

The Emergence of Online Tutoring at the
University of Louisville: Issues and Changes

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Abstract

The purpose of this study is to examine the issues related to why some students are passing or failing the content course they are receiving online tutoring in at the University of Louisville. Based on the review of the literature, there are two issues that could play a role in the tutees online sessions. The two issues are learning styles and the type of online tutoring session in which they are participating. By using semi-structured interviews, of those students who passed and failed the content course, we hope to gain a better understanding of how learning styles and the different types of online communication play a role in the academics of the tutees.

The Emergence of Online Tutoring at the University of Louisville: Issues and Changes

The emergence of online education is nothing new in the realm of higher education. Over the last ten years, there have been numerous articles written describing the emergence of both online education and tutoring. As early as 2002, Creanor (2002) stated “an increasing number of institutions are turning towards online education in response to the demand from students for more flexible learning opportunities” (p. 57). Kear, Chetwynd, Williams, & Donelan (2012) wrote that “in recent years internet-based technologies have spread rapidly into all aspects of everyday life” (p. 953). The University of Louisville (UofL) can be included in the “increasing number of institutions” that are currently offering online education and tutoring. One particular department at UofL, Resources for Academic Achievement (REACH), has begun to offer online tutoring for students enrolled in most 100, 200, and 300 level courses.

With the online tutoring program being fairly new at REACH, the coordinator for the Learning Resource Center (LRC) has requested a review of current operations to determine what changes can be made to improve the service. The coordinator for the LRC Center has stated that they feel as though the online tutoring program is not quite as strong as the face-to-face tutoring offered by REACH. Data from the spring 2012 semester indicated that the percentage of online students passing the course they were being tutored in was 68.6%. The percentage of face-to-face students passing the course they were being tutored in was 72%. The desired pass rate for students using REACH services is 70%. The face-to-face students are meeting the desired rate; however, the online students are slightly below the desired rate. As it is a new program, there are probably many different issues REACH has not considered that affect the students' performance in online tutoring. For this study, we have two questions. The first question is: Does the type of online tutoring have an effect on the tutoring session? The second

question is: Does the student's learning style have an effect on the online tutoring session? As mentioned earlier, there have been numerous articles written describing the emergence of both online education and tutoring. Most of the articles written about tutoring focus primarily on face-to-face tutoring rather than online tutoring. For the purpose of this study, I am assuming that the terms "online courses and learning" can be used interchangeably with "online tutoring" since most of the pedagogy between the two is the same.

Resources for Academic Achievement

Background. REACH was created in 2000. It began as a unit organized under the Academic Provost's Office. The initial offerings by REACH included: onsite support for developmental mathematics and reading courses for any enrolled UofL student with mathematics or reading deficiencies; a math lab for drop-in support for developmental math classes offered by a joint partnership with the local community college; advising for all students enrolled in the continuing studies program and those that were undecided; and the Learning Resources Center. Since 2000, REACH has greatly changed and its development has been the result of the university's focus on strengthening the academic support for all undergraduate students.

Today, REACH is the home of multiple academic support services and retention programs. The following services are offered to all undergraduate students: the Math Resource Center (MRC), the Onsite Virtual Math Center (VMC), the Computer Resource Centers in Ekstrom Library and MITC, the Delphi Digital Media Suite, and tutoring in the Learning Resource Center (LRC) (both onsite and online).

Online Tutoring at REACH. REACH initially started offering online tutoring fall 2011. Online tutoring consisted of students enrolled in selected distance-only courses. These students were added to an LRC Blackboard organization in fall 2011 and spring 2012 to provide an online tutoring option. The following distance course sections were

selected for fall 2011: Spanish 121-53 and 122-50; Philosophy 311-5; Sociology 329-50. The following distance course sections were selected for spring 2012: Chemistry 101-50 and 201-50, Spanish 121-50, 122-50/53, and 123-50, History 101-50. Spring 2012 REACH used Blackboard and Join.me to offer an online screen sharing option for online tutoring. Since fall 2012, REACH has been using Blackboard Collaborate to offer online tutoring to any student who wishes to participate in select tutoring sessions based on select courses.

