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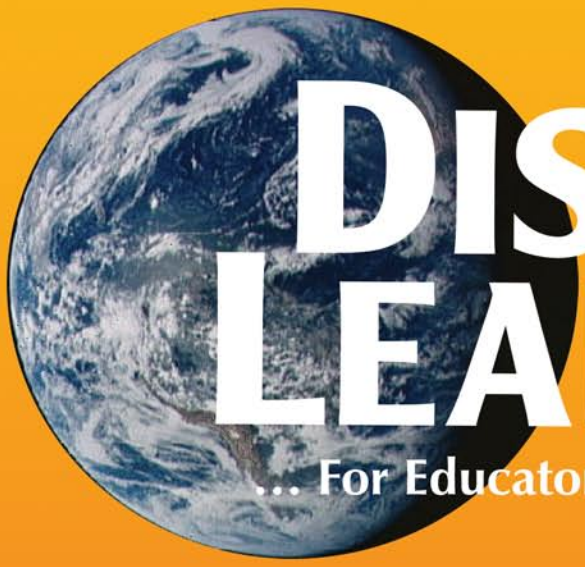

Volume 14 Number 2 2017

DISTANCE LEARNING

... For Educators, Trainers, and Leaders

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PURPOSE

Distance Learning, an official publication of the United States Distance Learning Association (USDLA), is sponsored by the USDLA, by the Fischler College of Education at Nova Southeastern University, and by Information Age Publishing. Distance Learning is published four times a year for leaders, practitioners, and decision makers in the fields of distance learning, e-learning, telecommunications, and related areas. It is a professional magazine with information for those who provide instruction to all types of learners, of all ages, using telecommunications technologies of all types. Articles are written by practitioners for practitioners with the intent of providing usable information and ideas for readers. Articles are accepted from authors with interesting and important information about the effective practice of distance teaching and learning.

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DISTANCE LEARNING
is indexed by the Blended, Online Learning and Distance Education (BOLDE) research bank.

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Embracing Engagement Through Technology in Online Graduate Education	*Susan Stephan*
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Investigating Twitter Use in Lower Division Online Classrooms

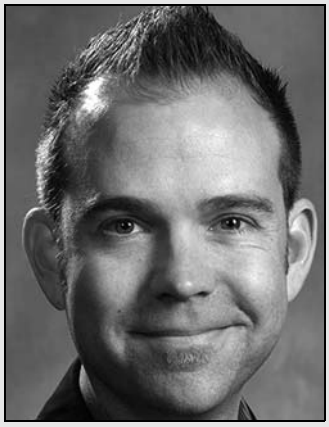
Bjorn Mercer and Amy Winger

Introduction

Reporting 313 million monthly users and a total audience near 800 million, the power of Twitter is palpable (Mims, 2016). With such an audience, Twitter's reach is vast and varied. Anyone with a computer, tablet, or smartphone can be instantly updated on anything imaginable with Twitter. You can follow Twitter's biggest celebrities such as Selena Gomez or Beyoncé, great writers such as Neil Gaiman or Margaret Atwood, or bask in American political dialogue as we all get informed, enlightened, and entertained in 140 characters or less. Given its vast appeal and broad content, it is not surprising that Twitter has begun to work its way into online classrooms. Whether it truly has a place as a viable learning tool in higher education deserves exploration.

Background

Twitter's broad scope and appeal leads educators to the task of determining whether Twitter is an effective tool for edu-



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cators and students alike. In this study, specific attention is focused on the feasibility of implementing Twitter effectively into lower division undergraduate classes in online education. Close to 30% of students in the United States attend distance learning courses at degree-granting postsecondary institutions (U.S. Department of Education, 2015). Additionally, despite enrollment in distance education growing over the last 10 years, retention consistently reflects rates 10%–20% lower than traditional postsecondary higher education institutions (Carr, 2000, Diaz, 2002; Frankola, 2001; Willging & Johnson, 2009; Xenos, 2004). Overall, online students with less professional as well as academic experience, namely first year students, drop out more frequently than others (Lee & Choi, 2011). Additionally, research indicates that such online students often withdraw from class not because of content-related concerns but because of navigational and operational concerns (Morris & Finnegan, 2008). A variety of personal and environmental factors will always influence student persistence, but research indicates that more attention should focus on course design and policy because this is a feature online institutions can more readily control and adjust (Lee & Choi, 2011). Additional guidance on how to more readily meet the needs of online students, especially lower division higher education students, is needed.

The typical first-year student at an online university has a diverse set of academic and time management skills and is often taking care of dependents, including children and/or adults. He or she is often employed full or part time. This student population poses a variety of risk factors, leading many instructors to develop innovative strategies to help students be more engaged with the course objectives, faculty, and peers. Additionally, such practices are implemented in order to improve learning outcomes and aid in overall student success. Contemporary innovation in higher education is often technological and without commenting on the learning management system (LMS), multimedia, or interactive learning resources, this brings us to social media.

To limit the scope of this article, the social media tool of Twitter alone will be discussed because of its intense popularity and because it has been used and studied in higher education ever since its founding in 2006. Researchers Fernández-Ferrer and Cano (2015) note, "There is a need for a better understanding of how to use Twitter in education" (p. 13). Additionally, the need for more insightful research on Twitter's use in the classroom echoes throughout much of the literature on its implementation (Evans, 2014; Prestridge, 2014; Yakin & Tinmaz, 2013).

Twitter's Benefits for Lower Division College Students

The positives of Twitter in higher education include: instant engagement with fellow students and faculty; instant access to diverse learning resources; portability and established presence via smartphones and tablets; and limited character count, enabling succinct and focused communications.

Twitter Builds Community

One of the major benefits of Twitter is its ability to connect students and increase engagement among them (Evans, 2014). In providing an additional way for students across the country, or even world, to connect in a group setting, Twitter works to further reduce feelings of disconnectedness and isolation in the online learning environment. In connection, some instructors might use Twitter as a way to remind students of upcoming assignment due dates or class cancellations, further building community in the online classroom.

Twitter as an Information Storehouse

Twitter caters to varied news sources, myriad topics, and diverse audiences. Due to its rich resources, Twitter has been "integrated successfully into a classroom for an additional information source" (Jacquemin, Smelser, & Bernot, 2014, p. 26). This key finding highlights the importance of having instant access to current resources that augment in-classroom learning. It is conceivable that the resources available on Twitter can support the textbook, provide information in an alternative multimedia form, or otherwise encourage the student to stretch learning through the use their critical thinking and analysis skills. In addition, Twitter allows students to discuss, question, and contemplate these additional learning resources while interacting with fellow students, faculty members, and even the world at large due to Twitter's international presence.

Additionally, Twitter also provides a way for students to become lifelong learners by promoting learning in an authentic environment. By locating real-world content in Twitter's vast platform, the student's learning environment expands past the virtual classroom's walls and bleeds into the world at large while also exposing students to informal and formal learning (Hsu & Ching, 2012). Another way that Twitter augments learning is by meeting the dual-coding needs of learners (Clark & Mayer, 2011). Many students learn best through the combination of visual and audio formats, and the use of the written language shared in 140 characters, images, and embedded videos addresses such specific student learning needs.

While Twitter serves as a storehouse of information for students, it additionally serves as a place where diverse pools of colleagues can meet to tweet. For instance, through such an informational resource, instructors can solicit instructional practices, share resources, seek advice, and promote research. Twitter as a resource for scholarly purposes amidst colleagues, however, is fledgling (Veletsianos, 2012).

Twitter's Portability

Another benefit worthy of consideration is Twitter's portability and accessibility. Today's student is a student on the go, and the portability and inclusion of Twitter in the classroom can aid students in varied ways. Caballé, Xhafa, and Barolli (2010) note, "Having a look at the near future, mobile technologies will become more ubiquitous, pervasive and networked, with enhanced capabilities for rich social interactions, context awareness and Internet connectivity, and such technologies can have a great impact on collaborative learning" (p. 44). Betrus (2012) makes a similar prediction, noting that apps easily accessed by mobile devices such as iPhones, iPods, and tablets will continue to grow in popularity and usability. The mobility of Twitter holds clear benefits for mobile learners.

Twitter as a Writing Tool

Another academic benefit of students using Twitter relates to its ability to improve student writing. An important finding by Fernández-Ferrer and Cano (2015) found that the quality of Tweets made by students over time improved to be more academically focused, more clearly articulated, and more rigorously supported through research. Therefore, such writing activities can help students more readily adjust "to the key academic requirements of this kind of experience in the context of higher education" (Fernandez-Ferrer & Cano, 2015, p. 13). In connection, the typical Tweet will use shorthand, vernacular, and often vulgarities. By raising the level of their writing even in 140 characters, or a series of tweets, students can learn how to meet the academic requirements of higher education, an especially important competency for lower division students to acquire.

Twitter's Challenges to Lower Division College Students

Among the challenges of using Twitter are: students and faculty proficiency in the use of Twitter; short duration of online classes; inconsistent use and implementation of Twitter; student privacy issues; questionable credibility; and efficacy.

Twitter's Proficiency and Timeframe Challenges

The first two challenges when using Twitter are the short duration of online classes and student and faculty proficiency. Many people use Twitter, but not everyone uses it or is proficient at using it. Additionally, in the context of a 5-week class, it would be difficult for anyone to become proficient with a social media platform while also becoming acquainted with various institutional LMS tools and system expectations. Noting the complications that accompany the shift to a new learning environment, one source reminds educators that transitions into the online environment "require that students not only learn the technical complexities of using digital tools, they must also learn specialized discourses associated with online participation and a wide array of new literacy skills and reading comprehension strategies … necessary for efficient and effective navigation" (Nicholson & Galguera, 2013, p. 22). To offer as an example of the general challenges of Twitter use in the classroom, one study reported that Twitter ultimately helped students to improve their "reflective, critical judgment and information selection skills" (Ricoy & Feliz, 2016, p. 246). This result, however, was observed in a master's level program over a 6-month period and included extensive training for both students and faculty on the use of Twitter. Therefore, given the time frame of a typical online class being in the range of 5–7 weeks, the inclusion of Twitter becomes shortsighted. Additionally, student and faculty proficiency may be questionable because the student or faculty member might not know how to use it effectively. Training on the appropriate and effective use of Twitter is necessary for it to succeed in the educational environment; due to the brevity of many online courses, Twitter's inclusion is not feasible.

Twitter's Implementation Concerns

Another challenge posed by Twitter is its implementation. When implemented, Twitter in the classroom needs to be coupled with clear expectations and communication as found by Bista (2015), who reported on Twitter's innovative value as a learning device in the classroom as long as it was accompanied by clear directions and instructions. From the beginning of class, when a faculty member uses Twitter, he or she needs to communicate how Twitter will shape learning, how Twitter can effectively be used by students, and how Twitter use will impact grades. Without clear expectations, using the platform will be confusing and negatively affect student learning and satisfaction (Prestridge, 2014).

Additionally, there are a variety of ways that Twitter has been implemented across schools, as each implementation of Twitter is uniquely designed. For instance, in one study, a real-time Twitter feed was embedded into the course shell to allow for ready access to the program; additionally, a specific hashtag was used to sort responses (Rohr, Costello, & Hawkins, 2015). Because there is no consistency of use from faculty member to faculty member and because of the uniqueness of each class's objectives, it is not a program that affords for consistent implementation across multiple course designs. If Twitter was used differently in every class, it could potentially be confusing as each student progresses through his or her degree programs. One of the key job requirements of a faculty member in any class is to clearly communicate expecta-

tions. If Twitter is haphazardly added, it would negatively impact student learning.

Furthermore, Twitter's platform and fast-paced interface indeed are associated with many negative student concerns. For instance, Fox and Varadarajan (2011) report that students found many of the class tweets to be overwhelming, rapid-fire, confusing, repetitive, limiting, constraining, and unhelpful. An additional study found Twitter to simply be "too obtuse" for classroom discussion (Jacquemin et al., 2014, p. 22). Furthermore, Prestridge (2014) reports that functionality was a stumbling block for many students, whereas Welch and Bonnan-White (2012) noted that adding one more technology source to check into every day led to login overload, further adding to first-year student frustration. Research also indicates that students using Twitter began to "resent the incursion of staff into 'their' online space, fearing censure (rightly or wrongly)" (Manca, Lafferty, Fioratou, Smithies, & Hothersall, 2014, p. 336). Given the unique and varied needs of lower division college students, it is especially important in the online environment to choose learning venues that support student success while avoiding learning activities that may exacerbate frustrations or may unknowingly discourage students (Appana, 2008, p. 18). Because of the reported concerns associated with the use of Twitter, its implementation as a pedagogical tool must be seriously considered.

Twitter's Student-Privacy Concerns

Next, an additional concern relates to student privacy. Twitter is open to everyone, and privacy settings must be considered. Faculty members should be careful when publically correcting students on Twitter because of the visibility of those Tweets and potential Family Educational Rights and Privacy Act issues if anything specific about a student is shared. Faculty and students do not have to be as worried when using an LMS because it is always self-contained behind the institution's security. Students appreciate the privacy that the LMS affords and find it cumbersome and more risk-fraught to leave the LMS (Ross, Banow, & Yu, 2015). Also, when asked about the use of social media in the classroom, many students noted that what they liked least about social media is the lack of privacy that accompanies it (Gualtieri, Javetski, & Corless, 2012). Another concern is data collection; some institutions require anything that is graded to be submitted within the LMS. This might lead to a complicated grading procedure, further requiring students to complete convoluted additional steps to submit assignments or meet due dates. Due to such concerns, Twitter's use and implementation too easily becomes troublesome for both students and instructors alike.

Twitter's Perceived Questionable Credibility

Yet another perplexing concern associated with Twitter relates to its credibility. Due to Twitter's reputation being known as a social network, its academic authority as a source of information was often questioned by students (Bista, 2015). Furthermore, students often viewed the inclusion of Twitter as being a gimmick or trend rather than as a credible source of knowledge (Manca et al., 2014). Because Twitter is not perceived as a sound academic source by many students, its use in the online classroom needs to be limited or used sparingly, especially with students new to online learning in lower division courses to best protect the credibility of online learning.

Twitter's Ambiguous Academic Efficacy

A final potential concern regarding Twitter's use is that research conflicts

regarding the efficacy of it. As found by Ross et al. (2015) regarding first-year college student experiences with Twitter although "students who took part in the Twitter portion of the course did report a higher 'sense of community,' there was little difference in terms of 'sense of engagement'" (p. 137). In addition, Twitter "does not achieve an improved perception of learning by the participants nor objectively of the total performance in the subject" (Fernández-Ferrer & Cano, 2015). Also, importantly, when using Twitter as a learning tool, intellectual growth was hard to measure given its use in the classroom (Bista, 2014). Manca et al. (2014) echo this observation, noting that around half of the students in their study did not find the way Twitter was used in their classroom to be helpful to their learning experience. Such information greatly concerns any faculty member who is trying to help her or his lower division students become more prepared for upper division programmatic courses and eventual graduation.

Conclusion

When selecting social media or multimedia tools to enhance learning, Kirkwood and Price (2014) warn against implementing technology-led learning activities, which are expected to transform learning through the use of technology rather than first identifying the educational problem and then choosing the most appropriate technological tool to address it. Given the controversial use of Twitter in the classroom, it is critical for instructors to take both the advantages and concerns associated with Twitter into consideration when using it in lower division courses. Moreover, its perceived questionability as a credible source and unclear efficacy as a learning tool should lead an instructor to carefully consider its inclusion in his or her curriculum.

