

Perceptions of e-learning in secondary education: a viable alternative to classroom instruction or a way to bypass engaged learning?

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Abstract

This manuscript uses interview data collected during a qualitative study in 2007 of a secondary US history e-learning course. The teacher, Mr. Harding, and 11 of the 13 students in the class were interviewed about their general perceptions of e-learning and the ability to effectively learn content online. The findings of the study show that nearly all participants maintained a belief that e-learning was best used for information transmission and rote memorization rather than active or social learning. Further, Mr. Harding seemed to characterize e-learning students as uninterested in engaging in social interaction online, a perception that was refuted, at least partially, by his students. The manuscript concludes with a discussion of the findings and implications for secondary e-learning programs.

Keywords: e-learning; secondary education; perceptions

Abstract:

Since the development of the first correspondence courses in the late nineteenth century, the evolution of distance education in the United States has been prone to skepticism due to the perception that non-traditional forms of education can never adequately replace the learning potential of classroom instruction (Larreamendy-Joerns & Leinhardt, 2006). Even with the rise of the Internet and the perpetual advancement of computer-mediated instruction, e-learning proponents still have to counter common misconceptions that online instruction lacks rigor, limits pedagogical creativity, and provides insufficient student engagement with content and peers (Noble, 2001; Ohler, 2005). However, as institutions proceed to use e-learning as a viable form of instruction and research continues to offer improvements to methods of learning and communicating online, these criticisms are often tempered. For example, the prevalence of e-learning in higher education has allowed researchers to make great strides in understanding the complexities of electronic communication, online communities, and computer-mediated content delivery, the sum of which has led to a more positive perception of online education, even when compared to classroom instruction (Bernard et al., 2004; Garrison & Anderson, 2003; Haythornthwaite & Kazmer, 2004).

Yet, it remains unclear whether the positive perceptions of e-learning earned in one area of education automatically transfer to others. What does appear clear, however, is that secondary education seems primed to be at the center of the next explosion of e-learning in the United States. As school and district administrators continue to view online instruction as a low-cost method of educating large numbers of students (Burbules, 2004), the demand for e-learning applications in secondary education is destined to increase. Already, over 30 states have established virtual high schools as a way of helping ensure equitable educational opportunities for all students (Blaylock & Newman, 2005; Schrum, 2004). Further, individual school districts throughout the country have begun piloting their own e-learning programs as a way of accommodating students or attempting to cut the ever-increasing cost of public education (Conceicao & Drummond, 2005). Finally, the Michigan Department of Education has taken the unprecedented step of mandating an e-learning requirement for all high

school students as a way of preparing their students for the growing demand for online instruction in higher education and business (Michigan Department of Education, 2006).

Despite this movement toward e-learning in secondary education, researchers have done little to assess the perceptions of online instruction among high school students and their teachers. The majority of e-learning research in secondary education focuses on the question of whether adolescents have the intrinsic motivation to succeed in independent learning environments, particularly in light of alarmingly high e-learning dropout rates (Jun, 2005; Roblyer, 1999; Roblyer, Davis, Mills, Marshall, & Pape, 2008; Roblyer & Marshall, 2002; Weiner, 2003). Other research has focused on the relationship between students' levels of interaction in e-learning courses and their academic performance (Herring & Clevenger-Schmertzling, 2007) and the ability of adolescents to engage in academic discussions using asynchronous communication (Journell, 2008; Larson, 2003), but few studies have attempted to ascertain student perceptions of e-learning. However, a handful of studies have asked students about their preferences toward certain aspects of their online courses, and the responses suggest that high school students often struggle with issues related to technology and isolated learning but enjoy the autonomy provided by online instruction (Dewstow & Wright, 2005; Kapitzke & Pendergast, 2005; Tunison & Noonan, 2001).

Similarly, little research has been done on high school teachers' perceptions of online instruction. Research from higher education suggests that many instructors often have adverse initial reactions to teaching online, particularly if they feel uncomfortable with technology, and that teaching online actually involves more instructional time than teaching in the classroom (Maor, 2006; Tomei, 2006). However, studies of secondary e-learning suggest that teacher interaction is instrumental to students' success in their online courses (Journell, 2008; Herring & Clevenger-Schmertzling, 2007; Kapitzke & Pendergast, 2005; Tunison & Noonan, 2001). Further, secondary online teachers, like their students, seem to enjoy the autonomy of e-learning but struggle with course organization and technological issues (Dewstow & Wright, 2005).

