



My students will Facebook me but won't keep up with my online course: The challenges of online instruction

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ABSTRACT

An examination of the current body of literature has found that despite the interest in transforming education to fit a growing body of technologically astute students, few studies have investigated the characteristics or competency of that population and their ability to meet with academic success in this digital era or an informational age. However, what has been revealed in the research is that assumptions about digital natives (students from grade K through college who represent the first generation to grow up with this new technology) may not be correct and that a focus on digital immigrants (individuals that did not grow up in this generation) face a similar set of challenges. While today's college students are immersed and fluent in social media, consumer electronics and video games, they are not nearly as proficient when it comes to using digital tools in a classroom setting - thus countering the myth that academicians are dealing with a whole generation of digital natives. Other studies that have investigated the extent and nature of college students' use of digital technologies for learning have found that students use a limited range of mainly established technologies and that use of collaborative knowledge creation tools, virtual worlds, and social networking sites was low. This study investigates the ability of digital natives to incorporate new technologies in the academic process and the challenge that digital immigrants as instructors face.

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Introduction

An examination of the current body of literature has found that despite the interest in transforming education to fit a growing body of technologically astute students, few studies have investigated the characteristics or competency of that population and their ability to meet with academic success in this digital era or an informational age (Li & Ranieri, 2010). However, what has been revealed in the research is that assumptions about digital natives [students from grade K through college who represent the first generation to grow up with this new technology] may not be correct. While today's college students are immersed and fluent in social media, consumer electronics and video games, they are not nearly as proficient when it comes to using digital tools in a classroom setting - thus countering the myth that academicians are dealing with a whole generation of digital natives (Cengage Learning, 2010). Other studies that have investigated the extent and nature of college students' use of digital technologies for learning have found that students use a limited range of mainly established technologies and that use of collaborative knowledge creation tools, virtual worlds, and social networking sites was low (Margaryan, Littlejohn, & Vojt, 2011).

Margaryan, et al. (2011) assert that information and communication technologies (ICTs) have changed rapidly since the 1980s and continued change brings new challenges for the 21st century classroom. Almost all colleges and universities are trying their best to optimize the use of ICTs to increase enrollment, address retention issues and transform education to best fit students who are an important part of this digital era. Some scholars emphasize that today's students are more familiar with ICTs than previous generations and have used labels such as digital natives to describe them. According to Prensky (2001), the scholar who coined the label, there is a new relationship between the digital native student and the teacher (the digital immigrant) and while the level of proficiency between the two may be marked by skillfulness in utilizing digital tools there is a level of learning and transformation that must occur on the part of both student and instructor in order to maximize learning. Prensky goes on to define the concepts of *legacy* content which include reading, writing, arithmetic, logical thinking, understanding the writings and ideas of the past (traditional curriculum]) and *future* content which includes digital and technological content and emphasized the fact that increased online learning means new thinking about how educators teach both legacy and future content in the language of the digital native (Prensky, 2001, p 4).

The research of Bennett, Maton & Kervin (2008) focuses on a significant point as the discussion over online learning grows - - while grand claims are being made about the nature of this generational change and about the urgent need for educational reform in response to the growth of ICTs consideration must be given to a population of users who have been immersed in technology all their lives but who are in need of more guidance, support and training in using digital tools in the classroom. A sense of impending crisis pervades this debate. However, the

actual situation is far from clear primarily because the argument is being approached from a point of little critical scrutiny, under-theorization and a lack of sound empirical evidence. There is thus a pressing need for theoretically informed research (Bennett, et al, 2008, p776).

The purpose of this study is to contribute to the debate on online learning by investigating the competency of a population of college online learners. This study focused on students enrolled in online courses at Delaware State University during the 2009-2010 academic years. The specific objectives of the study were to (1) to analyze the students' experiences with online learning; (2) to assess the students' digital competence; and (3) to examine the relationship between students' digital performance in an academic environment and their personal use of technology.

Background

In search of better, more cost effective ways to deliver instruction, universities have expanded their use of online/e-learning. Although several studies suggest that online education can be as effective as traditional classroom models, few studies have focused on learner satisfaction with online instruction, particularly in the transition to online learning from traditional approaches (Smart & Cappel, 2006). According to Roberts and McInnerney (2006) along the way to full online delivery there have been many casualties. Institutions have attempted to place their courses online (however; according to Panettieri (2004) understanding the online education paradigm is more than an academic pursuit. All of those concerned - administrators, course developers, teachers, and students - must embrace the paradigm to realize success.

