of course navigation as critical to their success in an online course.

To ensure consistent and efficient navigation, institutions and/or programs should consider applying a common navigation system to all courses, as much as possible. A course design with common names and consistent location of common elements reduces the learning curve between courses (Dykman & Davis, 2008). Students who take more than one course in the program/institution do not need to spend time learning to navigate each course's unique setup and can instead, focus on learning content. When creating a common navigation system within a learning management system, students should be consulted to

validate design choices and inform necessary revisions to ensure that the course is tailored to how students will use it.

Also related to experiencing a smooth start in an online course, students want to have the prerequisite knowledge and skills clearly stated. The survey included items related to minimum preparation and prerequisite knowledge (QM 1.5) and minimum technical skills (QM 1.6), each of which received QM's lowest rating of 1 point. Participants in this study rated those items one point higher indicating a difference with the QM rating that is both statistically and practically significant. While including clear statements on these topics may be just a box to check off for instructional designers and faculty, this information is more important from a student's perspective. It makes sense that students want to be sure that they have the prerequisite knowledge and skills to be successful in a course before they devote their time and energy to it. Given the value students place on this information, instructional designers and instructors should ensure that this information is prominently placed and easy for students to locate at the start of the course.

Other items that were rated highly by both students and QM were related to assessment and grading. Two of the top five items rated most highly by students involve the grading policy (QM 3.2) and criteria for evaluating student work (QM 3.3). QM rightfully views as essential that all courses include descriptive and specific criteria for how work and participation will be evaluated, as well as a clearly stated grading policy. Students are often highly motivated by grades, and often view a good grade as the primary indicator of their success in a course. Therefore, it makes sense that they would also consider these items to be critically important to their success in an online course. This notion is consistent with previous research which shows that students in online courses emphasize the importance of expectations--especially related to assignments and evaluation being clearly communicated (Durrington, Berryhill, & Swafford, 2006; Sheridan & Kelly, 2010).

Similarly, students and QM both place great value on courses including assessments that "measure the stated learning objectives and are consistent with course activities and resources" (QM 3.1). This statement addresses the concept of instructional alignment. Designing courses where there is strong alignment among learning objectives, assessments, and learning activities is fundamental principle of effective instructional design and is well supported in the research literature (e.g., Cohen, 1987; Fink, 2003). Instructional designers know that if there exists misalignment between any of these elements, the learning experience falls apart. Apparently, students are aware of this as well, perhaps because they have been victims of poorly aligned instruction at some point in their educational careers. This item may seem less obvious in importance to students than some of the other top-rated items related to course navigation and grading, so it is validating to see that students also recognize the impact of well-aligned instruction on their success in a course.

Given that students seem to value the importance of well-aligned instruction, it is interesting that they don't give nearly as much weight to the quality and relevance of the learning objectives that are stated. The QM framework includes a standard devoted to Learning Objectives (Standard 2), and all five of the indicators within that standard are ranked a 3 – Essential. Of those five indicators, participants in this study rated three of them more than one point lower than QM. Specifically, students did not feel it was as important as QM that learning objectives describe achievable outcomes (QM 2.1), be clearly stated from the student's perspective (QM 2.3), or that there be consistency between module/unit learning objectives and course-level objectives (QM 2.2). Although effective instructional design demands the statement of clear, measurable, behaviorally-oriented learning objectives, it is curious that students do not recognize their importance in their learning experience.

Also interesting is that students do not place nearly as much importance on interactive learning activities as does the QM framework, particularly when it comes to interacting with other students. In fact, participants in this study rated an item about learning activities encouraging interaction with other students almost two points lower than the QM ranking. Although research unequivocally supports the inclusion of interactive activities in online courses (Anderson, 2003; Darabi, Liang, Suryavanski, & Yurekli, 2013; Palloff & Pratt, 2007; Swan, 2001), previous research suggests that students may be apprehensive about, or reluctant to participate in, activities that require interaction (Brinkerhoff & Koroghlanian, 2007; Marshall, Greenberg, & Machun, 2012). This reluctance by students may also be experienced in group-based work where their grade may depend, at least in part, on the actions of others. Having their success dependent on a variable outside of their control may be concerning, especially to adult learners who have an increased sense of responsibility for their own learning and success (Knowles, 1975, 1980). Helping learners understand the point and value of such activities, and providing a good balance of individual and group accountability, may mediate the impact of possible negative attitudes and allow learners to more productively engage in interactive activities that may enhance their learning.

Related to the low value students place on interacting with other students in the class, it is perhaps not surprising that the lowest rated item on the survey was about students introducing themselves to the class. If students do not see value in interacting with others, then it is unlikely they would deem introductions among class members a valuable component of an online course. While students do not see the importance of introducing themselves to the class, they *do* however, see an instructor's self-introduction as being important. Participants in this study rated the item related to instructor introduction as almost one point higher than the item related to self-introductions. QM assigns both of these items 1 point, and while students agree with that rating for self-introductions, their rating for instructor introduction was both statistically and practically higher. Online courses can

sometimes feel isolating and best practices in online instruction emphasize the importance of the instructor being “present” in the course (Garrison, Cleveland-Innes, & Fung, 2010; Shea, Li, Swan, & Pickett, 2005; Swan & Shih, 2005). An instructor introduction is a key first step in creating a sense of social presence in an online course.

CONCLUSIONS

The results of this study reveal two overall themes of what students value most in their online courses. The themes encapsulate many of the criteria emphasized as important by QM, as reflected in their rubric. Those responsible for designing courses (instructional designers, faculty members, etc.) can benefit by keeping these ideas in the forefront of their design process.

The first theme relates to “clarity.” When designing a course, reducing unknowns, anticipating questions and trouble spots, and proactively addressing areas of concern during the design process can help ensure a smooth student experience throughout the course. Similarly, a well-designed course with a consistent navigational structure can also enhance the student experience. It should be made very clear to students how/where to start in the course and that clarity in navigation should continue throughout the course site. Another way of promoting clarity that is viewed by students as essential to their success is setting clear expectations, especially related to grading and evaluation policies. Rubrics that are well-aligned to the objectives and student products can help to communicate evaluative information clearly and concisely. Course designers can benefit from including the student point of view in the design process and by conducting formative assessments prior to and during the course being taught.

The second theme that emerged emphasizes that course elements must be “appropriate and relevant.” Everything included in an online course should be there for a specific reason. There should be no “busy work” or extraneous effort required. Online students often have jobs, families and other responsibilities. It is important that everything in an online course has a specific purpose and makes good use of student time. Ensuring that there is strong alignment between instructional elements (learning objectives, learning activities, assessments, resources) can help focus student learning and ensure the appropriateness and relevance of instructional components. Similarly, being deliberate in the use of tools, media and resources is important. The relevance and instructional usefulness of the media is more important than the media itself. That is, adding video to a course does not inherently increase quality; the video must be relevant, appropriate, and aligned with objectives and activities to add value.

In conclusion, course designers who build clarity into their courses and focus on ensuring all course elements are appropriate and relevant can build a better course from the student perspective. Course designers are encouraged to incorporate the student perspective into their course design. This may be accomplished by conducting student focus groups and/or student pilots of the course, especially when making design decisions that impact a group of courses within a program or institution. When making higher-level design decisions (e.g., navigation menus, getting started exercises, interface design), it is best to have a formal formative evaluation process that includes students/potential users as part of that process (Aleckson & Ralston-Berg, 2011).

REFERENCES

- Aleckson, J., & Ralston-Berg, P. (2011). *MindMeld: Micro-Collaboration between eLearning designers and instructor experts*. Madison, WI: Atwood Publishing.
- Allen, I. E., & Seaman, J. (2014). *Grade change: Tracking online education in the United States*. Babson Park, MA: Babson Survey Research Group and Quahog Research Group. Retrieved from <http://www.onlinelearningsurvey.com/reports/gradechange.pdf>
- Anderson, T. (October 2003). Getting the mix right again: An updated and theoretical rationale for interaction. *International Review of Research in Open and Distance Learning*, 4(2).
- Brinkerhoff, J. & Koroghlanian, C. M. (2007). Online students' expectations: Enhancing the fit between online students and course design. *Journal of Educational Computing Research*, 36(4), 383–393.
- Chen, S. J. (2007). Instructional design strategies for intensive online courses: An objectivist-constructivist blended approach. *Journal of Interactive Online Learning*, 6(1), 72-86.
- Chitkushev, L., Vodenska, I., & Zlateva, T. (2014). Digital earning impact factors: Student satisfaction and performance in online courses. *International Journal of Information & Education Technology*, 4(4), 356-359.
- Cohen, S. A. (1987). Instructional alignment: Searching for a magic bullet. *Educational Researcher*, 16, 16-20.
- Conrad, D. (2002). Engagement, excitement, anxiety and fear: Learners' experiences of starting an online course. *American Journal of Distance Education*, 16(4), 205-226.

- Darabi, A., Liang, X, Suryavanski, R., & Yurekli, H. (2013). Effectiveness of online discussion strategies: A meta-analysis. *The American Journal of Distance Education, 27*, 228-241. doi: 10.1080/08923647.2013.837651
- Durrington, V. A., Berryhill, A., & Swafford, J. (2006). Strategies for enhancing student interactivity in an online environment. *College Teaching, 54*(1), 190–193.
- Dykman, C. A., & Davis, C. K. (2008). Online education forum: Part two—Teaching online versus teaching conventionally. *Journal of Information Systems Education, 19*(2), 157-164.
- Fink, D. (2003). *Creating significant learning experiences: An integrated approach to designing college courses*. San Francisco, CA: Jossey-Bass.
- Garrison, D. R., Cleveland-Innes, M., & Fung, T. S. (2010). Exploring causal relationships among teaching, cognitive and social presence: Student perceptions of the community of inquiry framework. *The Internet and Higher Education, 13*, 31 – 36.
- Hixon, E., Buckenmeyer, J. A., & Barczyk, C. (2015). Closing the feedback loop: Hearing the student voice in course quality, *Quality Approaches in Higher Education, 6*(1), 26-36.
- Knowles, M. S. (1975). *Self-directed learning*. New York: Association Press.
- Knowles, M. S. (1980). *The modern practice of adult education: From pedagogy to androgogy*. (2nd ed.) New York: Cambridge Books..
- Ko, S., & Rossen, S. (2010). *Teaching online: A practical guide*. New York, NY: Routledge.
- Marshall, J., Greenberg, H., & Machun, P. A. (2012). How would they choose? Online student preferences for advance course information. *Open Learning, 27*(3), 249-263. doi: 10.1080/0280513.2012.716656
- Maryland Online. (2014). *Quality Matters Program*. Retrieved from <http://www.qualitymatters.org>.
- Miller, J. M. (2012). *Finding what works online: Online course features that encourage engagement, completion, and success* (Doctoral dissertation). Retrieved from California

State University Northridge ScholarWorks website:
<http://scholarworks.csun.edu/handle/10211.2/1062>

- Paechter, M., & Maier, B. (2010). Online or face-to-face? Students' experiences and preferences in e-learning. *The Internet and Higher Education, 13*(4), 292-297.
- Palloff, R. M., & Pratt, K. (2007). *Building online learning communities*. San Francisco, CA: Jossey-Bass.
- Quality Matters (2013). *Quality Matters™ Overview*. Pasadena, MD: Maryland Online. Retrieved from <https://www.qualitymatters.org>
- Ralston-Berg, P. (2014). Surveying student perspectives of quality: Value of QM rubric items. *Internet Learning, 3*(1), 117-126.
- Ralston-Berg, P. & Nath, L. (2008). What makes a quality online course? The student perspective. *Proceedings of the 24th Annual Conference on Distance Teaching and Learning*, University of Wisconsin System/
- Robins, D., Simunich, B. & Kelly, V. (2013). The impact of findability on student perceptions of online course quality and experience. In Jan Herrington et al. (Eds.), *Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications 2013* (pp. 1122-1129). Chesapeake, VA: AACE.
- Rodriguez, M.C., Ooms, A., & Montanez, M. (2008). Students' perceptions of online-learning quality given comfort, motivation, satisfaction, and experience. *Journal of Interactive Online Learning, 7*(2), 105-125.
- Shattuck, K., Zimmerman, W.A., & Adair, D. (2014). Continuous improvement of the QM rubric and review processes: Scholarship of integration and application. *Internet Learning, 3*(1), 25-34.
- Shea, P., Li, C. S., Swan, K., & Pickett, A. M. (2005). Developing learning community in online asynchronous college courses: the role of teaching presence. *Journal of Asynchronous Learning Networks, 9*. Retrieved from http://www.sloan-org/publications/jaln/v9n4/pdf/v9n4_shea.pdf
- Sheridan, K., & Kelly, M.A. (2010). The indicators of instructor presence that are important to students in online courses. *MERLOT Journal of Online Learning and Teaching, 6*(4). Available at http://jolt.merlot.org/vol6no4/sheridan_1210.htm

- Swan, K. (2001). Virtual interactivity: design factors affecting student satisfaction and perceived learning in asynchronous online courses. *Distance Education*, 22(2), 306-331.
- Swan, K. & Shih, L.F. (2005). On the nature and development of social presence in online course discussions. *Journal of Asynchronous Learning Networks*, 9 (3), 115 – 136.
- Shattuck, K. (2012). *What we're learning from Quality Matters-focused research: Research, practice, continuous improvement*. Annapolis, MD: Quality Matters.
- You, J., Hochberg, S.A., Ballard, P, Xiao, M., & Walters, A. (2014). Measuring online course design: A comparative analysis. *Internet Learning*, 3(1), 35-52.
- Young, A., & Norgard, C. (2006). Assessing the quality of online courses from the students' perspective. *The Internet and Higher Education*, 9(2), 107-115.

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Faculty Training and Student Perceptions: Does Quality Matter?

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ABSTRACT

The authors of this study explore the relationship between faculty training using Quality Matters™^A standards and the online course quality as perceived by students. The independent variable is whether a faculty member has participated in Quality Matters training before teaching the online course surveyed. The dependent variables are student perceptions of online course quality from different aspects of the Quality Matters standards including learning objectives, outcome assessment, instructional materials, learner interaction, and course technology. A total of $n = 122$ undergraduate and graduate students were surveyed in the study. Subjects in the treatment group participated in the online courses taught by faculty members who had attended Quality Matters training, and those in the control group participated in the online courses taught by faculty members who had not attended Quality Matters training. Results from student t -tests suggest that faculty training significantly enhances learner interaction. The effects of faculty training on learning objectives, outcome assessments, and instructional materials are marginally significant. Yet, faculty training does not seem to have much influence on the use of course technology.

Keywords: Quality Matters Standards, faculty training, student perceptions, online course development, quality assessment

Introduction

Enabled by the advances in information technologies, online learning represents a major, and advantageous, direction for higher education. Compared to traditional in-classroom courses, online courses provide students with more flexible and economic options (Twigg, 2003). Yet the quality of online courses is difficult to control, thus contributing to lower student completion rates over face-to-face courses (Kearsley, 2000; Xu & Jaggars, 2011).

Since the early stages of online education, researchers have recognized the importance of faculty training and development to reduce potential resistance to online teaching methods and to also sharpen their design skills when teaching online courses

^A "Standards and point values of the Fifth Edition of the QM Rubric can be found at <https://www.qualitymatters.org/rubric>. The wording and placement of a few standards has been changed from the 2011-2013 standards used in this study." [for example 6.3.]

(Berge, 1998; Palloff & Pratt, 2001). Nevertheless, empirical findings consistently point to the lack of training as one of the major barriers to the quality improvement of online education (Conrad, 2004; Allen & Seaman, 2010).

Meanwhile, educational institutions provide various online teaching training programs to prepare their faculty members for the challenges of online teaching (Goodyear, Salmon, Spector, Steeples & Tickner, 2001). Yet, the effectiveness of faculty training programs has been a concern of online education researchers as well as the faculty members themselves (Kosak, Manning, Dobson, Rogerson, Cotnam, Colaric & McFadden, 2004; McQuiggan, 2007). Unless the concern is not sufficiently addressed, instructors are unlikely to actively participate in training, and in turn, schools may be hesitant to set aside resources for such program offering.

Online education should be learner-centered, therefore, students are well-positioned to evaluate online course quality. The purpose of this study is to investigate the causal relationship between faculty training using Quality Matters standards and online course quality as perceived by students. Based on the literature review, this study first identified independent and dependent variables and hypothesized relationships between them. To further test the research hypotheses, observational survey data were also collected. Based on the statistical results from descriptive and reliability analyses as well as student's *t*-tests, the implications of the findings are discussed.

Research Background

Under the initiative to set up a national benchmark for online course design, educators established the Quality Matters (QM) program to assist continuous improvement of online education (Moore & Kearsley, 2012). The program is a faculty-driven peer review process to facilitate the evaluation of online courses with comprehensive rubrics (Legon, 2006). The ultimate purpose is to enhance student learning through the quality assurance of online courses.

The QM rubrics contain 41 specific review standards to ensure that the following key components of online course designs align with each other: 1) learning objectives, 2) assessment and measurement, 3) instructional materials, 4) learner interaction and engagement, and 5) course technology (Quality Matters, 2013).^B The rubrics offer instructors a template to review and improve online course designs, and assure educational institutions of online course quality with sufficient confidence (Parscal & Riemer, 2010).

^B “The materials found on the Quality Matters website may not be used without the express written consent of MarylandOnline. Terms of Use. © 2014. MarylandOnline. All rights reserved.

The Quality Matters review process of online courses requires additional faculty development and training (Shattuck, 2010). Such training programs not only familiarize online instructors with a comprehensive set of standards, but also lead to smooth transitions from in-class lecturing to online teaching in terms of general philosophy as well as specific methods. However, few studies have investigated the effects of faculty Quality Matters training on student online learning experiences. In particular, it is not clear whether the participation in Quality Matters training helps instructors to improve online course quality. The ultimate criteria for the evaluation of online course quality should be based on direct feedback from students. As the “consumers” of online education, students are what matters in the end. Thus, it is necessary to assess the effectiveness of Quality Matters training from the student perspective.

At the institutional level, researchers have discussed and examined the role of faculty training and support in online education. For instance, Covington, Petherbridge and Warren (2005) proposed a triangulated approach to assist faculty’s transition from face-to-face lecturing to online teaching with a) administrative support, b) professional development and c) peer support. Administrative support and professional development are closely related to faculty training. For Quality Matters training in particular, an institution’s administration is encouraged to adopt the standards, and provide some incentives for faculty members to attend the training programs.

At the individual level, researchers have been largely focused on the effectiveness of training programs from faculty perspectives. Based upon the responses from faculty participants who attended an online pedagogical training program, Gold (2001) found that such programs may significantly change teachers’ perceptions of online instruction, as they are potentially more participatory and interactive than face-to-face instruction. The results of some case studies suggest that faculty development programs eases instructors’ transitions from face-to-face lecturing to online teaching (Kim & Bonk, 2006). Based upon survey results from one-thousand faculty members, Shea, Pickett and Li (2005) found that faculty development programs on online course development directly affect faculty satisfaction and acceptance of online education.

Notwithstanding, few studies have examined the direct impact of faculty training programs on different aspects of online course quality as perceived by students. Based on the review of empirical studies on faculty development using different methods (quantitative and qualitative), McQuiggan (2007) identified nine topics related to online teaching training effectiveness, but none of them consider the student perspective. Nevertheless, Wiesenmayer, Kupczynski & Ice, (2008) found correlations between faculty support and student satisfaction in online programs. Meanwhile, new e-learning technologies have the potential to change the nature of pedagogy to meet the needs of students in a knowledge

society (Garrison, 2011). Therefore, it is important to examine the impact that online teaching training programs have on online course quality from the student perspective.

There are different approaches to assess outcomes of online course delivery, and a comprehensive evaluation should address its multiple aspects (Fenwick, 2001). For instance, final course grade is most commonly used to evaluate how well each student has learned from a course, but final course grades alone are not enough to measure teaching effectiveness (Barr & Tagg, 1995). A student is likely to receive a better grade from a well-designed course than from a poorly-designed course. However, the final grade also depends on many other factors, such as how motivated, prepared, and diligent a student is. Thus, researchers found only a marginal relationship between student final grades and course evaluation (Johnson, 2002; Gigliotti, & Buchtel, 1990).