Finally, in a study by Boston, Ice, and Burgess (2012) on retention in online higher education, it was noted that many students who enter online universities tend to do so in a more exploratory attempt than in a traditional university. Coupled with this finding in the study, it was also noted that the ability to maintain a satisfactory grade point average contributes more to a student's decision to remain enrolled than simply progressing, highlighting the importance of ensuring a user-friendly learning environment. Given these key findings on retention and because research indicates students often find Twitter to be complicated and overwhelming, when striving to create a learning environment meant to engender lower division student success, instructors should in general avoid incorporating controversial and complicated technologies such as Twitter. #edtech #successfulstudent

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Qualitative Phenomenological Analysis of Foreign Language Assessment

Varvara Gasparyan

Introduction

In a modern period of globalization and progress in most fields of human interrelations, the possession of foreign languages becomes one of the main and necessary focuses of the continuation of globalization. With it comes the necessity of second language assessment for use in education and the workplace, and in immigration and asylum contexts (State of Washington Office of Superintendent of Public Instruction, 2016). The assessment of languages is important from the points of view of students and teachers. The purpose of the assessment is to measure and document the direct result of the person's performance in the foreign language and for the teachers to learn the level of language proficiency of the student. According to Bogdan and Taylor (1987), qualitative research is qualifying or expressing the characteristics of a phenomenon (e.g., human behavior) by exploring the situation.

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Creswell (2012) suggested that one of the major characteristics of qualitative research in the educational culture is when a research process is "exploring a problem and developing [an] understanding of central phenomenon" (p. 16). Phenomenology refers to the science of describing what one perceives and knows in one's immediate awareness and experience (Kockelmans, 1967). In this case of qualitative research, the author as an assessor is presenting a point of view as her lived experience and as the central phenomenon. A qualitative phenomenological analysis of the foreign language assessment process will be made where the term *phenomenon* refers to a perception or appearance of the assessment process from the assessor's point of view (Willis, 2007). The qualitative phenomeno-

logical approach is based on understanding the personal behavior of the student being assessed as seen through the eyes of the assessor. Based on the assessor's professional experience, the assessment process is described in the report and the student's foreign language competency level is evaluated (Simon & Goes, 2011).

Overview of the History of Foreign Language Assessment in the United States

Historically, in the United States, in the general education programs, foreign language competency has not been given the necessary consideration. For the first time, in 1952, the government's Civil Service Commission undertook a decision to inventory U.S. employees' foreign language competence, including ability, skills, and experience (Herzog, 2016). However, at that time, there were no proficiency tests or specific exams to administer that were in the form of self-reports using responses, such as "fluent" and "excellent."

After 1958, it became mandatory that foreign language proficiency tests be completed by all foreign service officers. Staff at the U.S. Foreign Service Institute became involved in resolving of this challenge and developing the testing unit for each foreign language level proficiency based on a 6-point Likert-type scale ranging from 0 (*no functional ability*) to 5 (*equivalent to an educated native speaker*). Accordingly, by 1985, an official government language skill level description was named as an Interagency Language Roundtable scale (ILR scale). Also in 1980s, the American Council on the Teaching of Foreign Languages developed for popular and academic use the second Oral Proficiency Interview test complementary to the ILR scale to train educators.

The ILR scale consists of proficiency level descriptions of foreign language skill levels for reading, speaking, listening, writing, translation performance, interpretation performance, competence in intercultural communication, and audio translation performance. Each level has six basic functions of skill level accuracy and, between those base levels, there is a description of the "plus level" as a supplementary to the "base level" descriptions.

In 1988, the U.S. Congress established the National Assessment Governing Board to set policy for the National Assessment of Educational Progress (2000), which is a source of assessment guidelines on what the students know and can do in 12 subject areas included the process of foreign language learning (National Assessment of Educational Progress, 2016). The National Assessment Governing Board contracted the Center for Applied Linguistics in a project to develop recommendations on the National Assessment of Foreign Language Educational Progress (NAFLEP). Within the NAFLEP, the American Council on the Teaching of Foreign Languages and the American Institute for Research were involved. The project was targeted to be in use for first time in 2003 and was intended for 12th-grade students who had learned a foreign language (Spanish) in school, as well for those who had not. The target of the project was to examine and reveal the connection between the length of study and level of achievement.

It was critical to understand the issues of foreign language education. One proposal was for a general framework to assess communicative ability in languages other than English. Because it was critical to understand the issues of foreign language education, it became the reason for full development of foreign languages learning and evaluation activities by involvement of the governmental structures. The framework would include the issues of foreign language listening, speaking, reading, and writing skills by using three modes of assessment: the interpersonal (two-ways interactive communication) mode, interpretive mode by understanding of the spoken or written

language, and presentational mode by creating spoken or written communication.

Internationally, the National Center for Education Statistics, on behalf of the United States, participates in the International Indicators of Education Systems, a program coordinated by the Organization for Economic Cooperation and Development, an intergovernmental organization of 34 member countries. Staff at the National Center for Education Statistics coordinate the U.S. educators, adults, and students in various international assessments (National Center for Education Statistics, 2016).The communicative ability of students is assessed by asking questions related to their daily life, school, and work. In the process, communication can be evaluated to determine the level of understanding that students have when speaking their native language and communicate to make themselves understood.

The National Standards in Foreign Language Education Project was supported collaboratively by the associations for nine foreign languages education: Chinese, Classical Languages, French, German, Italian, Japanese, Portuguese, Russian, and Spanish. The National Standards were influenced by the states whose federal government developed their foreign language state-based standards. Because Spanish is the most popular language spoken, the governing board at first decided to make it the main foreign language for learners. At the time of this writing, for effective evaluation of the foreign languages, assessments are completed using various methods.

The Assessment Process

The assessment process of knowledge of learned language competency could be in the traditional in-class learning environment or in a distance learning setting. This kind of assessment named as a diagnostic assessment could be considered as the midpoint between the formative and summative assessments (Simonson, Smaldino, Albright, & Zvacek, 2012). From the point of view of formative assessment, it is an important matter to adapt instruction based on the learner's needs, and, as a summative assessment, it considers a readiness to advance to a higher level of learning ability. In a process of assessment, the educator asks, "How detailed or brief should the assessment be made?" Depending on the time given to the assessment process, the shape of the communication context influences the evaluator and the educational personnel. In a communicating process, foreign language assessors are simulating role plays when questioning the students during the assessment tasks: cultural knowledge, educational information, work experience, and some information regarding personal life.

An assessment of languages is important from the point of view of the learner and the teacher. It helps the learner to evaluate personal achievements and the teacher to estimate which method or approach is most helpful for the students to develop better language learning abilities. Various methods of assessing language and strategies can be utilized in the classroom practices: distinct approaches in assessments at the visual or face-to-face classroom and assessment at the distance learning. In most cases, in the assessment at a distance, the assessor is not working with a student who was taught by the teacher's chosen methods. The assessor has to have specific methods for the assessment and also use personal approaches to evaluate the student's foreign language learning abilities as much as possible. This is especially true as it is related to an estimation of the students' speaking proficiency in foreign languages.

Assessment in an online setting through synchronous communication could be completed using a communicative tool, such as videoconferencing, audio conferencing, or video talk via the Skype program. The author uses software from

Skype Technologies, which provides instant messaging and video services. The assessment uses a scale called the ILR with the set of descriptions of abilities to communicate in a foreign language.

In an evaluation process based on a one-to-one talk session between the student and instructor, it is helpful to assess the student's foreign language speaking competency. In a real-time or video-based interaction, the student replies to the oral message of the instructor. This kind of interaction has an advantage, because it keeps the conversation moving between the teacher and student in sense of immediacy for as long as needed. *Immediacy* is a term that includes social presence, communication, and social dynamics (Mehrabian, 1969).

Qualitative analysis of foreign language assessment is associated with gathering information for examination of a participant's observation, field notes, structured interview and, finally, a written report on the assessment. Assessment or a testing process is a simultaneous psychological testing where the interviewer records qualitative data throughout the testing process.

There are varied assessment categories of foreign language assessment that measure students' ability to understand, speak, and be understood by others in the same language. The degree to which assessment reflects an accurate estimate of foreign language competence level is termed *validity*. Online video communication allows the assigned person to demonstrate its personal foreign language expertise level. The assessment completed online is helpful to provide a higher content of validity. The assessor speaks with the person, asks questions, observes, and listens to the responses.

Most evaluated students wanted to measure their language proficiency level and were interested to enhance that language knowledge level in workplace training programs, to work toward technical certification, or to continue their education for their future needs at the foreign languages teaching institutions. Normally, to evaluate students' speaking proficiency, the assessor uses a popular method of direct assessment through interviews, which clarifies the performance of language in context. By using a direct assessment method, the teacher offers the student an opportunity to discuss familiar topics. Direct assessment is a preferred form because it increases communicative interaction between teacher and students, motivate the students, and is good evidence of language use.

For the most part, the evaluation of foreign language speaking competence was completed using the technological tools of the online environment in the form of synchronous two-way communication between the assessor and the assigned person. Specifically, in the process of student assessment, a face-to-face conversation was requested through Skype with the interviewer by giving the students the questions. The assessment questions were designed to be easy and to give the students opportunities to reveal the level of their knowledge by constructing responses in a productive way. The questions cover common topics, such as the state or city where the student lives, daily life, hobbies, education history, or light conversation about the family.

Practice of direct assessment has some disadvantages because it causes performance anxiety from the students (Plakans, 2016). Though the assessor asks the questions in a friendly manner, some students feel some stress or confusion, which can be a result a change of intonation and voice tone. Palloff and Pratt (1999) noted that in distance education, isolation or the feeling of being alone felt by students is the hardest symptom for educators to combat. In distance education, the assessor may also experience feelings of isolation, have solitude problems, and perceive difficulties in scoring (Plakans, 2016). Some researchers

reported that online instructors or assessors are having problems of isolation and solitude and there are needs to design effective and efficient online programs to minimize that condition (Ashton, 2015). According to Simonson (2007), a solitary instructor is a teacher, trainer, or professor who works alone, rather than in a traditional instructional institution, with little or no personal contact with other professionals of similar backgrounds.

The feedback to the direct assessment is documented and a report is written by the assessor in which the student responses are analyzed with written descriptions and the scores are recorded. In a direct assessment, scoring can be completed through an online video conversation of the students' responses by utilizing analytic scoring or holistic scoring. In the holistic method of scoring, the assessor gives one overall score and does not engage in a separate analysis of the performed language. In an analytic scoring of language-speaking proficiency, the student's performance criteria are analyzed according to language vocabulary, accuracy, fluency, flexibility, pronunciation, and accurate phrasing of ideas, as well as the correct expressions of time, space, and personal references.

In the case of a face-to-face online assessment, it is helpful for the assessor to interpret the student behavior and body language. During the online conversation, the assessor listens to the speaking ability and watches the student's behavior in the form of body language. It is recommended that the assessor be careful during occasions of performance difficulties being experienced by students to be friendly and helpful in possible mistaken moments, which, most times, a student expresses in body movements. It is a psychological moment where a student needs to be encouraged by politely prompting a forgotten word or expression to continue the conversation.

The process of measuring the students' performance is made in accordance with the ILR language skill level descriptions of speaking ability. In a case of using this language skill measuring method, the examiner analyzes a student's response by describing the skill of the examinee in descriptive statements. Accordingly, the examiner classifies the spoken language proficiency level in base levels coded as 00, 10, 20, 30, 40, and 50 or by using the plus-level designation. Usually the plus level is assigned in cases where proficiency is higher on base-level skill, but does not meet the next base level. These plus-level codes in an evaluation of performance are making direct assessment difficult to interpret the scores and are too subjective for scoring. An assessor must complete the scoring by employing both analytic and holistic scoring methods and giving one overall score as base level or plus level. As an example, when an assessor evaluates with the score as *Speaking* 2 +*Limited Working Proficiency*+ *with Data Code* 26, it means that the student has shown considerable ability in communicating on topics of social, formal, or informal interactions with a high-degree of fluency and ease of speech. However, the individual may not be strong in speaking in professional contexts.

The descriptions on the assessment are sometimes reported as an expression of "the native speaker can perceive the examined individual's speech." A method to measure language skill level includes the term *native speaker,* which is used to compare the level of the examiner's language proficiency with the native speaker's understanding of that speech. In the proficiency description, also the term *well educated* is used. Its content is not necessarily meant to be the formal high education level or the student's skill, but illustrates the culture of foreign language where higher education is common, and the student has to express a personal language ability according that language standard. In conversation, the student has to use the contemporary style of that foreign

language. The feedback of the assessor's evaluation is required in the form of a written report that includes the date, time with the student in conversation, and the questions that were given to the student for consideration and conversation.

Summary

When there is a need for a timely measurement of a proficiency of the spoken foreign language, it can be completed through the online synchronous two-way video communication with the assigned person in form of interview. It can be done by using Skype as a hybrid peer-to-peer system for transmitting both text and video messages.

Though this method of assessment has a disadvantage because it brings to the assessor and the assigned student anxiety and feelings of solitude and isolation, it is an effective way of evaluating the foreign language proficiency and knowledge. The assessor uses a friendly attitude by greeting the student, making introductions, and explaining the way the assessment process will take place. The assessor presents the questions that the student will respond to during a specific time. After responding on all questions, the student is asking questions, if there are and at the end the assessor is finalizing the assessment. The interview talk with the assigned person is documented by a written report with the proficiency level description characterized student's performance of the spoken foreign language. The description was completed according to the IRL skill level descriptions-speaking scale. This assessment program has six base levels and six supplementary plus levels. The wide range of assessment possibilities helps the assessor to examine the spoken language performance and describe the skills of the person. The assessor reports the assignee's spoken language and structural accuracy, wide range of vocabulary, and the degree of fluency. The term *native speaker* refers to the native speakers of standard dialect whose spoken language is compared the examinee's speech. The term *well educated* means the standard of language in a culture when higher education is common and in the standard level.

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The Role of Computer Simulations and Digital Gaming in Distance Education

Linda R. Rivers

Introduction

As businesses prepare for the demands of a rapidly evolving, information-driven society, it becomes evident new skills and knowledge are necessary in the workplace (Howland & Moore, 2002). This causes many adults to seek additional education and find distance learning a convenient way to acquire the needed knowledge; however, learners in general are demanding to be permitted to learn from a distance (Howland & Moore, 2002; Simonson, Smaldino, & Zvacek, 2015). More and more students are finding there are many benefits to participating in the distance education learning experience, as enrollment in distance education programs continues to rise (Kim & Bonk, 2006). This rise in enrollment can be attributed to the fact that online learning allows for flexibility of access, from anywhere and in many cases on demand, which gives participants the opportunity to save time without the use of public space (Dede, 1996; Kim & Bonk, 2006).

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The increased focus on gaming for educational purposes has developed over the last decade, with researchers identifying key pedagogical features that make good video games inherently strong learning tools (Bidarra, Rothschild, & Squire, 2011; Cruz-Cunha, Carvalho, & Tavares, 2011). Such features include real-time adaptation, self-explanation, and distributed learning. The use of these pedagogical strategies is usually not an option in the instructional environment because most curricula are developed to suit the lesson objectives instead of addressing the learning style of the student (Akilli, 2007).

Even though the use of computer simulations and games in distance education is a fairly new phenomena and research in

this area is limited, there are still ongoing efforts directed at developing and studying the use of computer simulations in distance education, which provides a special place for both in learning technologies (Lunce, 2004). Furthermore, Lunce (2004) believes computer simulations and gaming draw their importance from the ability to present interactivity between participants and allowing experimentation and discovery learning of multifaceted skills in a close to real-world environment.

Computer Simulations and Games in Distance Education

There are many reasons educational researchers are advocating the use of computer simulations and games in the field of distance education. The list of reasons include: (1) its framework is grounded in a variety of learning theories; (2) it appeals to a diverse audience; (3) it fosters emotional intelligence; and (4) it supports and/or supplements a plethora of pedagogical strategies.

Framework

Today's learners, better known as Generation Y or Millennials (born 1980 to 1995) and Generation Z (born 1996 onward), are well versed in the mechanics of technology use (Hart, 2008). They eagerly await the latest gadget, excited about exploring the functionality of the new device. These learners have been described as "digital natives" (Prensky, 2010) because they were born during the age of explosive technological advancements and are familiar with its use and application (Kiili, 2005; Prensky, 2010). Engaging these learners is not a problem; however, guiding this engagement towards a learning goal or objective is a major concern for educators across the globe. Many educational institutions are turning to computer simulations and digital games to address the academic engagement of Generations Y and Z.