There are also potential disadvantages or limitations of online learning. For example, one study concluded that asynchronous e-learning was not effective as a standalone method to deliver technical training. Learners in the study commented that e-learning eliminates classroom interaction time, where a significant amount of "real learning" takes place as users assimilate information, utilize software, apply knowledge to problem solving, and interact with the instructor and other learners (Smart & Cappel, 2006). Other potential problems of e-learning that have been identified in previous research include a sense of learner isolation, learner frustration, anxiety, and confusion (Hara & Kling, 2000; Piccoli, Ahmad, & Ives, 2001); higher student attrition rates (Laine, 2003); and the need for online users to make a time commitment to learning (Serwatka, 2003). Unfortunately, many students seeking to study online have grave misconceptions about the online learning environment while others have become disenchanted with low-quality materials, outdated links, and with files that take too long to download. The need to better understand how to implement and use online instruction should raise questions about the students' perception of online learning components and their understanding of various aspects of the e-learning environment.

Beyond these factors, researchers have shown that learning in an online environment requires a significant amount of discipline and self-motivation which may be lacking on the part of the learner (Smart & Cappel, 2006). This is particularly true where the online units are completed as independent, self-study units, as opposed to users interacting as part of a community of online users. Experience has shown that completing online units requires a significant investment of time by users. As research suggests, learner motivation is one of the key factors affecting student performance and learning, particularly online learning success (Cole, Field & Harris, 2004).

While the online environment has proven to be one in which young people acquire various forms of technical and media literacy by exploring new interests and adding new media skills to their repertoire, such as how to create a video or customize games, this same level of curiosity and self-directed exploration is not germane to the academic environment (Ito, et al, 2008). Little is known about a student's ability to navigate the internet for interest-driven purposes outside of the academic environment. Few studies have been conducted to explore the correlation between internet use for educational purposes and social purposes. However several recent studies demonstrated that asynchronous online interaction might provide learners flexibility, stimulate more innovative ideas, and facilitate learning. For example, face-to-face discussions preceded by Computer-Mediated Communications (CMC) were perceived to be more enjoyable and could include a greater diversity of perspectives than the face-to-face discussions not preceded by CMC (Yang & Tang, 2003).

Literature Review

Digital Natives

This group of individuals, born roughly between 1980 and 1994, has been characterized by their familiarity with and reliance on ICTs. They have "spent their entire lives surrounded by and using computers, videogames, digital music players, video cams, cell phones, and all the other toys and tools of the digital age" (Prensky, 2001, p. 1). A number of authors have argued that the digital culture in which this generation has grown up has influenced their preferences and skills in a number of key areas related to education. For example, Digital Natives are said to prefer receiving information quickly; be adept at processing information rapidly; prefer multi-tasking and non-linear access to information; have a low tolerance for lectures; prefer active rather than passive learning; rely heavily on communications technologies to access information and to carry out social and professional interactions (Prensky 2001; Oblinger, 2003).

Some of these authors have also questioned the extent to which higher education practitioners are equipped to meet the needs of this incoming cohort of students. Prensky (2001) suggests that the disparity between the ICT experiences of current students and the sophistication and degree to which these technologies are employed by teaching staff is the "the biggest single problem facing education today" (p. 2). Despite the considerable recent attention devoted to Digital Natives, few studies have documented the characteristics of this group.

Asynchronous Learning

According to Garrison (2003) asynchronous online learning has the potential to provide access for learners to a wide range of programs and information. What has not been apparent, or at least not well understood, is that asynchronous online learning is more than a means to access information. It has the potential, to significantly enhance the intellectual quality of learning environments and outcomes. Asynchronous online learning has the properties to support higher-order learning and create the cognitive presence congruent with deep and meaningful learning outcomes. This will most assuredly mean a move from the transmission and assimilation of vast amounts of information to the interactive and constructive potential of asynchronous online learning based in the ability to support virtual communities of inquiry without diminishing the time and space independence of the learner.

At the core of the properties of asynchronous online learning is the ability to provide collaborative learning experiences that are convenience for the individual. That is, we can have both interaction and independence. Not long ago it was impossible to have both; more of one meant less of the other. From a cognitive presence perspective, online learning makes possible critical discourse and reflective space (Benton, 2009). Thus, we identify connectivity and asynchronicity as the core properties of online learning, and which have the potential to create a uniquely effective higher-order learning environment.