Based on the literature, it appears evident that researchers are only beginning to understand the nature of secondary e-learning, and it seems that a likely place to begin this process is to develop a better understanding of how secondary students and teachers perceive online learning. In this study, I seek to address this issue through a qualitative case study of one secondary e-learning course. While the results are particular to the individual case and cannot be generalized to other secondary e-learning courses, the perceptions articulated by the teacher and students in this study can serve as a starting point to evaluate the current state of secondary online instruction in the United States and may offer implications for future research and practice in this area.

Context of the study

The study took place in 2007 during an online summer session of a Southwestern Virginia school district that comprises nearly 15,000 students. Overall, the district would be considered predominately middle-class and located in a suburban geographic area. At the time, the district had 10% minority enrollment, and 19% of students were available for free and reduced lunch. The district was widely recognized as a leader in educational technology and was one of the first in Virginia to implement a laptop initiative that provided personal computers to every high school student in the district.

In addition, the district maintained an e-learning program, which had been in existence nearly five years at the time of the study. While the program was initially developed as a way of educating homebound students who could not attend school due to illness or social reasons, online courses were eventually offered district-wide. At the time of the study, students could take online courses in a variety of disciplines with most courses offered in the summer. Each of the courses was taught exclusively online, although the students and their teachers did meet in person for a mandatory orientation session at the start of the course, as well as their midterm and final exams. During the 2007 summer session, over 200 students signed up for online courses, a group that represented each of the district's five high schools.

Thirteen of those students were found in Mr. Harding's online US history course, and collectively, they represent the focus of this study. Seven of the students were male, and six were female. All of the students were white. The majority of the students had just completed their sophomore year of high school, although one student had just completed her freshman year, and another student was repeating the course after failing it in the classroom during his junior year. All of the students passed the course, with a fairly even grade distribution of three students earning As, four earning Bs, and three each earning Cs and Ds.

All of the online courses were taught by district teachers whose primary responsibility was classroom teaching during the regular school year. Mr. Harding had over 10 years of classroom experience and had been given the responsibility of designing the online US History course due to his mastery of content and his willingness to incorporate technology into his classroom teaching. At the time of the study, Mr. Harding had been the only instructor for the online course, which he had taught six times over the previous three years.

The course ran approximately five weeks and consisted of 12 units that corresponded to traditional chronological divisions in US History. Students had to complete a variety of assignments in each unit, including written assignments, content worksheets, discussion board posts, and multiple choice assessments. Although Mr. Harding set due dates for individual assignments, students were encouraged to work ahead to accommodate employment schedules and family vacations.

Method

As part of a larger study on asynchronous discussion as an appropriate medium for historical discussions among adolescents (Journell, 2008), I conducted semi-structured (Merriam, 1998) interviews with Mr. Harding and 11 of the 13 students in the course¹ about their general perceptions of e-learning and the ability to effectively learn content online. Mr. Harding's interview took place in person at the beginning of the study, lasted approximately 45 minutes, and focused on his teaching philosophy and perceptions of online students and e-learning instruction. In addition, I maintained regular contact with Mr. Harding via email throughout the span of the course. As Meho (2006) notes, email correspondence is a viable method of continuing communication with research subjects when geographic boundaries become barriers to investigations. My email interactions with Mr. Harding often sought to clarify topics discussed in the initial interview or ask questions pertaining to specific instances found in the course.

The student interviews took place in person at the site of their midterm exam. The student interviews lasted approximately 15 minutes and centered on their reasons for taking the online history course, their feelings toward certain aspects of their online instruction, and their general perceptions of e-learning. In addition to the interviews, I also monitored the discussion board interaction among all course participants as well as the email communication between students and Mr. Harding (for greater detail on this aspect of the study, refer to Journell, 2008).