In addition to the final grades they receive,, students also base their evaluations of a course on its design and implementation (Remedios & Lieberman, 2008). Among different measures, researchers find that student course evaluations tend to be generally reliable and valid (Centra, 1993; Hobson & Talbot, 2001). The perceived course quality of students is not often strongly correlated with the grades that they receive, which depends on many non-course-related factors (Johnson, 2002; Gigliotti, & Buchtel, 1990). Actually, student perceptions of course organization and delivery are more reliable than rapport with students and fair grading (Jirovec, Ramanathan & Rosegrant-Alvarez, 1998; Chen, & Hoshower, 2003). Thus, student feedback provides a viable way to evaluate the quality of online courses (Driscoll, Jicha, Hunt, Tichavsky & Thompson, 2002).

Research Hypotheses

The independent variable of this study is whether or not a faculty member has participated in Quality Matters training before teaching the online course surveyed. The dependent variables are student perceptions of online course quality from different aspects of Quality Matter Standards. The effects of faculty training on online quality can be assessed by comparing student perceptions between the different levels of the independent variable. The main premise is that if faculty training improves online course design, students will positively affect course delivery.

There are five primary aspects of Quality Matters standards, and correspondingly there are five dependent variables. These dependent variables include: learning objectives, outcome assessments, instructional materials, learner interactions, and course technologies. Quality Matters training provides faculty members with specific guidelines on how to enhance each aspect in the design of online courses. Altogether, five research hypotheses are

proposed, one for each dependent variable in terms of its relationship with the independent variable of faculty training.

Firstly, Quality Matters training emphasizes the importance of clear and well-defined learning objectives in online courses. In traditional face-to-face courses, an instructor has opportunities to explain learning objectives to students in person, especially when students ask questions about them. But in online courses, ambiguous learning objectives lead to student confusion throughout the course. The training provides faculty members various templates to write clear learning objectives, and facilitate deeper thinking on course organization and learning activities. Hence, the first research hypothesis is as follows:

H1: Faculty training has a positive effect on students' perceptions of learning objectives.

In addition to learning objectives, instructors of online courses need to provide detailed grading policies for each type of assignment. Quality Matters training provides faculty members with guidelines on how to implement grading rubrics for discussions, assignments and projects. Instructors are also encouraged to make these rubrics readily available to students. When students are informed of grading policies beforehand, they are aware of the requirements for each assignment. This leads to the second hypothesis:

H2: Faculty training has a positive effect on students' perceptions of outcome assessments.

Instructional materials comprise the main content of an online course. In addition to traditional material such as PowerPoint slides, Quality Matters training encourages instructors to use other digital instructional materials such as videos and simulations. The clarification of learning objectives and assessment methods is also helpful for an instructor to prepare instructional materials that are appropriately aligned. Thus, the next hypothesis is as follows:

H3: Faculty training has a positive effect on students' perceptions of instructional materials.

One major challenge in online education is the lack of face-to-face interactions between instructors and students as well as among the students themselves. Quality Matters training emphasizes the importance of student participation, and introduces different ways to enhance instructor-student and student-student interactions. In particular, faculty members are encouraged to use active learning methods, such as hands-on exercises and group projects in online courses.

H4: Faculty training has a positive effect on students' perceptions of learner interactions.

Faculty members deliver online courses through the use of learning management systems (LMS) such as BlackBoard and WebCT. Advances in information and communication information technologies (ICT) have lead to the emergence of various e-learning tools such as discussion boards and web conferencing tools. Quality Matters training includes how to use different e-learning tools for different purposes. The use of such tools may enhance outcome assessments, instructional materials and learner interactions. Therefore, the last hypothesis:

H5: Faculty training has a positive effect on students' perceptions of course technologies.

Methodology

Observational survey data were collected from students to discover whether faculty participation in Quality Matters training programs positively affect online course quality. If the findings provide a positive answer to the research question, there is supporting evidence to the claim that the participation in the Quality Matters program leads to the improvement of online education quality as perceived by the student.

Research Design

This study adopts a quasi-experiment design, as a complete random design is not possible in this study (i.e., a student cannot be forced to select or not select a course). In the control group, students take online courses taught by faculty members who have not participated in QM training. In the treatment group, students take online courses taught by faculty members who have participated in QM training. Though subjects were not randomly assigned to two groups, they did not know whether an instructor had participated in the QM training or not throughout the process. Thus, faculty training status does not have any influence on student course selection, and the subjects in two groups are not supposed to be systematically different from each other. The differences in the dependent variables detected should be mostly due to the treatment.

Faculty members who have participated in a Quality Matters training program are likely to design online courses following the requirement of standards. Students who take such online courses are supposed to give more positive evaluations than otherwise. It is possible that a faculty member does not incorporate Quality Matters standards—even following a QM training. Yet, such a compliance issue still reflects the effectiveness of training programs. That is, if a program is effective, most of the attendees are likely to follow the guidelines received in the training.

Measurement

The measures of dependent variables were adapted from Aman's (2009) Student Satisfaction Instrument. For each component of the Quality Matters standards—a learning objectives, b) outcome assessments, c) instructional materials, d) learner interactions, and e) course technologies, there are associated student perception-related items in terms of approval level with a particular online course (see Appendix 1). A five-item Likert scale was used to measure student perception: strongly disagree, disagree, neutral, agree, and strongly agree.

Additionally, there are student demographic items, including gender and age. Further, the questionnaire asks students about their experiences with online education. One question asks for the number of online courses taken previously, and the other asks for the number of online courses taken during the current semester. On average, the questionnaire takes participants approximately 5-10 minutes to complete.

Data Collection

During the second half of an online course, an email invitation containing a link to the online questionnaire was sent to 195 undergraduate and graduate students enrolled in online courses at a Southwest university. After about one week, a follow-up reminder to complete the questionnaire was sent to those who had not yet responded. Altogether there were 127 responses, however five of them were largely incomplete. Thus, the overall response rate was 65.13%, and the valid response rate was 62.56%. To identify possible non-response bias, the early responses (those received before reminder) and late responses (those received after reminder) were compared. There were no significant differences between two sets of responses, thus suggesting that the non-response bias was not a big concern.

Participants

Participants in the treatment group took the online courses taught by faculty members who had already attended Quality Matters training, and those in the control group took the online courses taught by faculty members who had not participated in a Quality Matters training. Among the 122 participants who provided valid responses in the final sample data, 72 participants comprised the treatment group and 50 participants made up the control group. The sample sizes were not exactly the same but still relatively balanced between the two groups with a 3:2 ratio. The gender distribution was even: 61 participants were females and 61 were males. On average, participants were around 30.47 years old. The responses to

two additional questions in terms of e-learning experiences indicated that most participants had previously taken five to six online courses, and were taking one or two online courses at the time of the questionnaire's administration..

Data Analysis Procedures

An independent sample student's *t*-test was the statistical technique used to test each of the research hypotheses. All of the research hypotheses are directional--that is, the independent variable has a positive effect on each of the dependent variables. Therefore, the hypothesis testing is one-tailed rather than two-tailed by default. First, a reliability analysis was conducted to assess the internal consistency of item responses for each dependent variable. If response reliability is acceptable, the index score of each variable will be calculated for subsequent *t*-tests. Also, descriptive statistics including means and standard deviations from descriptive analyses were reported.

RESULTS

Presented in Table 1 are the results of reliability and descriptive analyses. Chronbach's Alpha was the reliability coefficient used in this study to measure the internal consistency of responses to the items measuring the same variable. If an alpha was greater than 0.7, this indicated that the measurement error of the items was controlled. In this study, the measures of all dependent variables exhibited acceptable levels of reliability as they were around 0.8 or higher. The relatively high reliability of item responses supported the calculation of index scores for each dependent variable based on the average of item scores.

Table 1 *Reliability and Descriptive Analyses*

Dependent Variable	Alpha	Treatment Group	Control Group
Learning Objectives	0.87	4.49 (0.54)	4.31 (0.84)
Outcome Assessments	0.85	4.52 (0.64)	4.32 (0.88)
Instructional Materials	0.92	4.31 (0.76)	4.10 (1.02)
Learner Interactions	0.79	4.34 (0.73)	3.99 (1.03)
Course Technologies	0.87	4.25 (0.84)	4.15 (0.88)

The descriptive statistics show that all average responses were above the neutral point of three, and the standard deviation was around one or lower. Thus, participants generally had positive perceptions of online courses. As expected, the treatment group exhibited higher average responses on all of the dependent variables over the control group. On the other hand, the standard deviations of the responses in the treatment group were lower than those in the control group. These findings suggest that the faculty training lead to relatively more positive and consistent perceptions from students with regard to online

course quality. Table 2 shows the results of *t*-tests to examine statistical significance. The null hypothesis of each research hypothesis presents that there was no difference between the treatment group and control group in the average values of the corresponding dependent variables. The significance level of each *t*-test was set to 0.05, with 0.1 as the threshold for marginal significance (Craparo, 2007). The *p*-values of *t* statistics indicated that one difference was significant at the 0.05 level, three differences were marginally significant at the 0.1 level, and one difference was not significant.

Table 2 Hypothesis Testing

Hypothesis	<i>t</i>	<i>p</i> -value
H1: Training → Learning Objectives	1.39	0.08
H2: Training → Outcome Assessments	1.35	0.09
H3: Training → Instructional Materials	1.24	0.10
H4: Training → Learner Interactions	2.10	0.02
H5: Training → Course Technologies	0.61	0.27

Specifically, there was supporting evidence for Hypothesis Four (H4) on the effect of faculty training on learner interaction. Hypotheses One, Two and Three (H1, H2, and H3) were marginally supported, indicating that faculty training had some impact on learning objectives, outcome assessments, and instructional materials. However, faculty training did not improve the use of course technology as perceived by students.

CONCLUSIONS AND IMPLICATIONS

The relationship between faculty training and student perceptions of online course quality was investigated. The author of this study hypothesized that if instructors had participated in Quality Matters training, students who took their online courses would have more positive perceptions in terms of a) learning objectives, b) outcome assessments, c) instructional materials, d) learner interactions and e) course technologies. Observations were collected from a quasi-experiment in which students were divided into a control group and a treatment group depending on faculty training status. The results suggest that faculty training significantly enhances learner interaction. The effects on learning objectives, outcome assessments, and instructional materials are marginally significant. Yet, faculty training does not seem to have much influence on the use of course technology.

The main limitation of this study was that some factors were not taken into account that could have influenced the dependent variables. For example, faculty members at this particular higher education institution are also required to participate in a BlackBoard training program in order to teach an online course. Yet, it is optional for faculty members who have already obtained the certificate to decide whether or not to participate in training on the BlackBoard platform--which incorporates course technologies such as discussion boards and wikis. Compared with Quality Matters training, Blackboard training may have a stronger effect on the course technology variable. The exclusion of such a more direct cause may explain why the corresponding hypothesis (i.e. H5) was not supported. In future studies, control variables like this may be included to provide deeper insights with more sophisticated statistical analyses (e.g. regression and structural equation modeling).

Nevertheless, the results provide supporting evidence for most of the research hypotheses. Thus suggesting that Quality Matters training does indeed help instructors improve the quality of online courses that they teach. In particular, the training enhances learner interaction in the virtual environment. This is likely related to the fact that Quality Matters training emphasizes the role of facilitators rather than lecturer for online instructors. Online education is often criticized for the lack of interactions compared with face-to-face education. The results of this study suggest that Quality Matters training is effective in addressing this concern.

Additionally, the findings suggest that the Quality Matters training enhances online course design in terms of learning objectives, outcome assessments and instructional materials. Compared with learner interactions, these aspects are more course-specific. That is, they also depend on other factors such as subject area and instructor expertise. This may explain the marginal effects of Quality Matters training on these dependent variables. Although the Quality Matters training program may not be sufficient on its own with regard to those aspects, the program remains very helpful to instructors who teach online courses.

The findings in this study also provide some practical implications at the institutional level. It is worth the effort and resources for administrators to provide faculty members online teaching training programs, especially using Quality Matters standards. Administrators may even consider offering some incentives to faculty members to participate in such training programs. On the other hand, faculty members should seek every opportunity to attend such a training program in order to enhance their online teaching. For those involved in an online program, in particular, it is highly recommended that they participate in training to enhance the consistency and quality of different courses in the program.

REFERENCES

- Alessandri, J., Darcheville, J. C., & Zentall, T. R. (2008). Cognitive dissonance in children: Justification of effort or contrast? *Psychonomic Bulletin & Review*, 15(3), 673-677.
- Allen, I. E., & Seaman, J. (2010). *Learning on Demand: Online Education in the United States, 2009*. Newburyport, MA: Sloan Consortium.
- Aman, R. R. (2009). *Improving Student Satisfaction and Retention with Online Instruction through Systematic Faculty Peer Review of Courses*. Oregon State University.
- Barr, R. B., & Tagg, J. (1995). From teaching to learning—A new paradigm for undergraduate education. *Change: The Magazine of Higher Learning*, 27(6), 12-26.
- Berge, Z. L. (1998). Barriers to online teaching in post-secondary institutions: Can policy changes fix it? *Online Journal of Distance Learning Administration*, 1(2). Retrieved from <http://www.westga.edu/~distance/ojdla/summer12/berge12.html>
- Centra, J. (1993). *Reflective Faculty Evaluation: Enhancing Teaching and Determining Faculty Effectiveness*. San Francisco, CA: Jossey-Bass.
- Chen, Y. & Hoshower, L. B. (2003). Student evaluation of teaching effectiveness: An assessment of student perception and motivation. *Assessment & Evaluation in Higher Education*, 28(1), 72-88.
- Conrad, D. (2004). University instructors' reflections on their first online teaching experiences. *Journal of Asynchronous Learning Networks*, 8(2), 31-44.
- Covington, D., Petherbridge, D., & Warren, S. E. (2005). Best practices: A triangulated support approach in transitioning faculty to online teaching. *Online Journal of Distance Learning Administration*, 8(1). Retrieved on October 19, 2013 from: <https://www.westga.edu/~distance/ojdla/spring81/covington81.htm>
- Craparo, R. M. (2007). Significance level. In N. J. Salkind (ed.) *Encyclopedia of Measurement and Statistics 3* (pp. 889–891). Thousand Oaks, CA: SAGE Publications.
- Driscoll, A., Jicha, K., Hunt, A. N., Tichavsky, L., & Thompson, G. (2012). Can online courses deliver in-class results? A comparison of student performance and satisfaction in an online versus a face-to-face introductory sociology course. *Teaching Sociology*, 40(4), 312-331.

- Fenwick, T. J. (2001). Using student outcomes to evaluate teaching: A cautious exploration. *New Directions for Teaching and Learning*, 88, 63-74.
- Garrison, D. R. (2011). *E-learning in the 21st century: A framework for research and practice*. London, UK: Routledge Falmer.
- Gigliotti, R. J. & Buchtel, F. S. (1990). Attributional bias and course evaluations. *Journal of Educational Psychology*, 82(2), 341-351.
- Gold, S. (2001). A constructivist approach to online training for online teachers. *Journal of Asynchronous Learning Networks*, 5(1), 35-57.
- Goodyear, P., Salmon, G., Spector, J. M., Steeples, C., & Tickner, S. (2001). Competences for online teaching: A special report. *Educational Technology Research and Development*, 49(1), 65-72.
- Hobson, S. M. & Talbot, D. M. (2001). Understanding student evaluations: What all faculty should know. *College Teaching*, 49(1), 26-31.
- Jirovec, R. L., Ramanathan, C. S. & Rosegrant-Alvarez, A. (1998). Course evaluations: What are social work students telling us about teaching effectiveness? *Journal of Social Work Education*, 34(2), 229-236.
- Johnson, V. E. (2002). Teacher course evaluations and student grades: An academic tango. *Chance*, 15(3), 9-16.
- Kearsley, G. (2000). *Online Education: Learning and Teaching in Cyberspace* (Vol. 91). Belmont, CA: Wadsworth.
- Kim, K., & Bonk, C. J. (2006). The future of online teaching and learning in higher education: The survey says. *Educause Quarterly*, 29(4), 22-30.
- Kosak, L., Manning, D., Dobson, E., Rogerson, L., Cotnam, S., Colaric, S., & McFadden, C. (2004). Prepared to teach online? Perspectives of faculty in the University of North Carolina system. *Online Journal of Distance Learning Administration*, 7(3). Retrieved from <http://www.westga.edu/~distance/ojdla/fall73/kosak73.html>
- Legon, R. (2006). *Comparison of the Quality Matters Rubric to Accreditation Standards For Distance Learning*. Pasadena, MD: Quality Matters.

- McQuiggan, C. A. (2007). The role of faculty development in online teaching's potential to question teaching beliefs and assumptions. *Online Journal of Distance Learning Administration, 10*(3). Retrieved from <http://www.westga.edu/~distance/ojdla/fall103/mcquiggan103.htm>
- Moore, M. G., & Kearsley, G. (2012). *Distance Education: A Systems View of Online Learning* (3rd ed.). Belmont, CA: Wadsworth.
- Palloff, R. M., & Pratt, K. (2001). *Lessons from the Cyberspace Classroom: The Realities of Online Teaching*. San Francisco, CA: Jossey-Bass.
- Parscal, T., & Riemer, D. (2010). Assuring quality in large-scale online course development. *Online Journal of Distance Learning Administration, 13*(2). Retrieved from http://www.westga.edu/~distance/ojdla/summer132/parscal_riemer132.html
- Quality Matters (2013). *Quality Matters™ Overview*. Pasadena, MD: Maryland Online. Retrieved from https://www.qualitymatters.org/applying-rubric-15/download/QM_Overview_for%20Current%20Subscribers_AE2013.pdf
- Remedios, R. & Lieberman, D. A. (2008). I liked your course because you taught me well: The influence of grades, workload, expectations and goals on students' evaluations of teaching. *British Educational Research Journal, 34* (1), 91-115.
- Shattuck, K. (2010). Quality Matters™: A case of collaboration and continuous improvement for online courses. In S. Huffman, S. Albritton, B. Wilmes & W. Rickman (eds.) *Cases on Building Quality Distance Delivery Programs* (pp. 135-145). Hershey, NY: Information Science Reference.
- Shea, P., Pickett, A., & Li, C. S. (2005). Increasing access to higher education: A study of the diffusion of online teaching among 913 college faculty. *The International Review of Research in Open and Distance Learning, 6*(2). Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/238/493>
- Twigg, C. A. (2003). Improving Learning and Reducing Costs: New models for online learning. *Educause Review*, September/October issue, 28-38.
- Wiesenmayer, R., Kupczynski, L., & Ice, P. (2008). The role of technical support and pedagogical guidance provided to faculty in online programs: Considerations for higher education administrators. *Online Journal of Distance Learning Administration, 11*(4).

Xu, D., & Jaggars, S. S. (2011). Online and hybrid course enrollment and performance in Washington state community and technical colleges. *Community College Research Center (CCRC) Working Paper* No. 31. New York, NY: Teachers College, Columbia University. Retrieved from <http://files.eric.ed.gov/fulltext/ED517746.pdf>

Appendix: Measurement Items

Learning Objectives

The course objectives for this online course were closely related to what I was expected to learn.

I find it helpful to be provided with the learning objectives in the course (e.g. syllabus, module introduction).

The course objectives for this online course assisted with guiding my learning activities.

Outcome Assessments

I find it helpful to be provided with the assessment methods of my course performance (e.g. assignment, discussion, project) from the beginning.

The course assessment methods for this online course were clearly described.

The course assessment methods for this online course were appropriate.

Instructional Materials

I find the course resources and materials helpful.

The purpose of course resources and materials for this online course were clearly described.

The course resources and materials for this online course are rich in content.

Learner Interactions

There are sufficient ways for me to interact with the instructor during this course.

The course instructor for this online course interacted with me in a timely fashion.

The amount of interaction with the instructor for this online course was helpful.

Course Technologies

The technology used in this online course enhanced my learning.