The reason for the big shift in pedagogical methods is based on research showing the gaming industry has captured the attention of more young adults than even the movie industry (Graesser, Chipman, & King, 2008), which alerts instructional designers to the many possibilities to increase educational engagement by merging the marriage of education and videogamelike entertainment (Brody, 1993). However, the burden of making the relationship between education and gaming work is not left entirely to the educational staff. Many teachers feel they must be the "sage on the stage" when it comes to pedagogical strategies; however, the focus should not be on the level of skills the teacher possess, but rather how technology can and should be used by students to facilitate their own learning (Prensky, 2010). A recent definition of educational technology includes the words "facilitating learning" to show that emphasis in the field is no longer based on delivering instructional content, but more about designing learning environments that produces knowledge construction (Molenda & Januszewski, 2008).

Facilitating a relationship between education and computer simulations/gaming should include development of a theoretical framework grounded in the appropriate learning theory. The first step in identifying the proper learning theory is to create a roadmap that details the learning objectives, the method of instruction, and includes assessment. Serious games (SG), which are games that are designed for a specific purpose other than entertainment or fun, are targeted by instructional designers because they already include many of the attributes necessary to bridge the gap between education and video-type games. Some positive characteristics found in serious games include motivational qualities and influence on participants (de Freitas & Jarvis, 2006). Additionally, serious games integrate elements of emotional intelligence in the form of soft skills such

as problem-solving, leadership, decision-making, inquiry, multitasking, long-term collaboration, and creativity (de Freitas et al., 2012; de Freitas & Routledge, 2013), which are considered important knowledge acquisition tools in education.

Pivec and Dziabenko (2004) revealed several steps instructional designers should consider when creating a road map for an effective and serious game. In the first step, the designer should:

- determine pedagogical approach (how you believe learning takes place);
- situate the task in a model world;
- elaborate the details;
- incorporate underlying pedagogical support;
- map learning activities to interface actions; and
- map learning concepts to interface objects (Pivec & Dziabenko, 2004).

Pivec and Dziabenko (2004) further explained that in addition to the recommended steps necessary to create a serious game roadmap, the design process must have intentional goals, meaning to identify the material the learner is expected to master. Use these goals to present the material in such a manner that the learner will be motivated to continue engaging the game regardless of repeated failed attempts. Pivec and Dziabenko believe this type of strategy leads to effective feedback and are preferred over the text-based feedback.

Grounded in Learning Theory

There are various learning theories across many disciplines; however, researchers are hard-pressed to find one that is exclusive to any one form of pedagogy. Ally (2004) characterizes the behaviorist, cognitivist, and constructivist framework as similar in many aspects, which allows designers to include variations of each in the gaming design of distance education materials. Instructional designers are aware of the challenge of selecting learning theories to help develop a foundational platform for development of educational gaming applications (Ally, 2004). The most important aspect of online learning program creation is that designers know research and theories are constantly changing; therefore, selecting the best approach to learning is detrimental to developing online materials. Ally (2004) believes that each learning strategy should be identified based on its ability to "motivate learners, facilitate deep processing, build the whole person, cater for individual differences, promote meaningful learning, encourage interaction, provide feedback, facilitate contextual learning, and provide support during the learning process" (Ally, 2004, p. 18).

Meanwhile, the prevalent learning theory many designers are using to develop the framework for computer simulations and games is grounded in constructivism. Constructivist theorists believe learners gain an understanding of information and the world around them based on personal experiences. These experiences can derive from events and environmental occurrences observed by the learner and placed in context centered on individual interpretations (Cooper, 1993).

Educational researchers and psychologists who are proponents of the constructionist learning theory includes well-known names such as, John Dewey, Jean Piaget, Maria Montessori, and Jerome Bruner. Their research is centered on the idea that knowledge acquisition occurs best when learners interact with the environment, while using prior experiences to organize mental schemas. Cruz-Cunha et al. (2011) note it is imperative that constructivism ideology be used to develop the theoretical framework for computer simulations and gaming applications. They based this conclusion on research conducted by Bruner, which implies a curriculum's intent is to help the student become an autonomous learner, while gaining

mastery of the material and developing problem-solving techniques. Additionally, Cruz-Cunha et al. (2011) believes the Piagetian ideology of constructivism helps merge the relationship between education and games by noting the importance of including authentic settings based on student abilities. This, according to Cruz-Cunha et al. increases the effectiveness of the lesson.

Furthermore,

> constructivism, situated learning, and the establishment of communities of practice, constitute a robust theoretical framework for knowledge acquisition based on the notion that learning occurs in the context of activities that typically involve a problem or task, other persons, and an environment or shared culture. (Bidarra, Rothschild, & Squire, 2011, p. 413)

Additionally, Dede (1996) reveals that providing learners with constructivist experiences, while assuming they have assimilated is important when facilitating their full comprehension, long-term retention, and ability to generalize instructional material.

Motivational Tool

In the distance learning environment, students are expected to possess a certain level of intrinsic motivation and be capable of self-regulating study habits to arrive at the desire learning outcome. In some K–12 virtual schools across the country, students must take a self-assessment questionnaire centered on level of motivation to determine if online learning is a "right fit" before enrolling in the virtual school of choice (Simonson, 2016). To that end, motivation plays an important role in the success of all students and must be considered when conducting research concerning the effectiveness of different pedagogical methods. This also holds true in distance education, as research has shown that intrinsically motivated students demonstrate characteristics that are self-regulated, and explorative, resulting in a deeper level of thinking processes (Connolly & Stansfield, 2006; Martens, Gulikers, & Bastiaens, 2004). Often, this type of discovery-based learning requires the use of analytical skills; and therefore, gives the student a sense of autonomous learning. Computer simulations and games are an excellent tool that can be used to develop the student's thinking processes, which enhances retention of information.

Interactivity and Collaboration

Barab and Duffy (2000) revealed that numerous educators and policymakers are advocating for a move away from "teacher-centered" models of instruction toward a more "learner-centered" and "community-based" model. Additionally, they reported that other researchers felt the word "community" was at risk of losing its meaning due to confusion as to the difference between a community of learners and a group of students learning collaboratively. To clarify this point, Barab and Duffy (2000)

> described communities as having three components in common: (1) a common cultural and historical heritage, including shared goals, understandings, and practices; (2) individuals becoming a part of something larger; and (3) the ability to reproduce as new members work alongside more competent others. (pp. 26–27)

Competition

When the purpose of including competition in educational games is to increase memory of the targeted material, DeLeeuw and Mayer (2011) recommend adding competitive features to the computer-based learning activity. They believe this learning strategy works well with all learners (para. 4.5). However, DeLeeuw and Mayer further assert that adding the competitive feature to computer-based

learning activities does not work very well when the goal is to obtain deep cognitive processing during learning; therefore, adding this feature is not recommended, especially for men (para. 4.5).

Adaptation

A very important characteristic of computer simulations and games is the ability to embed prompts that allows both designer and learner to change, edit or modify the learning environment based on the different learning styles of the users. Should the learner engage the educational game and find the material to be more challenging than originally expected, the user can adapt or change the level of difficulty. Once the learner finds the place where prior knowledge marries with development of new information, the learner will be more motivated to continue the game (Moreno-Ger, Burgos, Martínez-Ortiz, Sierra, & Fernández-Manjón, 2008). Moreno-Ger et al. (2008) reveals that another benefit of creating adaptive features in digital gaming applications is to supplement the interactivity of the game among users. The use of learning management systems gives the designer the flexibility to create tracking systems within the games to guide the learning process and ensure the learning objectives are being met. Adaption also gives the users flexibility in reference to course completion guidance, monitoring behavior patterns and assessment feedback.

Assessment

Educators are always concerned about selecting assessment tools that will accurately gauge the success of the pedagogical strategy used to deliver the lesson. Computer simulations and games are an excellent tool to use for the purpose of monitoring the learning environment through assessments. A very important part of any learning environment is the assessment of the learning experience. Computer simulations and games enrich the learning experience through an interactive medium that can be manipulated based on the learner's profile (Moreno-Ger et al., 2008). As with adaption, the computer simulation and game can be modified to monitor student activity, log events and participation in activities and can be done remotely through the selected learning management system of choice (Moreno-Ger et al., 2008).

Self-Explanation

When designers include self-explanation into the computer simulation or game, it allows the learner to insert a response to every move or decision made within the application. Opponents of computer simulations and games have mixed reviews about the effectiveness of self-explanation because they feel it takes away from the learner's level of motivation to complete the game. However, Johnson and Mayer (2010) found that allowing the learner to explain or give a reason for the choices made within the application contributes to what is called the "value-added" approach. Johnson and Mayer further report that self-explanation helps the learner to better understand the lesson's academic content. It is reported that embedding self-explanation features into computer simulations and games leads to higher academic performance by learners using applications containing this features than those who do not self-explain.

Distributed Learning

Computer simulations and games are taking hold in distance education by using a pedagogical strategy called "distributed simulation." When using the single-user simulation the individual is able to interact with a model of reality, whereas the distributed simulations enable several people at various locations to occupy and form a common artificial environment (Dede, 1996). This allows the learners to interact

and collaborate, leading to a more student-centered and community-based learning environment.

Kim and Bonk (2006) found that as the Federal Communications Commission addresses the need for increased bandwidth, Internet technologies, and capabilities, as well as online computer-based simulation and gaming tasks that online students engage in, will become more realistic and authentic (p. 29). Researchers have found that student engagement is an indicator of the effectiveness of the learning outcome, provided the activities are purposeful and has a set of learning objectives (Zhao, & Kuh, 2004). Computer simulations and digital games are appealing to most users because of the challenges presented in a social collaborative atmosphere. Through collaborative learning communities, students are able to relate prior experiences into authentic learning based on the academic and social activities found within the computer simulation or game (Newell, 1999).

Learner Transfer

In the past educators have been reluctant to use computer games for educational purposes; however, there is evidence indicating that using computer simulations and digital games may teach people more effectively than traditional methods (McClarty et al., 2012). Interest has increased across the board, to look at the use of digital games as serious learning and assessment tools (Vogel et al., 2006). However, the concern for many researchers is whether gaming develops cognitive and psychomotor skills that will transfer to different tasks in the real world.

Computer Simulations and Games Course Characteristics

Some colleges and universities have identified the need to produce curricula that can be used by the students to construct their own learning. Texas A&M University-Commerce, in Commerce, Texas, where Mary Jo Dondlinger is an assistant professor of educational technology, has taken steps to make the transition from teacher-centered to student-centered learning. Dondlinger (2015) believes there are qualities good computer simulations and gaming courses must possess, which should be centered on learning strategies and technologies that take into consideration critical and creative thinking. Dondlinger lists some of these critical and creative thinking techniques as, competition, open-mindedness, self-direction, critical curiosity, perseverance, and empathy. According to Dondlinger (2015), not only do computer simulations and games support critical and creative thinking techniques, but also critical and creative problem-solving. Students in distance education programs prefer the inclusion of critical and creative thinking processes in the online learning environment; however, Bonk conducted a survey and "found that only 23%–45% of online instructors surveyed actually used online activities related to critical and creative thinking, hands-on performances, interactive labs, data analysis, and scientific simulations" (Bonk & Kim, 2006, p. 23).

Case Study

Tobias, Fletcher, and Wind (2014) addressed the concern of learner transfer by comparing two conflicting studies, one conducted in 1994 by Gopher, Weil, and Bareket, and another study conducted in 1992 by Hart and Battiste. In the Gopher et al. study, a computer game was used, which was modified by Donchin (1989) from the original (Mane & Donchin, 1989) model, called *Space Fortress II*. The results showed the participants in the game group significantly outperformed the controlled group. Meanwhile, Hart and Battiste used an off-the-shelf computer game called *Apache Strike Force* and found no transfer resulting

from playing the computer game. However, Tobias et al. (2014) attributed this difference in results to the fact the *Space Fortress II* computer game used a simulation that closely resembled a plane cockpit for its study and no similar enhancements were made to the *Apache Strike Force* game. Since this comparison of studies, many other researchers have conducted studies and found significant results warranting the use of computer simulations and digital games for learning. Zhao and Kuh (2004) found that computer simulations and games can effectively help learners transfer what they have studied in one course to other assignments or academic requirements in other courses. This allows the learner to develop schemas that will create a certain level of familiarity when engaging new material.

Challenges of Computer Simulations and Games in Distance Education

Researchers have noted various disadvantages of computer simulations and games in comparison to other modalities (Lunce, 2004). Students in the distance education environment often take this route to help improve time management within their daily lives. Because computer simulations and games usually employ problem and discovery-based learning practices, they could be viewed to some of too time consuming (Lunce, 2004).

Another problem researchers found is that simulations could present a certain level of difficulty to learners who are not familiar with the complex content and interfaces (Graesser et al., 2008). An additional challenge Dede (1996) introduced was a concern with addiction, which could be a possible downside to computer-based simulations and gaming. Dede feels the use of avatars allows the learner to mask their identity; thereby, resulting in long-term use. Meanwhile, Cruz-Cunha et al. (2011) reports, overcoming the technology gap between learners and institutions is another problem interfering with the use computer simulations and gaming in the distance learning environment. Finally, some researchers feel there is a disconnection between what students want and what is being presented in the distance learning environment, especially when looking at the area of communication in the traditional as opposed to the eLearning environment. Connolly and Stansfield (2006) compared communication in the virtual classroom with that of the traditional classroom and discovered that the same types of communication interactions found in the traditional classroom were also found in the eLearning environment. Finally, Lunce (2004) feels computer simulations and games could be expensive and require an extensive planning, human and financial resources.

Future of Computer Simulations and Digital Games in Distance Education

Computer simulations and digital games are very important to the field of distance education as classrooms across the globe are faced with the challenge of how to deliver a quality education with a decrease budget. Massively multiplayer online games are popular in many learning environments and have the ability to replace a large amount of students; while reducing the number of instructors found in enormous lecture-type classes (Annetta, 2008). Additionally, Annetta (2008) found that "video games in education are gaining attention; it becomes more and more critical that empirical research be done on why and how games can impact students" (p. 237). Annetta further reveals those individuals interested in gaming for educational purposes should collaborate to help provide the necessary research to determine why and how games can impact students.

In spite of the benefits computer simulations and games provide to the distance

learning environment, Connolly and Stansfield (2006) acknowledge that "it is accepted that games-based eLearning will not be for all learners and it is accepted that there may be issues surrounding development costs" (p. 473). However, they feel there are many valid case studies available that indicates the successful use of games-based eLearning; therefore, additional research should be conducted to further understand the capabilities and limitations of gaming in the distance learning environment (Connolly & Stansfield, 2006).

Conclusion

Computer-based simulations and games present many ways to enhance cognitive development for a variety of learners with various levels of experience and abilities. However, additional research is needed to help instructional designers address methods of developing games that will measure variables affecting transfer of knowledge such as motivation, cognitive load, and engagement during playing, prior game experience and how the players feel about games in the educational environment. Similarly, research is needed to determine the consequences of adding other game features intended to promote deep learning, such as narrative theme, to a computer-based educational game (DeLeeuw & Mayer, 2011).

Even though computer-based simulations and gaming can help increase cognitive learning, traditional learning theories cannot be ignored. For example, the choice of pedagogical strategies used to implement innovative software tools and games and simulations in the distance learning environment should include concepts from some of the traditional constructivist theorists such as Brunner and discovery-based learning, Piaget and the stage theory of cognitive development, Vygotsky's social development theory, and Lave's situated learning theory (Bidarra, Rothschild, & Squire, 2011). This will ensure continuity among researchers and instructional designers when comparing data for development and implementation of a new computer simulation or gaming idea.

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Georgia Virtual Technical Connection

Distance Education for Georgia's Technical Colleges

Theresa West

Introduction

According to the Technical College System of Georgia (2017), an estimated 42% of the adult population has some level of college education in Georgia. For that reason, the Technical College System of Georgia (TCSG) provides a unified system of technical education, adult education, and customized business and industry training through programs that use the best available technology and offer easy access to lifelong education and training for all adult Georgians and corporate citizens. In fact, it oversees the state's technical colleges, adult literacy programs, and a host of economic and workforce development programs. As of today, the TCSG consists of 22 technical colleges with one university system technical division and 85 satellite campuses.