Literature Review

Online Tutoring Type

Asynchronous/Non face-to-face. The first factor that could cause the online tutoring program to not be as effective as the onsite tutoring program is the type of online tutoring offered. There are two different type of online communication: asynchronous and synchronous. Until recently the use of online communication primarily consisted of the use of asynchronous technologies such as discussion boards and email. According to Kear, Chetwynd, Williams, & Donelan (2012), asynchronous types of communication provide many benefits for learners. Some of the benefits include convenience and flexibility. However, asynchronous types of communication can also have disadvantages. Many times it can feel impersonal and students complain that they are not interacting fully with the tutor or other peers. Kear, Chetwynd, Williams, & Donelan (2012) report that due to a lack of scheduled interactions with asynchronous types of communication the student can fall behind because they do not schedule enough time to keep up with the activities. According to Skinner (2009), when a student falls behind this can lead to a low level of participation in asynchronous online learning.

Synchronous/ Face-to-face. Synchronous or real-time communication is one way to address some of the problems students have with asynchronous communication. There are many different forms of synchronous communications. A few examples are

chat rooms, instant messaging, and desktop audio and video conferencing. McInerney and Roberts (2004) found through their review of the literature on the different types of learning that synchronous or real-time communication feels realistic even though it is mediated by technology. Audio or video conferencing technologies can add significantly to the 'realness' of the delivery of the communication. Beyth-Maron, Saporta, and Caspi (2005), conducted a study looking at asynchronous and synchronous learning and the factors affecting students. They studied two groups of students in a research methods course who had similar learning material, similar tutorial content, and a similar tutor. The only difference between the groups was the type of delivery communication offered: asynchronous or synchronous. They found that students preferred face-to-face instruction/tutoring to online instruction/tutoring.

Price, Richardson, and Jelfs (2007) investigated face-to-face tutoring versus online tutoring in a quantitative study using the Course Experience Questionnaire (CEQ). The CEQ is intended to probe key elements of the university learning process and, in doing so, obtain data on the quality of teaching and courses. The CEQ consists of attitudinal statements, each with a corresponding five-point scale, labeled 'strongly disagree' at one end and 'strongly agree' at the other. The students were asked to indicate their agreement or disagreement with each item on the CEQ. Students in their study gave more positive responses in regards to face-to-face tutoring than those in online tutoring. Students participating in the face-to-face tutoring sessions gave more positive responses in regards to how academically engaged they were in the tutoring. One idea they suggested in their discussion is that the results are due to the characteristics of the students who opted for the online version of the course. Reading this study brought us to the second question for our study: Does the student's learning style play a role in how well he or she does in online tutoring?

Young and Norgard (2006) conducted a quantitative study to investigate student perspectives to online education. They surveyed 913 graduate and undergraduate students at a Texas college. Two hundred and thirty three students responded to the survey. A majority of the students (58%) stated they felt they learned more in face-to-face courses rather than online courses. However, students who had participated in 10 or more online courses felt they learned more in online courses than face-to-face courses. The authors believe that those who participated in 10 or more courses feel that they learn more in online courses than face-to-face because they become more comfortable with online courses as they take more.

Young and Norgard (2006), Price, Richardson, and Jelfs (2007), McInerney and Roberts (2004), and Beyth-Maron, Saporta, and Caspi (2005) all agree that students tend to prefer face-to-face learning to online learning. Two of the three studies suggest students prefer synchronous communication because of its 'realness'.

Implications of Online Tutoring Type. One of the implications of using asynchronous tutoring sessions at REACH, is that we will be eliminating some of the prejudices students, especially those with learning disabilities, might face in the classroom. These students will be able to move at their own pace and learn the material in their own ways.