Technology support was readily available for using the online features of this course.

The course technology functioned well most of the time.

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Table 1 *Reliability and Descriptive Analyses*

Dependent Variable	Alpha	Treatment Group	Control Group
Learning Objective	0.87	4.49 (0.54)	4.31 (0.84)
Outcome Assessment	0.85	4.52 (0.64)	4.32 (0.88)
Instructional Material	0.92	4.31 (0.76)	4.10 (1.02)
Learner Interaction	0.79	4.34 (0.73)	3.99 (1.03)
Course Technology	0.87	4.25 (0.84)	4.15 (0.88)

Table 2 *Hypothesis Testing*

Hypothesis	<i>t</i>	<i>p</i> -value
H1: Training → Learning Objective	1.39	0.08
H2: Training → Outcome Assessment	1.35	0.09
H3: Training → Instructional Material	1.24	0.10
H4: Training → Learner Interaction	2.10	0.02
H5: Training → Course Technology	0.61	0.27

Digital Information Networks and the Future of Online Learning

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INTRODUCTION

Digital information networks, with their tremendous amounts of data, constitute a challenge to the capacity for an individual to know the relevant aspects of society, a knowledge that international agencies often acknowledge as being an essential aspect of citizenship. Are there solutions for this very practical question? Is it possible to make profit from those big quantities of data? What are the role and importance of education, science, technology, and the humanities for contemporary societies, particularly for online universities? (Calhoun, 1996).

A very relevant practice of online teaching involves using the Internet to learn and produce new forms of knowledge. It is easy today, through Google and Wikipedia, to instantly reach knowledge that in the past would take years to consolidate into one's memory in a form that could be usefully retrieved when circumstances required. Such an ease of access is likely to soon be increased by the launching of Google's eyeglasses, where the Internet could be projected into one's eyeglasses upon request. This general, easy-to-access knowledge is useful for increased self-consciousness and understanding of the world, as well as to the improvement of the quality of social interactions, but has a reduced market value and can often be overly shallow (Glimcher, Camerer, Fehr, and Poldrack, 2009). The creation of useful-employment in the future requires the empowerment of society's capacity for developing content that is both unique and portable into digital networks. The essence of future online learning will be its capacity for helping/allowing students to discover and discern the best forms for filtering digital information that is balanced, credible, and relevant. The key for success will not consist of having librarian knowledge, but rather on the development of learning by doing, thus satisfying the capacity to attain knowledge in an autonomous way (Beinhocker, 2006).

In this article, Caetano and Lori (henceforth, we) reflect on the lines of development that we view as possible for universities that offer online teaching opportunities in Europe. We specifically focus on the extent to which these universities are addressing the developmental needs established by governmental and non-governmental agencies, international economic agencies (e.g. European Union (EU), Organization for Economic Cooperation and Development (OECD)), and by European associations that are invested in education and skills-training (e.g. European Association of Distance Teaching Universities

(EADTU)) (Dehaene & Brannon, 2011). As an example, we share the modifications that Alberta University, a public, four-year online university has implemented toward continuing Portugal's pioneering efforts in the field of online teaching. Using practical examples and theoretical discussions, we will present a vision of what we believe will be the future of education and the role online education will play in this vision.

The Current State of Technology Integration in Europe

The reform of higher education in Europe can currently be seen as a “reform of the reform”, i.e. as the reform of the democratic access to the universities. This democratic access took place in most European countries within the last 30 years of the twentieth century and resulted in a dramatic increase of students attending higher educational universities. Today, one of the main educational goals in Europe is not only to increase the number of students attending universities, but also to ensure the quality and relevance of their qualifications upon graduation and throughout the remainder of their careers. Education is viewed as being a continuous process throughout life, therefore the question becomes, how do we make better educational policies for better lives? (Freedman, 2005).

Undoubtedly, the question above is being addressed by universities all over the world, as efforts to redesign infrastructures to accommodate the multiple forms of constantly emerging technologies has taken center stage (Layne & Ice, 2015). In Europe, for example, these modifications being made in higher educational universities stem from the immediacy by which European legal and political systems began integrating emerging technologies into their internal policies and infrastructures. Because the EU starts from a commerce-based association, the European Economical Community (EEC), the legal systems were integrated by policymakers before the European integration of university systems, but the university integration across the EU is already an on-going process (Groenwegen & Van Dijk, 1993; Buchholz, 1989). The European legal system as a whole was designed to make sure that commerce would transform the EU into the most developed world area. It was the European Council of Lisbon (the political EU leading body) in 2000 that established the EU policy for science and development, and declared as one of its goals the establishment in the EU of the world's most competitive and dynamic knowledge-based economy (EU, 2002). The intention of developing a digital EU society supported on tools and methodologies of the online education approach is proposed in the Europe 2020: Europe's growth strategy document produced in 2013 (EC, 2011). To understand the impact that such changes will have in the academic sphere within European societies, e.g. the growing gap between the high budget universities and the low budget universities, it is necessary to analyze what initially served as the catalyst for these changes (Steiner, 2009; Castells, 2005). Some technological developments are simply products that have been improved. For example, it is simpler now to print the text that we write, e.g. using a personal laser printer, but the

printing of written text is not new at all. However, many emerging technologies allowing for immediate access to knowledge and skills in ways that were unfathomable even in the recent past, are the technologies that will serve as the focus in this article. Additionally, we further provide our thoughts on the practical implications that these emerging technologies may impart on the field of online education.

Traditionally, the relationship between education and the economy was based either on the technical-functional or on the modernization theories. Those theories are similar and differ only on whether they emphasize the effects of education on creating job-relevant skills, the technical-functional theory; or on creating job-relevant attitudes, the modernization theory. The technical-functional theory has tended to be more popular on developed countries, while the modernization theory has tended to occur more on underdeveloped countries (Rubinson and Browne, 1994). Both theories correspond to industrial societies where states had a lot of weight on both the economy and people's lives, and that is no longer true for contemporary societies. Technological development and free movement of factors of production have changed the nature of things. Today, the virtual economy is becoming more dominant - Google and Wikipedia are good examples – and, because of that, the success of collective action depends crucially on the autonomy and knowledge of individuals (Beinhocker, 2006; Freedman, 2005).

The Knowledge Economy

The basis for one's decisions is no longer dependent on the allocation of goods by the state, but rather on the knowledge people have and on the choices they make. Therefore it is crucial to promote the education and the training of people in order to make them more autonomous (Steiner, 2009; Barnett, 1992). Knowledge here is understood as useful information, by useful meaning that is capable of making products better. This is relevant as in modern economic theory (Beinhocker, 2006) knowledge is wealth. It is private knowledge that allows to create value in products, more than the access to raw products, e.g. iron or gold, which are now of equalitarian access except for raw products with strong military usage, such as uranium. There are also economical differences in the world because the distribution of raw product is not equal across the globe, but the greater source of economical differentiation is the unequal distribution of knowledge (Beinhocker, 2006). It is thus correct to affirm that the present society is increasingly having a knowledge-based economy.

Searching for equality is reasonable given that people have equal rights to human dignity, but it is also true that people often work to gain socio-economical advantages over those that work less. Thus, sharing knowledge universally would increase equality but would likely reduce people's interest in working. The best approach would likely be a

middle of the road approach where it is maximized the availability of the knowledge that is not proprietary, whereas all people are taught the best methods for developing knowledge that can be proprietary. It is in learning this middle of the road approach that online academic programs can have a very relevant effect on online educational expansion. We'll also argue that online learning has an important potential role within the European economy. As evidenced by several studies in the field of neuroscience, in situations of interdependence, what the individual considers to be rational behavior strongly depends on what the individual explicitly knows from personal and societal experiences (Whitehead, 1978 & 1995; Calhoun, 1996; Oishi, Kesebir, 2012). The empowerment of individuals is useful for the cultures where it already exists, as it is the case of the countries of northern Europe, but it is even more useful for southern European cultures where the existence of such empowerment is less prevalent (Norrie, 2005). The online learning is an opportunity for students from southern European countries to be more in touch with other students and to make a qualitative leap through this training, thus becoming more independent in both their behavior and decision-making.

The situation in Europe after the 1999 Bologna Agreement between 29 European countries led to a reform of the curricular systems in Europe, which has been a collection of good and bad events, as it happens in all reforms. But with what was learned from that and from the EU Science funding FP7 program a new set of goals and guidelines have been prepared by the governing bodies of the EU. Approved in 2011, Horizon 2020 is the EU continuation of the FP7 program that started being fully implemented in 2013. The purpose of the Horizon 2020 focuses on the creation of inclusive, innovative, and safe societies (European Commission, 2011). This foci directly results from the overarching urgency to eliminate recession and proactively re-launch the European economy. According to this program, the EU's global competitiveness demands budgetary consolidation and structural reform; but, mostly, demands strategic investments in all areas, with a special focus on research and innovation. According to the European Commission, it is necessary to become a society that is more efficient in the use of its resources in all areas of economical activity. According to the perspective presented by the European Commission, research and innovation will improve both prosperity and quality of life, through the creation of "worldwide public goods" (EC, 2012).

Today, education is an economical activity capable of generating transactional goods that can be exported, and it is thus a major engine for the growth of national Gross Domestic Product (GDP). The Horizon 2020 program gives economical incentives to activities that promote a "smart, sustainable and inclusive growth" (EC, 2011, p. 2). The Horizon 2020 assumes itself as a rupture with the past, through the generation of ideas, growth, and employment for the future. Education is now, together with research, a key and essential priority for a sustainable and inclusive growth of the EU. In university education, it is no

longer enough, as it was in the past, to give knowledge to passive students; but rather it is necessary to give them the chance and the means to achieve, implement and transmit top-level ideas. For the European Commission, the goal is thus to provide students with top-level research infrastructures, so that top-level research can be conducted by bringing to the EU the best researchers in the world. On the other hand, it is also clearly stressed the importance of dissemination of scientific research from industrial production, such as education; therefore, the education sector is being viewed by EU as an important producer of immaterial, yet valuable goods. This new approach by the EU will start to promote European universities not only as places for teaching, but also as places where patent creation and start-ups are expected to occur. In terms of funding, special attention is given to The Future and Emerging Technologies (FET)--in particular, digital educational networks. This attention can be observed by the large funding of the FET by the EU structural funds (large funds destined to create EU infrastructures).

The digital networks are seen as “essential facilitating technologies” for the increase of EU’s competitive capacity in the context of globalization. They are also a priority of the Europe 2020 EU strategy, of which the Horizon 2020 is a part. The social challenges addressed by the Europe 2020 program are the great common concerns not only of the EU inhabitants, but of the entire world. This “planetary consciousness” of the EU leads to a financing preference for challenges that have a global nature and application. The EFT will thus play an important role in the European societies by allowing for the integration of research, education, and innovation with high-level of excellence that can be applied at a global level. These three dimensions constitute what the European Commission calls the “triangle of knowledge” (EC, 2002; EC, 2009; EC, 2011; EC, 2012) (see also refs. (Locke, 1690 (1959); Caetano, Curado & Jacquinet, 2000) for a general classic perspective on the relevance of ideas in society).

In accordance with the Europe 2020 strategy, the Horizon 2020 program gives priority to digital networks. The strategy is intended to give high priority for funding projects that are likely to have a high impact in terms of improving the economy and the job market, such as the large-scale implementation of essential technologies. This approach must be complemented with measures to ensure that the Horizon 2020 program is available to diverse individuals or groups who are producing work and research that will have a positive impact. The Horizon 2020 program specifically states that the talents must be cultivated and supported so as to develop work at an excellent level, allowing for European researchers and innovators to benefit from instruments, networks, and financing of the EU science funding Horizon 2020 program (EC, 2011). This program will include the establishment of strong connections with EU programs such as teach/study abroad Erasmus program. The idea is promoting not only physical mobility of teachers, researchers and students, but also virtual mobility; it is also envisaged to establish relations not only in

Europe, but partnerships all over the world. The connection to the Millennium goals approved by the United Nations (UN) is also made explicit. The eighth goal of the Horizon 2020 is the establishment of a global partnership for development (EC, 2011, p. 11), which focuses on the interaction between research and education. It is in the EU's goal of having a global reach in research and education that online teaching has its highest potential of being highly efficient because of online teaching's capacity for operating at a global scale and low cost through the use of the available digital networks.

For the last 30 years, the EU has made universal access to education a priority; however, with the modified goal of establishing excellence-based interactions in society, it is being realized that mass education has not guaranteed an equality of job access for everyone. On the contrary, given the differing quality of teaching institutions, the different access to university formation has led to social inequality. Examining the world university rankings, it is also clear that countries where the governments have a more direct control on the universities are not the countries that have the best universities. Therefore, it is important to promote the equality of access to education opportunities without being dependent on a direct control by the countries' governments. In this light, online education is in a unique position to achieve both equalitarian access and independence from over-bearing control by the countries' governments (Lane, 1993, 1995), namely the European countries. Through digital networks, availability of access to information is clearly leveling the playing field, however reducing governmental quality control –especially in instances involving online learning with international education institutions, it is imperative that there is agreement regarding quality control among all partnering institutions.

Online education has been for a long time seen as a second-opportunity education oriented towards older adults already working who did not have the chance to follow the standard education system. But with the recent development of powerful digital networks and free access to large quantities of information, online education has become increasingly more attractive both because of its cost efficiency (the teacher/student ratio is smaller than in face-to-face universities) and because of its wide reach (online universities can reach the whole world). By understanding the growing advantages of online teaching, European policy-makers have been greatly increasing the incentives for research in online education. An example of such incentives is the increase in funding by the EU toward EADTU projects concerning quality in higher education, such as E-xcellence and E-xcellence Next projects. Both of these projects aim to clearly define and establish quality standards for online education. Funds are directly allocated toward efforts to increase collaboration between institutions and professionals working in the field of online, namely the national agencies for assessment and accreditation of higher education (Ubachs, 2012; North, 1990).

The Institutional Economical Context

The present context of transforming educational systems in Europe gives a heightened relevance to interuniversity consortiums and partnerships that embrace and support advancements in scientific, technological aspects, and the expansion of educational programs. The present legal structure in Europe has been inspired by both governmental and organizational efforts and practices in the United States and various European countries. Cooperation in education matters has been assuming a great relevance with the homogenizations of the national university educational systems across Europe.

Although originally well-intentioned to extend education to all, the financial structure supporting the national university educational system was deficient, hence leaving an aftermath of overreliance of student quantity over quality. This lack of quality, in turn, has left a gap in the assurance of obtaining employment upon graduation. In many countries, no special attention was paid to the specificity and potential of online/distance learning universities. Some universities have been paying attention to the specificities of online learning, but such an attention is not common. The laws in the EU countries typically promote the building of inter-university consortiums and of partnerships between universities and several types of institutions. In some countries, there are universities that are fully dedicated to online learning, for example, in Portugal, Spain, and the United Kingdom. While in other countries, such as The Netherlands and Germany, many university professors simultaneously teach at their respective face-to-face university and do the online teaching through their face-to-face university and/or through their national online university.

There is a strong movement in Portugal for face-to-face universities, which are geographically close, to become integrated in larger super-universities—the advantage being the reduction of costs, the budgetary increase which allows for higher-scale projects, and an improved position in the world university rankings. A recent example is the effort to join the University of Lisbon with the Technical University of Lisbon. But online universities have the clear advantage of not needing geographical proximity to be merged with another university. Portugal's fully-dedicated public university, the Aberta University, has been making an effort to increase the degree of collaboration with several fully-dedicated online universities, such as UK's Open University and the *Universitat Oberta* of Catalonia, but also with traditional face-to-face universities.

Not all online universities have similar number of students; examples of large online universities are the British Open University or the Spanish *Universidad Nacional de Educación a Distancia* with many tens of thousands of students, while examples of medium-size universities are the Aberta University and the *Universitat Oberta* of Catalonia with a few tens of thousands of students. And even if online universities have similar numbers of

students, it should not be assumed that similarly sized universities work in similar manners. For example, the medium-sized Dutch *Open Universiteit* works in a very different manner from the two mentioned medium-sized universities (e.g. adopting different pedagogical approaches, and using different online interaction strategies).

Long-range online universities are typically marked by the existence of a much smaller number of teachers per student than face-to-face universities. This difference is based on the used teaching methodologies, basically that in online teaching students are expected to be a lot more autonomous than in face-to-face universities and that they can attend the lectures at any time by just downloading the materials (in general, multi-media materials which allow for multiple forms of interaction). Both the greater student autonomy and the thoroughness of the support materials greatly reduce the number of required teachers without reducing the quality of what is being taught. We will even argue in this work that what is taught at online universities can potentially be considerably better than what is taught at face-to-face universities. An obvious advantage in the reduction of teachers is that universities can potentially become cheaper, while actually increasing the quality of the education.

The face-to-face universities are certainly aware of the potential of online teaching, but the teaching load of online teaching is considerably higher than that of face-to-face teaching; and so teachers in face-to-face universities are often reasonably weary of committing themselves to online teaching. The inexistence of a differentiation between face-to-face and online teaching is often negative career-wise to those professors that focus on online teaching, therefore appropriate legislation needs to be enacted. A policy recently adopted by the Aberta University that is likely to be positive for other fully-dedicated online universities, is to have their teachers linked to face-to-face research institutions, thereby increasing their scholarly productivity.

For different reasons, both Germany and Brazil are keenly aware of the importance of online learning; Brazil because of its size, and Germany because of its ever increasing economical interaction with both China and Russia. It is actually the success of its interaction with the two large-size countries that is behind the more recent, and very strong, economical success of Germany. When one thinks about countrywide high quality education in linguistically mostly homogenous countries such as Brazil, Russia, or China, then online learning should be strongly considered. For online learning to be successful in the EU, it must be done by strongly multilingual professors, as the courses will need to be multilingual.

In face-to-face universities there are teachers and tutors, but, in online universities, besides those two, the web designers also play a very important role. The teaching

technologies in online universities are therefore possible to patent, and indeed Aberta University is in the process of patenting some of its teaching techniques. This interplay between media technology and teaching will be opening new forms of teaching how to work with information-rich content. Through online universities, we will be able to see the development of a new form of teaching within online learning environments with a high level of quality, and that can be taught to segments of the society that were previously disenfranchised.

Information Access as a Universal Right

Until recently, the information grabbing techniques learned at online universities were only useful when people were in front of computers, which was useful to only a fraction of the available jobs. But the development of technologies, such as the Google eyeglasses, where all the information in the web can at any time and place be downloaded to a person's eyeglasses, means that answering the questions to any exam in any discipline will become more and more trivial. But if answering to an exam is trivial, then why should students take exams, since all those exams measure is the difficulty of Internet access? By using eyeglasses such as those, and its future improvements, it will be possible at any time to be immersed in 2D and 3D virtual realities representing anything we want to be informed about. Thus, as those technologies become more and more available, the only exams that make sense are those that measure people's capacity to access and process that information available in the web; and online universities are very well-suited to teach and test those types of skills. The access to all existing information by anyone anywhere constitutes a powerful mechanism for the promotion of human dignity, and so we are proposing that this access should be a fundamental human right. Like all the rights that have a monetary cost associated to them, its implementation will be gradual and not immediate, but nevertheless it should be a goal of any civilized nation.

Universal access to information does mean homogeneity in the quality of the technologies used to assess and process such information. The quality of teaching in the future, and already in the present, will be about how well the teaching institution has trained the students on their capacity to assess and process the web's huge amount of information. The sovereign states are changing their functions and structure not only through the appearing of large deeply integration areas such as the EU, but also through the emergence of sovereign individuals that will create diffuse virtual sovereign aggregates of people having common goals; with the common goals being economical, religious, linguistic and/or other. But, regardless of what kind of societal structures are being created, the type of knowledge gained in online universities is likely to be more appropriate for a life in those types of societies.

