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ABSTRACT

This paper focuses on motivating online learners. Online instruction has presented teachers with new methods of instruction. At the same time, online instruction has the potential to depersonalize the teacher-student relationship and impede the teacher's ability to understand their students. This study attempts to begin translating the traditional classroom knowledge into "best practice" for the online environment. Over the past three years the authors collected evidence of personality types from students taking an online course. During the same years, students completed surveys concerning their preferences for a variety of course components. The results of this study suggest that student personalities do play a part in motivating the online learner. The study also suggests general ideas about each personality type's preferred instructional modes and provides suggestions for components to include within an online course. (Contains 15 references.) (Author/AEF)

Best Practices in Cyberspace: Motivating the Online Learner

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Abstract:

The purpose of this paper is to describe what we have learned about motivating online learners. Online instruction has presented teachers with new methods of instruction. At the same time, online instruction has the potential to depersonalize the teacher-student relationship and impede the teacher's ability to understand their students. This study attempts to begin translating the traditional classroom knowledge into "best practice" for the online environment. Over the past three years we collected evidence of personality types from students taking an online course. During the same years, students completed surveys concerning their preferences for a variety of course components. The results of this study suggest that student personalities do play a part in motivating the online learner. The study also suggests general ideas about each personality types' preferred instructional modes and provides suggestions for components to include within an online course.

Introduction

In 1995 Lemay asserted that the use of the World Wide Web as an instructional format was growing at a phenomenal rate. While this observation has not proven valid in every instructional setting, it does continue to ring true and suggest challenges for educational innovators around the world. During the past few years, online instruction has presented teachers at all levels with new and exciting methods of communication at a greater distance than ever before. Yet, experienced and effective teachers faced with the task of developing online courses find themselves struggling with basic questions related to instructional management and delivery. Several concerns have arisen as a result of this "technological explosion." Teachers are expected to create environments that do not frustrate the students' natural tendencies to seek meaning from instruction. Many have mastered these attitudes and behaviors within the four walls of a school or university. Having knowledge of effective teaching in a traditional situation does not automatically translate to effective online instruction (Zhao, 1998). How can the online instructor transmute these skills and abilities into the world of education via cyberspace?

- Will the quality of education received be equivalent to traditional course delivery methods?
- Will opportunities for student interaction be maintained?
- Will teacher/student interactions be as meaningful as in traditional classes?
- What type of students will succeed or fail in web-based course settings?

The answer to many of these questions can be sought through translation of the art and science of traditional classroom instruction. This paper examines one essential element of student learning: motivation. Motivation or "motive" is defined as "something (as a need of desire) that causes a person to act." (Webster, 1991)

Motivation

There is a large body of knowledge related to student motivation in the traditional classroom (Ames, C. & Archer, J., 1988; ChanLin, 1994; Deci, E. & Ryan, R., 1995; Keller, 1987, 1999; Graham, S. & Golan, S., 1991). What educators try to achieve is the incorporation of theoretical frameworks to apparent student learning interests, learning curiosity, and learning involvement. One such study showed that student rankings or evaluation of online courses were no different than those for traditional classes (Spooner, 1999). Another reported that adult learners preferred taking courses online to attending a traditional lecture-type class (Krantz, 2000). These studies describe overall attitude and preferences but do not answer the question regarding what conditions or elements must be present for students to be motivated to learn in an online course. Areas open to investigation are teaching methodology, learning and teaching styles, the personalities of students, types of prior learning experiences, or comfort levels of one's content knowledge.

Keller (1991) delineated the motivational elements of instruction as encompassing four necessary components: engaging and maintaining student interests, relating course content to student interests, enhancing student confidence in understanding course content, and satisfying students' inquisitiveness related to information thus encouraging students' active involvement in learning. These elements were summarized as (A) attention, (R) relevance, (C) confidence, and (S) satisfaction in order to create the "ARCS Model of Motivation".