The collaborative and reflective properties of asynchronous online learning offer the potential to create an environment with both social and cognitive presence. In this regard, the challenge is to understand the properties and potential of asynchronous online learning that goes beyond —infotainment. However, a greater focus must be on the cognitive aspects of the educational process if quality learning outcomes are to be the result. The issue is learning and not connectivity or control for its own sake. Learning for educational purposes is more than simply accessing information and participating in chat rooms (Garrison, 2003). One major concern of online education is whether the learning is effective. In a published article by Benton (2009), he editorializes about professors who have reservations about the effectiveness of online courses.

A study from the Association of Public and Land-Grant Universities (2003) shows that 70 percent of the 10,000 faculty members surveyed believe that online courses are either "inferior" or "somewhat inferior" to traditional ones. Professors who have taught online are more positive about the approach, but 48 percent of them are likewise convinced that online courses are not as good as face-to-face teaching. Many studies have been conducted to explore the effectiveness of web-based distance learning or asynchronous learning. Although most studies showed that the learning outcomes of asynchronous learning are as effective as or more effective than those of traditional face-to-face teaching, the results were not conclusive since the learning materials and goals might exert significant influence on outcomes. For example, conceptual learning might be different from technique learning. Negative effects such as decrease in group effectiveness, increase in time required to complete tasks, and decrease in member satisfaction were confirmed. Students' feeling of isolation may also become an obstacle in pure online (Yang & Tang, 2003).

Student Preparedness for the Online Environment

Many of students today see computers as a given rather than a technological marvel. Although youth are learning basic social and technological skills they need to fully participate in contemporary society the claim that a digital generation is overthrowing culture and knowledge as we know it has been questioned by some researchers. This new form of technical literacy is opening new frontiers for learning; however there are very few benchmarks from which to measure levels of new media and technical literacy (Ito, et al, 2008). What has been quantified is the fact that many college students do not possess the technical skills necessary to successfully complete an online course. Moreover, little empirical evidence has been provided to support claims made about the Digital Natives and their implications for higher education. There is an inherent assumption that because students are using particular technologies in their everyday lives this warrants their use in teaching and learning. However, it is unclear whether students want their everyday technologies to be adopted or appropriated as learning technologies. Further, it is not clear that emerging technologies and students' everyday skills with those technologies will easily translate into beneficial technology-based learning (Kennedy, Krause, Judd, Churchward & Gray, 2006).

In a study conducted by Dempsey, Fisher, III, Wright and Anderton at the University of South Alabama (2002), students were asked to evaluate their computer skills level. Less than 10 percent of the students in traditional classes and web-enhanced classes reported a below average or novice level of computer skills. Perhaps because the actual performance (vs. the perception) of these skills is so essential to fully online courses, a larger number (18%) of online students reported low levels of computer skills. Students taking a web-enhanced class or online class were asked their familiarity with a variety of web and computer tools. Over 90 percent of both groups were familiar with e-mail, attachments, word processing, and cutting and pasting. Over 90 percent of the web enhanced students were familiar with creating files compared slightly less than 90 percent of the online students. Students were less familiar with using PowerPoint and other presentation software; however, the figures were relatively high with 77 percent of the students in web-enhanced classes and 63 percent in online classes noting they were familiar with such software.

The study also revealed that skills that elicited the greatest response for more training were online test taking, time management, and use of the web for scholarly research. One interesting finding from the study was the large difference between students online and students in web enhanced classes on the need for a library orientation and the web. Approximately 55 percent of the online students expressed the importance of having a library orientation on distance learning compared to 14 percent of the students taking web-enhanced classes (Dempsey, et al, 2002).

Social Networking

Social networking covers a wide range of online environments, with many formal definitions broad enough to encompass almost any Web 2.0 collaborative environment (Alexander, 2006). While various public social collaborative environments existed on the Internet as early as the 1980s, the emergence of social networking as it is best understood today

arose with the large commercially-supported sites such as Friendster, LinkedIn and MySpace, and Facebook, along with content-sharing focused sites with limited social network features such as Flickr and YouTube (Hoffman, 2009). With the development of Twitter in 2006, social networking took a new twist that increased immediacy and incorporated mobile phones into the social mix. Boyd and Ellison (2007) include three criteria in their definition of social network sites (SNSs) which are: web-based services that allow individuals to (1) construct a public or semipublic profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system (§4). SNSs are designed as personal networks, with the individual at the center of their own community (Boyd & Ellison, 2007). Perhaps more critical from an educational viewpoint, many of the SNSs are enhanced with multiple collaborative tools that go beyond the personal profile and links that allow a user to friend others, including the ability to post and share files (text, images, audio and video), participate in discussions or blogs, co-create and edit content with wiki-like tools, and link in and tag external resources from other web sites paralleling social bookmarking.