As we mentioned, online universities are capable of having more students with less money. This is likely to increase the monetary capacity of a university, and there are practical advantages to a university on having easily available funds. Money is useful in improving universities when it is applied so as to increase people's productivity, rather than their sense of comfort. In societies with a very strong work ethic, meaning that people feel uncomfortable when they are not producing, and those feelings are reinforced by their environment, comfort is not a danger. But when societies are tolerant about lack of production, then feeling comfortable about not producing can become a stable living condition; and when that occurs, then the lack of production will tend to increase with time rather than decrease. The act of producing something innovative always implies an effort, conflict with the *status quo*, and the risk of becoming ostracized. For a behavior that comports so many risks to occur, it is necessary that the incentives to produce innovations are clear, strong, and non-extensible to those that do not innovate.

The major incentive most people look for is to climb up on the social hierarchy. Revolutions are always about a change in the way the social hierarchy is built and/or accessed; and the purpose of the revolution is to change that order into one that the revolutionaries believe is better. Because they believe it to be better, they call it more just, but often revolutions imply changing the judicial system so as to make sure that what the revolutionaries feel is better is what is postulated to be more just. If the sense of what is just *was* universal, then all political parties would promote the same sense of justice. But what happens in practice is that differences about what is just not only variable across people, but they can even vary for the same person across time. Until recently, the ideal of social justice would be one where the social hierarchy was based on each person's capacity to produce knowledge (meaning useful information), and thus the importance of learning knowledge in the universities as a mean for creating societal improvements. But the recent development of technologies capable of giving almost-instantaneous access to huge amounts of knowledge at almost any place by almost anyone implies that knowledge is no longer a social differentiator. To some people this is the dawn of an equalitarian future, but we think it is wise to curb that enthusiasm, as we expect that the more likely outcome is a new form of social hierarchy that is not based on knowledge. Rather, that hierarchy will be built on the person's capacity to reconstruct knowledge in new and different ways, the capacity to innovate based on what is available on the web.

Make no mistake that these methods are not about innovation by imitation; however, it is not the creation of new innovations either. The innovation referred to consists of creating something new by the integration of what is available, and that others want to have, accompanied by making this product available (not necessarily free of charge). The Internet brings the geographic borders down, flattens the mountains some would say (Freedman, 2005), but it also creates a new type of border/mountain which is the huge amount of

completely irrelevant information/services that are available. The battle for the creation of interesting new products will no longer be focused on the products being new, but rather on them being interesting. This means that the relevant difference between information and knowledge (useful information) is on making sure that its usefulness is so clear and publicized that the product will become interesting. Such an alteration of what is relevant about a product will make scientific/technological research increasingly less relevant, and social/psychological/marketing research increasingly more relevant; it also makes a lot of the structure we are using to promote production, such as patents, increasingly more focused on marketing technologies and increasingly less so on technological developments.

Languages are the representation of a joint cultural past, bridges to the construction of a joint future, and barriers to the construction of other joint futures. Languages can indeed both unite and divide people. Another well-known capacity of languages is the building of cultural commerce landscapes that can represent extremely large amounts of money. The more widespread a language, the larger the market of the culture having such language can access. Of course, that translation is always possible, but the existence of a common language helps the building of a common culture. The combined existence of a joint language and culture is very useful in the construction of a joint market. This must be understood as a relevant political issue (Heller, 1991 & 1995).

CONCLUSION

The analysis of the global economical fluxes is both multi-science and multi-technology, and young people understand that it is the managing of that monetary flux that is the essence of what presently constitutes power. Power is no longer in the military as it occurred until the 60s-70s of the previous century, and it is starting to no longer be associated to knowledge about the legal system, but it is rather starting to become associated to the knowledge about the management of economical fluxes. The EU is a paradigmatic example of this shift. Fraternity in Europe can only endure if the production capacity becomes more homogeneous across the EU, otherwise it will not occur. The people of the poor countries cannot live better than the people of the richer countries using the richer countries' money, nor can they accept to live in worst conditions than in the richer countries forever.

The universities that by lack of scale and/or money cannot produce the best art, science, or technology in the world have the moral duty of trying to show those high achievements of humanity to their students. The online universities are especially well equipped to be that window to world-class quality and achievement that can be open by combining multi-science and multi-technology teaching (Morin, 2008), and at a considerable lower cost than face-to-face universities; even more so if you are a student not living in the richer countries of the world, where one typically finds the top-level face-to-face universities.

REFERENCES

- Barnett, R. (1992). The Function of Several Property and Freedom of Contract, *Economic Rights*, Cambridge University Press.
- Beinhocker, E. D. (2006). *The Origin of Wealth: Evolution, Complexity, and the Radical Remaking of Economics*, Harvard Business School Press.
- Buchholz, R. A. (1989). *Business Environment and Public Policy*, Prentice Hall.
- Caetano, J. C., Curado, H., and Jacquinet, M. (2000). On Transdisciplinarity in Organizations, Innovation and Law, Transdisciplinarity, *Joint Problem-Solving among Science, Technology and Society*, Swiss Federal Institute of Technology.
- Calhoun, C. (1996). Social Theory and Public Sphere, *The Blackwell Companion to Social Theory*, Blackwell.
- Castells, M. (2005). The Network Society: From Knowledge to Policy, *The Network Society: From Knowledge to Policy*, John Hopkins Center for Transatlantic Relations.
- Dehaene, S. and Brannon, E. (2011). *Space, Time and the Number in the Brain. Searching for the Foundations of Mathematical Thought*, Elsevier.
- European Commission (2002). Barcelona European Council. Presidency Conclusions, 15 and 16 March 2002. N 100/1/02 REV 1.
- European Commission (2011). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. *Horizon 2020 - The Framework Program for Research and Innovation*. Brussels. 30.11.2011 COM (2011) 808 final.
- European Commission (2012). The European Union explained: *Europe 2020: Europe's growth strategy*. Brussels, December 2012.
- Swedish National Agency for Higher Education (2009). The Knowledge Triangle Shaping the Future of Europe. *Summary report from the conference 31 August–2 September 2009*, Göteborg, Sweden. Högskoleverkets rapportserie, 2009:26. University Chancellor's Office.

- Freedman, T. L. (2005). *The World is Flat: A Brief History of the Twenty-First Century*, Farrar, Straus and Giroux.
- Glimcher, P. W., Camerer, C. F., Fehr, E., and Poldrack, R. A. (2009). *Neuroeconomics. Decision Making and the Brain (Chapter 1)*, Elsevier.
- Groenwegen, J., and Van Dijck, J. (1993). *Changing Business Systems in Europe*, VUB Press.
- Heller, A. (1991 & 1995). The Concept of the Political Revisited, *Political Theory Today*, Polity Press.
- Lane, J-E. (1993, 1995). *The Public Sector. Concepts, Models and Approaches*, Sage.
- Layne, M., & Ice, P. (2015). Re-Imagining and Re-Structuring Scholarship, Teaching and Learning in Digital Environments. In F. Nafukho, & B. Irby (Eds.) *Handbook of Research on Innovative Technology Integration in Higher Education*, (pp. 398-418). Hershey, PA: Information Science Reference. doi:10.4018/978-1-4666-8170-5.ch020.
- Locke, J. (1690, 1959). *An Essay Concerning Human Understanding*, Dover Publications.
- Morin, E. (2008). *On Complexity (Advances in Systems Theory, Complexity, and the Human Sciences)*, Hampton Press.
- Norrie, A. (2005). *Law and the Beautiful Soul*, Glasshouse Press.
- North, D. C. (1990). Institutions and Their Consequences for Economic Performance, *The Limits of Rationality*, The University of Chicago Press.
- Oishi, S., and Kesebir, S. (2012). Optimal Social-Networking Strategy is a Function of Socioeconomic Conditions. *Psychological Science*, December, 23, pp. 1542-8.
- Rubinson, R., and Browne, I. (1994). Education and the Economy, *The Handbook of Economic Sociology*, Princeton University Press.
- Steiner, G. (2009). *George Steiner at The New Yorker*, Robert Boyers.
- Ubachs, G. (Coordinator) (2012). *Quality Assessment for E-learning: A Benchmarking Approach*, 2nd Edition, EADTU.

Whitehead, A. N. (1978 & 1995). *Process and Reality*, The Free Press.

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3 Questions for an Online Learning Leader

WALLY BOSTON

President and CEO of American Public University System

What I Think About Student Success in Online Learning

Dr. Wallace Boston is the president and chief executive officer for American Public University System—a four-year fully online university boasting over 100,000 students and more than 90-degree programs. It should come as no surprise that Dr. Boston's research agenda focuses on student persistence, retention and degree completion in online postsecondary learning environments. I had the chance to sit down with this issue's "3 Questions for an Online Learning Leader" and ask him about the continuing hot topic of online education and student success.

1 How would you describe the manifestation of success for an APUS online student?

On the surface, most people think that success for one of our students would be the completion of a degree. Our students have a wide variety of personal and professional goals and that leads me to conclude that success is best defined as the continued academic progression and reenrollment of a student until he/she has completed their individual goal. That goal could be the completion of a single course that enhances their knowledge of a subject or completes their degree at another institution, it could be the completion of a certificate that enhances their knowledge and is valued as a resume booster for a promotion at work, or it could be the completion of a degree that leads to additional career opportunities.



2 In what ways have you seen the needs of online student's change over the last five years?

Five years ago, there were fewer colleges and universities offering fully online degree programs. With more offerings, students are much more selective about degree relevance, course availability, tuition price, quality of the course content, and student service. With prospective and current students seeking these features, I believe it ratchets up the quality

offerings of online programs and provides us a much better platform to compete against traditional face-to-face programs.

3 How do you know that what you have done at APUS has improved student success?

Quality is still a subjective measurement in higher education. A mentor of mine said that we should measure how far our students have progressed during their time at our institution. Using that rubric, I would state that the number of students who have received recognition at work for their learning, who have been admitted to prestigious fellowships and graduate programs at other institutions, and who are satisfied with the education at either American Military University or American Public University has increased substantially. Additionally, our faculty and staff have been recognized nationally by organizations such as NILOA (National Institute for Learning Outcomes Assessment) and the OLC (Online Learning Consortium, formerly the Sloan Consortium) for initiatives that have enhanced student learning and student engagement and which we have shared with the broader higher education community. As the quality of our teaching and student engagement increases, it's not a surprise that the student outcomes improve.

Assessing the Degree of Homogenous Online Teaching Textbook Infancy from 1999 to 2007 Using the Immediacy Principle

By Erik Bean, University of Phoenix and American Public University System

ABSTRACT

Since the 1920s, textbook critics have maintained that textbooks should offer a homogenous editorial approach, including an acknowledgment of a mix of author opinion and scholarly research. Several researchers indicated that some textbooks are not homogenous. The purpose of this quantitative content analysis study was to examine whether independently authored online education textbooks published in the infancy of online teaching development from 1999 to 2007 included acknowledgment of scholarly studies pertaining to a teaching technique dubbed immediacy. In consideration of the growing field of online education and its efficacy, a secondary purpose of the study was to examine the effective transformation of scholarly knowledge to practice. For this study, teacher immediacy in the online classroom was operationalized as non-verbal teacher communications that foster psychological closeness and acknowledge student feelings in a timely manner. This study examined terminology related to immediacy in the first four chapters and chapter titles. The results indicated the early online textbooks did not prominently acknowledge immediacy terminology and did not include peer-reviewed scholarly immediacy references. Compared to terminology related to general student collaboration, the textbooks did not convey significant terminology related to student feelings or closeness, thus the textbooks did not offer a homogeneous approach regarding immediacy scholarship. In addition, in this instance, the books were idiosyncratic in communicating scholarly immediacy knowledge to the field.

INTRODUCTION

Numerous studies have illustrated that scholarly research has an important role in the creation of effective and credible textbooks in many fields (Alred, 2006; Bleiklie & Powell, 2005; Griggs, Proctor, & Cook, 2004; Laidlaw, Harden, Robertson, & Hesketh, 2003; Lewis, 2006; Withrow et al., 2004). Researchers examined business education, knowledge creation in general, psychology education, marketing, medical education, and criminal justice respectively, to determine whether textbooks included acknowledgment of published scholarly research and in some studies, scholarly terminology. Findings indicated scholarly journal references were limited (Alred, 2006; Griggs & Marek, 2001; Griggs et al., 2004).

For example, after examining a stratified sample of 15 introductory psychology textbooks published from 1999 to 2002, Griggs, Proctor and Cook (2004) discovered that no journal articles were cited. According to Griggs et al. (2004), “The texts do not even use common vocabulary (e.g. Zechmeister & Zeckmeister, 2000), much less cite the same articles and books” (p. 115). The studies suggested an imbalanced blend of the author’s voice with text supported by research and little commonality among chapter terminology and the order of discussion topics.

One way to approach testing whether or not a textbook cites scholarly references and germane terminology is to track specific well-documented, peer-reviewed scholarly studies. No studies have been found to have examined journal article reference count and terminology usage in textbooks related to the infancy of online education. Compelling scholarly evidence, for example, indicates the best practice of teacher immediacy can lead to more satisfied online students and higher attendance (Arbaugh, 2001; Rocca, 2004). Therefore, germane scholarly immediacy terminology is worthy of such a test.

In the early 1970s, Mehrabian, a scholar at the University of California, popularized the immediacy principle. Regarding the immediacy principle, Mehrabian (2007) said, “The association of immediacy with liking, preference, and generally good feelings on the one hand and the association with non-immediacy with dislike, discomfort, and other unpleasant feelings lead to numerous applications” (p. 109). Teacher immediacy in the online classroom has been operationalized for this study as non-verbal teacher communications that foster psychological closeness and acknowledge student feelings in a timely manner (Dupin-Bryant, 2004; Easton & Katt, 2005; Mehrabian, 1971; 2007).

Researchers have scrutinized the practice of online teacher since its infancy (Brown, 2006; Day, Smith, & Muma, 2006; Lao, 2002; Moskal, Dziuban, Upchurch, Hartman, & Truman, 2006). Online classrooms in which teacher immediacy is practiced illustrate higher student retention and a more satisfying student experience (Arbaugh, 2001; Dahl, 2004;

Dupin-Bryant, 2004; Rocca, 2004). Scholars continue to debate how to utilize teacher immediacy in new ways in the online teaching environment.

One theory of scholarly knowledge is to supply professions with useful information and best practices (Bleiklie & Powell, 2005). Researchers conducting scholarly studies usually generate new terminology that allows for better communication in professions. Such terminology emerges through technological or medical breakthroughs or when the language of a particular field is refined as the field changes (He, 2004).

One of the three schools of thoughts regarding the formulation of textbook content, according to Coppola, Hiltz, and Rotter (2002), is that authors with field experience often write textbooks. If this were solely the case, textbooks would contain little or no scholarly citations. However, according to DeGroot and Marshak (1978), a second school of thought indicates that scholars with little practical experience author textbooks. The latter school of thought includes a recommendation that textbook authors include information generated by academicians and by those with practical experience (Arnold, 1993).

Thus, a debate about how such textbook content is developed has contributed to the following quantitative content analysis research study. The purpose of the study, however, is to examine textbook content in the growing field of online teaching to test how scholarly immediacy studies were acknowledged. The study also will quantify the number of immediacy terms prominently found in the first four chapters of online teaching textbooks dated 1999 to 2007.

A sample of 19 popular independently authored online teaching textbooks found on the Amazon.com Internet site, was selected for the study. These books were found using the words *online* and *teaching* or *learning* in the search parameter under the *textbooks* menu tab. A popular textbook is one that lists its sales ranking as the highest on the day the textbook is searched using the selected terms in the Amazon.com search engine. See Population under chapter 3 for a complete definition of the textbooks.

Prominent teacher immediacy studies, those that were peer-reviewed and included *immediacy* in the title or in an abstract, were examined to determine how frequently the online education textbooks include citations of scholarly research. Finally, definitions of online teacher immediacy were divided into two groups, broad and minor to count scholarly citations and terminology related to immediacy in the textbooks. The terminology scale included a selection of 23 terms.

The broad group included 17 words that operationalize teacher behaviors ranging from *feelings*, *closeness* and *proximity* that Mehrabian (1971; 2007) tied to immediacy as

well as Jones and Wirtz (2006) terminology equating *emotions* tied to immediacy to terms that operationalize student behavior such as *collaboration*, *engagement*, and *interaction*. Minor terms are those associated with the instructor's timely student feedback.

BACKGROUND

Online education is a relatively new field when compared to psychology education. According to Griggs, Proctor, and Cook (2004) psychology education has more than 100 years of peer reviewed scholarly studies available for textbook content. Their sample of psychology education textbooks had a broad range encompassing thousands of scholarly studies that could have been included in their chapters. However, the field of online education dates back to the early 1990s (Lao, 2002).

The sample online teaching textbooks used in this study covered asynchronous and synchronous education practices which have “not been found to be arguably effective and many higher education institutions are struggling how to best implement it [online education]” (Lao, 2002, p. 12). As online education evolves, further research into the effectiveness of online education is needed (Brown, 2006; Day et al., 2006; Moskal et al., 2006). Although the field of online higher education is expanding, the pool of peer-reviewed bibliographic citations is smaller than research available in established fields, such as psychology education.

As noted earlier, Griggs et al. (2004) noted 37,590 bibliographical entries upon examining textbooks from 1985 to 1989. However, not one bibliographical entry was attributed to a scholarly psychology study. In consideration of the vast numbers of psychology scholarly journal citations, the finding was contradictory.

Because asynchronous and synchronous online classes have only been available more widely since the mid-1990s according to Lao (2002), a large number of bibliographical entries would not be expected among the 19 online education textbooks used in the following study. For example, a cursory overview of two online teaching textbooks, *Discussion-Based Online Teaching To Enhance Student Learning* by Bender (2003) and *Collaborating Online Learning Together in Community* by Palloff and Pratt (2005), revealed that the former textbook yielded 94 bibliographical entries, and the latter contained only 41 entries. However, the focus of this study is to inquire if those scholarly journal references are related to teacher immediacy and specifically, how many terms related to immediacy are noted in these textbooks.

Three schools of thought illustrate who authors textbooks and how. DeGroot and Marshak (1978), representing the first school, claimed “textbooks are written, for the most

part, by academicians without too much practical experience and are frequently based on rehashes of other texts before them by like professors” (p. 17). Coppola et al. (2002), from the second school of thought, explained, “Instructors tend to get their training on the job” (p. 186). Hence, Coppola et al. may agree that seasoned online faculty with practical experience should write textbooks. The third school of thought on textbook development, as noted by Baker (1986), includes describing “the textbook, its authorship, and its evaluation as combining the structural aspects of teaching, research, and publication” (as cited in Arnold, 1993, p. 42).

Problem Statement

The descriptive, quantitative content analysis study included an examination of immediacy terminology and immediacy scholarly references in sets of popular 1999 to 2007 online education textbooks. Online education scholars have identified the term *immediacy*, which has been operationalized for this study as non-verbal teacher communications that foster according to Mehrabian (1971; 2007) psychological closeness and acknowledge student feelings in a timely manner (Easton, 2003; Freitas & Myers, 1998; Teven & Hanson, 2004). Use of teacher immediacy in online classrooms can yield higher student retention and satisfaction (Arbaugh, 2001; Dahl, 2004; Rocca, 2004).

Several studies have noted textbooks do not necessarily reflect homogeneous content taking into consideration a mix of scholarly citations and some textbooks do not use common terminology when describing theoretical principles and best practices (Alred, 2006; Bleiklie & Powell, 2005; Griggs, Proctor, & Cook, 2004; Laidlaw, Harden, Robertson, & Hesketh, 2003; Lewis, 2006; Withrow et al., 2004). If educational textbooks do not include consistent terminology and scholarly studies, instructors are only able to read a limited number of best practices (Griggs et al., 2004). Griggs et al. (2004) conducted benchmark research to test how terminology found in scholarly studies is conveyed to the psychology education practice via textbooks. Based on an introductory psychology textbook sample, Griggs et al. determined that textbooks were idiosyncratic, meaning textbooks acknowledged few scholarly journal studies, or scholarly nomenclature.

Collegiate research has contributed to the knowledge base of many professions since academies opened their doors (Bleiklie & Powell, 2005). Researchers operationalize, test, and publish scholarly intuition. Collegiate research often yields new terminology (He, 2004). Nomenclature is the language practitioners use to document theories and paradigms.