All interviews were audio-recorded and transcribed for accuracy. I then analyzed the data by systematically reading the interview transcripts and coding (LeCompte & Schensul, 1999) all instances where Mr. Harding or his students appeared to give personal opinions related to e-learning or particular aspects of the online course. I then looked for patterns throughout the case in order to make naturalistic generalizations (Stake, 1995).

Findings

Based on the interviews, I found several distinct perceptions of e-learning among the course participants. Interestingly, Mr. Harding and his students shared many of the same perceptions, although differences did exist, particularly with respect to Mr. Harding's characterization of online students. In order to present my findings systematically, I will first discuss Mr. Harding's perceptions before moving to the comments made by his students.

Mr. Harding's perceptions

E-learning as exclusively content transmission

When I asked Mr. Harding to describe his teaching philosophy, he stated that his goal was always to “help students.” He then further distinguished between ways of helping students academically versus socially and proceeded to argue that e-learning only catered to former goal. As he said,

Now the goal may be academic; that is what it is obviously, almost exclusively in online. It's an academic goal, as in pass the [Standards of Learning] test, learning the information at a level well enough to, you know, demonstrate to the state of Virginia that you actually know American history.

Mr. Harding continued by comparing e-learning to the classroom by saying,

In the classroom you obviously add in the social component, and the goal is going to be to obviously exceed well beyond the academic goal. The goal there would be, in the classroom, to help the students develop themselves socially, to become confident in themselves, to enjoy the day.

Mr. Harding and I then had the following conversation about whether he believed one of these goals was more significant to his beliefs on education than the other:

Author: Now do you think one [of these goals] is better than the other?

Mr. Harding: Yeah, I'd say in the classroom is the better goal.

Author: Why?

Mr. Harding: Because I think that most students, including myself, will forget the vast majority of information that you learn in the classroom, the rote memorization, which means ultimately, maybe you have a short term goal that is accomplished or achieved, but for the long term academics are largely meaningless ... Socially, on the other hand, if they can become confident in themselves, if they can ascertain where their strengths and where their weaknesses are, if they will socially come out in the classroom and interact with others in a productive way then that, to me, far exceeds the value of academics. And the best goal, of course, in my opinion, is if they would actually remember the experience in there as a good one and enjoy it. That to me is the ultimate goal.

Author: And do you think they do that in the online course?

Mr. Harding: No.

Author: What do you think their goal is in the online?

Mr. Harding: I think their goal is to pass the [Standards of Learning tests]. Get in, get out of it, minimize your interaction or input.

That conversation highlighted another of Mr. Harding's perceptions of online instruction: that e-learning was not well suited for social interaction among students. As noted in the previous section, Mr. Harding included activities in each unit designed to encourage student interaction in the discussion board, but while he saw his online course as meeting acceptable academic standards, he believed “the social goal is not well achieved at all.”

Even when assessing the discussion board participation in his course, Mr. Harding seemed to unfavorably compare e-learning interaction to that found in the classroom. He described the difference as

From an online teacher's perspective, [the online course interaction] might be pretty good. I mean, they interact every couple of days, they will give input about each other's comments, you can see that they are thinking, they are making judgments, they are expressing their opinions, and those are all good things like we see in the classroom. But the magic of the classroom, where you respond to the moment, when a kid's facial expression, the nonverbal expression, is the key to taking the next step, you lack all of that, obviously in online, and therefore it's somewhat contrived and somewhat artificial.

Based on his comments, Mr. Harding seemed to perceive e-learning as primarily a medium for transmitting content to students, one that paled in comparison to classroom instruction and did not provide the necessary social and emotional aspects that he believed were essential to an engaging learning experience.

Perception of online students

Based on his experiences teaching online, Mr. Harding seemed to develop a perception of e-learning students that went hand in hand with his general perceptions of distance learning. According to Mr. Harding, students take online courses because their “whole goal . . . is to put in the minimal amount possible.” Moreover, this perception seemed to influence his choice of instruction in the online class, which, according to Mr. Harding, involved more rote memorization and repetition than his classroom instruction. As he said,

For the kid that simply wants to do the minimum, just give me the information, be quiet, spit it back to you and we're fine, then the online is the better place because all I do with them is worksheets, well not all do, but one of the aspects is worksheets. We don't do any worksheets all year long in my regular (classroom) class. For the minimalist that just wants to crank in and get out [online] is better.