A second implication with using asynchronous tutoring sessions at REACH will be how we go about training our tutors. We currently train the tutors to tutor in the traditional face-to-face manner. De Smet, Van Keer, De Wever, and Valcke (2010) provided some suggestions about tutor concerns in their study of online peer tutoring. Many tutors expressed concern that lack of time prevented them from inviting tutees to think critically about the materials. They also expressed that the time they had for tutoring was not sufficient to develop the critical thinking skills desired by the instructors. The tutors expressed concern with the text-based interaction. They expressed concern

with how and when to intervene and were afraid they would be misinterpreted by the tutees. Many also expressed concern with the amount and frequency of posting to the tutees. The final concern for the tutors was related to the tutors being a facilitator and not an expert. At REACH, we will need to focus on training the tutors on the issues De Smet, Van Keer, De Wever, and Valcke (2010) mentioned but also on how to deal with the lack of non-verbal communication such as facial expressions and tone of voice.

A third implication from the research on type of online tutoring to offer is the overwhelming idea that synchronous communication is better than asynchronous communication. Most articles point out that synchronous communication is far better than asynchronous and as a result it is easy to assume and make the decision that we should only offer synchronous tutoring. However, as mentioned earlier in the first implication from this research, some students will do better with asynchronous tutoring.

To better understand who will do better with which type of tutoring, we need to investigate what makes students prefer one method to the other. REACH is an advocate of the use of learning styles to help students plan better ways to study and learn. The use of learning styles could be applied to online tutoring.

Learning Style

As mentioned above, REACH advocates the use of learning styles in helping students plan better ways to study and learn. While there has been much research on online learning, there has been little in regards to the psychological characteristics and learning preferences of those who use online learning. Several studies indicate that learning styles and personality types are a good predictor of a students' success in online education. However, there are just as many studies that indicate that learning styles and personality types are not a good predictor of student success in online learning.

Wang, Wang, Wang, and Huang (2006) conducted a quasi-experimental research experiment using the 'formative assessment model' and 'Kolb's learning style' as independent variables, and 'learning achievements' as the dependent variable. This study was one that indicated that learning styles are a good predictor of student success in online learning. They found that both learning style and formative assessment strategies significantly affect student achievement in online learning. Their research suggests that both formative assessment strategies and learning styles should be taken into account in the design of online learning environments.

Huang, Lin, and Huang (2012) investigated what type of learning style leads to online participation in a mixed-mode e-learning environment. Two hundred and twenty four students were surveyed in the quantitative study, and 219 responded to the survey. They used the Index of Learning Styles assessment, which is a 44-item questionnaire with 4 different types of learning style preference. Their results showed that students who preferred the 'sensory' learning style were more likely to participate online and participate for longer times. Students who identified as more intuitive were found to not be able to adjust to the e-learning environment. These students may need extra help to adjust and benefit from online learning.

Nguyen and Zhang (2011) examined the use of learning styles and college student attitudes towards online instruction and distance learning. They surveyed 105 students in an Introduction to Information Systems course. Students were asked about their learning style preference and attitudes towards the learning process and the outcome of the class. They used Kolb's Learning-Style Inventory questionnaire. Those students who learn from concrete experiences and reflective experimentation/ observation (both different styles under Kolb's Learning Style model) did not appreciate flexible class schedules offered by online learning. They needed instant question

responses and feedback. They needed more visual course components, more guidance, and more structure in their courses.

Küçük, Genç-Kumtepe, and Tasci (2010) investigated students learning style preferences in a asynchronous online course to determine if any particular learning style performed better in asynchronous courses. They examined 139 juniors and seniors enrolled in asynchronous online courses. Qualitative and quantitative data were used for the study. They found that the learning styles of convergers and divergers were more engaged in asynchronous discussions than the assimilators and the accommodators. This supports the study conducted by Nguyen and Zhang (2011). Assimilators and accommodators fall under the concrete experiences and reflective experimentation/observation dimensions on Kolbs Learning Style theory, which they found to be the least engaged in online learning.