Social Networking and Academic Instruction

Social networking sites such as Twitter and Facebook have now become a ubiquitous part of many students' lives. The value of social networking has been defined, in one sense, as the collective power of community to help inform perspectives that would not be unilaterally formed - e.g. the best thinking comes from many not one. Others argue that significant time spent on social networking platforms actually distract students from their studies. So a question emerges, could the introduction of social networking tools be useful in a formal classroom setting? Additionally, is the concept of social networking a progressive, but legitimate, form of student-to-student and student-to-teacher collaboration (Economist, 2008).

In an online debate hosted by The Economist about the value of using social networking in education, opinions ranged from waste of time and distraction from academic goals to empowering and inevitable. Based on Internet voting, 63% supported the proposition that social networking will bring large, positive changes to educational methods. Similar debates have occurred elsewhere online, in periodicals, and in schools raising issues of affordances versus challenges common to any new technology (Hoffman, 2009).

Many academics support the use of social networking for community building and increasing student engagement in higher education classrooms. Some critics have suggested that the links between computer-mediated discussion (CMC) and learning or engagement are not well documented, proposing that such advocacy is more hype than reality (Godwin, Thorpe, & Richardson, 2008). But a recent study by Mazer, Murphy and Simonds (2007) indicates that teacher self-disclosure via social networking can increase motivation and improve classroom climate thus impacting student outcomes. In many of these debates, the focus is often limited to the massive and most well known of the social networks, MySpace and Facebook, particularly because media coverage has ensured that even those who have limited familiarity with social networking have heard about these Internet environments. However, social networking tools are more diverse and in fact, some may better fit specific class needs.

Hart (2008) identified five types of [social] learning that take place in an organization, as well as how social media is being used in each. According to Hart (2008) for social learning to be successfully implemented in an organization it is not just about adding in the new tools or platforms but also about acquiring a new mindset and new skill set for both learning professionals and individuals. The following diagram summarizes some of Hart's key considerations.

The social network approach holds that the behavior of an individual is affected by the kinds of relations, or technical ties, and networks more than by the norms and attributes that an individual possesses. Yang and Tang (2003) assert that the social, informational, or material resources that two individuals exchange characterize their ties. In social network analysis, these resource exchanges are termed —relations. Some positive and negative relations are assumed to be related to an individual's performance. Researchers empirically demonstrated that friendship and advice relations were positively related to a student's academic performance and an employee's job performance. On the other hand, the effects of an adversarial network were negatively related to performance. It seems worthwhile to investigate the effects of the three social networks on student performance online and offline (Yang & Tang, 2003). Social networking is a tool, with both its advantages and problems for usage in teaching and learning. When used in a learning context where affordances of the technology are carefully evaluated in terms of pedagogical requirements and student learning outcomes, including those elements that result in a supportive and collaborative learning environment, these tools offer significant advantages for distance learning (Hoffman, 2009). Among the positive attributes are impacts on student engagement, motivation, personal interaction, and affective aspects of the learning environment. The direct contribution to student achievement remains to be proven, but when technology contributes to successful pedagogical strategies without distracting from essential objectives for development of knowledge and skills, the result of formative evaluation of social networking potentials for distance learning is positive.

Enhancing Online Courses

Online learning has become popular because of its potential for providing more flexible access to content and instruction at any time, from any place. Frequently, the focus entails (a) increasing the availability of learning experiences for learners who cannot or choose not to attend traditional face-to-face offerings, (b) assembling and disseminating instructional content more cost-efficiently, or (c) enabling instructors to handle more students while maintaining learning outcome quality that is equivalent to that of comparable face-to-face instruction. Different technology applications are used to support different models of online learning. One class of online learning models uses asynchronous communication tools (e.g., e-mail, threaded discussion boards, newsgroups) to allow users to contribute at their convenience. Synchronous technologies (e.g., webcasting, chat rooms, and desktop audio/video technology) are used to approximate face-to-face teaching strategies such as delivering lectures and holding meetings with groups of students. Earlier online programs tended to implement one model or the other. More recent applications tend to combine multiple forms of synchronous and asynchronous online interactions as well as occasional face-to-face interactions (Means, Toyama, Murphy, Bakia, & Jones, 2009).