A modified version of the ARCS Model (Keller, 1999) considers the nature of motivation in the online classroom. Keller indicated that **attention** problems occur when students work independently. In the computer-based environment students may not attend to important information because they do not find independent work interesting. Content in the online setting must be presented in ways that help or motivate students to attend to the information. The level of **relevance** any one student attaches to instruction will differ as a result of their individual background and personal interests. Application is needed to promote learning by utilizing students' prior knowledge and making sure that personal connections to the course content are made. Despite the inclusion of more technology in many schools, not all students have the same opportunity to develop **confidence** with online learning. When students have experience and know what they are expected to learn they will begin to develop self-assurance. The online instructor can facilitate this process by providing manageable structures and reasonable pacing expectations. Motivating students to continue learning can create **satisfaction** when the learning experience is enjoyable and fulfilling. Students need to be made aware of how much they have learned so that the time spent on learning is not considered a waste.

Keller's modified ARCS model corresponded well with our initial efforts at translating what we know about teaching and learning to the online environment. Our efforts have been guided by the belief that sources of motivation are not significantly different in an online course than they are in traditional classrooms. However, we still needed to know how motivation is effected by the nature of online courses. To begin we identified the following barriers to motivation:

- The individual nature of online learning has the potential to depersonalize the teacher-student relationship. Given the social nature of learning, this issue could adversely affect student attention.
- The choices involved in instructional decision-making are also constrained by the nature of online courses. Without choice, students will be less likely to find relevance in the information to be learned.
- The absence of a physical classroom challenges the online teacher to provide a climate that supports learning. Courses that lack identifiable structure and organization could damage the development of student confidence.
- The lack of face-to-face meetings in online courses impedes the teacher's ability to understand and encourage their students based upon their personality types. This introduces questions about the nature of student satisfaction while involved in cyber learning.

In addition, we hoped to identify instructional strategies that were most effective in promoting learning among individual personalities. What has motivated students previously in "traditional" classrooms may not be appropriate or possible in the online instructional environment.

Personality Types

Due to the age range of the students and Internet accessibility, the Jung Typology Test was used to determine individual personality styles. This online test site provides links to a number of personality descriptions. Test results are reported based on four oppositional items. Personalities are expressed first as being either extroverts or introverts. This factor " . . . defines the source and direction of energy expression for a person. The extrovert has a source and direction of energy expression mainly in the external world while the introvert has a source of energy mainly in the internal world." The second factor, sensing or intuitive, " . . . defines the method of information perception by a person. Sensing means that a person believes mainly information he receives directly from the external world. Intuition means that a person believes mainly information he receives from the

internal or imaginative world." The thinking or feeling factor ". . . defines how the person processes information. Thinking means that a person makes a decision mainly through logic. Feeling means that, as a rule, he makes a decision based on emotion." Finally, the judging or perceiving factor ". . . defines how a person implements the information he has processed. Judging means that a person organizes all his life events and acts strictly according to his plans. Perceiving means that he is inclined to improvise and seek alternatives." Assuming that the personality type is correctly determined, individual students are likely to be motivated by different instructional strategies. (http://www.humanmetics.com)

Developing Motivating Components in Online Courses

When faced with the task of developing online courses we returned to the Modified ARCS Model and began to look for ways to create interaction between students and teacher, interest in the course content, an organizational structure, and a sense of personal connection. We also relied on the knowledge and experience that we have gained from years of traditional classroom instruction in both P-12 and university level settings.

Components that Promote Interaction

When we began to examine the idea of online teaching, our first reaction was that this would not work. This attitude came from our deeply held beliefs that teacher-to-student and student-to-student interaction was essential to learning. We could not imagine how an online course would allow the social construction of knowledge. We quickly found that a

variety of interaction tools are available to the online instructor. We choose to utilize e-mail and bulletin board postings for interaction.