As mentioned earlier, there are a number of studies that indicate that learning styles and personality types are not good predictors of success in online learning. A study conducted by Harrington and Loffredo (2010) suggested that only the introvert/extrovert personality types were a good indicator for success in online learning. They surveyed 166 psychology, nursing, and education students. All participants in their study had taken at least one online course in their college career. Students were asked to complete the Myers-Briggs Type Indicator, a questionnaire asking their general preference for online instruction versus face-to-face instruction, and a follow up questionnaire designed to assess the reasons why they preferred one instructional delivery modality to the other. The results of their study indicated that only the introvert-extrovert dimension showed statistical significance. They found that introverts prefer online education (65%) and extroverts prefer face-to-face (59.1%). This leaves a lot of speculation about personality types because there are other indicators in Myer-Briggs

that could possibly influence success, however they did not show any statistical significance.

Ross and Schultz (1999) conducted an exploratory study to investigate the impact of learning styles on human-computer interaction. Seventy learners who were enrolled in a large urban post-secondary institution participated in the study. The researchers used the Gregorc Style Delineator to obtain subjects' dominant learning style scores. Results of their study indicated that patterns of learning indices did not differ significantly based on subjects' dominant learning style. To investigate the effects of the subjects' dominant learning style on human-computer interaction, a MANOVA was conducted using patterns of learning as the dependent variables and dominant learning style as the independent variable. The results of their study indicated that there was not a significant effect for patterns of learning by dominant learning style.

Implications of Learning Style. Research has indicated inconsistent findings relating learning styles and personality types to success in online learning. However, if we look at both the positive and the negative aspects of using learning styles, we can come up with the following implications. Based on the research from Huang, Lin, and Huang (2012), Wang, Wang, Wang, and Huang (2006), Nguyen and Zhang (2011), and Küçük, Genç-Kumtepe, and Tasci (2010) we can determine that learning styles will be a good predictor of whether or not students will be successful with online learning and perhaps even be able to identify whether or not they prefer asynchronous or synchronous types of communication. From this research, the following implication can be made: people differ in their preferences regarding learning styles and personality types. Some individuals, such as introverts, prefer autonomy and some prefer controlling all parts of their educational experience. These students will probably prefer asynchronous tutoring. On the other hand, extroverted students will prefer synchronous tutoring because of the similarities to face-to-face class sessions. REACH could use the

data from the learning style inventory that each student completes to determine which type of online tutoring would be offered to the student. One problem with this implication is that it could be costly to the department. This could result in offering both a asynchronous and synchronous session for the same class and having to pay a tutor for both.

Based on the work of Harrington and Loffredo (2010) and Ross and Schultz (1999) we know that learning styles may not be a good predictor of student success in online learning. As the last paragraph suggested there is research that does support the use of learning styles as good predictors. In order to keep from designing a particular online tutoring strategy or strategic plan, REACH should design their online tutoring activities to accommodate multiple learning styles

Method

To better understand why students are not doing as well in the online tutoring as they are in the face-to-face tutoring we plan to conduct a study to investigate the issues discussed in the literature review. As mentioned earlier, the research questions for this study are: Does the type of online tutoring have an effect on the tutoring session and Does the student's learning style have an effect on the online tutoring session? For this study, we will need to investigate the issues of learning styles and which style tends to do better with online learning, as well as the issue of asynchronous and synchronous types of communication. One of the aspects we are interested in is if there is a particular learning style inventory that best identifies which learning style does the best with online learning. This study will also investigate whether or not students prefer asynchronous or synchronous types of online communication and whether or not a particular learning style identifies those who chose asynchronous or synchronous communication.

A qualitative study of the learning styles and online communication preference of tutees using the online tutoring program is proposed, using semi-structured interviews as

the primary research approach. According to Brewerton & Millward (2001), “semi-structured interviews incorporate elements of both quantifiable, fixed-choice responding and the facility to explore, and probe in more depth, certain areas of interest” (Brewerton & Millward, 2001, pg. 70). It is proposed to begin the interviewing process in the spring of 2013.