Online scholars recommended continued collegiate research that demonstrates the effectiveness of online education in order to validate the quality of education (Brown, 2006; Day et al., 2006; Lao, 2002; Moskal et al., 2006; O’Dwyer, Carey, & Kleiman, 2007). One

method of determining how well scholarly findings are used to inform any practice is to recognize knowledge transformation from the academy to the practice (Bleiklie & Powell, 2005). The primary problem is the degree to which online education textbooks offer idiosyncratic or homogeneous immediacy content and a secondary problem is the efficacy of validating online education, which the textbooks can perpetuate in content.

Griggs et al. (2004) maintained that introductory psychology textbooks “are not at all homogeneous except for the global dimensions of chapter topics and order” (p. 115). Chapter topics were similar but had no commonality of words expressing the same topic. According to Griggs et al., homogeneous is a term that refers to not only the number of citations in a textbook but also whether the textbook includes similar nomenclature found in scholarly studies.

Griggs et al. (2004) maintained, “Teachers should be aware of this non-homogeneity in introductory texts” (p. 115). If teacher immediacy is homogeneous among the popular texts, judged by nomenclature found in chapter headings and paragraphs containing immediacy terminology, facilitators can include online textbooks in higher educational training materials more confidently. The findings of the study may help to ensure that future online instructors follow the best practices proven to promote student retention, such as immediacy (Arbaugh, 2001; Dahl, 2004; Rocca, 2004).

Textbook authors, according to Kurtz et al. (2002), are leaders in their fields. Alred (2006), however, believed that many textbook authors oversimplify scholarly concepts to the point that they do not convey the original meaning properly. The results of the study to follow provide higher education textbook authors and editorial leadership a better understanding of whether textbooks are idiosyncratic, meaning the editorial content contains few citations, or homogeneous, meaning the content contains many citations. The study is significant to the field of educational leadership because authors, editors, and publishers can learn how to reflect on the quality, credibility, and value of their work.

THEORETICAL FRAMEWORK

The study involved knowledge creation theory, transfer, and usage in practice (Bleiklie & Powell, 2005; He, 2004) and textbook and curriculum development theory (Alred, 2006; Arnold, 1993; Coppola et al., 2002; Kurtz et al., 2002; Laidlaw et al., 2003; Lewis, Schmisser, Stephens, & Weir, 2006; Marshak & DeGroot, 1978; Withrow, Weible, & Bonnett, 2004). In addition, the study involved online teacher immediacy best practice theory (Easton, 2003; Freitas & Myers, 1998). As discussed, Rocca (2004) indicated a correlation between teacher immediacy and higher college student attendance as discussed earlier. Arbaugh (2001) has shown immediacy can lead to more satisfied students.

Researchers have affirmed teacher immediacy effectiveness in online classrooms (Arbaugh, 2001; Conaway, Easton, & Schmidt, 2005; Dahl, 2004). When operationalized for this study in terms of the online classroom teacher, immediacy includes two categories: instructor-initiated personalized communications that are particularly considerate of student feelings and build psychological closeness and instructor timely online responses. In a general application of immediacy, Mehrabian (2007) said, “Immediacy or closeness in an interaction between two persons (or between an individual and an object) involves greater physical proximity and/or increasing perceptual availability of two persons (or an object to a person)” (p. 180). Thus, words like *closeness*, *feelings*, and *proximity*, can be viewed as scholarly terms that best operationalize immediacy.

Terms such as *emotions* or *emotional* cues according to Jones and Wirtz (2006) are also related to immediacy. “Two such message features, verbal person centeredness (PC) and nonverbal immediacy (NI), have consistently been found to be particularly beneficial in bringing about emotional change” (p. 217).

Griggs et al. (2004) conducted research to investigate whether instruction in introductory psychology communicated the advice of the scholarly community. By examining and applying the results of the Griggs et al. research to the practice of online education, the study included establishing a benchmark for the frequency of teacher immediacy citation. Griggs et al. noted, “It is not unreasonable for teachers to expect that introductory texts would present the basic common core concepts of psychology as well as cite a common set of classic studies and books” (p. 115). The focus of the study to follow did not include immediacy in introductory psychology. Instead, the focus included immediacy terminology usage in online education textbooks, the extent to which the textbooks cite scholarly studies, and whether consistency exists in nomenclature choice for chapter headings.

Underlying the degree to which textbooks include acknowledgment of the scholarly community is a debate about the authors of the textbooks: Marshak and DeGroot (1978) argued that people with practical experience in the field do not necessarily write textbooks. Coppola et al. (2002) contended that online instructors learn by doing. Moore (1993) observed that “instruction is no longer an individual’s work, but the work of teams of specialists—media specialists, knowledge specialists, instruction design specialists and learning specialists” (as cited in Laidlaw et al., 2003, p. 182).

Based on the compendium by Griggs et al. (2004), an absence of teacher immediacy discussion or an absence of scholarly references pertinent to immediacy in the online educational textbooks would indicate that the books are idiosyncratic, but only in

comparison to the best practice of immediacy. Stakeholders such as school administrators, students, and faculty may benefit from the study because the results indicated the extent to which textbooks communicated immediacy as a best practice identified by scholars. Online educational textbook audiences would want to know the effectiveness of teacher immediacy and how to employ immediacy in discourse exchanges with students.

If the presence of immediacy scholarly studies was low, the textbooks were idiosyncratic. If, however, the authors adequately cited immediacy scholars, textbooks were homogeneous. The degree to which textbooks included prominent immediacy terminology and mimicked one another in terms of immediacy terminology chapter placement shows whether such online education textbooks have commonalities that as instructional texts Griggs et al. (2004) say should be consistent for training purposes.

Griggs et al. (2004) provided a method to determine whether textbooks are idiosyncratic or homogeneous. The fewer peer-reviewed scholarly studies cited in a textbook, the more idiosyncratic the textbook. In a 2001 content analysis, Griggs and Marek discovered that 27,590 individual bibliographical entries appeared among 24 textbooks published between 1985 and 1989. However, all the texts included a citation of only one peer-reviewed journal article (as cited in Griggs et al., 2004).

Griggs et al. (2004) concluded that introductory psychology textbooks did not adequately include citations of scholarly studies. Thus, the textbooks were idiosyncratic. Because several introductory psychology textbooks were idiosyncratic, Griggs et al. maintained that instructors who rely on such texts for classroom instruction had little consistency in terms of planning classroom lessons. As noted earlier, Griggs et al. elaborated, “The texts do not even use a common core vocabulary (e.g. Zechmeister & Zechmeister, 2000), much less cite the same articles and books” (p. 115). Griggs et al. concluded that the discipline of psychology education lacked a common scholarly base as well as nomenclature.

The study of independently authored higher education textbooks included replicating portions of the Griggs et al. (2004) study. The approach of Griggs et al. was employed to assess textbooks by counting citations and references associated with scholarly peer-reviewed studies. Instead of examining introductory psychology textbooks, the study involved testing the research design of Griggs et al. using online education textbooks designed to train instructors on how to engage students.

Griggs et al. (2004) concluded that textbooks are not homogeneous in terminology and conveyance of scholarly knowledge of basic psychological principles. According to Cabré, “Four stages of modern terminology are identified: the origin, the structuring, the

boom and the expansion” (as cited in He, 2004, p. 86). The study did not involve analysis of the stages. The stages affirm that terms are created and used to a higher or lesser degree. The online education textbooks represent a vehicle of communication that can disseminate immediacy best practice knowledge through common immediacy terminology.

Definition of Terms

The study involved teacher immediacy terminology. A terminology scale and the Coding Book of Definitions included definitions of the terms. The term immediacy relates to teacher behaviors, not student behaviors, and from its roots in 1971, immediacy itself was defined as the psychological closeness a communicator (sender) conveys between him- or herself and the recipient of the message (Mehrabian, 1971; 2007). The study included a focus on instructor-to-learner immediacy and involved a content analysis of the prominence of online teacher immediacy terminology conveyed in popular, independently authored online teaching textbooks.

The bulk of teacher immediacy research entailed verbal (Carrell & Menzel, 2001; Swan & Richardson, 2003) and nonverbal (Freitas & Myers, 1998; Rocca, 2004) instructor behaviors. While some forms of online instruction can allow for verbal exchanges, most communication in the online asynchronous and synchronous classrooms is non-verbal dependent on written postings and exchanges.

However, body language has little influence in the asynchronous and synchronous classes offered by many colleges and universities because students do not see the instructor. Consequently, for nonverbal teacher immediacy, assessing online body language is not easy; rather, written transactions between instructor and student are the primary focus. Conaway et al. (2005) claimed, “Strategies for increasing immediacy online include writing in a conversational tone, using students’ names in the postings, and including personal notes in the group feedback” (p. 32).

Building a successful social learning rapport in the online distance learning (ODL) environment between instructor and student is an on-going process in the online classroom. The timeliness and frequency of written communications typically determine teacher immediacy. Even more important is the degree to which communications foster student psychological comfort. Easton and Katt (2005) stated, “Several factors such as teacher immediacy, interaction, and psychological comfort have been identified as influencing collaborative learning” (p. 179).

To ensure that teacher immediacy in the online classroom can radiate from written communications, “instructors need to be aware of the impact that their immediacy behaviors

and social presence or lack thereof may have on their students' satisfaction, motivation, and learning" (Swan & Richardson, 2003, p. 81). Thus, how an instructor personalizes communications to a student ties to student satisfaction and as Rocca (2004) noted, increased student attendance. The definition of online teacher immediacy includes two distinct categories: The first category concerns personalized student responses, and the second category concerns the timeliness of responses. Before online classes existed, in a formidable definition, Duran and Zakahi (1987) claimed that being *personable*—attentive, friendly, open, relaxed—and lively comprised immediacy.

Two delineated formats observed within the popular textbooks served as the definition of teacher immediacy. The first format, *broad emphasis*, indicates the need for instructors to acknowledge personally or reinforce the feelings and emotions of the online students through communications such as email, message board postings, or assignment feedback. The second format, *minor emphasis*, references timely instructor responses.

The Coding Book of Definitions included two categories of immediacy terminology, broad and minor and a display of these terms as list can be found in the Immediacy Terminology and Reference/Citation Coding Sheets. Broad terms relate to *feelings* and *closeness*. Teacher immediacy in the online classroom has been operationalized for the study as non-verbal teacher communications that foster psychological closeness and acknowledge student feelings and emotions in a timely response. Minor terms relate to timely instructor responses, such as *quick*, *fast*, and *speedy*.

Assumptions

The first assumption was that the word *immediacy* would not likely appear in the textbooks. Instead of the word *immediacy*, its operational terms, such as *feelings* and *closeness*, as defined in the Coding Book of Definitions (see Appendix B), may be acknowledged based on happenstance related to the level of online teaching experience each independent author held as an instructor. The second assumption was that the term *immediacy* may not be so readily on the mind of the independent author who had earnestly searched scholarly research databases but who only applied familiar terms, such as *collaboration*, *interaction*, and *engagement*, within such searches. Appendix A represents prominent immediacy studies those with the word *immediacy* in the title or abstract.

The scholarly field of research applied to teacher immediacy in the online classroom was less than one decade old. Conversely, Griggs et al. (2004) had more than 100 years of scholarly citations and references available to study the introductory psychology textbooks. Immediacy has been well documented in scholarly journals for approximately two decades for all modalities of classroom instruction (see Appendix A) for a complete list of prominent

immediacy studies. However, while prominent studies, those with *online* and *immediacy* in the title or an having an abstract regarding online immediacy are becoming popular, far fewer of them have been published in the last 5 years than on-ground classroom immediacy studies (Conaway et al., 2005; Dupin-Bryant, 2004; Waldeck, Kearney, & Plax, 2001).

Researchers have studied online immediacy during the early online efficacy years of 1999 to 2007 in the online asynchronous and synchronous. Few scholarly studies emerged from exhaustive searches through the InfoTrac database, and the Google and Yahoo! search engines. Almost exclusively, peer-reviewed information on the topic of immediacy was gathered. Information regarding online immediacy was available through EBSCOhost (Elton B. Stephens Company), ProQuest Dissertations, and ERIC databases. Only peer-reviewed scholarly journals containing full texts were included in the study.

Limitations

Because no other definition of online teacher immediacy was available, limitations existed due to the unique operational definition of online teacher immediacy created and used throughout this study. Capturing words other than the term *immediacy* served to determine whether the online education textbooks had discussed the scholarly concept of immediacy even if prominent scholarly references were not identified in text or in the reference section of the textbooks. In addition, training coders to recognize when the term immediacy was relative to its typical dictionary definition opposed to the scholarly based operational definition developed for the study presented a challenge. The limitation here added to additional coder training time and because too few instances of the term immediacy would be found, there were no portions of the textbooks available to test the coders' ability to find either the dictionary or a scholarly-based operational definition.

The prominent scholarly immediacy references also presented a limitation. Prominent immediacy studies were defined with the word *immediacy* in the title or in the abstract. Consequently, not all available immediacy studies were used to compare whether they were included in the reference section of the online education textbooks. The rationale for only limiting the definition of prominent immediacy studies to those using immediacy in the title or abstract had to do with the concept of immediacy itself. A belief that the relatively unknown immediacy concept would be more likely discovered in searches of scholarly studies that more prominently touted the term, guided the study.

The sample size of 19 independently authored online teaching textbooks was small based upon how Amazon.com retrieves the books and due to the relatively new field of online education. If the sample were somehow stratified, it would have been even smaller based on how the Amazon.com popularity rating and keyword search terms retrieved the

available books. Thus, this small sample size limits the generalizable findings to other textbooks. The results of the study may be generalizable to the educational publication community.

Delimitations

The textbooks for the study were not available in a portable document format (PDF). However, if each of the 19 textbooks were available electronically, the accuracy in counting among coders would not necessarily increase. Accuracy is limited even with an electronic sample that affects what coders can and cannot count in the textbooks. In the study, coders did not count bullet points, direct quotes, and sidebar stories because these did not constitute the definition of a paragraph.

REVIEW OF THE LITERATURE

A review of the literature indicated the breadth of teacher immediacy behaviors traditionally defining this best practice as a communication technique. Therefore, a review of on-ground classroom immediacy usage and online immediacy usage was conducted. What makes teacher immediacy such an important part of online education is what has made immediacy so useful in on-ground classrooms: student satisfaction and retention (Arbaugh, 2001; Duran & Zakahi, 1987; Easton, 2003; Freitas & Myers, 1998; Rocca, 2004).

Teacher immediacy is an example of scholarly knowledge creation. According to Bleiklie and Powell (2005), universities create knowledge later used in the practice. Scholarly research illustrates a strong representation of immediacy, and the word *immediacy* appeared in scholarly texts more than 30 years ago (Mehrabian, 1971). Immediacy includes a division between the behaviors that the teacher or student elicits.

Title Searches

The search for pertinent information related to immediacy included sources such as ProQuest, InfoTrac, Digital Dissertations, and Educational Resource Information Center (ERIC) databases. In addition, searches on the Internet included using the search engines Google and Yahoo! and *The Chronicle of Higher Education* website. However, the most germane peer-reviewed scholarly studies related to immediacy appeared in the EBSCOhost (Elton B. Stephens Company) scholarly database. Only peer-reviewed scholarly journals with full texts available were used in the search process.

A call for homogeneous textbooks that combine independent authorship with peer-reviewed journal research was announced as early as the late 1920s (Kulp, 1927).

Three schools of thoughts highlight how editorial content in textbooks are shaped. DeGroot and Mashak (1978) maintain textbooks are written by academics with little practical experience. Coppola et al. (2002) argue that teachers with classroom field experience write education textbooks. Others like Arnold (1993) state that textbooks should be a collaboration of those with teaching, research, and publishing experience.

Mehrabian (1971) tied immediacy to psychological closeness between the communication sender and receiver. Throughout the next three decades, the efficacy of immediacy would be analyzed in on-ground classrooms, distance learning classes, and online classrooms. Immediacy was differentiated from other online classroom terms such as *collaboration*, *interaction*, and *engagement* that might otherwise be related to behaviors cultivated from both teacher and student. Yorks (2005) said the academy should take onus for transferring knowledge to industry and the field. According to Bleiklie and Powell (2005) scholars sometimes create new terminology for use in the practice. Terminology is the language a field uses to document theories and paradigms (He, 2004). Immediacy is a term created by scholars and it is unknown how immediacy is being communicated to the practice of teacher education outside of the academy.

A review of higher education textbook publishing illustrated that some textbooks reflect independent authorship, known as idiosyncratic, and other textbooks incorporate a more homogeneous approach combining scholarly knowledge and a variety of opinions. Griggs et al. (2004) maintained that curriculum development should be tied to textbook development and that authors should strive to agree on topics, terminology, and presentation order based on chapter headings. In the Griggs et al. study, higher education introductory psychology textbooks lacked sufficient scholarly citations, and the chapter headings and nomenclature appeared to be more idiosyncratic than homogeneous. Withrow et al. (2004) observed uniformity among criminal justice introductory texts based on inclusion of relatively even numbers of scholarly studies.

The educational scholarly community documented teacher immediacy throughout the 1970s, 1980s, and 1990s (Rocca, 2004). Later, researchers demonstrated how to deploy teacher immediacy in the online classroom regardless of an asynchronous or synchronous modality (Easton & Katt, 2005).

RESEARCH METHOD

The primary purpose of the study was to document how prominently and frequently popular mass-marketed online teaching textbooks include acknowledgment of an important

teaching approach, immediacy, and how often these textbooks include acknowledgment of prominent scholarly studies about immediacy. DeGroot and Marshak (1978) maintained that academics with little significant first-hand experience write textbooks. Coppola et al. (2002) argued that instructors who do author textbooks do have much experience, and, finally, Arnold (1993) asserted that textbooks should be a collaboration between teaching, researching, and publishing efforts.

Regardless of the author's level of experience, many scholars agree that textbooks should comprise a homogenous scholarly mix rather than reflect only the author's voice (Alred, 2006; Kulp, 1927; Laidlaw et al., 2003; Lewis et al., 2006). The homogenous approach of the textbooks was determined by examining whether the independently authored online educational textbooks included acknowledgment of the best practice of immediacy as documented by the scholars.

A secondary purpose of the study was to examine the transformation of knowledge to practice. Availability of online degree programs continues to increase. According to Kyle (2005), "The 2003 MBAInfo database indicated that 208 institutions worldwide offer MBA programs online or through distance learning. As of October 2003, USNews.com (2003) was listing 246 online graduate degree programs, up from 48 in 2001" (p. 241). However, academicians, such as Moskal, Dziuban, Upchurch, Hartman, & Truman (2006), question online education as an effective learning tool. Researchers such as these recommend that studies continue to address instructor interest in effective online teaching.

The academy exists to transfer knowledge to the practice (Bleiklie & Powell, 2005). Presence of scholarly immediacy terminology in online education textbooks indicates knowledge has been transferred. Secondly, if the practice of online education implements best practices responsibly, the practice has an opportunity to prove growth in attendance that is not simply due to convenience of the online modality. Academicians have demonstrated online immediacy is a best practice that leads to student satisfaction and retention (Arbaugh, 2001; Dahl, 2004; Rocca, 2004).

An analysis of the sample psychology texts revealed a peculiar idiosyncratic view between the terminology and scholarly references in the textbooks (Griggs et al., 2004). The online education textbook study involved using a similar method of counting terms. The study of online education textbooks involved applying the quantitative content analysis methodology to independently authored online teaching textbooks instead of introductory psychology textbooks as in Griggs et al.

Griggs et al. (2004) examined introductory psychology textbooks copyrighted from 1999 to 2002 in the context of a content analysis. Griggs et al. discovered that textbooks

were not homogeneous with regard to their reference citations and chapter headings. The order in which authors presented classic scholarly psychology topics and the terminology identified in published journal studies revealed no consistency among the textbooks. Finally, Griggs et al. noted that an inconsistency existed in the number of scholarly studies cited and the authors of the scholarly studies.