At the beginning of each semester, students are asked to e-mail an introduction to the instructor. At regular intervals during the remaining portion of the semester, students send e-mails designed to summarize their progress or concerns. E-mail is also used to exchange assignments and feedback specific to the coursework. Students are encouraged but not required to begin e-mail discussions with each other. Bulletin boards are used to promote student-to-student interaction. Students are required to post summaries of readings or reactions to topics on the course bulletin board. They are also required to read the various postings and respond to other students. Chat rooms were not used in these courses. Students enrolled in our courses have consistently reported that they prefer taking an online course because they do not have a common time that they could be "in class". Early efforts to plan a chat time were not successful with our particular clientele.

Components that Supply Content

Providing content in an online course seemed to be an easier task than providing interaction opportunities. Content in the traditional classroom can be given independently via textbooks or reading assignments. The challenge we faced in online teaching was two-fold. First, we were challenged to provide the content that typically would be presented through lecture or discussion. We also found that the Internet provides a new challenge, limiting the course content to appropriate and valuable information. We decided to use a variety of content approaches.

Students enrolled in our online courses were required to purchase a textbook. Scanning articles to place within the course and supplying links to online journals provided additional reading assignments. Some topics in the course required all students to read the same text or article. At other times students were given a choice of reading assignments or the ability to search the Internet for their own ideas or articles specific to their interests and needs. Traditional lecture material was redesigned and presented in textual and visual format within the course website. In addition to text-based assignments, the instructor provided links to appropriate websites.

Components that Convey Structure and Environment

Translating the motivating elements of structure and environment in a traditional classroom to the online context presents an interesting situation. Creating an intriguing classroom in a traditional setting is both a visual effort and an organizational trial. We found it difficult to translate our three dimensional ideas to a virtual space. Additionally, the environment and structure should appeal to a variety of personality types.

We choose to create our course pages using a repeating format and color scheme to give the course a consistent environment. The pages and assignments were then organized into chapters to provide students with a familiar configuration. Every chapter began with a summary assignment sheet. All assignments for the chapter were listed up front and the grading requirements were clearly delineated. In an effort to add humor and enjoyment to the learning process, we added cartoons, pictures, and interesting quotes at regular

intervals. The asynchronous nature of online courses allows instructors to provide flexibility in application and completion of assignments. At the same time, instructors must guard against allowing the asynchronous nature of online courses to enable students who tend toward procrastinate. To address this issue we used a calendar to periodically post target due dates. These dates were designed as reminders to stay on track while maintaining the flexibility of the course.

Examining Online Motivation and Personality

Over the past two years we have collected evidence of personality types from students taking a series of three completely online courses. During the same years, students have completed surveys concerning their preferences for a variety of course components that they have encountered. These surveys have been examined to determine the match and mis-match of personalities to online course components. Data concerning demographics, personalities and preferences were collected from 31 masters level students. All of these students are K-12 educators and each course is taught completely online. The participants included a variety of teachers, administrators, and educational support personnel. Their experience level ranged from new teachers (teaching one year) to veteran teachers (having taught for ten years). When completing the survey, students were asked to rate components of the online course on a 1 - 5 scale with one indicating those items that motivated them the most and five indicating those items that were least motivating. The surveys were compiled to provide a look at the group as a whole. These responses were then compared with the results of the students' personality profiles.

Registering for an Online Course

Prior to completing the surveys, students reported that their primary motivation for choosing an online course was related to scheduling and their desire to maximize their personal time. A number of students involved in this study have given birth to a child during one of the courses. A few students live far enough away that attending classes on campus is difficult. The majority of the students already attend classes in the evenings while working toward an advanced degree. They simply do not want to be away from their families and homes an additional evening. Once the decision to enroll in an online course has been made, the instructor must work to motivation students to learn.

Interaction Components

When analyzing the results of all surveys, we found that e-mails from the instructor were consistently described as providing the highest level of motivation. Other interaction items were not ranked as highly. E-mail communications from other students was given a low motivational ranking. Posting to the bulletin board and being required to respond to other postings was rated as mildly motivating. The lowest ranking among all interaction items was receiving bulletin board postings from other students. These results suggest that students are more motivated by communicating with the instructor and creating postings for the bulletin board than communicating with their fellow students or receiving a response to one of their postings.