In addition, Mr. Harding also appeared to perceive that students chose e-learning because they wanted to avoid the type of interaction and collaborative learning found in traditional schooling. As he quipped, “I mean, there is a reason why they are doing it online; they don't want to be in the classroom!” Further, he compared his online students to

The students in the classroom among the bottom ten percent that don't want to interact with me. You know the kids I am talking about. They come in, take their seats, they're quiet, they give you one word answers, and they are out the door. I see them but I don't interact with them much. That is kind of how it is online.

Similarly, Mr. Harding seemed skeptical about whether his online students even read any comments or feedback that he sent them throughout the course, although he said his work ethic and district expectations demanded such attempts to reach out to students even though he was convinced they were done in vain. In essence, it appeared that Mr. Harding viewed e-learning as a way of matriculating students through a particular program and not conducive to engaged learning, a viewpoint that may help explain his lack of substantive email communication with students and minimal participation in the course discussion boards (Journell, 2008).

Student perceptions

E-learning as quick and easy

When asked why they decided to take US History online, the majority of students' responses centered on the perception that e-learning offered a quicker and easier approach to learning than what they would have received in the classroom. As Walter said, “You get through [content] faster. You do a lot more in less time.” Hunter even boasted that “I am taking two [online] classes in like two months or something like that, and I get my whole junior year out of the way.” As with Mr. Harding, there seemed to be a perception among the students that e-learning was the option for those simply trying to earn required credit and not wishing to engage in the material. As Cynthia, one of the top performing students in the class, admitted, “[History] doesn't have anything to do with what I really want to go into, so that's also why I am doing it [online].”

Many of the students also seemed to believe that online courses were less rigorous than traditional classes. While several of the students equated ease with flexibility, as was the case of Brandon who described e-learning as easier because “you don't have to actually get up and go to class. You can sit there and plan out your whole day with it,” other students viewed online instruction as a way to easily learn large amounts of content. This attitude was evident in Jennifer's statement that “it would be harder to take a math or science course [online], but history is a lot of facts and memorization.” Again, Jennifer's suggestion that e-learning is conducive to a subject often derided by students as dull and prone to memorization (Chiodo & Byford 2004) as opposed to

math and science, two subjects that often require engaged activities such as solving problems, speaks to the aforementioned perception that online instruction is best suited for basic transmission of information.

Interestingly, however, several of the students had begun to question their preconceived notions by the middle of the course. As Jason admitted to me, “[E-learning] is definitely not as easy as they say it is.” Amy added, “I think if I took [US History] during the school year in a class it would be much easier.” However, for most of the students who confessed to struggling with the course, the primary reason was a lack of self motivation rather than difficulty with the academic requirements, a well-documented issue among adolescents in online learning (Roblyer, 1999; Roblyer & Marshall, 2002; Weiner, 2003).

Little need for social interaction online

Like Mr. Harding, the students did not perceive e-learning as conducive to social interaction. Moreover, many of them did not seem to believe interacting with their peers online was necessary. As Brandon stated,

I haven't really gotten to know [his classmates] much because I haven't talked to them. It's just like the discussion boards, that's the only way you get to talk to them and you're just debating about history so it's not like you really have a connection.

Perhaps one reason that students failed to develop a connection with their classmates was due to the lack of opportunities provided by Mr. Harding for students to engage in non-academic conversations. The only recreational banter that occurred throughout the course, including the mandatory face-to-face orientation session, was an initial discussion board post where students were asked to provide a short introduction about themselves. However, Allen's interview suggests that the lone informal discussion board activity was not enough to encourage social interaction among the students. He stated, “I don't really have a relationship with [others in the class] just because, you know, you can only see what they wrote about the class. The only personal thing that we did was the introduction and I didn't read everybody's.”