The success of online offerings depends on the ability to create a learning environment that is engaging and that will enable the student to increase online skills by using one or a combination of three learning experiences:

- Expository instruction—Digital devices transmit knowledge.
- Active learning—The learner builds knowledge through inquiry-based manipulation of digital artifacts such as online drills, simulations, chats, or games.
- Interactive learning—The learner builds knowledge through inquiry-based collaborative interaction with other learners; teachers become co-learners and act as facilitators (Means, et al, 2009).

According to Riel and Polin (2004) online learning offerings should be designed to enhance the quality of learning experiences and outcomes. One common conjecture is that learning a complex body of knowledge effectively requires a community of learners with a certain skill set and that online technologies can be used to expand and support such development. Ito, et al (2008) assert that being able to participate in the digital age means more than being able to access online information and culture; it also means having a understanding of the technology, how to use it and how to interface in a multitude of activities online beyond social and recreational use. Fluent and expert use of new media requires more than simple, task-specific access to technology. In theory, students who engage in a dynamic range of learning opportunities with new media generally have robust technology access, ample time and autonomy to experiment and explore. Sporadic, monitored access may be sufficient access for basic information seeking, but is insufficient for the immersed kind of social engagements with networked publics that are becoming a baseline for participation in the online learning environment (Ito et al, 2008).

The challenge is to get beyond imitating traditional technologies and approaches to teaching and learning. According to Garrison (2003) instructors must continue to understand the multiplicative properties of online learning. This means moving beyond a teaching style that replicates the delivery of lectures over a computer and the Internet enhanced with multimedia analogues to the overheads or PowerPoint slides of a lecture. Unreflective adoption of past practices will not help to improve online offerings or create benchmarks by which to evaluate to learning experiences (Garrison, 2003).

Methodology

The data for this study are based on students' experiences enrolled in online courses at Delaware State University (DSU). The pool of respondents was enrolled in mass communications, English, or history/political science courses. Professors teaching the 38 online courses were contacted by the senior secretary in the Distance Learning and Education Lab and asked to participate in the study. It was suggested by the researcher that students be offered extra credit (points to be determined by the individual professor) for their participation in the study. Four professors participated and gave the senior secretary permission to launch the survey in their Blackboard.

The learning units that students were enrolled in were designed based on department course requirements and under the guidelines provided by the DSU Distance Learning and Educational Lab and the e-learning course development training. Instructors used a variety of instructional tools, including but not limited to blogs, discussion boards, online examinations and weekly assignments. With the exception of the mass communications courses, students navigated the semester in a purely online environment. The mass communications course was designed as a hybrid course. At the end of the semester, students were asked to complete a Likert-scale course survey which consisted of 13 items to measure individual centrality in terms of online course support, the connection between social networking and online success, and professor/student interaction. Students were offered extra credit for completing the survey.

Respondents

The characteristics of the respondents are summarized in The appendix. The overall sample consisted of (68 percent of the respondents were female and 32 percent were male). The respondents consisted of 1 percent 1st year students, 46 percent second year students, 35 percent third, and 18 percent 4th year students. Frequency tests revealed that subjects had greater awareness of the online environment [and the Blackboard platform] as they had taken one or more online courses.

Data Analysis and Interpretation

Overall Satisfaction and Respondents' Perceptions of the Online Course

Table 1 presents several important measures of respondents' reactions to completing online courses. Overall, as indicated by the data calculations and the responses on the five-point response scale (strongly agree, agree, neither agree or disagree, disagree, strongly disagree), students rated the online course in which they were enrolled marginally positive (Q5: combined responses for disagree/strongly disagree = 55 percent, Q7: combined responses for disagree/strongly disagree= 65 percent, Q10: combined responses for agree/strongly agree = 52.5 percent).

Table 1: Respondents Perception the Online Course

	I was often lost in this online course	Technical support for this course was adequate	I had difficulty accessing the course information
Mean	3.5405	2.5000	3.6757
N	37	36	37
Std. Deviation	1.16892	.94112	.94440

Overall Satisfaction and Respondents' Perceptions of Interaction in the Online Environment

Participants also rated the level of satisfaction with the interaction in the online course. Table 2 shows the results for the following questions: Q2-combined responses for agree/strongly agree = 40 percent; Q3- combined responses for agree/strongly agree = 90 percent; Q6-combined responses for agree/strongly agree = 42.5 percent and combined responses for disagree/strongly = disagree 40 percent; Q12-combined responses for disagree/strongly disagree = 77.5 percent. Pooled results show that students were cognizant of the level of interaction between themselves, the professor and peers.