Course Content Components

The only component ranked lower than student-to-student e-mail by the entire group was assigned readings from the textbook or an article. Links to Internet sites provided by the instructor were rated as highly motivating. Slightly less motivating was the lecture-based content provided within the course by the instructor and student controlled Internet searches. In each case (text vs. lecture and links vs. searches), content that students perceive as having been provided by the instructor were reported as more motivating.

Structural and Environmental Components

The entire group reported the target due dates set by the instructor, and flexibility allowed as highly motivating. This would suggest that a balance of structure and flexibility is important to many students. Assignment summaries provided at the beginning of each chapter were also rated as highly motivating. Cartoons, pictures, and visuals were less likely to motivate the students. However, these items were ranked more highly motivating than student-to-student e-mail, bulletin board responses from other students, and assigned readings. These findings suggest that while students enjoy the added humor and visuals, they are more motivated by a clear and well-structured course organization.

Components that Correspond with Personality Types

The online students participating in this survey were equally divided between extroverts (E) and introverts (I). The majority of the students were described as sensing (S) rather than intuitive (N) and more students were depicted as feeling (F) than thinking (T). All participants were identified as judging (J) leaving no student identified as perceiving (P).

The personality types of ESTJ and ISFJ were ascribed most often to our students. All other possible personality combinations were reported equally.

Interaction and Personality

All personalities reported teacher e-mail as highly motivating. All personalities also reported a lack of motivation based on bulletin board responses to their own postings. Extroverts, sensors, and thinkers were highly motivated by posting to the bulletin board. Extroverts, intuitives, and thinkers also reported being more motivated by student e-mails than other personality types. The ESFJ personalities consistently reported high motivation for all forms of interaction while the INFJ personalities reported the lowest motivational scores for all forms of interaction.

Content and Personality

The intuitive element of personality was the only single factor that did not list assigned textbook readings as the lowest motivating course component. However, it was still reported as not very motivating. The intuitive personalities reported all other forms of course content as consistently high in motivation. Links provided by the instructor was reported as highly motivating by all expect the sensors and thinkers. The thinking personalities consistently reported course content as low in motivation. ENFJ personalities reported the highest motivation for course content with INFJ personalities close behind.

Structure and Environment Related to Personality

Structure and environment presented the greatest variance between personality types. Intuitive personalities reported consistently high motivation in the area of structure and environment. They were highly motivated by both the target due dates and flexibility. The pictures and cartoons also motivated the intuitive personalities. The feeling personalities were least motivated by structure and environment. The ENFJ and the ISTJ personalities reported consistently high motivation in the structure and environment categories.

Cross Category Analysis

Analysis of the personality types did not show any one factor (E, I, N, S, F, T, J) as determining a higher level of motivation across all components of the online course. However, the ENFJ personality combination was motivated by nearly all components. Only reporting the requirement of responding to other bulletin board postings as not providing motivation. The ESFJ personality combination was also consistently motivated. They did not respond to as many course components at the highest level of motivation.

Conclusion

This study was never intended to control for all variables or be generalized to all situations. We began our investigation into personality types and online course components in order to inform our own practice. Despite years of combined teaching experience, we found ourselves struggling with lessons we had already learned in the traditional classroom. Relearning these lessons required that we take a close look at our students, their preferred learning styles, and our instructional approaches.

The results of this study suggest that despite signing up for online courses based on individual needs, student personalities do play a part in motivating the online learner once the course begins. Preferences for particular course components were marginally predictable based on personality types. Interaction with the instructor is necessary to motivate all students. At the same time, students would not complain if we were to ban all textbook reading assignments in cyberspace. It is clear that instructors need to provide a variety of course components in order to motivate a wide range of students.

This study adds to the limited research available to online course developers. Our findings may provide other researchers with a framework for investigating student personality types and their relationship to course components. The study suggests general ideas about each personality types' preferred instructional modes and provides suggestions for components to be included within an online course. Finally, this study provides a beginning point for all those who wish to translate the traditional idea of best practice into best practice in cyberspace.

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