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Particularly, the system provides a broad range of career opportunities through a variety of certificate, diploma, and associate degree programs; continuing education programs; and economic development programs. More importantly, all TCSG colleges are accredited through a process overseen by a national or regional accrediting agency recognized by the U.S. Department of Education. For instance, the Council on Occupational Education is a national accreditation body recognized by the U.S. Department of Education, while the Southern Association of Colleges and Schools is a regional accrediting body recognized by the U.S. Department of Education.

According to Online Colleges, a website that provides information about top online colleges and degree programs in Georgia, several technical colleges in the Technical College System of Georgia (TCSG) system were recognized for their excellence and achievement in higher education.

As a leading resource for campus and online learning, Online Colleges released its annual ranking for 2017 and honored TCSG colleges for their excellence in online learning such as Georgia Piedmont Technical College, Central Georgia Technical College, Albany Technical College, and Ogeechee Technical College (onlinecolleges.com).

Georgia Virtual Technical Connection

According to Koon (2013), Georgia Virtual Technical Connection (GVTC) is a portal for online instruction in the TCSG. In fact, GVTC serves as the TCSG conduit for distance education and technology-enhanced education. Additionally, GVTC strives to ensure that the instructor and/or course developer workforce of the TCSG is afforded a vast array of tools, training, and support, assisting them in the development and delivery of the highest quality online content possible. In the same manner, Georgia Virtual Tech offers online courses that do not require on-campus class time and hybrid courses that are split between traditional face-to-face and online course time.

GVTC Mission Statement

According to GVTC (2011), its mission is to provide support, guidance, and assistance to the state's technical colleges in the design, development, and delivery of distance education and technology-based learning initiatives, manage the state level online student application portal, and serve as a conduit for distance and technology enhanced education (GVTC, 2011).

GVTC History

In the beginning, the Georgia Virtual Technical Institute consisted of 132 students and 17 online courses (Koon, 2013). Instructors within the TCSG system suggested the idea of teaching over the Internet to their presidents, who then approached the commissioner about online learning. Afterwards, the commissioner supported the presidents and instructors in their efforts by appointing an executive director of the Department of Technical and Adult Education Online Learning Initiative and a board of presidents to oversee this initiative (Koon, 2013). After its inception, the name changed to Georgia Virtual Technical College in 2000. Later, the name changed to Georgia Virtual Technical Connection in 2010 because it was established as a unit of the Technical College System of Georgia, not a college (A. Berger, personal communication, April 26, 2017).

Today, GVTC has nine staff members. According to Berger (Personal communication, April 26, 2017), the number of online faculty is between 4,000 to 5,000 instructors, and the number of online students is between 100,000 to 130,000 students. Indeed, each technical college in the TCSG provides rigorous and engaging online learning as well as hands-on learning. For this reason, GVTC's goal is to ensure best practices for learners in the distance education environment as well as provide technical assistance to technical colleges in the TCSG (see Appendix A).

Complete College Georgia Initiative

In order to build a 21st century higher education system, there is a need to provide students with the necessary tools to increase successful completion rates in the distance education environment. According to the Complete Georgia College initiative (2016), it aims to meet projected workforce needs by increasing the percentage of its population with some level of college completion from a current 42% to 60%. In fact, the Complete College Georgia initiative focuses on designing and building an accessible, responsive, and accountable higher education system while

fostering a national sense of urgency for action to achieve Goal 2025 (Complete College Georgia, 2016). For that reason, the goal of the TCSG and University System of Georgia (USG) is to add 250,000 postsecondary graduates to Georgia's workforce by 2020 (Complete College Georgia, 2016).

According to Morris (2012), the Complete College Georgia initiative is supported by the governor and led by the University System of Georgia in partnership with the TCSG. In other words, the shared responsibility for improving postsecondary completion rates among the TCSG and USG has led to collaborative agreements, as both systems move to implement high-impact strategies on their campuses. In fact, both the USG and the TCSG work cooperatively on organizing, planning, and implementing efforts that improves student success and increase graduation placement rates from institutions of higher education. For example, these two systems have articulation agreements in which the goal is to provide associate of applied science graduates of select programs with an opportunity to earn a bachelor of applied science degree from one of the universities in the USG. The articulation agreement between the USG and the TCSG will ensure that students' technical/occupational credits will be accepted as transfer credits by the university.

Achieve the Dream Initiative

To meet the Complete College Georgia initiative, the Achieve the Dream initiative focuses on closing achievement gaps and accelerating success among diverse student populations, particularly low-income students. Through this initiative, there is a need to identify areas where achievement gaps threaten the success of the college's student population. For that reason, the TCSG has collaborated with the Achieve the Dream organization since 2012. TCSG has made great strides in strategically addressing various projects designed to close the gaps and accelerate success among diverse student populations, particularly low-income students and students of diverse ethnicity, which aligns with the Achieving the Dream National Reform Network's mission (Achieve the Dream National Reform Network, 2017).

According to the Achieve the Dream National Reform Network (2017), there are three priorities. The first priority strives to improve the enrollment services process through an initiative entitled "Getting It Right from the Start." Through efforts associated with this initiative, the TCSG has successfully eliminated some of the wait time experienced by the students during peak registration. In fact, the number of complaints received from students has declined, while the number of enrollees has increased. The second priority works to improve the success rate of students in the college's gateway courses. Strategies for this initiative include the continuation of blended/provisionally admitted classes, implementation of College Success course, and the effective delivery services in the Academic Achievement Center. To monitor this initiative's impact, each individual technical college collects data and analyzes students' performance in blended and general education courses.

The third priority entails the monitoring and tracking of the college's online learning activities along with the newly established Academic Advising Center. For instance, integrating a checklist such as a Learning Outcome Assessment tool will not only identify but also outline online student's expected learning outcome. On the other hand, the Advising Center will enable colleges to assist students as they navigate through their academic programs. The mission of the Advising Center is to provide a supportive atmosphere that promotes the educational development of students in which it serves to prepare them to be workforce ready. In view of that, the desired results of the Achieve the Dream initiative and the TCSG's three pri-

orities include growing enrollment for our geographic and demographic groups, increasing graduation and placement rates, and achieving results and desired outcomes for students, local employers and local communities (Achieve the Dream National Reform Network, 2017).

Performance Accountability System

To adhere to the Achieve the Dream initiative, the TCSG developed the Performance Accountability System to promote quality and excellence in technical education and training. For instance, the Performance Accountability System contains four modules: program assessment, community needs assessment, planning, and budgeting. The program assessment module is based on the assessment of the effectiveness of the college's programs that culminate in a technical certificate of credit, a diploma, or an associate degree (Technical College System of Georgia, 2017). The community needs assessment module assists each college in determining its future needs for program improvement, modification, phase-out, expansion, or startup. The planning module is the key to improving quality, customer satisfaction, and high performance. Finally, the budgeting module addresses the needs identified through the internal analysis and improvement planning process. In other words, each technical college receives state funding annually for continuation of current programs, services, and administration. One of the ways that the technical colleges receive state funding is through the Perkins IV Act. The Perkins IV Act provides federal support to career/technical education programs by allotting 85% to academics, 10% to state leadership activities, and 5% to state administration activities. As a result, each year the legislature may allocate state funds for distribution the following year based on the enrollment. For that reason, each technical college in the TCSG system receives funding based on the enrollment and graduation placement (Technical College System of Georgia, 2017).

Instructional Technology

Technology has proven to be an integral part of everything we do in society, including how we teach and learn. In fact, innovative uses of technology engage students in the traditional face-to-face environment as well as contribute to student success in the distance education environment. According to Smaldino, Lowther, Russell, and Mims (2015), "instructional technology does not replace the teacher, but rather technology and media can help one become a creative manager of the learning experience instead of a mere dispenser of information" (p. 10). For that reason, video podcasts can be used for creating lectures or having students view lectures from other content experts. In view of that, GVTC manages the systemwide learning management system (LMS) that is utilized by all the state's technical colleges. In other words, GVTC oversees several additional applications that enable, enhance, and support distance and blended education such as:

- Blackboard Collaborate—offers synchronous learning via a webinar type environment;
- SmarterMeasure—online evaluation tool designed to assist students in determining their readiness for distance education;
- Respondus—used to create assessments, exams, and question banks all of which can be delivered via the LMS or used in a face-to-face environment through printed versions;
- Smarthinking—online tutoring service available to students taking fully online courses—select colleges only;
- Softchalk—allows the design of web-based learning content that can be used as a standalone resource or imported into the existing LMS platform;

- Studymate—allows the creation of Flash-based activates and games that can be incorporated into the virtual classroom or serve as stand-alone resources; and
- TurnItIn—allows instructors to verify originality of written papers, as well as providing a tool for feedback (Georgia Virtual Technical Connection, 2011).

According to the GVTC (2011), Blackboard Learn is the LMS that TCSG utilizes. Blackboard Learn supports the delivery of online content by providing students and instructors a secure logon environment into their virtual classroom. Instructors and/or course developers design, develop, and deliver course content and materials in and through the LMS. Students interact with the content, the instructor, and other students while attending their virtual course. Similarly, Blackboard Collaborate is a tool within Blackboard Learn that allows students to do online presentations. For instance, using Blackboard Collaborate will allow students to virtually present their presentations and allow instructors a faster way to grade and provide timely feedback to the student.

Next, SmarterMeasure Learning Readiness Indicator (formerly Readiness for Education at a Distance Indicator Assessment) is a web-based tool to assess students' likelihood for succeeding in an online learning environment. Students use the SmarterMeasure Assessment because it serves as a device to depict strengths and weaknesses of required computer skills. Since TCSG's target population is diverse, it is advantageous to analyze and administer a pretest of specific learning groups to determine the required computer skill level. For that reason, learner characteristics are assessed as learner-related characteristics because they are centered on the learners' demographic characteristics, chronological age, physiological characteristics, educational background, and cultural background.

Admissions Requirements

According to the GVTC (2011), students may sign up for online courses at a "home" institution or any other college in the TCSG. To enroll, applicants must be at least 16 years of age. To be admitted through the GVTC to one of the 22 technical colleges within the TCSG, students must:

- complete and submit the online application form with a nonrefundable application fee; and
- submit high school, technical school, and/or college transcript.

Home school students' acceptance requirements in lieu of a high school diploma or transcript require the following:

- letter from superintendent's office showing that the parents conformed to the requirements of the Georgia Department of Education;
- final or exit exam scores from an accredited state and/or national testing program; and
- annual progress reports for the equivalent of the home schooler's senior years.

Students with diplomas from secondary schools located outside the United States may have their transcripts evaluated for equivalency by an approved outside evaluation organization or attain a General Education Development High School Equivalency Diploma. They must:

- submit assessment test scores within the last 5 years. These may include ASSET, SAT, ACT, COMPASS or Accuplacer; and
- be 16 years of age or older (Georgia Virtual Technical Connection, 2011).

Library Resources

It is widely recognized that information literacy skills play an important role in academic achievement and lifelong learning.

Even though faculty have the responsibility of designing curricula and assignments that promotes information literacy, librarians have the responsibility to identify core ideals within its own domain to extend learning for students and work collaboratively with teachers. According to Calhoun (Personal communication, April 25, 2017), information literacy principles support instruction and provide measurable evidence that the faculty is utilizing the library support services. In relation to academic achievement, some of the factors influencing the quality of student coursework include:

- Ability to retrieve relevant information: Students' ability to retrieve information is hampered by their inability to identify concepts, read citations, use controlled vocabulary, use library catalogs.
- Inefficient use of time: Students experiment using different search strategies without success. This "trial and error" approach is time-consuming.
- Risk of plagiarism due to a lack of knowledge of the principles of the ethical use of information and particularly the use of citations. A significant number of students have limited or no knowledge of the basic information research process.

In view of that, students enrolled in distance education courses via GVTC have access to the Georgia Library Learning Online (GALILEO) system. GALILEO is an initiative of the Board of Regents of the University System of Georgia that provides access to multiple information resources including secured access to licensed products (GALILEO, 2014). In fact, GALILEO is the doorway to a wealth of information such as encyclopedias, business directories, e-books, and government publications. Through GALILEO, students can access over 300 databases indexing thousands of periodicals and scholarly journals from their mobile devices anytime and anywhere (GALILEO, 2014).

Equally important, Interlibrary Loan is an agreement among participating libraries to make certain materials, books, dissertations, journal articles, et cetera, available to member libraries upon request. In other words, this agreement for "resource sharing" gives students access to far more materials than any one library can hold. Each individual technical college searches its own collection first and then searches the Online Computer Library Center database to locate and borrow materials owned by other American, Canadian and European libraries. In addition to the Online Computer Library Center, students may also search the WorldCat database to locate books, and Gold (Georgia Online Libraries) to locate journal articles. Since there is no charge for the Interlibrary Loan requests, these databases are available through GALILEO (2014). For that reason, each individual technical college provides statistics on the number of searches in which a usage summary is available in the GALILEO database.

Advantages and Disadvantages of GVTC

One of the advantages of GVTC is that it has everything in one location such as a list of programs and courses for each technical college. Next, it provides student orientation, live chat, computer needs, online readiness assessment, and technology requirements. More importantly, students are able to access online resources for their specific program from their specific institution anytime and anywhere. Finally, each technical college has autonomy and flexibility which gives them complete control of their online development and online instruction.

Despite the advantages, there are limitations with GVTC. For instance, even though there are audio and videos for Blackboard Learn platform, the integration of audio and video podcasts of student orientation in one centralized location within the GVTC website would enable TCSG to

maintain a global competitive edge among other community colleges and universities. Next, incorporating assistive technologies such as text-to-speech software to meet the needs of students with disabilities. More importantly, GVTC website needs to be more engaging by incorporating a GVTC tour as well as student testimonials in one centralized location for online students to access anytime and anywhere.

Summary

Georgia Virtual Technical Connection serves as the Technical College System of Georgia conduit for distance and technology enhanced education. In other words, GVTC is a unit within the technical education arm of the TCSG. Mainly, GVTC supports and manages the application used for distance education environment. For instance, GVTC manages Blackboard Learn, which is the systemwide learning management system. Even though GVTC serves as a back-end support only, it would be advantageous for GVTC to incorporate audio/video online experiences to promote distance education for each technical college within the TCSG.