Table 2: Participants Perception of Interaction in the Online Learning

	This course required more reliance on other students.	The professor used other online tools to communicate throughout the semester.	There is little social interaction with classmates.	There was a lack of contact with the professor during the semester.
Mean	2.9459	1.7895	3.0000	4.1053
N	37	38	37	38
Std. Deviation	1.33221	.70358	1.22474	.98061

Respondents also reported that equal time was given to the use of social networking sites and Blackboard course work (Q8: Agree-15/frequency 0.39473686), however Table 3 revealed equally significant perceptions about the use of social media and a correlation between navigation the Blackboard platform (Q9: Agree-11/frequency 0.28947368, disagree-11/frequency 0.28947368).

Table 3: Perception of Technical Experience and Social Media Use in Relations to Online Learning

	My use of social media (Facebook, Twitter, etc) made using Blackboard easier	Previous technical skills prepared me for this online course.
Mean	2.8000	2.1579
N	35	38
Std. Deviation	1.07922	.97333

In open-ended responses (Q14 and Q15), participants expressed what they considered were the strengths and challenges of the online course.

As shown in Table 4, the most commonly reported benefit of the online course was interaction and convenience, which was noted by approximately one-third of the subjects (11 of 38 and 10 of 38 respectively). Eight respondents cited the course designed as one of the strengths of online learning and seven reported that flexibility/ability to work at one's own pace as a benefit.

Table 4: Strengths and Challenges of Online Courses

Strengths of the Online Course	Number of Respondents Perceived Mentioning*
Access to work/information	3
Fitschedule/convenient	10
Course design	8
Pure enjoyment for the learning and the [online] environment	3
Completing work on your own time/flexibility/ability to work at my own pace	7
Interaction (instructor/peer)	11
Challenges of the Online Course	Number of Respondents Perceived Mentioning
Large amounts of work to complete	3
Lack of class discussion	1
Access to work/information	3
Difficulty understanding information	8
Time management issues	4
Adjustment from classroom to online	2
Lack of interaction	8
Technical issues	7

* This indicates the number of participants who provided one or more of the responses shown in each respective category. Some users'

responses fit more than one category.

Some students reported that what they disliked most about the online course was the difficulty in understanding information and the lack of interaction (8 of 38 respondents) and seven respondents reported that technical issues made the course a challenge.

A growing body of research suggests that student's prior experience with technology affects their attitudes about technology in general (Smart & Cappel, 2006; Martins & Kellermanns, 2004). The greater amount of experience users have with technology the higher the levels of users' satisfaction in learning to use new technology. According to Smart & Cappel (2006) having experienced an online learning unit in a blended context may likely benefit students in the future as they make decisions about selecting between different educational or training options for themselves. The results may suggest that students with more experience with technology and e-learning rate it more positively.

Discussion

This study provides data on an initial attempt to understand student preparedness for online learning and the correlations between previous technical experience and social networking and the student success in the online environment. One striking statistic that was revealed was that the majority of students surveyed, 87 percent had never attended an orientation for distance learning while another 78

percent reported that they have never gotten assistance with an online course via the campus distance learning lab. This data may suggest the need for further exploration as the Dempsey, Fisher, III, Wright, & Anderton, (2002) study reported that 55 percent of their students expressed the importance of a web orientation for online courses.

The analysis of the opened ended questions yielded more about a student's ability (or inability) to engage in self-directed learning. Three themes were revealed:

- Most students acknowledged that the online environment was more challenging than a traditional classroom and attributed much of their success (or failure) to their own abilities to organize their work and discipline themselves to accomplish it (time management).
- Most students reported that the structure of the course impacted learning.
- The lack of familiarity with the Blackboard platform proved to be challenging.

A key consideration about online learning that seems to have emerged in this study (via the open-ended questions) is that a student's inability to understand course information may be directly linked to a lack of interaction (approximately 24 percent reported that inability to understand information and the need for more interaction). Most students simply did not feel as if they had a level of interaction that would enable them to engage as they were accustomed to in a traditional, face-to-face classroom. Other factors such as the self-paced nature of the courses led some students to feel like they had a lengthy, solitary semester. It is worth noting that the open-ended questions supported the students premise that peer/instructor interaction (33 percent) was one of the key strengths to online learning. Although further research is needed to understand these differences, we can presume that increasing an instructor's understanding, use and incorporation of ICTs would be highly recommended to improve student understanding and education performance in the online environment.

The major assumption of the research (the connection between social networking and academic success in an online environment) was not clearly answered, however the study did reveal that looking for factors that would answer questions about a student's ability to embrace a new mindset about learning, especially in an online environment is key to determining measures of success or failure for these students (Table 5).