However, contrary to Mr. Harding's belief, many of his students seemed to crave personal interaction, even unfavorably comparing e-learning to their classroom experiences because of the missing social component in their online course. Responding to my question of whether they preferred taking classes online versus in the classroom, Jason replied, “Probably in the classroom due to more hands on; I like the atmosphere more than just sitting at your computer learning the material.” Bill answered the same question by saying, “Online you're kind of pulled out. The classroom is a little more fun.” When I asked him why the classroom was more enjoyable, he said, “Because you can't really do group activities and talk with your friends and stuff. It's like with me, I get on Instant Messenger while I am taking the class; that way I can still talk to friends while I am doing it.”

Teacher as nonessential to learning

When asked how they felt about their relationship with Mr. Harding, the majority of the students in the course seemed to perceive him as unimportant to their learning of history. None of the students made any reference to Mr. Harding guiding their learning; rather, most of the students stated that the only time they contacted Mr. Harding was to seek technology support or ask procedural questions related to missing work or scheduling concerns. As Jennifer said, “The only time I ever emailed him was when I noticed a mistake on my grades and he fixed it and apologized.” In a similar comment, Pete said, “I have talked to him a couple times about the links not working and stuff.” An analysis of the email data further shows an instructional divide between Mr. Harding and his students. Out of 111 emails sent throughout the duration of the course, only two, a question from Cynthia and subsequent response from Mr. Harding, were academic in nature (Journell, 2008).

Moreover, it seemed as if Mr. Harding's students recognized this lack of academic communication and found it inferior to the relationships formed with teachers in a traditional classroom setting. As Jason stated, “I think maybe if there was a way to lessen that gap [between students and teachers] I think the online experience would be a little bit better.” Further, several students attributed their poor relationship with Mr. Harding to the lack of physical presence one would typically find in a classroom. As Allen stated, “It's definitely different because you

don't have the face to face. You don't know him as well I guess.” Pete further explained by saying, “I mean, I wouldn't really consider us having a relationship because I don't really know him, but I mean, if you are in a classroom with a teacher day after day after day you start to know him, you see him, you can kind of like relate to him.”

Clearly, the perceptions of e-learning held by Mr. Harding and his students suggest that they did not view online instruction as conducive to active or social learning, at least when compared to classroom instruction. Moreover, it seems likely that these perceptions prevented the students from becoming engaged with the material and developing an appreciation of history. While this study only represents one case of secondary e-learning, these findings raise alarming questions about the viability of such instruction. In the next section, I will focus on the implications of these findings and offer suggestions for continued reform of online instruction at the secondary level.

Discussion

For secondary e-learning to act as a viable alternative to classroom instruction and not devolve into the diploma mills feared by critics (Noble, 2001; Postman, 2000), policymakers must strive to change the perception among secondary educators and students that online instruction lacks rigor and opportunities for engaged, social learning. One easy reaction to this study is to criticize Mr. Harding, who seemed pessimistic about the prospects for his online course from the start. However, Mr. Harding, who, by all accounts, was a successful classroom teacher who cared about his students' learning, is likely symptomatic of a larger problem within secondary e-learning in that teachers and students are often uninformed about online instruction and, as a result, unprepared to transfer notions of active learning into an online format.

Unlike in higher education where research has shown the need to adequately train instructors to effectively teach online (Maor, 2006), secondary e-learning remains in its infancy. Many school districts, like the one in this study, see potential in online education and create programs with the assumption that the traits that make teachers and students successful in the classroom will translate to e-learning. Mr. Harding is a perfect example of Garrison and Anderson's (2003) assertion that exceptional classroom teachers, even those adept at technology, do not necessarily make effective online instructors.

Similarly, this study suggests that despite considerable research in higher education on online social interaction, secondary teachers and students still view e-learning as an individualized way of transmitting content rather than a type of discursive space where ideas are shared and discussed. Perhaps the most alarming aspect of my findings was that the students almost unanimously viewed their teacher as unimportant to their learning, a notion that contradicts widely accepted educational theory (Vygotsky, 1978). Again, such perceptions are particularly troubling given the amount of research done in higher education on creating constructivist environments that stress the importance of teachers in facilitating active learning online (Berge, 2002).