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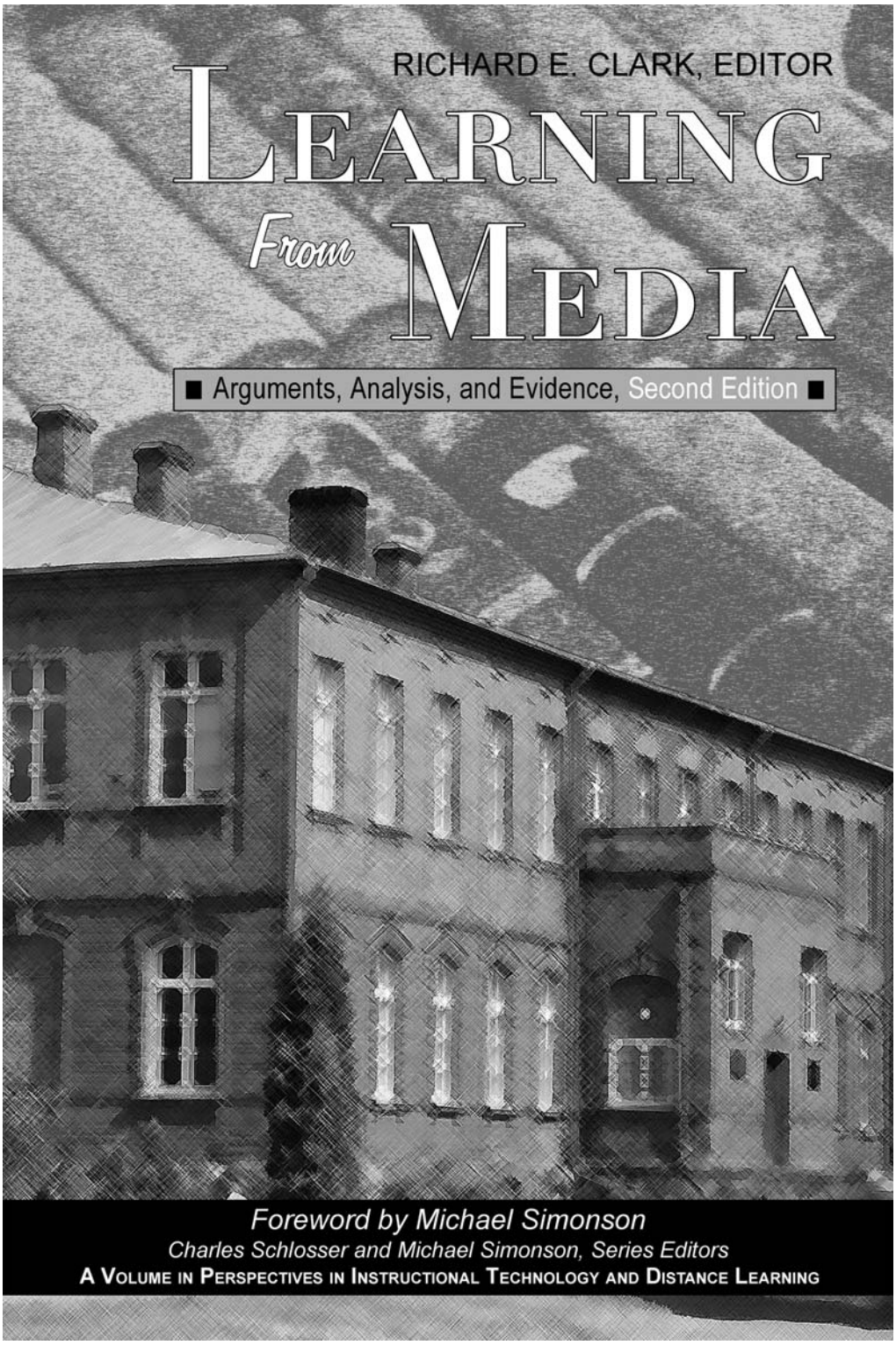
Appendix



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Broward Virtual School

Preparing Students for Success

Adrienne Fuller

Introduction

Broward Virtual School (BVS) seeks to prepare students for success in college and careers through the provision of excellence in teaching and advanced technology (Broward Virtual School [BVS], 2017a). Its mission statement states that, "The Broward Virtual School learning experience will provide students with an individualized, rigorous and engaging instructional model through a technology driven, interactive format" (BVS, 2017f, para. 1). BVS is committed to providing the necessary resource and tools to ensure students receive the skills need to be successful. It is a virtual school that strives for excellence while establishing a flexible and challenging alternative for students. BVS continues to meet the challenges that virtual schools face and they have reached a level that has made them a viable school of choice for students and parents within the county and beyond.

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About BVS

BVS is a part of the Broward County Public School System (BCPSS) (BVS, 2017a). Students within the county have the ability to take virtual courses through BVS free of charge. BVS was formerly located in Davie, Florida, but has since transitioned to Coconut Creek High School's campus, in Coconut Creek, Florida. BVS partners with Florida Virtual School to offer secondary courses, and K12 Inc. to offer K–5 courses to bring quality distance learning courses to K–12 students throughout the county, state and other areas. In 2016, BVS serviced more than 15,000 students (Royes, 2017a). BVS courses are 100% online with the exception of some exams, labs, and some meetings. Since BVS is a part of BCPS, it is fully accredited through AdvancED (BVS, 2017a). BVS takes pride in helping students prepare for success in colleges and careers.

BVS Courses

BVS is comparable to traditional schools due to the nature of providing quality educational experiences to students (Lishon-Savarino, 2013). BVS is a flexible alternative for students that is designed with content that is at or above grade level (BVS, 2017c). The courses at BVS are an alternative for students that is not only flexible but challenging as well. The BVS curriculum

encourages problem solving skills and critical thinking skills, as students work on real-life projects. BVS offers opportunities for students to utilize the knowledge and skills they have gained throughout their courses. BVS recommends that students devote approximately one hour or more daily to complete course requirements in order to remain abreast on the content.

Students that take courses through BVS must have access to the appropriate technology to complete the coursework. Lessons through BVS are compiled of learning modules with interactive content (Lishon-Savarino, 2013). Some courses require different equipment depending on the content. Students must possess basic skills in technology and instructors will work with students to develop any other skills needed to complete the coursework. If any additional software is needed for communication purposes, links are provided for students to download the software (Lishon-Savarino, 2013). Although courses at BVS are completely online, students are expected to remain active participants throughout the duration of the course (BVS, 2017c). The administration of state exams to BVS studies requires a secure testing environment, which makes it necessary for students to take the exam face-to-face. Teachers also have the option of employing this option to guarantee credibility for major assignments or exams. If students fail to remain active in courses for a period of a week or more they will be considered truant. Attendance in online courses is just as valuable as attendance in traditional courses to remain on track for success.

"BVS utilizes videoconferencing so students, educators, and administrators can collaborate with one another" (Lishon-Savarino, 2013, p. 21). Schools within the county have partnered with BVS to bring instruction to the various classrooms through videoconferencing (Lishon-Savarino, 2013). This method has been used effectively with multiple schools at the same time. Videoconferencing allows students to participate in different lessons at one time with students in a different school. The lessons are engaging for students because they get the opportunity to view other students on the screen from different schools and they get to actively participate in the process.

Administration

BVS has managed to remain a school of excellence through the dedicated and innovative leadership of its administration, led by Principal Christopher McGuire. McGuire was a finalist for Broward County Principal of the Year for the 2016–2017 school year (Royes, 2017b). The focal point of his leadership is ensuring that the well-being of students is top priority. Under his leadership BVS continues to promote diversity within their school (BVS, 2017c). This is believed to be one of things that sets this school apart from traditional schools. BVS provides an experience for students that is unique and was created for the purpose of leading students to success.

Teachers

BVS desires to remain an elite school that prioritizes the quality of each learning experience (BVS, 2017a). BVS courses are facilitated by teachers who are knowledgeable and highly qualified and certified through the state of Florida (Lishon-Savarino, 2013). Due to the diverse educational experience of BVS teachers, the school is able to offer courses that traditional schools offer. Virtual teachers must be able to manage the traditional roles of a teacher such as presenting content, being a role model or mentor, providing assessments, developing lessons, et cetera. (Teacher Certification, 2017). In addition to managing traditional roles virtual teacher must become acclimated to teaching students at a distance (Royes, 2017a). Students are given the ability to transition from one class to another whenever they desire with their virtual courses. Students have men-

tioned that they have the liberty to communicate more often with their BVS teachers than in a traditional classroom. The relationship that the teachers and students develops is unique. The teacher can provide specialized attention to students based on their individual needs. BVS requires that students actively participate in courses and communicate with their instructor.

Students

Although BVS partners with other virtual schools, it is a district run virtual school. Virtual schools that are run by school districts typically have a low full-time enrollment (Miron, Gulosino, Shank, & Davidson, 2017). "Approximately 350-400 full-time students elect to pursue a diploma with BVS each year" (BVS, 2017b, p. 1). BVS does have a limited full time enrollment but they have serviced thousands of other students seeking to take virtual courses. Students choose to take courses through BVS for various reasons. One of the reasons students take courses through BVS is for the purpose of recovering required courses (Royes, 2017a). Others attend BVS part-time to take courses that may not be offered at their local schools. Some may take courses through BVS to get ahead for the purpose of graduating early or for the purpose of taking more college preparatory courses (Lishon-Savarino, 2013). Another factor that has led to an increase in the number of students taking courses through BVS is that fact that high school seniors need at least one online course to graduate (BVS, 2017c). As of the 2014–2015 school year, BVS high school seniors still manage to have a high completion rate (U.S. News, 2017). The completion rate for high school seniors has managed to stay over 90% since 2007 (Lishon-Savarino, 2013). "BVS targeted an appropriate learning strategy that enables the majority of students to complete coursework" (Lishon-Savarino, 2013 p. 18). The high senior completion rates shows that BVS is dedicated to ensuring that students reach success.

Parents

BVS serves as a viable school of choice for parents seeking to find a school that offers quality education and flexible options (Royes, 2017a). BVS understands that in order for students to be successful, the parents/guardians must be involved in the educational experience of their children (BVS, 2017g). Parents are kept up-to-date with student progress at all times. Parents are contacted on a regular basis regarding the progress of their child. BVS provides a link for parents that enables them to check on the progress of their child in a BVS course at their leisure. BVS offers many resources for parents like Virtual Counselor, which enables the parent to check things such as student attendance, grades, test scores, et cetera. BVS also provides links for graduation requirements, College Board, and the Florida standards.

Admissions

Full-Time Students

Students have the ability to enroll in BVS on a full-time or part-time basis. If students choose to enroll full-time they must apply for admittance. In order for students to be admitted full-time they must meet certain criteria (BVS, 2017d):

- Students must show that they have successfully completed courses in the past;
- Students must have scores from state assessments from the previous school term;
- Students must be a resident of Broward or Miami-Dade County; and
- Students with any disability will be admitted upon the review of their Individual Education Plan.

Part-Time Students

Part-time students for BVS live in Broward County and are enrolled in private or public schools within the county and home-schooled students (BVS, 2017h). These students must also have access to computer that will enable them to take online courses. Through BVS, students are given the opportunity to take courses part-time not only through the school year but through the summer as well. Students can enroll in courses based on availability. When BVS courses reach capacity, students are able to still take courses through Florida Virtual. Due to the partnership the schools have, the courses are replicas of each other. Home-schooled students do have the ability to take courses part-time but they cannot be promoted through BVS, they cannot receive their diploma through BVS, and they are not mandated to take any state tests. Parents must still follow the home school reporting guidelines to enable student promotion.

School Choice

Virtual schools are experiencing growth nationwide due to the expansion of the school choice initiative and provided rewards for companies that are seeking to enter the virtual school market (Molnar, 2017). "Broward County Public Schools (BCPS) is proud to offer high-quality educational programs at each of our schools. Our District is a national leader in providing innovative learning opportunities to help students reach their highest potential" (BCPS, 2017b, para. 1). BVS is one several choice options that is provided for parents/guardians to explore. School choice in BCPS allows students to attend schools that are not their boundary school (BCPS, 2017b). BVS must continue to offer quality courses and other resources to appeal to parents and students and remain a viable school choice option (Royes, 2017a). BVS does not desire to compete with traditional public schools, but instead provide a quality alternative for students. Many assumed that providing the option of virtual courses would impact student enrollment in traditional schools. After a few years, this belief diminished and BVS began to be known for offering courses that were not being offered at local schools.

Preparing Students for Success

BVS makes every attempt to ensure student success by providing a wealth of support for students (BVS, 2017c). The teacher for each course is the first option students can use for assistance. Students can reach teachers in a multitude of ways to receive support. Guidance counselors are also readily available for students. BVS promotes the development of skills, approaches, and discipline (BVS, 2017a). Students may desire to know whether or not online learning is right for them (BVS, 2017c). Students at BVS are held accountable for their learning. It is imperative that students preparing to take courses at BVS be motivated and have the ability to independently begin coursework. Students must be dedicated to accomplishing the tasks necessary to complete each learning goal. Managing extracurricular activities in addition to coursework can be tedious but BVS offers flexible courses that students can take on their journey to success. BVS is not designed to serve as a school for students on the verge of dropping out; there are other less strenuous options available for students to explore.

BVS seeks to engage students through the provision of face-to-face activities (BVS, 2017a). "To enhance the virtual school experience for students, BVS offers extracurricular activities to provide students with opportunities to collaborate with their teachers and classmates" (BVS, 2017a, para. 3). BVS offers many face-to-face social and academic activities for full time students to remain active (BVS, 2017a). Some of the social activities that are offered are junior and senior prom and

meet-and-greets where students can meet other BVS students. Academic activities such as field trips, academic competitions, National Junion Honor Society/National Honor Society, college planning sessions, and various clubs are available for eligible students. "These events allow students to collectively work with one another, engage in constructive programs, raise awareness for good causes, enrich their personal learning experience, and actively participate in community services activities" (Lishon-Savarino, 2013, p. 19-20).

BVS provides students with the necessary resources to be successful. BVS offers the same resources for students and parents that are offered for BCPS students (BVS, 2017e): resources such as Virtual Counselor, which helps students and parents monitor things such grades and graduation requirements, BEEP, which is a portal with resources for students and parents, and Navience which is a program that helps students prepare for colleges and careers. BVS also provides links for instructional tutorial sites such as Khan Academy and Lit2Go audiobooks (BVS, 2017e; Lishon-Savarino, 2013). Khan Academy is a free resource that provides math tutorials, practice tests, practice questions, and so much more (Khan Academy, 2017). Khan Academy also provides some of those same features for other subject areas such as science and humanities. Lit2Go is a site that provides audio and pdf copies of a range of books and poetry (Lit2Go, 2017). The site is organized and user-friendly, which makes it simple for students to access the material that they desire to read.

School of Excellence

BVS has also maintained their school grade of an A since 2012 (BCPS, 2017a). Student performance on state assessments has led to the proficiency level of BVS students in reading and math being above the district average (U.S. News, 2017). BVS earned a silver medal for 2015 and 2016 from the U.S. News national high school ranking, which is based on student performance on state assessments and the level at which students are prepped for college. Back in 2010, BVS received the Outstanding Learning Practice award from the International Association for Online Learning (Lishon-Savarion, 2013). BVS continues to provide quality courses surpassing the common standards for virtual schools to ensure that are learning and preparing for success.

Challenges in Virtual School

The popularity of virtual schools has increased due to the nature of providing an alternative to education that promotes a different teaching style other than the traditional teaching style (Royes, 2017a). According to the Miron et al. (2017), "school performance measures for both virtual and blended schools indicate that they are not as successful as traditional public schools" (p. 6). These measures are evidenced by input and output differences amongst students in traditional and virtual schools. The differences are based on the analysis of policies in comparison with the instructional/organizational models of virtual schools within different states. Virtual schools still are faced with challenges that are related to funding, accountability, quality of instruction, and staffing shortages. "Accountability challenges linked to virtual schools include designing and implementing governance structures capable of accounting for expenditures and practices that directly benefit students" (Miron et al., 2017, para 6). BVS sets high expectations for their students to ensure learning success, these expectations have led to standards that lie above the average standards for virtual schools (Royes, 2017a). The guidelines that BVS have in place that are related to the increase in teacher/student face-to-face communication and decreases the chances of students falsifying their assignments.

Conclusion

"Virtual learning provides flexibility of time and location, and promotes development of the skills, attitudes, and self-discipline necessary to achieve success in the 21st century" (BVS, 2017a, para. 1). BVS has become a viable school of choice preparing students for success whether the student is completing their entire high school program, doing course recovery, meeting high school graduation requirements or simply taking a course to get ahead. BVS strives to provide quality educational experiences for students. Although BVS faces the same challenges many virtual schools face across the nation, they are continuing to set high expectations for students to maintain the integrity of the school. Moving into the future BVS plans to remain a school of choice for students within the county and beyond and continue provide the tools and resources that are needed to help the 21st century learner succeed.

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Telehealth

Changing Healthcare for Humans and Animals

Lee S. Nagy

Introduction

Telehealth is an innovative and revolutionary method of healthcare delivery that provides high quality, convenient, accessible healthcare at a lower cost. The broad umbrella of telehealth is a broad category that includes telemedicine and mHealth and addresses the growing physician shortage while increasing patient engagement through telecommunications technology. Telehealth provides some interesting and potentially very positive solutions to the care of infants, small children, and animals, who cannot necessarily speak for themselves. Although telehealth/telemedicine raises some serious practical, legal, and ethical challenges, many health care providers are committed to not only improving access to high quality medical care, but to innovation as well.

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The Telehealth Umbrella

The telehealth umbrella includes both clinical and nonclinical services, consulting, education, and information through telecommunications devices such as smart phones, tablets, wearables, laptops, et cetera. Telehealth is a broad category and includes telemedicine, which focuses mainly on clinical services delivered at a distance via two-way video, e-mail, smartphone apps, wireless tools, and other telecommunications technology (Raskas, Gail, Schinasi, & Vyas, 2017). In addition to telemedicine, eHealth and mHealth also fall under the telehealth umbrella.