Additionally, since today's student has embraced social interaction through by integrating a number of mix media methods, this may be a starting point for developing social communication on a different level that will facilitates students' online learning in a variety of ways. Research indicates that a learning community can not only increase persistence of students in online programs, but also enhance information exchanges, learning support, group commitment, collaboration and learning satisfaction (Wang, 2005).

Table 5: Respondents Perception of Technical Skills and Use of Social Media

	My use of social media (Facebook, Twitter, etc) made using Blackboard easier.	Previous technical skills prepared me for this online course.
Mean	2.8000	2.1579
N	35	38
Std. Deviation	1.07922	.97333

There needs to be an extensive examination of how social relationships develop online (e.g. structural factors such as pre-existing friendship networks and psychological factors such as communication styles) and how these factors influence collaborative learning and working networks. Studying the social dimension of online communication provides some insights to online learning from students' perspectives. The development of more online course offerings and increased reliance on social networking by students, makes attention to these dimension during the design and teaching of online courses, rather than focusing solely on course materials and technology template an instructional imperative (Hart, 2008). A quality online course comes with a live learning community where social interaction is decisively encouraged and facilitated. However, social interaction is a multi-faceted dynamic process that is impacted by many factors, such as students' characteristics, subject content, instructional strategies, technological interface, and organization of instruction. To this end, courses must be designed to drive students to the instructional website and to encourage them to navigate, trouble shoot, collaborate and utilize the collective learning to enhance the online experience (Yang & Tang, 2003).

Future research may focus on course design, interaction and management of the online environment that will support peer-to-peer and instructor-to-peer learning. For example, it is important to know how to incorporate video/video chats, discussion boards, wikis and forums that allow for learning communities to develop. The future challenge will be how to design different courses that attract the Digital Natives and make use of the advantages of technology in the manner in which they have grown accustomed to using them.

Limitations of the Study

This study has several potential limitations; as an exploratory study, the small number of participants did not allow for the collection of data that could be generalized to a larger population. Follow up studies would include a larger survey sample in which all students enrolled in online courses would be active participants. Another limitation may be the need for incentives for survey participants. Ideally, this will be addressed in the follow-up study by working with the Distance Learning and Education Lab to make completion of the survey a course requirement.

Additionally, more open-ended questions to obtain information about why students do not take advantage of online course orientations, more in depth data collection regarding students technical skills and use by Digital Natives, and a review of the Performance Dashboard (on the

Blackboard platform), which provides an up-to-date report on the activity for all students can be incorporated for a more robust data report.

Lastly, while the relative frequency interpretation of the data allows for a clear snapshot of respondent's experiences in the online courses, the data analysis in the form of statistical reports from the online courses (which can be collected as a part of the course evaluation software) and a variable analysis would help to shed light on factors that contribute to or detract from student success in online course.

Conclusion

There has been an existing assumption that students characterized as Digital Natives possess a level of familiarity with ICTs to support online learning. What researchers have found is that many of the necessary skills have to be learned at the college or university and that the motivation for doing so is very much tied to the requirements of the curriculum. Another significant result of this research was that being familiar with ICTs does not mean that one is able to use ICTs in a competent way. Thus, living in a digital environment does not reliably imply being digitally competent. Even though this generation of Digital Natives has the ability to spontaneously learn to use technologies, there is not enough evidence to support that they are digitally competent and that these skills transfer to the academic environment. What has been supported by research is that well-designed instructional materials for developing digital competence is urgently needed to engage students and increase educational success in the online environment (Li & Ranieri, 2010).

Similarly, studies find that students have not gained the necessary skills to use technology in support of academic work outside the classroom, thus making the case for further training in the use of information technology in support of learning and problem-solving skills. Some complacency may occur because of the belief that Digital Native students require less training with technology (Kvavik, 2005). Kavik (2005) further asserts that student and faculty use of instructional technology is more limited than is often portrayed. Students appear to be slower developing adequate skills in using information technology in support of their academic activities, which limits technology's current value to the institution. Higher education's investment in learning technology may be paying less than optimal returns because students and faculty often lack the appropriate skills or motivation to use it effectively.