What, then, are the necessary steps to changing these perceptions of e-learning within secondary education? First, I concur with Davis and Roblyer (2005) when they call for universities to modify their teacher training programs to include courses on online instruction. As costs of technology continue to decline, more school districts will turn to online instruction, and universities have an obligation to prepare their teachers to succeed in all types of educational environments, including the virtual. As Mr. Harding's experience shows, the skills and strategies that students receive in traditional methods classes do not necessarily translate to online instruction, which ultimately leaves many secondary e-learning instructors struggling to accurately evaluate the effectiveness of their online pedagogy.

This lack of adequate pre-service teacher preparation leads to my second call for reform. For those teachers who were not privy to e-learning instruction as part of their pre-service teacher training programs, it is the responsibility of school districts to ensure that their online instructors are versed in current e-learning literature and teaching strategies. The struggles and misconceptions of Mr. Harding and his students are symptomatic of a larger problem in public education. District and school administrators are often quick to embrace educational

innovations, particularly those that are deemed “low-cost,” without taking the necessary steps to truly evaluate the effectiveness of such programs or fully train their personnel to implement them. Neither Mr. Harding nor his students seemed particularly educated about the social potential of online instruction. I would argue that this is not the fault of Mr. Harding, who, given his track record as a classroom teacher and his stated willingness to help students succeed, would most likely have used more engaging strategies in his online instruction had he been exposed to them. Rather, the district must assume part of the blame for the lack of social engagement and rigor in the course. As a whole, the e-learning program comprised a very small portion of the district administration, and the primary focus of their efforts was educating students on the motivational aspects of online instruction rather than instructing their teachers on how to effectively engage students in an online environment.

It is the responsibility, then, of districts with established e-learning programs to provide in-service opportunities for teachers to continually refine their online teaching and remain privy to current strategies related to effective e-learning instruction. For teachers like Mr. Harding who have shared online and classroom responsibilities, such expectations may not be reasonable, particularly when e-learning is secondary, both financially and in terms of advancement, to classroom instruction. Therefore, as secondary e-learning programs grow, districts may want to consider hiring instructors who teach exclusively online, preferably individuals who have undertaken rigorous pre-service training in online instruction.

Finally, it seems clear that researchers must begin to turn their attention to secondary e-learning. The quality of online instruction in higher education has drastically improved in the past decade, due, in large part, to empirical research. However, it is unwise to assume that this information will find its way into secondary e-learning programs or will automatically transfer to adolescents. Only through continued research endeavors will the quality of secondary e-learning programs improve and negative attitudes toward online instruction change. Secondary e-learning marks the new frontier of public education in the United States, but it is essential that both researchers and policymakers make painstaking efforts to ensure that they drive the evolution rather than wait until poor online instructional techniques become commonplace.

Notes:

1. The two students who were not interviewed either did not agree to be interviewed or did not receive parental permission as required by Internal Review Board regulations.

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Appendix A

Interview protocol for Mr. Harding

- (1) How long have you been teaching online?
- (2) Can you explain your teaching philosophy for your online courses?
- (3) Does your philosophy for online instruction differ from your philosophy for classroom instruction?
- (4) What do you think the students' instructional goals are for the online class?
- (5) What strategies do you use to push the social component in the online class?
- (6) How do you perceive your role in the online classroom?
- (7) How does your role differ in the online classroom versus your regular classroom?
- (8) How would you characterize your relationship with your online students?
- (9) How important do you think it is for students to discuss historical issues?
- (10) Do you make requirements for your online students with regard to numbers of postings or word limits?

Appendix B

Interview protocol for Students

- (11) How do you feel the course is going?
- (12) Why did you decide to take US History online?
- (13) Where does history rank in your favorite subjects?
- (14) What aspect of the course do you like the most? Why?
- (15) What aspect of the course do you like the least? Why?
- (16) How would you characterize your relationship with Mr. Harding?
- (17) How do you feel about the discussion board?
- (18) Do you feel you frequently respond to your classmates' posts on the discussion board?
- (19) How many of your classmates' posts do you read in each unit?
- (20) How do you choose which of your classmates' posts to read in each unit?
- (21) What do you get out of reading your classmates' posts?
- (22) Do you ever go back to see if Mr. Harding or one of your classmates replied to one of your posts?
- (23) If so, what keeps you from responding to that person?
- (24) How would you characterize your relationship with the other members of the class?
- (25) How would you characterize your learning of American history in this course?