Definitions and Distinctions

According to the Health Resources and Services Administration of the United States Department of Health Human Services, Telehealth is defined as

> the use of electronic information and telecommunications technologies to support and promote long-distance clinical health care, patient and professional health-related education, public health and health administration. Technologies

> include videoconferencing, the internet, store-and-forward imaging, streaming media, and terrestrial and wireless communication. ("Telehealth Programs," 2015, para. 2)

The American Telemedicine Association defines telemedicine as "the remote delivery of health care services and clinical information using telecommunications technology. This includes a wide array of clinical services using Internet, wireless, satellite, and telephone media" ("About Telemedicine," n.d.).

The World Health Organization defines eHealth as "the use of information and communication technologies (ICT) for health," and mHealth or mobile health as "the medical and public health practice supported by mobile devices, such as mobile phones, patient monitoring devices, personal digital assistants, and other wireless devices" (World Health Organization, 2011, p. 6). Mobile health includes an exchange of health information via cell phones and tablets, such as appointment reminder messages, reminders to check blood sugar for diabetic patients, and alerts about large-scale outbreaks of disease (Butcher, 2015).

Although the terms telehealth and telemedicine are often used interchangeably, they are distinctly different. Both delivered at a distance using telecommunications technologies, telehealth is broader and includes nonclinical services, while telemedicine focuses on clinical services (Raskas et al., 2017). This article will discuss telehealth/telemedicine, and the benefits and challenges this innovative trend is facing as adoption and use is rising around the world.

History of Telemedicine

In 1905, a Dutch physician, Wilhem Einthoven, performed an early form of telemedicine by transmitting electrocardiogram data from a distance, and in 1924, Hugo Gernsback invented a "fantasy" telemedicine tool with robotic fingers and a projected video to remotely examine patients. However, it is Kenneth Byrd who gets the credit for the term "telemedicine." In 1968, Byrd linked Boston Logan Airport with Massachusetts General Hospital, creating the first telemedicine system using two-way, interactive television to remotely diagnose and treat patients from transmitted medical images. In the 1960s, 1970s, and 1980s, the National Aeronautics and Space Association used telemedicine to treat astronauts in outer space, residents of rural Indian reservations in Arizona, and earthquake victims in Armenia. In 1989, with the invention of the World Wide Web, telemedicine's capabilities were greatly expanded, and the early 1990s saw the creation of the American Telemedicine Association and telehealth consultations for rural, underserved population were paid for by Medicare. In 1999, a neurologist provided acute stroke care through "telestroke." The early 2000s saw the emergence of video chat and apps leading to rapid growth of telemedicine in the United States with the use of smartphones and creation of telemedicine companies bringing lower cost, on demand health, and medical care to the masses (Dorsey & Topol, 2016; Iafolla, 2016; Simonson, Smaldiono, & Zvacek, 2015).

Modalities, Applications, and Devices

Telehealth/telemedicine can be conducted synchronously, such as in live interactive services or asynchronously, as in store-and-forward, where images and other patient data are stored and sent via a secure electronic connection to medical professionals and providers for assessment. For example, in direct-to-consumer telemedicine, patients can connect with their healthcare provider via a secure video or e-mail for consultation right in their own homes. This type of synchronous communication is convenient,

efficient, and cost-effective (Butcher, 2016; Dorsey & Topol, 2016; Simonson et al., 2015). Other methods of telehealth/telemedicine include online communities and consumer networks, wearable sensors and devices, at-home monitoring technology, and mobile health applications (Butcher, 2016).

Telemedicine has four main applications: remote consultation, remote monitoring, remote education, and telementoring. In remote consultation, a healthcare provider, such as a physician, seeks out the advice of another specialist, subspecialist, or other professional colleague to aid in diagnosis or determine a solution to patient issues. For example, Doctors Without Borders has a network of more than 280 experts that use the Internet every day to relay questions and answers about difficult cases physicians encounter in countries around the world, including Niger and South Sudan (Beck, 2016). In remote monitoring, patient vital signs are taken at a distance and transmitted via telecommunications technology. For example, wearable sensors and mobile diagnostic systems such as heart rate monitors, blood pressure monitors, glucometers, and electrocardiograms collect and transmit data to health care providers (Dorsey & Topol, 2016). In remote education, knowledge and education is shared with practicing professionals and providers that are geographically separate from the educators. In telementoring, medical providers and professionals are guided or guide another from a distance using telecommunications. The most common example of telementoring involves robotic surgical tools (Simonson et al., 2015).

Telehealth/telemedicine devices include specialized medical devices and equipment to capture critical patient information. In addition, specific software is available to record, manage, and share that patient data and images. Telehealth/telemedicine devices include examination cameras, medical scopes, camera and illumination systems, stethoscopes, vital signs monitors, electrocardiogram machines, spirometers, holters, retinal cameras, and ultrasound probes. Telemedicine carts or "telepresenters" can be customized and configured with the appropriate medical devices and software technology to fit various applications.

Benefits

Telehealth/telemedicine has many benefits including convenience, more timely delivery of high quality healthcare due to reduced wait times, a reduction in health care costs for both the provider and the patient, greater access to care for rural and underserved populations, aids in solving the physician shortage issue, improved doctor-to-doctor consultations, and connection to the healthcare digital ecosystem (LaPlante, 2017).

Telemedicine has been successfully used to treat military personnel, inmates, rural, and underserved populations (Dorsey & Topol, 2016). In the United States, 90% of employees have access to services from telemedicine companies, such as Doctor on Demad, Teladoc, and MDLive (Lin, 2017). The American Telemedicine Association reports that these and other telehealth/telemedicine companies were expected to have over 1.2 million virtual visits in 2016 (Beck, 2016; Lin, 2017).

In 2014, the U.S. Veterans Health Administration conducted more than 2 million telehealth visits for more than 700,00 veterans (Lin, 2017). On April 25, 2017, the "Veteran E-Health and Telemedicine Support Act (VETS) was introduced in the U.S. House of Representatives. VETS will allow VA health professionals to practice within the scope of their authorized federal duties across state borders. In addition, this act allows an exemption for health professionals to practice across state lines without getting an additional state credential (Bloch, 2017). This is good news. Currently, to provide medical care to a

patient doctors are required to have a valid medical license in the state where the patient is located, forcing virtual-visit companies to work with only locally licensed clinicians. This is problematic for world-class institutions, such as the Mayo Clinic, that treat out-of-state patients. Once a patient has returned home and has a new problem or concern, the doctor's hands or tongue is tied, as he or she can only follow up via e-mail, phone, or web chat and discuss conditions for which the patient was treated for in person unless that physician is also licensed in the patient's residential state (Beck, 2016). In 2016, 17 states joined a compact to honor the licenses of the other states to provide greater access to telemedicine services across state lines (Lin, 2017).

In addition to greater access across state lines, telehealth and telemedicine addresses the current physician shortage and the lack of quality care to rural and underserved populations. In the United States, approximately 20% of the population live in rural areas with a mere 39 primary care physicians available for every 100,000 patients. By the year 2020, the Association of American Medical Colleges estimate an increase in the shortages to 45,000 primary care physicians and 46,000 surgeons and specialists. This shortage results in longer wait times, commutes, and access to consultations for chronic care or for life-threatening diseases (2016 U.S. Telemedicine, 2016; "About Rural," n.d.).

A typical virtual visit costs $50.00 and lasts 10–20 minutes, in contrast to approximately $150 office visit fee for the 2 hours spent for a typical 20-minute in person appointment plus drive and wait time (Dorsey & Topol, 2016; Jones Sanborn, 2017; Lin, 2017; Raskas et al., 2017). Many of these virtual visits are conducted from home, which is an advantage for those who have long commutes to see a physician, cannot take the time off work, or are too sick or have another condition that impedes or makes travel difficult. Telehealth/telemedicine services are convenient, timely, and cost-effective.

Potential: Kids and Pets

Two areas of potential in telemedicine are pediatric care and veterinary care. Neither infants nor animals can clearly use words to describe or explain pain or discomfort. Pediatricians and veterinarians must rely on parents or pet owners to describe behavior, physical symptoms, et cetera. The author interviewed a hospital pediatrician and a veterinarian about the potential for telemedicine in their respective fields.

Urgent care centers could benefit from using telemedicine with a variety of clinical models, such as kiosks for "satellite," "hub and spoke," school-based care, and load balancing. Another use of telemedicine in pediatric urgent care centers are direct-to-consumer platforms where patients can use devices that attach to their smartphones or other standalone tools, such as thermometers, stethoscopes, otoscopes or a combination of these devices to aid in the virtual exam. In addition, telemedicine use for pediatric urgent care centers can facilitate consults with subspecialists, and mentoring (Raskas et al., 2017). For children with acute illness or injury, telemedicine could be used to consult with area hospitals to aid in proper transition, transport, and admissions (Dorsey & Topol, 2016).

Thomas Wojciechowski is a hospital pediatrician with over 20 years' experience, and although telemedicine is not in widespread regular use in his department, he believes it to be a beneficial tool. In fact, he suggested that it be used for consultations with other pediatricians and specialists and to aid in determining the proper level of care for an infant or child patient in the emergency room or an urgent care center. An interesting potential application for pediatricians to provide telemedicine is for schools or athletic tournaments. Schools typically do not have medical personnel on

staff and if they do, it is likely a nurse or a medical assistant and athletic tournaments have trainers, therefore video consultation with a pediatrician could be very beneficial and less costly. During the 2015–2016 school year, Howard County schools in Maryland conducted 150 exams via telemedicine and 87 during the first half of the 2016–2017 school year with 98% of students treated via telemedicine returned to classes right away. This statistic does not include students with contagious or conditions not treatable by telemedicine (Ollove, 2017).

Wojciechowski agrees that telemedicine can be beneficial, but states that caution should be used.

> I am in favor of telemedicine for pediatric care, however there is a strong need for caution, it many cases it is necessary to lay hands on a patient for proper diagnosis and although there are advancements with diagnostic tools it isn't the same. This could have serious legal and ethical implications. (T. Wojciechowski, personal communication, April 29, 2017)

Legal and ethical implications are also major barriers to telemedicine in veterinary practice here in the United States and across the pond in the United Kingdom. The Royal College of Veterinary Surgeons in the United Kingdom regulates and guides veterinary practices in the United Kingdom just as the American Veterinary Medical Association regulates and guides veterinary practices in the United States. The Royal College of Veterinary Surgeons follows the United States in recommending the practice of telemedicine unless there is an established veterinarian-client relationship other than just by telephone or electronic communication or an emergency before the animal patient can be seen by a veterinarian (Clark, 2017). The American Veterinary Medical Association Model Veterinary Practice Act states "a Veterinarian-Client Patient Relationship (VCPR) requires the veterinarian to examine the patient, it cannot be adequately established by telephonic or other electronic means (i.e., via telemedicine) alone" (Ishmael, 2015, para 1). This act specifies establishing new VCPRs, it does not say anything about established VCPRs or teleconsulting (Vogelsang, 2016).

Teleconsulting is a safe and practical application, especially for feline behavioral counseling. Danya Linhean, with over 34 years of combined experience in animal welfare and veterinary science agrees with Wojciechowski that a hands-on exam in which the veterinarian can palpate and manipulate the patient is very important in many cases. The opportunity to observe the feline in the home environment to get a true sense of what the feline is experiencing. When an animal is taken into the animal hospital or clinic, especially felines, there is often a great deal of fear and trauma associated with the visit. Typically, when getting a resting pulse in the clinic, it is not a true measure, as the heart rate is elevated due to the fear factor (D. Linehan, personal communication, April 29, 2017). Linehan suggests educating pet parents on how to take a resting heart rate, blood pressure, and other vital signs to aid in properly assessing behavior. Additionally, the current technologies such as collars that measure heart rate or litter box technology that measures glucose in the urine are not truly accurate and can lead to misinterpreted data. The veterinary profession is about relationships, not apps or technology. Those are just tools to aid in creating a better life for animals (Vogelsang, 2016).

Challenges

Despite the benefits and great potential for telehealth/telemedicine, there are significant challenges and concerns for both human and animal populations. Potential liabilities include standard of care, incorrect diagnosis or prescriptions, fraud, abuse, and legal and ethical issues.

Although many procedures and check-ups can be done digitally, there are concerns about diagnosing humans and animals via phone or video chat without touching the patient, whether it is human or animal. There is a significant concern that telemedicine is not equivalent to in-person care for a variety of reasons. For example, in the case of acute abdomen pain, it is necessary to palpate the abdomen to properly diagnose appendicitis or other conditions. However, in some types of virtual visits, touching may not be necessary. For example, the management of chronic illness, such as diabetes or congestive heart failure. The diabetic patient follows up with his/her endocrinologist every three months and the data from his/her glucometer is sent electronically for review prior to the visit. The heart patient is sent home with a tablet to survey symptoms daily. Both patients benefit from at-home monitoring and virtual visits for maintenance care (Raskas et al., 2017; Zhang, 2016).

Another significant challenge is regulation. Regulation of medical and health care is in the hands of the states, therefore there could be 50 different definitions of "medical practice," licensing fees, and sets of rules. As of 2015, 41 states have definitions for "telehealth," 17 states have definitions for "telemedicine," and two states do not have definitions for either (Butcher, 2015). Most of these definitions do not align with the definitions used by the federal government. More than 200 bills relating to telemedicine were introduce in 42 states in 2016. Most of these bills cover which services will be covered and reimbursement for remote patient monitoring and store-and-forward technologies (Beck, 2016). Only Alaska, Minnesota, and Mississippi reimburse for all three types of telehealth/telemedicine services through Medicaid (Butcher, 2015). As of 2016, 17 states joined the Interstate Medical Licensure Compact that allows physicians providing telehealth/telemedicine services in multiple states, but the standards of care have not been determined in all 50 states. In fact, only three states—Colorado, Hawaii, and Texas—have standards for telemedicine care (Dorsey & Topol, 2016).

The digital divide is also a challenge for telehealth/telemedicine. Although it is predicted that 90% of people will have smartphones by 2020, not all people, especially those in remote areas, will have access to the Internet or the skills to effectively use the smartphone and apps for telehealth/telemedicine (Dorsey & Topol, 2016). The National Broadband Plan from the Federal Communications Commission is helping to close this gap. Telehealth and telemedicine will continue to grow.

Conclusion

Telemedicine is currently a $17.8 billion industry and is predicted to grow to $34 billion by the year 2020 (Iafolla, 2016). Telemedicine visits are expected to grow exponentially from the 1.25 million conducted in the United States in 2015. Patients, physicians, healthcare workers, and healthcare organization leaders are embracing telehealth/telemedicine. In a recent survey of healthcare executives believe telemedicine is critical to the future success of their organizations. Also, 86% of patients surveyed in 2014 stated that their telemedicine visits were successful and in 2015, 95% of the 1,700 customers in a CVS in-store telemedicine service pilot study were satisfied (Raskas et al., 2017). For successful telehealth/telemedicine acceptance and implementation, there must be appropriate and consistent guidance between the states and federal government, proper training on technology, and clear communication between health professionals is needed.