At a time of growing interest in the attributes of the so-called 'Net Generation' it is important for universities to consider how to enhance learning of these students from an empirically informed perspective (Kennedy, Krause, Judd, Churchward & Gray, 2006). These data provide a timely confirmation that while Digital Natives may not be experts when it comes to ICT skills and interest that this is an important issues to be considered in the design and delivery of online courses. It is beneficial for faculty to know how use technology as this provides an useful starting point from which faculty can begin to shape student expectations

about how and why certain technologies will be used for pedagogical advantage (Kennedy et al, 2006). Further, in a study by Caruso and Kvavik (2006) it was found that students perceive the most valuable reason for using technology in courses is convenience (51% of undergraduates sampled). In other words, from a student's perspective, technology is most useful for the convenience and control that it affords rather than something associated with learning per se. If universities are serious about enhancing learning via innovative use of technologies, a commitment to gaining an understanding of the challenges that both instructors and students face in an online environment coupled with the barriers faced by Digital Natives and Digital Immigrants must be further investigated (Bender & Kerr-McCurry, 2005).

Much of what was revealed in this study and others can be attributed to growing pains in area of ICTs implementation at the university level. Viewing this generation of online students as a monolithic group with the same beliefs and perceptions about online learning oversimplifies the nature and needs of today's student. Emerging research should look at ways to empirically explore online learning in an environment where the Digital Native and Digital Immigrant intersect and provide suggestions that will lead to the creation of courses that better engage students through effective use of certain technologies.

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Appendix

My Students will Facebook me but Won't Keep up with my Online Course:

The Challenges of Online Instruction

Online Instruction Questionnaire

Prepared by Dr. Francine Edwards, Assistant Professor Mass Communications Department

Online instructions: Please log onto your course Blackboard site. You will find the survey under the Online Test tab. The survey should take less than 15 minutes to complete. Your instructor will assign extra credit points for your participation after the survey is completed. If you have any questions about the survey, please contact Dr. Francine Edwards at 302-857-6570.

Online Course Survey

1. I acknowledge that I consent to participate in this study. This consent serves as my electronic signature and I acknowledge that I have read and understand the consent information provided.

☐ Yes I consent

☐ No I do not consent

	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
2. This course required more reliance on other students.					
3. The professor used other online tools to communicate throughout the semester.					
4. This online course required more work than a traditional course.					
5. I was often lost in this online course					

6. There is little social interaction with classmates.					
7. I had difficulty accessing the course/course information.					
8. Throughout the semester, I gave equal attention to accessing Blackboard and my personal social networking site(s).					
9. My use of social media (Facebook, Twitter, etc) made using Blackboard easier.					
10. Technical support for this course was adequate.					
11. Previous technical skills prepared me for this online course.					
12. There was a lack of contact with professor during the semester.					
13. I would take another online course.					

14. Please describe what you liked most about this course.
15. Please describe what you disliked most about this course.

Demographic Information

7. Where do you use the computer for course work? (Mark all that apply)

☐ Home computer

☐ Campus computer labs

☐ Work computer

☐ Public library

1. Gender
 - ☐ Male
 - ☐ Female

2. Classification
 - ☐ Freshman
 - ☐ Sophomore
 - ☐ Junior
 - ☐ Senior

3. Degree Program
 - ☐ BA/BS
 - ☐ Master's

4. Current Grade Point Average (GPA)
 - ☐ 2.0-2.5
 - ☐ 2.6 -3.0
 - ☐ 3.1-3.5
 - ☐ 3.6 and above

5. Number of online Course Taken
 - ☐ 1-3
 - ☐ 4-6
 - ☐ 6 or more

6. Was this a required course?
 - ☐ Yes
 - ☐ No

Respondent Characteristics

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 (male)	8	21.1	21.1	21.1
	2 (female)	30	78.9	78.9	100.0
	Total	38	100.0	100.0	

Classification					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00 (freshman)	1	2.6	2.6	2.6
	2.00 (sophomore)	17	44.7	44.7	47.4
	3.00 (junior)	15	39.5	39.5	86.8
	4.00 (senior)	5	13.2	13.2	100.0
	Total	38	100.0	100.0	

Grade Point Average (GPA)					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00 (2.0-2.59)	3	7.9	7.9	7.9
	2.00 (2.6-3.0)	13	34.2	34.2	42.1
	3.00 (3.1-3.59)	17	44.7	44.7	86.8
	4.00 (3.6-above)	5	13.2	13.2	100.0
	Total	38	100.0	100.0	

Number of Online Courses Taken					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00 (1-3)	35	92.1	92.1	92.1
	2.00 (4-6)				
	3.00 (6 or more)	3	7.9	7.9	100.0
	Total	38	100.0	100.0	

Required Course					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00 (yes)	29	76.3	78.4	78.4
	2.00 (no)	8	21.1	21.6	100.0
	Total	37	97.4	100.0	
Missing	System	1	2.6		
Total		38	100.0		