As the study is exploratory, it will not be possible from the outset to determine the exact questions needed to guide the research. However, the following guiding questions have been deduced from the review of the literature. The first question to be asked is “Please describe the way you best learn?” This question will probe for the students learning style. Based on the type of responses received from the tutee we will be able to code the students into different learning styles. The second interview question will ask the tutee to describe their preferred method by which they prefer to receive communication. The purpose of this question is to establish whether the student preferred asynchronous or synchronous communication. The third question will ask the tutee to describe the kinds of things he or she expects to happen in online tutoring? The purpose of this question is to establish the range of activities that students might conceive of as online tutoring. The next question that will follow is “How would you prefer these activities to be provided? Email, face-to-face, online conferencing, etc.” Together the third and fourth question will allow us to better understand the way students classify asynchronous and synchronous activities. We will also ask students to provide us with examples of activities that occurred in their tutoring session that they felt did not contribute to their academic success as a student. We will ask follow up questions as we progress to dig deeper at the issues that are possibly causing students to not perform well with the online tutoring. See Table 1 for an overview of the research plan.

Table 1

Research Plan

Participants	Data Collection Method	Data Analysis	Anticipated Findings
Online Tutoring students who passed the content course	Semi-structured interviews	Transcription of the semi-structured interviews	<ul style="list-style-type: none"> • Tutees preferred learning style and communication type • Tutees positive and negative experiences about the online tutoring sessions. • Recommendations for improvement of the online tutoring services for those who passed.
Online Tutoring students who failed the content course	Semi-structured interviews	Transcription of the semi-structured interviews	<ul style="list-style-type: none"> • Tutees preferred learning style and communication type • Tutees positive and negative experiences about the online tutoring sessions. • Recommendations for improvement of the online tutoring services for those who failed.

Participants

The participants in this study will be tutees that have participated in the REACH Online Tutoring Program. They will be divided into two groups: those who successfully passed the content course related to their online tutoring session and those who did not pass the content course related to their online tutoring session. The LRC Coordinator will provide the list of names of student signed up for online tutoring.

Data Collection

Data will be collected in two phases. The first phase will gather data on the students who signed up for online tutoring. The researchers will use the REACH TutorTrac system to look up student grade information at the end of the semester. This information will be used to divide the students into either the successfully passed or failed the content course groups. The criteria for determining who passed or failed will be

as follows: those who are considered to have passed will have scored A, B, or C in the content course and those students who scored D or F in the content course will be categorized as failed.

The second phase for collecting data will be the individual interviews. Students in each group will be contacted to set up individual interviews. Students will be scheduled for 20-30 minute interviews either online using Blackboard Collaborate or face-to-face. All interviews will be recorded using the Livescribe pen, with the permission of the students being interviewed. After the interviews, the recordings will be transcribed into computer files. Care will be taken to assure the students that they will not be identified in any subsequent reporting of the data.

Data Analysis

The transcripts will be coded into different issues. These issues will be lumped into the different concepts. The concepts are then placed into different categories. These categories can then be used to generate a hypothesis on why there is a particular problem. We will look for themes related to the type of learning style, learning style inventory, asynchronous communication style and synchronous communication style.

Conclusion

The purpose of this study is to examine the issues related to why some students are passing or failing the content course in which they are receiving online tutoring. Based on the review of the literature, there are two issues that could play a role in the tutees online sessions. The two issues are learning style and the type of online tutoring session they choose. As described in the literature review, there are those who say learning styles play a role in how well a student will do with online learning and there are those who say that learning styles have no effect on the online learning. The same can be said about the type of online communication. The research plan presented here will

help to provide a better understanding of how learning styles and the different types of online communication play a role in the academics of the tutees.

The data collected for this project will be used to inform the Executive Director for REACH, the Learning Resource Coordinator, the Graduate Student Assistant assigned to work with the Online Tutor Program about the issues students are facing with the online tutoring. The Learning Resource Coordinator and Graduate Student Assistant will use the results of this study to make changes and suggestions to the online tutoring services to best serve the needs of the students using the service.

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