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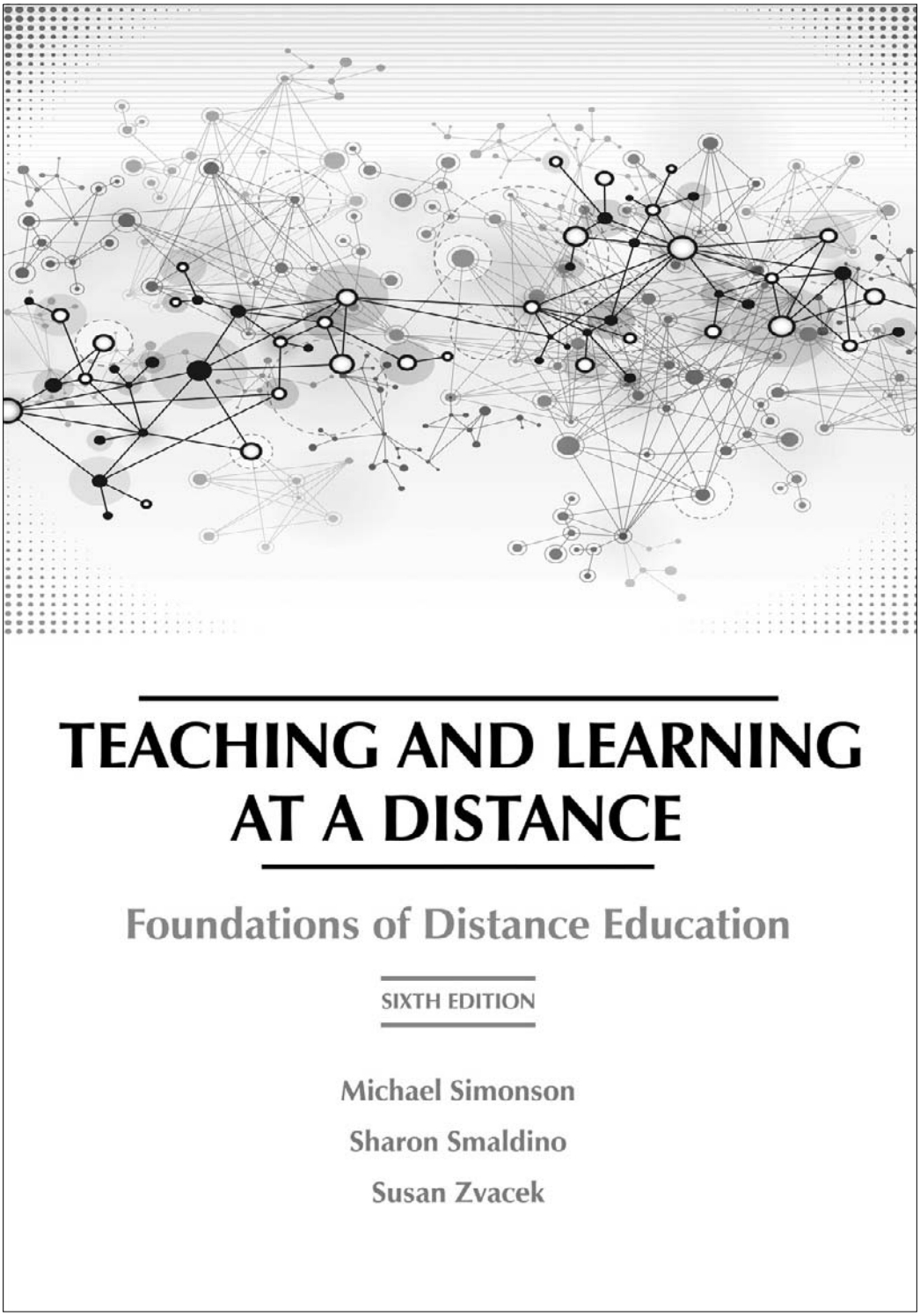

What Is Problem-Based Learning?

Natalie B. Milman and Clare R. Kilbane

There are many strategies instructors can use to engage their learners in meaningful learning. One approach, problem-based learning, has its roots in medical education. It was first introduced in the 1950s at Case Western Reserve University. Faculty preparing doctors needed a way to support students' ability to apply professional skills and knowledge in real-world contexts. Problem-based learning influenced the instructional approaches and curriculum used in medical schools by challenging medical professionals to help their students apply their content knowledge to real medical cases. This methodology, eventually called "problem-based learning," was officially adopted as a pedagogical approach at Canada's McMaster University to promote students' ability to

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apply their scientific knowledge to clinical situations (Neufeld & Barrows, 1974). The model spread to academic programs for law, business, and education. Currently problem-based learning is used as the predominant approach to learning at various institutions of higher education around the world including the University of Delaware, Maastricht University in the Netherlands, Gadjah Mada University in Indonesia, and the University of Limerick in Ireland.

Problem-based learning (often referred to as "PBL") is also the name for an established instructional model of teaching that challenges students to learn and apply knowledge of content through the application of problem-solving skills to solve meaningful problems in the academic disciplines (Kilbane & Milman, 2013). It consists of the following four phases:

1. "present or identify the problem,
2. develop a plan for solving the problem,
3. implement the plan for solving the problem, and
4. evaluate the implementation plan results" (Kilbane & Milman, 2013, p. 285).

This model is intended to be used by educators at all educational levels and settings to build learners' problem-solving skills while also solving a problem.

Another approach with the same abbreviation, "project-based learning" (also referred to as "PBL"), has also become popular in many educational settings. Project-based learning is a method to promote students' engagement in the learning process through the structuring of learning around the accomplishment of projects or tasks that have meaning and relevance for the learner. In this type of learning, students have a great deal of say about the projects they will work on and how they will work on them. Although project-based learning shares much in common with problem-based learning, they are two distinct models of learning. In both models, instructors motivate students by centering learning on the accomplishment of a meaningful goal. In problem-based learning, that goal is solving a problem. In project-based learning, the goal is completion of a project. Table 1 compares these two learning models.

How Can Online Educators Use Problem-Based Learning?

There are many ways in which online educators can use problem-based learning. It can be employed as a major problem that takes a long period of time for students to solve (e.g., over the course of an entire semester), or it can be used during a shorter period of time (e.g., one lecture). Often PBL is incorporated as a case. There are many case-related resources available online. A key feature of problem-based learning is identifying a "good" problem for learners to solve. Problems are chosen or developed by the instructor to correspond with learning goals and objectives. According to Schmidt, Rotgans, and Yew (2011), good problems have certain characteristics, which are:

- ill-defined—the problem has multiple solutions or ways to solve it. There is no single, obvious answer or solution;
- authentic—the problem might be encountered in real life, for example figuring out which apps to purchase for a set of iPads or developing a proposal for designing an online workshop; and
- engaging and interesting—the problem is engaging and interesting, involves students in the learning process, and motivates them to want to learn more, for example creating travel guides for a target location and audience in a course that will be used for a friend's destination wedding.

Table 1. Problem-Based Learning Versus Project-Based Learning

Problem-Based Learning (PBL)	Project-Based Learning
Problem-based learning emphasizes applying existing skills and knowledge.	Project-based learning emphasizes developing new skills and knowledge.
Problem-based learning's main motivation is solving a problem.	Project-based learning's main motivation is completing a project.
Problem-based learning may or may not involve completing a project.	Project-based learning may or may not involve solving a problem.
The teacher develops the problem, but students get control over how to solve it.	Students have a great deal of control over developing the project and the process for accomplishing it.
Problem-based learning provides opportunities for students to develop problem-solving skills.	Project-based learning can provide opportunities for students to develop problem-solving skills but always provides students opportunities to learn to manage the tasks involved in completing a project.
Interdisciplinary nature of problems is stressed.	Project-based learning can be interdisciplinary.
Students may work alone or in groups.	Students may work alone or in groups.
Teachers develop the tools used for assessment.	Students have a great deal of control over the development of tools for assessment.
An important by-product is learning to solve problems.	An important by-product is learning to manage complicated tasks and maintain focus.
Students are provided with resources rather than answers.	Students are supported with resources.
Problem-based learning is meaningful to the learners.	Project-based learning is meaningful to the learners.
Problem-based learning can vary in duration depending on the problem.	Project-based learning can vary in duration depending on the project.
Problem-based learning can be accomplished in groups, cooperative groups, or alone.	Project-based learning can be accomplished in groups, cooperative groups, or alone.

Source: Kilbane and Milman (2013, p. 283).

The use of problem-based learning in online settings provides instructors with an approach to designing instruction that provides learners with authentic, real-world learning experiences.

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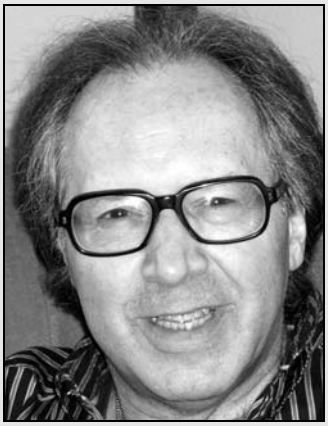
A Crucial Relationship

The Faculty Manager and the Online Educator

Errol Craig Sull and Kathy Embry

It is a crucial relationship, one that at its best is nurturing, positive, enjoyable, welcoming, informative, fun, and helpful: the faculty manager/supervisor (FM/S) and the online educators he or she oversees. Yet, as known by many folks who teach online, this "boss-employee" duo can also be less than productive. The FM/S may be less than involved, have a curt or overbearing personality or tone, offer little guidance, and give naught but fear to his or her online educators. And on the faculty side, the online educator might be less than receptive to suggestions or new ideas, can habitually overlook messages from the FM/S, continually disregard directives, and not check in with the FM/S for important clarifications on course questions and challenges. When this relationship works well, all benefit: the online educator becomes better, the FM/S enhances the efforts of the online educator in the classroom, the school flourishes—with the students being the ultimate beneficiaries. To make this alliance work smoothly and effectively takes effort from both parties—and the end result is simply a beautiful combo to behold.



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This is a special column, as I have asked my faculty manager, Kathy Embry, online program chair for education at American InterContinental University, to join me so both sides of this important relationship can be given from a walk-the-walk and talk-the-talk vantage. And let me quickly add: Kathy is the perfect cocontributor to this column, as her attention to detail, constant oversight and communication with faculty, desire for faculty input, and energetic and humorous approach to keeping faculty at the top of their online teaching game easily defines the qualities one would want in a faculty manager. And,

yes, she can be tough when need be: I have not escaped a call now-and-then to "the principal's office"—but none of us is perfect as online educators, so the FM/S who can make us better is always a plus.

Follow these suggestions—and share this column with your FM/S: the end result will be a better and more symbiotic relationship with solid respect, admiration, and assistance for each other.

Suggestions: Online Faculty Developing a Solid Relationship With the FM/S

The assignment is made: "XXX, your faculty manager is YYYY." From this seemingly simple connection can come a wide range of emotions from the faculty member during this relationship—joy, relief, worry, excitement, despair, apprehension, calm, enthusiasm, and confidence. While the faculty manager will be responsible for some of these, it is the faculty member who can ultimately decide which emotions will be experienced. Simple guidelines will keep the positive ones out front, while reducing—never fully eliminating—any negative emotions:

- **Listen and read carefully to all expectations and responsibilities of you—and keep them in a file on your computer.** This is perhaps the umbrella rule of developing a solid relationship with your FM/S. It is important you are known as someone who can be depended upon, someone who "follows the rules," someone who does not have to be told twice what to do or what not to do. Each time a dictum, a responsibility, a policy comes down be sure it is copied and pasted and/or saved into a master file on the computer, but also create individual folders for quick references, such as, "Plagiarism," "Discussion," "Deadlines to Meet," et cetera. And be sure to keep these updated! The more "in your face" of these you have the more certain you can be of not straying from what is expected of you.
- **Never assume or presume—always ask for clarification and guidance.** Things will come up—note the plural "things"!—that may not have been covered in guidance you were given, may appear in a "gray" area where your approach could be uncertain, or simply need some further explanation. Never guess in your actions, but rather—after checking all info you might have on the subject, and determining it is still unclear—immediately reach out to your FM/S. One responsibility this person has is to make sure you do not make errors, that your decisions and actions fall within school policy/within your FM/S's policy—and thus getting the correct info "from the horse's mouth" will keep you in good stead.
- **Keep e-mail correspondence in the original chain if following up.** It may seem quite easy, quite expedient to quickly send a new e-mail to your FM/S on a subject that has previously been discussed via e-mail. But to save time for the FM/S (you are not the only faculty member with whom the FM/S is corresponding) and to show you are well-organized, respond within the latest e-mail in that chain on the subject between you and your FM/S. And there is a bonus for you: all e-mail exchanges on the subject will be in one neat little package of one e-mail, so easy for you to check—and to save when the matter is closed.
- **Copy your FM/S on all relevant and important e-mail correspondence with students and others.** Your FM/S might have certain rules about copying e-mails to him or her, and certainly you are expected to follow these. But beyond this the "unexpecteds" might come up with students involving such items as plagiarism, class participation, students' personal problems, and a complaint about another student; these are seri-

ous, and the FM/S must "be kept in the loop" on such matters. Also: if you are involved in other activities, such as mentoring a new faculty member or participating in a schoolwide program, it would also be wise to copy your FM/S in such correspondence: that person should be in the know about all your activities relating to the school.

- **Make note of any meeting times and deadlines—and use reminder software so you do not miss any.** Teaching online will often require you attend departmental or school-wide online meetings; professional development presentations may necessitate you being present; mandated professional development courses might be offered; and there will be a plethora of class deadlines for you to meet. It is, of course, de rigueur that none of these dates be missed. In addition to old-fashioned jotting-it-down-on-a-calendar or using a smartphone to remind, here's a great piece of reminder software (it's free!) I use to help in this area: memotome.com.
- **Always be open for extra duties, classes, and tasks that may come your way.** Once hired, you want to show yourself as one not merely interested in getting a paycheck because you are teaching X classes, but rather someone who is a teacher in every sense of the word—and this translates into using your knowledge, enthusiasm, and motivation to help out beyond your classes. Let your FM/S know you are open for other assignments and involvements, and when the call goes out for volunteers to do this or that do "raise your hand"! Just two words of caution: (1) Do not take on more than you can thoroughly do without having a negative impact on your teaching load; and (2) Be sure you fully immerse yourself in the extra assignment or project; your 100% involvement will help the school and the students, while showing the FM/S you can be counted on for such extra items.
- **Carefully read over and/or listen to all evaluations given to you by your FM/S—discuss areas that need improvement or you believe require more information.** Evaluations are often feared by online faculty, because no matter their best efforts the FM/S may see one or more areas that need improvement and/or one class may not have had the best passing rate. Yet the evaluation should be looked at as guidance—and when one or more weak areas are pointed out, discuss these with your FM/S. Ask for input; while you may have an idea of how to improve the underperforming items, the FM/S can give you solid suggestions—and make sure you implement them. Of course, ask for clarification on any item you do not fully understand or with which you do not agree—and keep your strong points strong from class to class!
- **Never "suck up" or go beyond the boundaries your FM/S has established between the two of you.** It is always nice when a boss is pleased by our performance—this often translates into job security, and perhaps a promotion. But what one should never do is give perfunctory or "just because" praise or adulations and not brag about oneself (unless it has some positive effect on your teaching at the school—and then it's not bragging!)—a FM/S will quickly realize this. Also, pay attention to the tone of, information offered, and material given by the FM/S; while you may establish a really nice relationship, there will be boundaries you do not want to cross. The FM/S is, ultimately, the person to whom you report—not your best bud with whom you are going to shoot darts and have a drink!
- **If you make a mistake or forget to do an assigned task, immediately own up to it.** We all make mistakes—it's called

"being human," and everyone does it, no matter how careful one might be. In the online teaching environment every word becomes important, each action we take is scrutinized. But something will eventually go awry, despite your best efforts: a missed deadline, wrong info given to a class, a "kaflooey" direction given to a student. When this happens—and you are cognizant of the oversight—immediately inform your FM/S. The best defense is a good offense, so to speak, and the translation of this is simple: you look human but also professional when reporting your error; if you do not, and your FM/S finds out about it, you give the impression of being unprofessional, lacking confidence, and not being dependable. None of these negatives have to occur if you (1) report your mistake right away, and (2) do not do it again!

Suggestions: Developing a Solid Relationship From the Online Faculty Manager Perspective

The FM/S-educator relationship is crucial and even more crucial when all parties are part of an online university. In most cases, the FM/S's never meet face-to-face, thus the most *critical component of the relationship is communication. A manager is only as effective as his or her employees, regardless of industry—whether part-time or full-time, newly hired, or long-time employee.*

On my team, all instructors must be treated well … with respect, sincerity, and with trust. This has been my personal "M.O.," whether managing faculty on a ground campus environment and now within the online campus environment. We want our instructors to be successful as instructors; thus, mentoring and development takes precedence. Over the years, I have understood more and more how a successful FM/S-educator relationship should occur. This does not happen overnight; it happens over time and with solid practice while experiencing good outcomes and, at times, painful outcomes.