Because the study was a partial retest of the Griggs et al. (2004) benchmark research, the study included the content analysis format. A content analysis provides a superior quantifiable data investigative approach compared to a qualitative study. A quantitative study, such as the content analysis, allows variables to be measured to determine whether the hypothesis can be generalized (Creswell, Clark, Gutmann, & Hanson, 2003).

Terminology Scale

A terminology scale was created that incorporated two categories, broad and minor for the purposes of researching immediacy-related terms in the textbooks. Broad terms relate to immediacy in its simplest term. For example, Mehrabian (1971) indicated immediacy as the psychological closeness experienced between sender and receiver. Thus, *closeness* was selected as one of the broad immediacy terms, whereby minor terms related to timely online instructor replies, such as *quick*, *fast*, and *speedy*.

Although the study involved tracking the more important broad definition of immediacy, tracking the minor counterpart was advantageous. The intent was to determine whether textbook paragraphs contained immediacy terminology in its most simplistic purpose as operationally defined. In the case of broad immediacy, terms such as *feelings* and *closeness* represented immediacy in its most simplistic form. The minor delineated terms included *timely*, *quick*, and *fast*.

In several cases, synonyms of the words (see Appendix B) represented terms related to immediacy. However, the more such terms departed from *feelings* and *emotions*, the more likely the terms were not included in the scale; for example, Textbook 2 contained the term *psychological*, which was eliminated from the scale. While the term may relate to the social and emotional well-being of the student, the term *closeness* was selected as it represented the outcome immediacy was intended in its most simplistic form. The term *think* did not function as a synonym for *thought* because thinking is an activity that occurs constantly and was too broad to appear in the category with *feelings* and *emotions*. Textbook 16 included the word *moderating*, which was not included in the scale.

The term *participation* emerged in several textbooks, including Textbook 19. *Participation* was judged a generic term, like *moderating*, related to *interaction* or

collaboration, a low-broad immediacy term. Finally, *speedy* or *rapidly*, as defined in Thesaurus (2007), were combined because not only were *speedy* and *rapidly* synonyms of each other, but any term numbered from 18 to 23 was classified as a minor immediacy term (terms not as important to the outcome of the study). Appendix B includes a complete list of terminology used.

Research Questions

The following research questions guided the quantitative research study:

1. Does the complete textbook sample offer a homogeneous or idiosyncratic approach to the usage of immediacy based on the number of scholarly immediacy citations referenced?
2. How many instances of the word *immediacy* appear in each of the online teaching textbooks, and which broad or minor immediacy terms are featured most prominently in the first four chapters?
3. How prominent is teacher immediacy terminology in chapter titles?

Research Hypothesis

The following null and alternate hypotheses guided the study:

H_0 1: No difference exists between the two sets of textbooks in the number of references and citations devoted to teacher immediacy regardless of the publication timeframe.

H_1 1: The more recent set of textbooks contains a larger number of scholarly studies related to teacher immediacy due to the publication of more prominent scholarly immediacy studies between 2003 and 2007.

Instrument Rationale

The independent variable for the study was the publication dates of the textbooks. In the study, the publication dates formed two categories: 1999 to 2002 and 2003 to 2007. The primary hypothesis indicated that the older set of textbooks would contain less discussion and terminology associated with immediacy because more online immediacy scholarly studies were published in the later period, corresponding to the newer set of textbooks. However, the earlier date set sample contained an extra textbook. The more recent the publication, the more likely online immediacy terminology would be included (see Appendix A for a list of peer-reviewed prominent immediacy scholarly studies).

The quantitative study included the content analysis instrument to examine the two sets of online textbooks available from the most popular online bookseller, Amazon.com. The study involved comparing one set of 10 of the most popular textbooks published from 1999 to 2002, when online education was struggling for legitimacy (Lao, 2002) to a more modern set. The modern set contained 9 of the most popular online educational textbooks published from 2003 to 2007, a period in which the efficacy of online education continued (Brown, 2006; Day et al., 2006; Moskal et al., 2006). The sets did not include an equal number of textbooks because each set represented all the available most popular, independently authored online teaching textbooks based on search term criteria discussed earlier.

The textbooks were only available as traditional perfect-bound or softcover textbooks. The study involved searching each textbook for key words, such as *immediacy*, within the table of contents, text, and reference pages and tracking paragraph counts related to broad and minor operational definitions of immediacy. Percentage of total paragraphs within the chapters served as comparative data. Trained coders scanned the reference pages for scholarly immediacy authors.

Population

The population was drawn from the largest mass-marketed bookstore online, Amazon.com. According to Creswell et al. (2003), the term *population* refers to individuals or objects that share common characteristics. The first step of deriving the population included selecting the Amazon.com website menu tab entitled *textbooks*. *Mass-marketed textbook* referred to any length manuscript for sale, other than an article, in *softcover*, also known as *perfect-bound*, or *hardcover* available to the public from online booksellers under a specific portion of such websites labeled *textbooks*.

The search included only textbooks from the *college textbook* category tab and only the most popular, independently authored hardcover or softcover texts using the terms *engaging*, *online*, *students* or *teaching*, *online*, *students*. Initially, the search included the above terms paired with *immediacy*, but the search did not yield any textbooks. Thus, the dearth prompted more obvious and popular terms, such as *collaboration*, *interaction*, and *engaging*. Chevalier and Mayzlin (2006) explained Amazon.com's ranking system as follows:

Chevalier and Goolsbee (2003a) reported that Amazon.com claims that for books in the top 10,000 ranks, the rankings are based on the last 24 hours and are updated hourly. For books ranked 10,001–100,000, the ranks are updated once a day. For books ranked greater than 100,000, the sales ranks are updated once a month (Amazon.com 2000). (p. 346)

Sales ranking affected which books were available for retrieval, the keyword search determines, on the particular day, the search outcome. The Amazon.com search engine provided the most popular books for the key words in the search, typically returning three pages of results, detailing 48 textbooks. However, not all of the textbooks contained *online* or *distance learning* in the titles, not all were independently authored, and not all achieved the highest rankings, which led to their subsequent removal.

If a title did not include other words, such as *collaborating*, *interacting*, *engaging*, *teaching*, *learning*, *instruction*, *learners*, or *facilitation*, the textbook was removed from the population. Moreover, in cases where *learning* appeared in a title, but the title further indicated that the textbook addressed only *assessment* or *evaluation* of online students, such titles were removed. Books arranged as compilations of multiple papers or multiple authors were excluded because the books were not independently authored. Finally, where a similarly authored textbook appeared as another edition, only the latest edition was included, and duplications of textbooks found on Amazon.com were removed. The goal was to make both sample sets equivalent in number. However, based on popularity, the older sample yielded more qualified texts. Selection of the Amazon.com textbook sample occurred during the summer of 2006. After the proposal was accepted in April 2007, the textbooks were purchased from Amazon.com or obtained through interlibrary loans.

While every effort was made to ensure that the textbooks reflected independent authors, 3 textbooks were later found to be edited compilations of authors, not independent authorship. These textbooks could not form part of the study. To maintain as large a sample size as possible, based on sample criteria, either the next most popular book from a 2007 Amazon.com search was acquired, or, in one case, a textbook from 2007 was used because it met the criteria and was the first to appear in relation to the search string.

During the data-gathering stage, three of the textbooks were found to be compilations of multiple authors written by a single editor. These books were disqualified from the sample. In order to broaden the sample to the largest size possible, the decision to replace these textbooks with the next most popular independently authored textbooks was constructed from an Amazon.com search in May 2007 using the search term criteria discussed earlier. The first most popular 2007 textbook meeting the selection criteria resulted in the sample including texts published between 1999 and 2007.

Table 1 illustrates a complete listing of the final sample of textbooks compiled under the 1999 to 2002 set and the more recent 2003 to 2007 set.

Table 1 *Final Text Book Sample Selected*

Popular textbooks 2003 to 2007	Popular textbooks 1999 to 2002
1. <i>How to Teach Online (and Make \$100,000 a Year)</i> by Brown (2007)	10. <i>Teaching & Learning Online</i> by Morris (2002)
2. <i>Student Engagement in Campus-Based and Online Education: University Connections</i> by Coates (2006)	11. <i>E-Activities: The Key to Online Teaching, Training and Learning</i> by Salmon (2002)
3. <i>Learning in Real Time: Synchronous Teaching and Learning Online</i> by Finkelstein (2006)	12. <i>Teaching Online</i> by Draves (2002)
4. <i>500 Tips for Open and Online Learning</i> by Race (2005)	13. <i>Supporting Students in Online, Open and Distance Learning</i> by Simpson (2002)
5. <i>75 E-Learning Activities: Making Online Learning Interactive</i> by Watkins (2005)	14. <i>E-Moderating: The Virtual Student</i> by Salmon (2001)
6. <i>Collaborating Online: Learning Together in Community</i> by Palloff and Pratt (2005)	15. <i>Teaching Online: A Practical Guide</i> by Ko and Rossen (2001)
7. <i>Student Retention in Online, Open, and Distance Learning</i> by Simpson (2003)	16. <i>Facilitating Online Learning: Effective Strategies for Moderators</i> by Collison, Elbaum, Haavind, and Tinker (2000)
8. <i>The Virtual Student: A Profile & Guide to Working with Online Learners</i> by Palloff and Pratt (2003)	17. <i>147 Practical Tips for Teaching Online Groups: Essentials of Web-Based Education</i> by Hanna, Glowacki-Dudka, and Conceicao-Runlee (2000)
9. <i>Discussion-Based Online Teaching to Enhance Student Learning: Theory, Practice and Assessment</i> by Bender (2003)	18. <i>Online Education: Learning and Teaching in Cyberspace</i> by Kearsley (2000)
	19. <i>Building Learning Communities in Cyberspace: Effective Strategies for the Online Classroom</i> by Palloff and Pratt (1999)

Sampling

A total of 19 independently authored textbooks were included, nine from 2003 to 2007 and 10 from 1999 through 2002. Although several other textbooks were found, they were not independently authored as discussed earlier. Based on the keyword search and Amazon.com's popular ranking method, reproducing the same sample again, may not be

possible. Therefore, all the most popular independently authored books were included. Based on this sampling approach, the only other possible means to identify the best selling online teaching textbooks would be to survey the publishers. According to Riffe, Lacy, and Fico (2005), “The value of research using a convenient sample should not be diminished” (p. 102). If the sample, such as the best selling Amazon.com population of online teaching textbooks identified, was small and the content was not homogeneous, bias may be introduced. Riffe et al. maintained that journalistic endeavors typically are not homogeneous by nature.

A cursory review of chapter arrangements was necessary after the 19 textbooks were finalized. No common pattern of terminology or the order of best practices discussed had emerged after examination of chapter headings in 4 of the textbooks. Sampling of the paragraphs was stratified by chapter. Consequently, chapter content complexity was expected to vary significantly (see Appendix H for specific paragraph counts). References from the entire sample were coded and compared to the scholarly peer-reviewed immediacy journal articles.

Griggs et al. (2004) included 24 textbooks in the study of introductory psychology textbooks but produced an in-depth study because of 100 years of psychological scholarly references available for inclusion in the texts. The practice of online education has approximately 1 decade of research from which to draw scholarly studies. Hence, the authors of the online teaching textbooks had more than 40 immediacy studies (see Appendix A) available for inclusion in the texts.

Data Collection

Raw data comprising of scholarly immediacy terminology drawn from the terminology scale discussed earlier were culled from the first four chapters of the 19 independently authored online teaching textbooks. Counting instances of prominent scholarly immediacy in-text and reference page citations were among the most important descriptive statistical variables tracked for the study. Finally, counting the instances of scholarly immediacy terminology drawn from the terminology scale in chapter titles and sub-titles also comprised the raw data.

Each coder used the perfect bound textbooks defined in the sample to gather data about immediacy. For the terminology scale, teacher immediacy terminology was divided into two categories. The first was a broad category that included a number of terms related to immediacy, such as students’ *feelings*, *closeness*, and *emotions* (Mehrabian, 1971; 2007). The second category was a minor category that included associating immediacy with timely

instructor responses. A Coding Book of Definitions was developed to define each page variable as well as all study definitions and each coder received a tabulation form.

Each of the 19 textbooks received a number, and coders gathered the data based on numerical matches relevant to an assigned numerical value for coding purposes. The data gathering technique is a common practice for content analysis. Unlike other types of statistical or quantitative studies, researchers using content analysis rely heavily on the accuracy of coding. Thus, inter-coder reliability formed an important part of the data collection process.

The data collection process commenced with each textbook receiving a number, 1 through 19. Next was the year of publication. The number 1 indicated textbooks published in 1999, and 9 indicated textbooks published in 2007, for example. In the original dissertation proposal, only texts published between 1999 and 2006 were included.

The chapter headings were used to rank the prominence of immediacy terminology discussed and determined whether the term was specifically used in the first four chapters, for example. Coders compared in-text citations to a list of scholarly immediacy citations, a set of more than 45 peer-reviewed studies since 1990 that contained the word immediacy in the title or abstract. If an author was listed in this study sample, but his or her authorship did not appear in a corresponding scholarly article title, a credit citing a scholar was issued if the first initial and last name matched.

Data Analysis

Raw data from the 19 textbooks were entered into a Microsoft Excel[®] spreadsheet starting with the textbook assigned a number based upon the year. The second column represented the corresponding code based upon the textbook publication year. Columns C through N represented the raw data for the chapter title and subtitle where immediacy terminology found. Columns O through X accounted for the number of paragraphs where both broad and minor immediacy terminology were found and the total number of paragraphs per chapter in each of the first four textbook chapters. Two grand total columns also accompanied this raw data category.

Columns Y through AU then included the instances of each of the 23 broad and minor immediacy terms found. Columns AV and AW were used to track the raw instances of prominent scholarly immediacy in-text and reference citations. Finally, column AX was used for the total general reference count per textbook.

To test significance of the hypothesis, samples were selected from two independent populations of textbooks. The samples were examined for evidence of scholarly references. Hypothesis testing was then conducted using a z-test comparing the proportions of the samples with scholarly references from each of the populations. The null hypothesis was that the proportion of scholarly references in the two textbook populations would be equal; the alternate hypothesis was that those textbooks with the more recent publication dates would have a higher proportion of textbooks with scholarly references than the earlier set of textbooks.

Hypothesis testing procedure for testing two population proportions was used to examine if the two samples came from populations with an equal proportion of success. The null and alternate hypothesis were applied as follows: H_0 : proportion 1 (textbooks published from 1999 to 2002) = proportion 2 (textbooks published from 2003 to 2007) and H_1 proportion 1 (textbooks published from 1999 to 2002) < proportion 2 (textbooks published from 2003 to 2007). The level of significance with a margin of error of 0.05 was applied. A z-test to compare two sample proportions was applied with calculations from the data collected from each of the population samples. In order for the hypothesis to be accepted, the proportion of recently published textbooks must be greater than the proportion of earlier published textbooks with scholarly references. The results were tabulated using Microsoft Excel[®] and MiniTab[®].

Journalistic Prominence

Budd (1964) conducted one of the first studies to survey a portion of the journalism profession to develop a device, the Budd Index, to measure newspaper reader attention score. Budd developed five criteria, and eight randomly selected editors rated the criteria in terms of importance. The five criteria included (a) multicolumn heads as opposed to one-column heads; (b) a story placed at the top of any page, or above the fold; (c) stories that run three-fourths of a column; (d) stories with an accompanying photograph; and (e) stories prominently published on the front page or principal department page.

Budd (1964) removed the fourth criterion because it was not as relevant as the others, and the editors selected the fifth, second, and first criteria as the most important. The measurement device was an improvement on an earlier version developed by Teh-Chi Yu in 1949 (as cited in Budd, 1964). According to Budd, “The attention score, in its present form, is thought to be well suited for use in comparisons of publications similar in physical size” (p. 260). A cursory examination of 6 of the online teacher textbooks revealed that each was relatively the same 6 x 9 size or slightly larger. Thus, the closer immediacy terminology appeared towards chapter 1 in a textbook, based on Budd’s argument, the more the terminology would be noticed.

Inter-coder Reliability

For purposes of testing the reliability of coders to cull the number of times *immediacy* appeared in a textbook, two test coders were used. Establishing inter-coder reliability included examining the accuracy of coders comparing the peer-reviewed prominent immediacy articles with those appearing in the textbook reference sections. Coders I and II examined the number of citations within the first four chapters (see Appendix A for the complete list of peer-reviewed immediacy articles).

Validity

Because the population and sample of the study did not include people, much control over the accuracy of the information was attainable by devising the Coding Book of Definitions and rewriting materials to allow coders to cull data better during the pilot test. Because the development of the coding book involved great care, external validity did not affect the outcome. Regarding internal validity, the researcher was responsible for proper measurements. Consequently, the quantitative measurements, counting of references and paragraph devoted to immediacy, were tested for inter-coder reliability.

RESULTS

Griggs et al. (2004) conducted a study using a sample of introductory psychology textbooks and found the textbooks to be idiosyncratic, yielding only one scholarly reference. To test whether textbooks in the field of online education are homogeneous or idiosyncratic, identifying a scholarly best practice approach to online education was necessary to determine whether online teaching textbooks included acknowledgment of the approach. Teacher immediacy was identified as a promising best practice.

Research studies have illustrated a correlation between online teacher immediacy and increased student satisfaction and retention (Arbaugh, 2001; Dahl, 2004; Dupin-Bryant, 2004; Rocca, 2004). For the study teacher immediacy in the online classroom has been operationalized as non-verbal teacher communications that foster psychological closeness and acknowledge student feelings and emotions in a timely response. To track online immediacy terminology, *immediacy* and words closely related to the term were arranged on a scale of 1 to 23. Number 1 indicated the term *immediacy*, and number 23 indicated the terms *speedy* and *rapidly* used interchangeably. Numbers 2 through 17 indicated terms related to immediacy, such as *closeness* and *emotions* and synonyms derived of each. Numbers 18 through 23 related to the minor immediacy definition of timely feedback initiated by the instructor.

The process involved tracking terms, such as *collaboration*, *engagement*, *interaction*, and *rapport*. Selection of words for the tracking scale involved considering how closely the words related to the operational definition of *immediacy* discussed above as opposed to general *collaboration*. However, the tracking scale included synonyms related to both *immediacy* and *collaboration*. The term *collaboration* would receive a low rating compared to *immediacy*, *feelings*, *mindset*, *emotions*, and (student) *thoughts*. The complete scale consisted of 23 words (see Appendix B).

The primary research question formulated for the study was as follows: Does the complete textbook sample offer a homogeneous or idiosyncratic approach to the usage of immediacy based on the number of scholarly immediacy citations referenced? The null and alternate hypotheses of the study appeared as follows:

H_0 1: No difference exists between the two sets of textbooks in the number of references and citations devoted to teacher immediacy regardless of the publication timeframe.

H_1 1: The more recent set of textbooks contains a larger number of scholarly studies related to teacher immediacy because of the publication of more prominent scholarly immediacy studies between 2003 and 2007.

The results of the content analysis and descriptive statistics indicated that the complete 1999 to 2007 textbook sample reflected an idiosyncratic approach to immediacy. The textbooks included no in text citations related to prominent peer-reviewed immediacy scholarly articles defined as articles that contained the word *immediacy* in the title or abstract. Similarly, no immediacy references were found.

Textbook 6 included a citation for Gunawardena and Zittle (1997). The list of prominent scholarly immediacy studies (see Appendix A), defined as studies containing the word immediacy in the title or abstract, did not include Gunawardena and Zittle. However, research conducted by Gunawardena and Zittle was cited in some reference pages of the prominent immediacy studies identified, yet this finding was outside the scope of the study. As noted in the literature review, Gunawardena and Zittle (1997) indicated immediacy is just as important to student success as other electronic classroom techniques. Appendix F contains the number of general references found.

The second research question concerned the number of paragraphs containing immediacy-related terminology: Among a set of recent (2003 to 2007) and a set of older (1999 to 2002) online education textbooks, what percentage of paragraphs in the first four chapters relates to both broad and minor teacher immediacy based on paragraph counts?