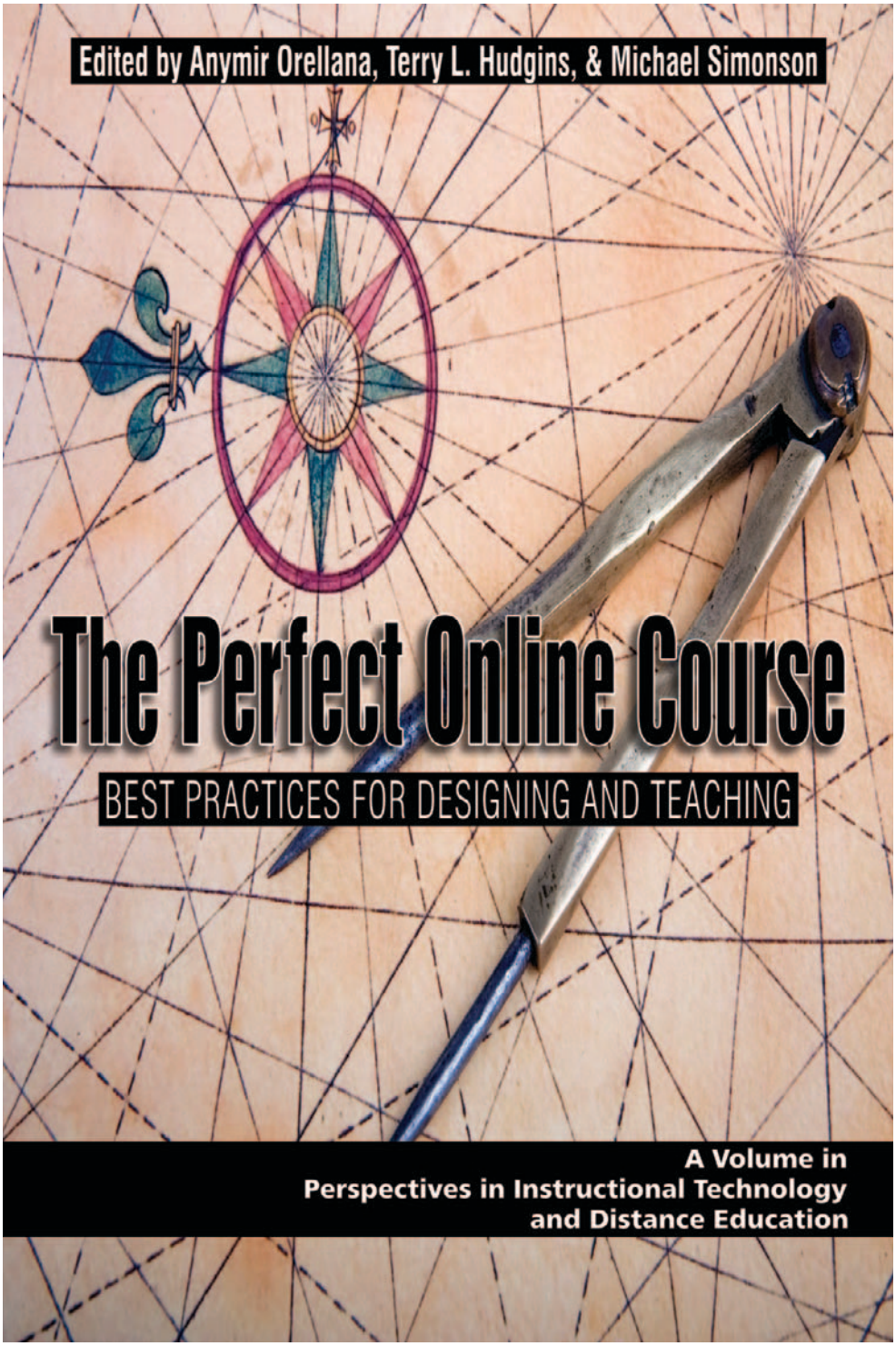
Components of a successful faculty manager/supervisor-educator relationship:

- **Communication is a minimum expectation.** Neither the instructor nor the FM/S can be silent. Instructors are encouraged to ask questions. A response from the FM/S (no matter how small) to each instructor inquiry shows that the FM/S is listening and responsive to the instructor's concerns and needs. As is often the case, the question and response is something that can and should be shared with all faculty members. Key to this communication is for the FM/S to provide consistent messaging in a timely manner.
- **Transparency is critical.** Providing just the right amount of information for the instructors to complete their responsibilities and meet institution expectations is important. This ensures that the faculty members are given an opportunity to be successful within the classroom and, as is often the case, to reach above and beyond what would be considered "minimum expectations." The goal for all is the success of the student; by being transparent, all parties will be able to reach for the common goals.
- **Asking for input is an indication of trust**. Faculty members are hired for their expertise. To show that this expertise is valued, as often as possible faculty should be asked to collaborate on projects, engage in presentations, review and update course materials, and, additionally, be asked for their input related to course content and best practices. Asking for input within the realm of all-faculty meeting allows for faculty peers to consider a new best practice, comment and provide feedback to their peers, and to encourage collaboration amongst the instructors.
- **Tooting our own horns feels good!** Whenever the opportunity arises, send

kudos to instructors in a public forum. At monthly all-faculty meetings we kick off with faculty recognition by sharing student comments from end-of-course surveys, feedback from student success advisors, and recognizing instructors who are presenting at in-service sessions. We are proud of our fantastic team and this pride is shared with all instructors. In addition to making the individual instructor feel good, it encourages other instructors to think, "How can I be recognized?"

As a faculty manager/supervisor, I like to consider our instructors to be team members and not necessarily "working for me." It is important to have a collaborative environment while providing the necessary support and development to keep both the faculty manager/supervisor and the educators satisfied. We want our faculty to feel an intrinsic motivation to continue working for the institution and to feel respected and satisfied with the support provided by the faculty manager/supervisor.

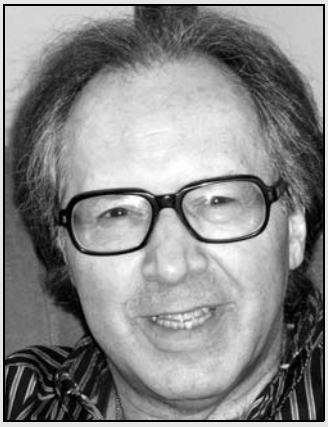
Remember: Robin worked for Batman, Scotty worked for Captain Kirk, Chester worked for Marshal Dillon, Barney Fife worked for Sheriff Andy Taylor, Andrea Sachs worked for Miranda Priestly—and what great professional relationships they developed!



Ask Errol!

Errol Craig Sull

The complexities and challenges of distance learning continue, dear readers, and we know they will never stop! New approaches to teaching, additional courses and course rewrites, changing demographics, and more: these translate into a teaching experience that will never be stagnant, never be "same old-same old." This column, of course, responds to some questions that have not previously been covered, and each is an important linchpin that only contributes to a more successful and enjoyable online teaching career. Please: continue to write me so many in the United States and abroad can benefit from your concerns. Meanwhile, this issue's selections, and my responses …



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How to Handle Students Who Plagiarize

Errol, I need your help with an area that is especially common to we who teach online: plagiarizing. Our school has very clear-cut guidelines on what should be done if a student is caught plagiarizing by a faculty member, but I've also found that most of my students who have plagiarized have done so inadvertently because they simply did not know the correct way to cite a source or—in some instances—were taught that it was a form of flattery to include other folks' work straight on. If I follow my school's guidelines for each of my students who has plagiarized it could really hurt the "innocent" ones—any suggestions?

You raise an issue that is probably the biggest problem online educators face simply because the Internet is so easy for students to use, and there is so much information on the web. And, of course, you are right about the punishment: it can range from automatic failure of a course or expulsion from school to a warning by an academic integrity-type department of the

school. I've been teaching online for nearly 23 years, and my columns bring in e-mails from online educators in all 50 states and several foreign countries—and in all of this I have never come across any school that is eager to fail or expel a student. What is the best approach is to remind ourselves why we teach: to improve the knowledge of our students in this or that subject—and related areas (such as study skills)—to help them effect positive change in their lives beyond school. One of these areas is how to avoid plagiarizing.

What I do—and what I recommend you do (if your supervisor signs off on it—always ask first)—is to let the student know you are aware of what he/she did, ask the student why it was done, and if you are satisfied that it was unintentional allow the student to resubmit the assignment. (Of course, cases will come up where the plagiarizing is obvious, and thus more forceful steps must be taken.) One word of advice: for any course always have, on Day 1, info about plagiarizing, and how to avoid it.

How to Have a Smooth Transition Into a New Course Design

Thanks so much for your columns! There have been several over the years that have helped me, even though I've been teaching online for 10 years, and thought I "knew it all." Now something has come up I've never encountered, and I thought you might have some insight. We were recently told that in 6 months our courses would have a total redesign, and it was indicated there would be some sort of instructor guide to help us navigate the new course layout. Certainly, this would seem important, but is there anything I can do to remain proactive on this?

Thanks for the positive feedback! It's always nice to hear that my columns have proved helpful, for that is my only goal with each one. As to your conundrum, it is quite common for schools to redesign and rewrite courses: new technology may come along, new pedagogical approaches to a course may result in a rewrite, and a better course layout to help in making the subject more relevant may have a new course look.

There are a few items you can do: (1) Attend any all-faculty meetings, even if not required. There is a good chance the course redesign may be brought up, by the presenter and/or by one of the attendees. Any new info on this will prove helpful to you. (2) Ask your supervisor for additional info he or she might have, and volunteer to a part of any pilot group that might be selected for an early tryout of the course redesign. (3) When the new course guide becomes available, go through it carefully, making notes on anything you do not understand or may not seem to work smoothly in the course. This is New Course 1.0—and it is quite possible "patches" might be needed! (4) As you begin to teach in the new course layout take notes on how your students react to a new item in the course versus an old item in the previous course layout; report these (if you find a problem) to your supervisor or any link that might be set up for such reporting. Doing these will show you to be an online faculty member who really cares and is really involved—two qualities any school always appreciates!

Best Tips for Using a School's Online Library

I think one of the most underused resources at our school is the online library. Because it exists in my class as simply a link it is fully dependent on me to encourage students to use it and for students to find it on their own. Yet this resource can be helpful for students in so many ways: research, of course, including minilessons on how to correctly cite sources and learn what makes a source credible, but also extensive databases and links in such areas as study skills, English,

math (and many other courses), and employment. Can you offer some tips on how to have students use the library on a more regular basis? Thanks!

I have often remarked that librarians are my heroes, and I do not say this glibly: through my undergrad and graduate studies the library, and thus the librarians, made my efforts in achieving degrees much easier. But it was only after I discovered how great they could be that I embraced them. What needs to be kept in mind is many students take a minimalist approach to their online studies, that is, what is not required or what does not result in a grade simply is not necessary—and I know of no school where a student receives grade points for visiting the library. Yet it is crucial for a student's learning, and once a student discovers its value he or she has the same reaction I did: "Wow—this is great!"

Do this: (1) Create a guide to the library that can be posted in class, and if your school allows it make a video guide—students will quickly gravitate to this; (2) If your online librarian agrees, have him or her visit your class through an online chat session where the librarian can give the students a virtual tour; (3) Take some of the library's links—such as time management, writing, job search, plagiarism, citations, et cetera—and make a little chart for the students to remind them on these links' value in and outside the course; (4) Encourage the library's use in assignment feedback, course announcements and e-mails, and in discussion posts. Also, if the library has announcements of workshops and tours be sure to post these; (5) If you have live chat sessions with your students mention the library in each, and use one to feature the library. Doing some or all of these will drive home the importance of your school's library, and have students begin to recognize it as a necessary and important tool for their learning.

Reminding Students Not to Focus on One or Two Poor Grades

I've been teaching online for almost 6 years and have read each of your columns, but cannot remember one that addressed this subject: students who become discouraged, and sometimes no longer participate in a class, because they received one or two poor grades. I remind them to look at the big picture, that is, the entire course, but these one or two grades become so much a focal point for them that this experience seems to overshadow all other assignments. Is there anything else I can do?

I smiled when I read your question, as I had planned on addressing this problem in my next column, but you asked it so I am addressing it now! What you describe is certainly not new, and in the online course it can be more potent as the student cannot walk into your office (unless you are teaching a hybrid course) to discuss his or her poor assignment showings—whether at your request or the student's. Too, online education makes it quite easy for a student to constantly check his or her running grade for the course in the online gradebook, an immediate reminder of one or two assignments that did not go so well. There are several approaches you can take to help students get by this "My life is over because I did poorly on X assignment!" mentality:

- Tell all students to never focus on one or two grades; many grades in a course equal a final grade. You mentioned you are doing this for individual students, but it is helpful to have a sheet that keeps this up front for all students, in addition to attaching it to any feedback for a student who does poorly on an assignment.
- Remind students to always use your feedback on assignments to improve future assignments. Rather than look at the comments, then forget about them, the total comments on an assignment

can equate to each student's personal study guide.

- Always let students know: If more clarification is needed on your assignment feedback always ask; tell them, "I want you to improve, and thus I'm happy to give you additional input."
- Another reminder: Many successful students from your school and graduates from your school did poorly on one or two assignments—but went on to receive their degrees and secure excellent professional employment!
- Something like this is always a good motivator to post: "Albert Einstein failed a math course, Harrison Ford (the Academy Award-winning actor) failed a philosophy course, Charles Darwin failed a biology class, Ang Lee (the Academy Award-wining director) failed his college entrance exams—but all of these famous folks (and many more) persevered and succeeded. SO CAN YOU!"

Remember: Black coffee, with nothing added, is okay. But, when some cream and sugar, a bit of flavoring, and a touch of whipped cream are included, that cup of coffee can become an amazing experience!

agement system can make an important contribution to course effectiveness, but only to the extent that it appropriately facilitates the "big three" components.

Content, design, and instruction; let's examine each. First, as any publisher will say, content is king. That is why there is education: to provide access to important content and processes.

Next, design—or how the instructor organizes the vast quantity of information that could potentially be presented in a course. While there are many design strategies, the instructional design strategies presented by Dick and Carey, Kemp and Morrison, and Smith and Ragan, all based on instructional systems, are the most significant and important.

Finally, there is instruction, or what teachers do. This is probably the most important contributor to learning. There are many who argue that teaching is a science, and others who say teaching is an art. Certainly science and art overlap. Our warm memories of a great teacher's artful application of the science of human learning clearly illustrate this.

The editors of *Distance Learning* encourage more—and more critical—consideration of the role of course management systems. Among the questions worthy of investigation and discussion are:

- Are some courses inappropriate for placement in a CMS? If so, how do we decide?
- To what degree should courses be redesigned before placement in a CMS?
- Does a CMS impose a one-size-fits-all approach that may stifle creativity?
- Does the mandated use of a CMS cede academic authority to information technology staff at the expense of the faculty?

One simple measure of what makes a great school lesson, college course, or training session is what is remembered. As for the course management system, unless it impeded learning, no one remembers it.

And finally, as Bill Gates said "technology is just a tool." It is unlikely that putting a course on "this or that course management system" is the path to quality online learning and teaching.

Reference

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Online Courses Have Three Critical Components (and Learning Management Systems Are Not One of Them)

Michael Simonson

It is happening again. Vendors—and some well-meaning educational administrators—are talking about the power of course/learning management systems and claiming that the technology used to deliver online courses has an impact on student achievement.

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How many times have we heard the phrase "put your course in Blackboard, or convert your courses to Canvas," implying that this will make it a better course? The idea seems to be that putting something into an online learning management system makes an online course a good one.

Some may remember the statements of several decades ago about putting a course "on film," "on video," or even "on the computer" to make them relevant or effective or improved. As Clark (1983) so famously noted, "media are mere vehicles that deliver instruction but do not influence student achievement any more than the truck that delivers our groceries causes changes in our nutrition" (p. 446).

Let's be clear. There are really only three critical components of an online course—or any course, for that matter: content, design, and instruction. The learning man-

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ISSN: 1547-4712
Distance Learning
IAP–Information Age Publishing
P.O. Box 79049
Charlotte, NC 28271-7047
www.infoagepub.com

ISBN 978-1-61413-097-4
90000
9 781641 130974