The results of the examination of the percentage of broad and minor immediacy terminology observed in the first four chapters of each of the 19 textbooks reflected that the percentage of immediacy-related terminology had increased from the early set (1999 to 2002) to the more recent set (2003 to 2007) by nearly 6% (see Table 2).

Table 2 *Percentage of Immediacy in Paragraphs of the First Four Chapters*

2003 to 2007			1999 to 2002		
Textbook	Year	Immediacy (%)	Textbook	Year	Immediacy (%)
1	2007	17.95	10	2002	31.82
2	2006	61.17	11	2002	49.36
3	2006	48.70	12	2002	29.61
4	2005	19.26	13	2002	09.38
5	2005	10.75	14	2001	36.26
6	2005	92.86	15	2001	40.81
7	2003	04.88	16	2000	07.34
8	2003	37.82	17	2000	22.22
9	2003	13.45	18	2000	28.68
			19	1999	33.99
Average:		34.09	Average:		28.64

However, more immediacy terms related to *collaboration* and *interaction*, not *closeness* and *emotions*, which are more closely associated with immediacy. A 6% increase in immediacy terminology is low, resulting from an excess of minor immediacy terms, such as *time* and *timely*, spread throughout both textbook sets more often than broad category terms, terms closely related to immediacy, such as *feelings* and *emotions*.

Although the H₀₁ null hypothesis was accepted relative to the proportion of scholarly immediacy references, immediacy terminology had increased 6 % from the 1999 through 2002 textbook set compared to the 2003 to 2007 set. However, this increase was not significant because not one scholarly immediacy studies was referenced. However, the majority of the immediacy terminology found included terms from the minor category related to timely instructor feedback.

Closer examination of the broad immediacy terms showed that while immediacy terminology had increased over the 8-year period, the terminology related more to general

online classroom communication terms, such as *collaboration* and *engagement*, rather than terms that were defined as immediacy. While few or no immediacy citations were predicted, Textbook 3 included the term *immediacy* on eight occasions and included a reference to the operational definition of immediacy, as noted in Appendix B. However, the textbook included no scholarly immediacy citations. Again, more of the terms related to collaboration and interaction, not feelings and emotions.

Textbook 6, published in 2005, reflected the highest percentage of combined broad and minor immediacy terminology with a striking 92.86%. Textbook 2, published in 2006, represented the second highest percentage of immediacy terminology found at 61.17%. Textbook 7, published in 2003, and Textbook 16, published in 2000, displayed the lowest percentages of immediacy terminology found at 4.88% and 7.34% respectively. For a breakdown of the number of paragraphs containing immediacy terminology per chapter in each textbook please see Appendix G.

The third research question concerned the specific term *immediacy*: How many instances of the word *immediacy* appear in each of the online teaching textbooks, and which broad or minor immediacy terms feature most prominently in the first four chapters? Based on the Coding Book of Definitions' parameters that included only counting the terms in paragraphs, not sidebars, direct quotes, or paragraph headers, only one textbook, Textbook 3, published in 2006, yielded any instances of the word *immediacy*. Textbook 3 reflected the term on eight occasions.

Assessment of the textbooks for terms closely related to immediacy (e.g., *feelings* and *closeness*) revealed that the highest number of instances *interaction* appeared (59) was six times the highest number of instances *feelings* appeared (9) and four times the highest number of instances *emotions* appeared (15) in a single textbook. Aside from the popularity of the term *interaction* (a low-broad importance term), compared to *immediacy*, for example, the focus of the study, terminology associated with the low-priority minor category, *time* or *timely*, reflected the second highest count of all terms in a single textbook at 58. The cumulative terminology reflected among all textbooks is minor immediacy terms or broad terms of a low priority, such as *interaction* and *collaboration*.

Mindset, *closeness*, *intimate*, *proximity*, *rapport*, and *prompt*, were observed at one occurrence each. The term *mindset* was almost non-existent, discovered once as the highest in any of the textbooks. The terms *thoughts* (high-broad importance) and *togetherness* (medium-broad importance), considered more closely related to immediacy, appeared in five instances in a single textbooks. The terms *nearness*, *propinquity*, *affection*, and *punctual* were not found among the first four chapters in any of the 19 independently authored textbooks. (see Table 3).

Table 3 Most Prominent Immediacy Terms

Immediacy term	Highest occurrence in one book	Importance of broad or minor term
Interaction	59 n	Low broad
Time	58	Minor
Collaboration	38	Low broad
Emotions	15	High broad
Engagement	14	Low broad
Feelings	9	High broad
Immediacy	8	High broad
Relationships	7	Medium broad
Speedy/rapidly	7	Minor
Thoughts	5	High broad
Togetherness	5	Medium broad
Quick	4	Minor
Fast	4	Minor

The fourth research question appeared as follows: How prominent is teacher immediacy terminology in chapter titles? The study involved comparing the term’s usage from the earlier to the more recent textbook set.

While not all of the first four chapter headings/subheadings included *immediacy* or *collaboration* terms in the broad and minor immediacy terminology scale, some textbooks included discussions of collaboration techniques under chapter headings not related to student interaction online. See Appendix I for actual chapter titles and sub-titles. The results indicated that the broad immediacy term, *thoughts*, appeared once in one of the textbook chapter titles in the 2003 to 2007 set. The left-hand column of Table 4 reflects the terminology examined from the highest importance, *immediacy*, to the lowest or minor-importance terminology related to *timely* responses.

The second most frequent terms found in the chapter titles were *interaction* at two counts, *engagement* at three counts, and *collaboration* at nine counts (see Table 4). All of these terms reflect low-broad importance. Results indicated that the textbook titles and subheadings did not include a substantive number of immediacy terms contained in the terminology scale. Moreover, no commonality of similar immediacy terms in chapter title headings existed.

Table 4 Number of Immediacy Terms Found in Chapter Titles

Most prominent terms	1999 to 2002	2003 to 2007	1999 to 2007
Thoughts	0	1	1
Interaction	0	2	2
Engagement	0	3	3
Collaboration	1	9	10
Timely	2	0	2
Total chapters with no accompanying sub-headings	32	15	47
Total Number of chapter titles without immediacy terms	85	78	163

The null hypothesis related to the second research question was accepted even though a foregone conclusion could be noted because more peer-reviewed online immediacy studies had been published during the latter set of online education textbooks published from 2003 to 2007 compared to the earlier set published from 1999 to 2002. The results indicated that the earlier sample set included more paragraphs devoted to immediacy terminology than the later set.

RECOMMENDATIONS

The purpose of this quantitative content analysis study was to examine whether or not independently authored online education textbooks used scholarly derived immediacy terminology and whether these textbooks shared common immediacy terminology in chapter headings and sub-headings. For this study, teacher immediacy was operationalized into a terminology scale using a total of 23 words most representative of the scholarly immediacy concept such as *feelings* and *closeness* to those words commonly associated with online class involvement such as *collaboration* and *interaction*. The scale was segmented into a broad category of terms and a minor category. The broad category included those discussed above and the minor category was related to timely teacher responses, a secondary operational definition of immediacy.

A total of 19 independently authored online educational textbooks were selected for the study by searching Amazon.com. Nine books were published between 2003 and 2007 and 10 books were published from 1999 through 2002. Traditional textbooks were used to

count the number of immediacy terms and to identify whether the textbooks referenced prominent peer-reviewed scholarly immediacy studies, ones including the word immediacy in their title and/or abstract. The independent variable was the textbook publication year. The dependent variable was the quantity of references to immediacy the authors may have cited.

Griggs et al. (2004), a seminal study to the current online educational textbook study, asserted that introductory psychology textbooks were almost entirely idiosyncratic, meaning these textbooks contained few or no scholarly citations. Not only were introductory psychology textbooks almost entirely void of scholarly peer-review citations, but also chapter titles and subheadings rarely displayed agreement on classic terminology and the sequence in which topics appeared. While the purpose of the online education textbook study was to examine whether independently authored online education textbooks also acknowledged scholarly peer reviewed studies, the limitation was only devoted to scholarly immediacy studies.

The primary research question formulated for the study appeared as follows: Does the complete textbook sample offer a homogeneous or idiosyncratic approach to the usage of immediacy based on the number of scholarly immediacy citations referenced? The content analysis relative to the primary research question indicated that the sample is reflective of an idiosyncratic editorial approach to immediacy. In addition, none of the textbooks in the sample included reference to any prominent peer-reviewed immediacy studies defined as those with the term *immediacy* in the title and in the abstract. The null hypothesis did not hold true since no scholarly immediacy studies were identified:

H_0 1: No difference exists between the two sets of textbooks in the number of references and citations devoted to teacher immediacy regardless of the publication timeframe.

H_1 1: The more recent set of textbooks contains a larger number of scholarly studies related to teacher immediacy because of the publication of more prominent scholarly immediacy studies between 2003 and 2007.

The second research question of the study concerned the number of paragraphs containing immediacy-related terminology: Among a set of recent (2003 to 2007) and a set of older (1999 to 2002) online education textbooks, what percentage of the first four chapters relates to both broad and minor teacher immediacy based on paragraph counts? The content analysis revealed that approximately 34% of immediacy terminology appears in the sample dated 2003 to 2007; approximately 6% more than the earlier set dated 1999 to 2002. The majority of immediacy terminology discovered comprised terms from the minor category related to timely instructor responses.

The third research question involved the specific term *immediacy*: How many instances of the word *immediacy* appear in each of the online teaching textbooks, and which broad or minor immediacy terms feature most prominently in the first four chapters? Not a single instance of *immediacy* appears in the textbook sample. The terms *interaction*, *time*, and *collaboration* are the most popular within any single book at 59, 58, and 38 instances respectively. The terms *interaction* and *collaboration* were categorized as low-broad nomenclature, meaning these terms are more closely related to the minor immediacy category, unlike the immediacy terms *feelings* and *closeness* located in the broad terminology scale category.

The fourth research question appeared as follows: How prominent is teacher immediacy terminology in chapter titles? Of the 163 possible first four chapter title headings available, only 10 titles include a low-broad immediacy term, *collaboration*. One chapter title includes a high-broad immediacy categorical term, *thoughts*. Regardless of the location of the terminology in the first four chapter titles, only 18 instances of immediacy nomenclature appear. In sum, only approximately 10% of all terms in chapter headings relate to immediacy; thus, immediacy nomenclature is not prominent or consistent from one textbook to another.

The results appear similar to the results of the study of higher education introductory psychology textbooks by Griggs et al. (2004): Textbooks tend to reflect an idiosyncratic rather than homogeneous approach. However, the test for online education textbooks was only relative to immediacy scholars, not scholarship in general. Similar to the introductory psychology textbook sample, online education textbooks reflect little agreement on terminology in chapter titles or chapter locations.

The results of the study indicate for online instructors textbooks do not necessarily expose practitioners to the best practice of immediacy as scholars defined the term. Authorship scholars claim that textbook content is selected depending on the grounding of the author's school of thought. Three schools of thought have been identified.

First, DeGroot and Marshak (1978) claimed, "textbooks are written, for the most part, by academicians without too much practical experience and are frequently based on rehashes of other texts before them by like professors" (p. 17). Second, Baker (1986) includes describing "the textbook, its authorship, and its evaluation as combining the structural aspects of teaching, research, and publication" (as cited in Arnold, 1993, p. 42). Third, Coppola et al. (2002) maintained, "Instructors tend to get their training on the job" (p. 186). The results of this study were only guided by Arnold's school of textbook development thought--that of a homogeneous approach. The study was not designed to test or examine the personal experience of the authors.

He (2004) described terminology as the chosen words used as a communication vehicle for a field. Immediacy scholars may want to consider using words that signify student behaviors, such as *collaboration* and *interaction*, in study titles and abstracts to alert researchers who might not otherwise be familiar with the term *immediacy*. While immediacy is a teacher initiated behavior, by associating the term immediacy with more commonly used online teaching terms, it may be possible to expose a broader audience to the immediacy term. The results of the study illustrate that *collaboration* and *interaction*, for example, appear to be most popular among independent online education textbook authors.

Yorks (2005) maintained that industry, like the academy, has a responsibility to transfer knowledge. The results of this study indicate that the predominant immediacy terminology was in the minor category, that of timely responses. The disconnect between online education textbook authors and immediacy scholars was more apparent in the broad category of developing teacher to student closeness and acknowledging student feelings. This research indicates that regardless of the textbook authors' positions internal or external to the industry, the online education textbook industry has not acknowledged scholarly studies related to immediacy. Bleiklie and Powell (2005) believed that individuals have a strong role in knowledge creation in industry as well as education. Publishing leaders, authors, and scholars can improve performance in transferring research findings for inclusion in online educational textbooks.

A call by several scholars for on-going research into the efficacy of online education continues (Brown, 2006; Day et al., 2006; Lao, 2002; Moskal et al., 2006; O'Dwyer et al., 2007). Online educational textbook authors can disseminate an understanding of immediacy as scholars intended. Teacher immediacy in the online classroom has been operationalized as non-verbal teacher communications that foster psychological closeness and acknowledge student feelings and emotions in a timely response. Immediacy can result in satisfied students (Arbaugh, 2001) and increased attendance (Rocca, 2004).

Limitations

The study did not include online education textbooks edited and written by multiple authors; therefore, whether these multi-authored books incorporate immediacy terminology or include citations to peer-reviewed immediacy scholarly studies is unknown. Because no online educational textbooks contained the term *immediacy* in the title, those textbooks containing *engagement* or *collaboration* formed part of the study even though the terms are not indicative of immediacy. The focus of the study was not general collaboration or interaction in the online classroom; instead, the focus was determining how authors used immediacy terminology in the textbooks. Immediacy terms counted within the first four

chapters were not necessarily used in discussion solely related to collaboration or student rapport.

Alred (2006) and Lewis et al. (2006) noted that popular texts do occasionally include acknowledgment of scholarly theories, but the occurrences may be coincidental. The inclusion of scholarly references stems from the authors' networks of colleagues and personal education that allow authors a closer relationship to the research community. For unknown reasons, the 19 independently authored online teaching textbooks did not include examination of the many immediacy studies published.

Another limitation is that the textbooks did not acknowledge the operational definition of immediacy as defined in this study. Immediacy terminology found was likely coincidental. However, the textbooks and the efficacy of the many other online teaching techniques discussed can appeal to a wide-range of online education stakeholders.

Finally, as noted earlier, a limitation exists in Appendix A in that the references are not all inclusive of scholarly immediacy studies. Only the prominent immediacy scholarly studies that had the word *immediacy* in the title or abstract were compared. In addition, more prominent immediacy studies were published from 2003 to 2007 as opposed to those from 1999 to 2003. Scholarly immediacy references dated 2003 to 2007 could not have appeared in the set of online education textbooks dated 1999 to 2002.

Future researchers may want to sample a set 10 years in advance from 2009 through 2017 and examine all textbook chapters. In addition, this research recommends future researchers consider surveying textbook authors to determine why the term *immediacy* was absent. Investigating scholars' opinions on how prominently they might feature immediacy terminology in chapter headings could be used to test author familiarity of immediacy particularly if prominent scholarly immediacy author names were used to prompt responses. This suggestion may in of itself prompt more online education textbook authors to consider including more information on immediacy as intended by immediacy scholars.

The most cogent benefit of the study was found in the first usage of the scholarly derived immediacy terminology scale. For the first time the concept of immediacy was operationalized for key immediacy related terms that scholars deemed important. The scale allowed the ability for immediacy terminology to be counted. For example, as noted earlier, the most prominent immediacy terms found in the first four chapters were those related to student and teacher behaviors such as *interaction* and *collaboration* opposed to teacher initiated behaviors important to immediacy such as acknowledging student *emotions* and *feelings*. The most popular immediacy terminology found in chapter titles or sub titles was

again *collaboration*, a term not readily associated with the scholarly definition of immediacy.

This study provided an operationalized definition of online immediacy based on the immediacy vocabulary scale and the content analysis methodology. Other researchers may want to incorporate this scale and methodology or refine it based on the mediums sampled. Other scholarly concepts that researchers may want to track in the practice of online education may include andragogy itself.

Another aspect of standardization of terminology, the standardization of the principles and methods of terminology is the task of an international organization such as ISO, who makes unified guidelines and principles for work in terminology so as to achieve a coherent approach and to improve communication (as cited in He, 2004, p. 88).

Consequently, higher education leadership as well as educational publishing leadership may want to join forces with the International Organization of Standardization (ISO) to study ways to improve consistency in higher education terminology usage and categorization. Other organizations including the Library of Congress that categorizes books also may need to enter into a dialog with ISO, authors, and publishers.

REFERENCES

- Alred, G. J. (2006). Bridging cultures. *Journal of Business Communication*, 43(2), 79-88.
- Arbaugh, J. B. (2001). How instructor immediacy behaviors affect student satisfaction and learning in web-based courses. *Business Communication Quarterly*, 64(4), 42-54.
- Arnold, D. L. (1993). Faculty perceptions of the scholarship and utility of writing college-level textbooks. *Publishing Research Quarterly*, 9(2), 42-55.
- Bender, T. (2003). *Discussion-based online teaching to enhance student learning: Theory, practice and assessment*. Sterling, VA: Stylus.
- Bleiklie, I., & Powell, W. (2005). Universities and the production of knowledge— Introduction. *Higher Education*, 49(1-2), 1-8.
- Brown, A. (2006). Learning from a distance. *Journal of Property Management*, 71(4), 42.
- Brown, R. (2007). *How to teach online*. Brooklyn, NY: ShortandSweetBooks.com.

- Budd, R. W. (1964). Attention score: A device for measuring news 'play.' *Journalism Quarterly*, 41(2), 259-262.
- Chevalier, J. A., & Mayzlin, D. (2006). The effect of word of mouth on sales: Online book reviews. *Journal of Marketing Research*, 43(3), 345-354.
- Coates, H. (2006). *Student engagement in campus-based and online education: University connections*. Routledge.
- Collison, G., Elbaum, B., Haavind, S., & Tinker, R. (2000). *Facilitating online learning: Effective strategies for moderators*. Madison, WI: Atwood Publishing.
- Conaway, R. N., Easton, S. S., & Schmidt, W. V. (2005). Strategies for enhancing student interaction and immediacy in online courses. *Business Communication Quarterly*, 68, 23-35.
- Coppola, N. W., Hiltz, S. R., & Rotter, N. G. (2002). Becoming a virtual professor: Pedagogical roles and asynchronous learning networks. *Journal of Management Information Systems*, 18(4), 169-189.
- Creswell, J. W., Clark, V. L., Gutmann, M. L., & Hanson, W. E. (2003). Advanced mixed methods research designs. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed method research in social and behavioral research* (pp. 209-240). Thousand Oaks, CA: Sage.
- Dahl, J. (2004). Strategies for 100 percent retention: Feedback, interaction. *Distance Education Report*. Retrieved July 12, 2006, from http://www.magnapubs.com/pub/magnapubs_der/8_16/news/596588-1.html
- Day, D., Smith, B., & Muma, R. D. (2006). The effectiveness of online courses in physician assistant education. *Journal of Physician Assistant Education*, 17(3), 33.
- DeGroot, J., & Marshak, S. (1978). Marketing: Who shall teach what to whom? *Journal of Advertising Research*, 18(2), 17-20.
- Dictionary.com. (2006). Terminology. Retrieved July 1, 2006, from <http://dictionary.reference.com/browse/terminology>
- Draves, W. (2002). *Teaching online*. Riverfalls, WI: Lern Books.

- Dupin-Bryant, P. A. (2004). Strategies for teaching in online learning environments: Utilizing instructor immediacy behaviors. *Journal of Applied Research for Business Instruction, 2*(2), 1-4.
- Duran, R., & Zakahi, W. (1987). Communication performance and communication satisfaction: What do we teach our students? *Communication Education, 36*, 13-22.
- Easton, S. S. (2003). Clarifying the instructor's role in online distance learning. *Communication Education, 52*, 87-105.
- Easton, S. S., & Katt, J. (2005). Online learning: Expectations and experiences. *International Journal of Learning, 12*(5), 177-186.
- Finkelstein, J. E. (2006). *Learning in real time: Synchronous teaching and learning online*. Jossey-Bass.
- Freitas, F. A., & Myers, S. A. (1998). Student perceptions of instructor immediacy in conventional and distributed learning classrooms. *Communication Education, 47*, 366-372.
- Gorham, J., & Zakahi, W. R. (1990). A comparison of teacher and student perceptions of immediacy and learning: Monitoring process and product. *Communication Education, 39*(4), 354-368.
- Griggs, R.A., & Marek, P. (2001). Similarity of introductory psychology textbooks: Reality or illusion? *Teaching of Psychology, 28*(4), 254-256.
- Griggs, R. A., Proctor, D. L., & Cook, S. M. (2004). The most frequently cited books in introductory texts. *Teaching of Psychology, 31*(2), 113-116.
- Gunawardena, C. N., & Zittle, F. J. (1997). Social presence as a predictor of satisfaction within a computer-mediated conferencing environment. *The American Journal of Distance Learning, 11*(3), 8-25.
- Hanna, D., Glowacki-Dudka, M., & Conceicao-Runlee, S. (2000). *147 practical tips for teaching online groups: Essentials of web-based education*. Madison, WI: Atwood.
- He, C. (2004). Terminology: Theory, methods and applications (book). *Babel, 50*(1), 85-89.

- Jones, S. M., & Wirtz, J. G. (2006). How does the comforting process work? An empirical test of an appraisal-based model of comforting. *Human Communication Research, 32*(3), 217-243.
- Kearsley, G. (2000). *Online education: Learning and teaching in cyberspace*. Belmont, CA: Wadsworth.
- Ko, S., & Rossen, S. (2001). *Teaching online: A practical guide*. Houghton Mifflin.
- Kulp, D. H. (1927). Towards scientific textbook writing. *The American Journal of Sociology, 33*(2), 242-247.
- Kurtz, D. L., Christie, J., & Smith, S. (2002). A name recognition study of marketing academics: Contrasting journal publication and textbook authorship. *Journal for Advancement of Marketing Education, 2*, 1-6.
- Kyle, R., & Festervand, T. A. (2005). An update on the high-tech mba. *Journal of Education for Business, 80*(4), 240-244.
- Laidlaw, J. M., Harden, R. M., Robertson, L. J., & Hesketh, E. (2003). The design of distance-learning programmes and the role of content experts in their production. *Medical Teacher, 25*(2), 182-187.
- Lao, T. M. (2002). *A description of the experiences, perceptions, and attitudes of professors and graduate students about teaching and learning in a web-enhanced learning environment at a southwest border institution*. Unpublished doctoral dissertation, New Mexico State University.
- Lewis, J. E. (2002). *Perceived learning needs of post secondary faculty of institutions moving towards online course delivery*. Unpublished doctoral dissertation, University of Toronto, Canada.
- Lewis, L. K., Schmisser, A. M., Stephens, K. K., & Weir, K. E. (2006). Advice on communicating during organizational change. *Journal of Business Communication, 43*(2), 113-137.
- Mehrabian, A. (1971). *Silent messages*. Belmont, CA: Wadsworth.
- Mehrabian, A. (2007). *Nonverbal communications*. New Brunswick, N.J: AldineTransaction.

- Morris, S. (2002). *Teaching and learning online*. Lanham, MD: ScarecrowEducation.
- Moskal, P., Dziuban, C., Upchurch, R., Hartman, J., & Truman, B. (2006). Assessing online learning: What one university learned about student success, persistence, and satisfaction. *Peer Review*, 8(4), 26.
- O'Dwyer, L. M., Carey, R., & Kleiman, G. (2007). A study of the effectiveness of the Louisiana algebra online course. *Journal of Research on Technology in Education*, 39(3), 289-306.
- Palloff, R., & Pratt, K. (1999). *Building learning communities in cyberspace: Effective strategies for the online classroom*. Jossey-Bass.
- Palloff, R., & Pratt, K. (2003). *The virtual student: A profile and guide to working with online learners*. John Wiley & Sons.
- Palloff, R., & Pratt, K. (2005). *Collaborating online learning together in community*. Jossey-Bass.
- Race, P. (2005). *500 tips for open and online learning*. Routledge/Falmer.
- Riffe, D., Fico, F., & Lacy, S. (2005). *Analyzing media messages: Using quantitative content analysis in research* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum.
- Rocca, K. A. (2004). College student attendance: Impact of instructor immediacy and verbal aggression. *Communication Education*, 53, 185-195.
- Salman, G. (2001). *E-moderating: The key to teaching and learning online*. Sterling, VA: Routledge/Falmer.
- Salman, G. (2002). *E-activities: The key to online teaching, training and learning*. London, UK: Kogan Page Limited.
- Simpson, O. (2003). *Student retention in online, open and distance learning*. London, UK: Kogan Page Limited.
- Swan, K., & Richardson, J. C. (2003). Examining social presence in online courses in relation to students' perceived learning and satisfaction. *Journal of Asynchronous Learning Networks*, 7, 68-82.

Teven, J. J., & Hanson, T. L. (2004). The impact of teacher immediacy and perceived caring on teacher competence and trustworthiness. *Communication Quarterly*, 52(1), 39-53.

Thesaurus. (2007). Retrieved March 5, 2007, from <http://thesaurus.reference.com>

Waldeck, J. H., Kearney, P., & Plax, T. G. (2001). Teacher e-mail message strategies and students' willingness to communicate online. *Journal of Applied Communication*, 29(1), 54.

Watkins, R. (2005). 75 e-learning activities: Making online learning interactive. Pfeiffer.

Withrow, B., Weible, K., & Bonnett, J. (2004). Aren't they all the same? A comparative analysis of introductory criminal justice textbooks. *Journal of Criminal Justice Education*, 15(1), 1-18.

Yorks, L. (2005). Adult learning and the generation of new knowledge and meaning: Creating liberating spaces for fostering adult learning through practitioner-based collaborative action inquiry. *Teacher College Record*, 107(6), 1217-1224.

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The Shifting Paradigm: Learning to Unlearn

By Carmen Elena Cirnu, National Institute for Research and Development in Informatics, ICI Bucharest

ABSTRACT

In order to be able to fully benefit from the enormous amount of openly available data and also from competitive advantages that new forms of learning may provide, do we need to learn to *unlearn* in order to bypass any biases already acquired? Do we need to free our minds first to enable new learning trajectories? The knowledge--learning--power paradigm is changing and it tends to become the *unlearning* – the ability to extract relevant knowledge, that supersedes.

Societal changes in recent years are challenging the ways knowledge is produced and distributed. Seen as the main resource in present-day society, knowledge has been an increasingly source of power. The learning-power paradigm continue to shift. If the '70s - '80s question was how to learn, through '90s – 2000s it moved to how fast and how much we can learn. Now the question becomes how much can we unlearn? If this is the case, we need to develop skills that help us to let go of old rules.

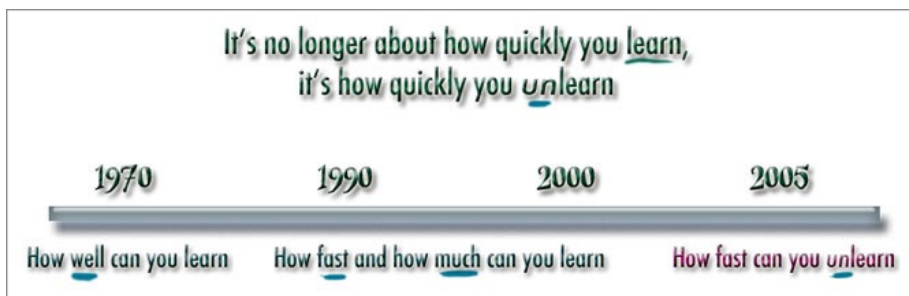


Figure 1. A timeline illustrating decades associated with how and how fast we learn. source: <http://headrush.typepad.com>

Patreman (1997) discusses barriers that often prevent *unlearning* from occurring and that are contributors to living in an acquisitive society. *Unlearning* is not about forgetting something, but rather more about rejecting a previously-held belief or repudiating a long-revered theory.

Curricula today are designed around learning as something one *acquires*—from a learning acquisition-based society to a society where we learn to unlearn odd knowledge and to deal with substantial amounts of information (e.g., big data).

Theories of Learning: Where Does Unlearning Originate?

Society is in such a tremendous flurry of change that it cannot be questioned if anytime soon a big part of what we currently know and assume to be right will become wrong. Not un-updated, but completely wrong. This will not be a question of learning, but a question of *unlearning* and *relearning*.

Albeit this new form of learning may not be taken seriously as an actual theory, and is largely presented by learning specialists in a more informal way (blogs) rather than in a formal one (scientific articles), *unlearning* is not going to be simple.

According to Cirnu (2008) learning is comprised of two different dimensions--**tacit and explicit** Social interaction between individuals is the basic requirement for creating, cumulating, and transferring both tacit and explicit knowledge. The transfer of knowledge intensifies when social and cultural exchanges increase among individuals. In this instance, knowledge may be purposefully transferred, or it may be transferred as an outcome of other unrelated activities (Roberts, 2001). According to Zack (1999), tacit knowledge is understood and applied subconsciously, is difficult to articulate, is developed from direct experience and action and is usually shared through interactive conversation, storytelling, and shared experiences. Creating and transferring tacit knowledge requires 'shared observation' (Leonard & Sensiper, 1998) and 'social networks' (Lam, 2000). In this view, the explicit represents concepts, facts, and theories, while tacit involves practices that are used to complete tasks.. The core theories of learning are dependent upon the existence of prior knowledge in order for *unlearning* to occur. a

The *cognitivist theory of learning*, educators address the power of analogies to bypass students' misconceptions, and then develop two related analogies as a desired "target" or new form of learning that a student does not initially accept. The first analogy is an "anchor," and serves as an example comparable to the target, but one that the student can accept based on intuition or day-to-day experience. The second analogy is a "bridge," an intellectual midway point that shares features of both the target and the anchor. More than just directing students to the analogies in a textbook (the traditional approach), the educator actually engages students in a process of analogical reasoning in an interactive teaching environment, and uses the analogies to enrich students' view of the target rather than helping them view the target more abstractly.

Early cognitive theories examine the role of "proactive interference and inhibition" or the interference of old and new knowledge in the context of successive memorization of word lists. Other cognitivists examine the role of prior knowledge in learning. Piaget stressed the role of knowledge structures and their reformulation through the processes of assimilation (i.e., incorporating new information into existing structures), accommodation (i.e., incorporating new information by revising existing structures) and equilibration (i.e., the overall interaction between existing ways of thinking and new experiences). He states that we achieve states of more complex, satisfactory, and stable equilibriums with the environment through successive reformulations.

On the other hand, Dewey (1938) explored the role of problematic experience in stimulating inquiry. He concluded that we feel confused, uncertain, and unable to coordinate prior knowledge and habit to meet the demands of the present moment during the experiments. Additionally, Vygotsky (1978) highlighted the role of social interaction in the reconstruction of prior knowledge. He explored the "zone of proximal development" or the difference between what a learner can do without help, and the capabilities of the same learner engaged in interactions with others.

One of the fathers of **constructivism**, Bruner's theoretical framework (1961) is based on the theme that learners construct new ideas or concepts stemming from existing knowledge. Learning is an active process that includes a) selection and transformation of information, b) decision-making, c) generating hypotheses, and d) making meaning from information and experiences.

Further, Bruner's theories stress the significance of categorization in learning. Bruner (as cited in Anderson, 1998) expands this significance by emphasizing that "To perceive is to categorize, to conceptualize is to categorize, to learn is to form categories, to make decisions is to categorize." Interpreting information and experiences by similarities and differences is a key concept.

Most of the learning we experience is continually added to our existing knowledge therefore in order for the facilitation of *unlearning* to occur we must begin with the tacit dimension. We as learners, are reliant upon tacit knowledge, therefore we cannot bypass what we rely on. Most of what constitutes tacit knowledge is the fact that many times we are not even aware of the knowledge that we possess; therefore the process of modifying our own tacit knowledge can be very difficult and challenging and even impossible for some to change. his/her own.

The **behaviorist** theory approaches learning as new stimulus-and-response sets that allow learners to forge through powerful external reinforcements. In this light, the

unlearning process takes place in two ways: 1) through a process of removal of reinforcements, and 2) through the apposition of "reciprocal behaviours" or the introduction of a stimulus that strikes a response different from the usual response in a given situation.

The behaviorist literature suggests several ways of promoting unlearning in the service of new and better learning. Gagne and Briggs (1975), proposed an eight-point lesson plan--a fusion of the behaviorist and cognitivist traditions, where instructors engage students' prior knowledge early on before introducing new material.

Dawson et. al. (1997) summarized the concept of *meditational learning*. This theory provides a distinctive pedagogy that addresses the major issues of unlearning and relearning when individuals face change in their prior habits, skills, or concepts. Educators are able to control and redirect proactive inhibition and thus control *the unlearning process* as follows: a) they present a learning model that explains the need for meditational learning strategies to students; b) the process uses students' knowledge, beliefs, and ideas of a concept; and c) differentiation of words are used in a technical manner from their common sense usage and then explicit instruction of the concept with opportunities for students to rehearse important aspects of it is provided. Also, a comparison of old and new concepts from multiple perspectives and the generalization of the new concept to at least six novel applications or problem solving situations are requested.

What is *Unlearning*?

To illustrate the notion of unlearning, it is necessary to rely on a shared understanding of learning. The most common approach related to learning in terms of content, respectively facts and concepts we know and/or knowledge in a specific domain (e.g. finance, psychology, history). However, taking into account various types of knowledge--not only the declarative knowledge (knowing that) but also procedural knowledge (knowing how) that refers to ways of acting upon information in distinct situations. Unless we are in the early stages of learning, such knowledge is often tacit. In crisis situations newer and less stable learning will inevitably cave into older learning, however misguided it is. Below is an example of how we cave into older learning and how much effort is needed to conquer it.



To view video go to <http://devour.com/video/the-backwards-brain-bicycle/>

Personal values that dictate attitudes and their reflection in how we behave also represent an important domain of learning. If, for example, students believe that learning is a matter of natural ability rather than effort, they will be unlikely to try very hard in the face of the slightest adversity.

Learning, Unlearning, and Relearning in Corporate Industries

Learning, unlearning and relearning have deep implications in present-day societies—not only in the academic domain, but also in the progress and productivity of companies. Employees enter companies or specific positions in companies with habits and assumptions either from school or previous positions, and thereby have difficulties coping with rapid changes into various domains.

Breaking down previous barriers and patterns is needed. Either to be able to grasp the latest initiative, to embrace a new workplace culture or to deal with changing scientific theories, employees may need to go through the process of unlearning what they have previously learned. In this particular situation, there are two clear choices: 1) either the employer needs to teach employees to unlearn, 2) or the employee will need to practice self-regulation by learning to unlearn by himself/herself in order to gain competitive advantage. As our society continues to evolve amid the existence of the unlearning process, there will eventually be a need for research delving deeper into such scenarios—especially as the

affordances of unlearning will gradually emerge within the social and collective behaviors of large companies/organizations and in turn, to employees; therefore making unlearning a necessity rather than an option in our competitive world.

The concept of unlearning is intrinsically bound to the concept of change. Shaner (2010) believes learning leaders must first discover the level of knowledge a potential employee already possesses before trying to change their existing beliefs and habits. Therefore, first and foremost, in order to benefit from unlearning, we first need to unearth old roots. Shaner explains further by stating that “*senior management often makes the mistake of trying to teach learners without first asking important questions such as ‘What are those habits? Where is the cynicism when it comes to change programs?’ The designers of the learning initiative have to understand where the student is at any given time*”. He argues that biologically, we cannot entirely unlearn something, but we can put effort into the assimilation of new learning and training, with the provision to replace old ideas with new ones.

Oftentimes, having previous information serves as a barrier to change. Leaders need to first assess this information, and then based upon this assessment, try to implement new patterns. Patterson (*Kerry Patterson, co-founder of VitalSmarts*) argues that employees have “*years of cognitive mass that are counter to what you’re telling them. They won’t do what you ask, and rightfully so. You need to first demonstrate why (they) need to change.*”

To easily understand the importance of unlearning and relearning in the corporate sector, it may help to pose common, everyday situations whereby a company is acquired by another company and employees are urged to unlearn the ways of their previous positions in order to become part of the new company. Similarly, when modifying business strategies, companies that invest in the time and money to integrate the unlearning and relearning process into on-boarding training of new employees will clearly reap the benefits in the long term. In short, the core concept is that in order to learn new skills, it is necessary to let the old ways of doing things, go.

CONCLUSIONS

Learning, unlearning and relearning requires on-going training and assessment or self-regulation. Either a company seeks to change the behavior(s) of an employee or seeks change at the organizational level, and needs to clearly articulate the goals of such unlearning. To successfully drive organizational change, leadership--no matter the trade, discipline, field or sector must be mindful to ensure that those who they are leading clearly understand the collective mission and vision of the organization, but even further the drivers behind the change, but to further understand the drivers behind the change and what is

needed in terms of training, development and support they are ultimately trying to implement.

REFERENCES

- Anderson, M. (1998). Jerome Bruner. *Educational Psychology*. Portland, OR: Cortland College. Retrieved from <http://facultyweb.cortland.edu/~andersmd/cog/brunder>.
- Bateson, M. C. (1994). *Peripheral visions: Learning along the way*. New York: HarperCollins Publishers.
- Brown, D. E., & Clement, J. (1989). Overcoming misconceptions via analogical reasoning: Abstract transfer versus explanatory model construction. *Instructional Science*, 18 (4), 237-261.
- Bruner, J. S. (1961). The act of discovery. *Harvard Educational Review*, 31, 21-32.
- Cirnu (Ene), C. (2008). Distance education as a device to assign knowledge distribution. The 4th International Scientific Conference eLSE “E-learning and Software for Education” proceedings, Bucharest.
- Dawson C., Lyndon, E. H. (1997). Conceptual mediation: a new theory and a new method of conceptual change for the new millennium of practice. *Research in Science Education*, 27 (2).157-173.
- Dewey, J. (1938). *Experience and education*. New York: Simon & Schuster.
- Gagne, R. M., Briggs, L. J.(1975). Principles of instructional design. *AV Communication Review*, Vol. 23, No. 1, pp. 104-109.
- Lam, A. (2000). Tacit knowledge, organizational learning and societal institutions: an integrated framework. *Organizational Studies*, 21, 3, 487–513.
- Leonard, D. & Sensiper, S. (1998). The role of tacit knowledge in group innovation. *California Management Review*, 40, 3, 112–130.
- Lee, V. S. (2002). Unlearning. A critical element in the learning process. *Essays on Teaching Excellence Toward the Best in the Academy*, Vol. 14, No. 2.

- Prather, J. P. (1985). Philosophical examination of the problem of the unlearning of incorrect science concepts. Paper presented at the 58th Annual Meeting of the National Association for Research in Science Teaching, French Lick Springs, IN.
- Roschelle, J. Learning in interactive environments: Prior knowledge and new experience. Retrieved from <http://www.exploratorium.edu/IFI/resources/museumeducation/priorknowledge.html>
- Vanderbilt Unlearning: http://cft.vanderbilt.edu/files/vol14no2_unlearning.htm
- Roberts, J. (2001). The drive to codify: implications for the knowledge-based economy. *Prometheus*, 19, 2, 99–116.
- Seely Brown, J. (May, 2015). BooksStorytelling: Scientist's Perspective. Retrieved from <http://www.creatingthe21stcentury.org/JSB3-learning-to-unlearn.html>
- Shaner, D. (2010). *The seven arts of change: Leading business transformation that lasts*. Union Square Press.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological process*. London: Harvard University Press.
- Zack, M. (1999). Managing codified knowledge. *Sloan Management Review*, 40, 4, 45–58.
- (2002) "Lifelong Unlearning", in D. Barford, ed., *The Ship of Thought. Essays on Psychoanalysis and Learning*, pp. 212-223, London: Karnac.
- Clomedia Learning to Unlearn: <http://www.clomedia.com/articles/learning-to-unlearn>
- Headrush: <http://headrush.typepad.com>

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