TRANSITIONAL DISTANCE THEORY AND COMMUNIMCATION IN ONLINE COURSES – A CASE STUDY

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ABSTRACT

The need to enhance online classrooms is imperative to ensure a successful learning experience. This paper outlines the methods and tools needed to open the lines of communication within the different factors described in Moore's transitional distance theory. The paper may also serve as a model for graduate technology classes at Indiana University of Pennsylvania (I.U.P.) that are being designed for delivery in an online format. While these courses span multiple facets of technology such as security, technical trends, and Web design, the core competencies to develop a structurally sound online learning environment remain unchanged. The authors of this paper are incorporating tools and programs outside of traditional text and PowerPoint to encourage communication and student interaction in the online classroom. Incorporating communication tools in an online course differs from that of a traditional course. Thus this paper searches for answers in this regard.

Keywords: Transitional distance theory, communication, online collaboration, communication in online course.

INTRODUCTION

Over the past decade the Internet has changed the face of distance education. The number of programs offered as well as the number of online students has skyrocketed. As the Internet has grown, programs are becoming more advanced, telecommunication speeds are increasing, and interactive applications are more readily available. During this time online institutions have searched for methods to increase enrollment and retain students. One major hurdle for distance education to overcome is the communication barriers that exist in the online world. This paper addresses these barriers, as well as the methods that can be used to make the online development of classes successful. Specifically this paper will focus on the courses being developed by the Technology Support and Training (TST) department at the Eberly College of Business I.U.P. This research study opens with a review of related literature that details the challenges facing communication in the online learning environment. The paper then shifts to outline the tools and methods currently being used in the development of online courses within our department. Finally, the paper details a summary of the processes used to develop technology classes for online education and recommendations for future research.

TRANSACTIONAL DISTANCE THEORY

Numerous studies have been conducted across multiple platforms to discover if there is a connection between the pedagogical elements of distance education and their effects on communication between students and their teachers [4, 8, 9, 12]. Michael Moore [7] developed a theory that is built on the belief that the largest force on distance education is the pedagogy implemented rather than the true physical distance (4). Within this content, Moore [9] introduced a new variable into the equation of distance education called "Transactional Distance" and defined it as "a psychological and communications space to be crossed, a space of potential misunderstanding between the inputs of instructor and those of the learner" (p.23).

While the interpretation of Moore's theories can vary among online educators, the focus of the theory and the domain it emphasizes deserves a deeper look so to be able to facilitate communication in online courses.

There are numerous means to communicate in a virtual classroom. The Encyclopedia of Educational Technology attests to this abundance of means. Distance education has been around in one form or another for over a hundred years. Correspondence courses, training files, radio, television, and most recently the Internet have all been a part of the history of distance education [2]. By the same token, online training and education can be done via e-mail, instant messenger, company intranets, or on popular online platforms such as eCollege, Blackboard, and WebCT. While each platform shell may be similar,

the content, communication methods, and pedagogy will ultimately impact the student's success within their class.

When comparing the quality of traditional classes to online classes many debates may arise. These debates not only encompass the quality of education, but also the pedagogy and tools that are necessary to deliver quality instruction [10]. Technological changes may dictate that the online course must go beyond simply posting text and assignments in the course room [6]. The content must be designed in small manageable pieces that will hold the learner's attention while effectively delivering the necessary content. As compared to traditional classes, the online learning environment offers a classroom that is available 24 hours a day, seven days a week regardless of the learner's location. Thus every aspect of interaction needs to be planned for and examined to facilitate this continuous learning process.

The Encyclopedia of Educational Technology uses Moore's theory to outline four methods of interaction in the online learning environment [3]

- Interaction with contenting
- Interaction with the instructors
- Interaction with peers
- Interaction with interface

The remainder of this section explains each of the four interaction methods listed above:

Interaction with Contenting:

The delivery of online courses may become complicated depending on the technology options associated with each learning tool. The content and design within a course are to a large extent dependent on the technology utilized in the online course. Examples of online technology can be found in lectures postings, streaming video, voice technology, interactive study material, online labs, and a multitude of additional distance learning tools.

Technological advances have made it more complicated for the novice user to attain and participate in online classes. Current online courses are not limited to chat sessions and a discussion board, but instead include a wide range programs such as multimedia technology, streaming video, graphics, voice communication, and other advanced

technologies. Despite this increase in use of technology, many emphasize cases on the learning outcomes. Irwin notes the importance of creating a student centered environment allowing students the ability to work at their own pace [5]. Because of this, orientation into the platform and the technology involved becomes essential to ensure the student's success in the virtual classroom.

Interaction with Instructors:

Traditional courses taught in the classroom have the distinct advantage of face-to-face communication. Berger & Luckman [1] contrast face-to-face and distance communication:

"In the face-to-face situation the other is fully real. This reality is part of the overall reality of everyday life, and as such massive and compelling. To be sure, another way may be real to me without having encountered him face to face – by reputation, say or by having corresponded with him. Nevertheless, he becomes real to me in the fullest sense of the work only when I meet him face to face. It follows that relations with others in the face-to-face situation are highly flexible. Put negatively, it is comparatively difficult to impose rigid patterns upon face-to-face interaction." (p. 29-30).

Online courses do not have the distinct advantage of face-to-face communication. Instead, interaction between the faculty and students is limited in most cases to chat sessions, online discussions, email, and other similar forms of communication. Even in courses that incorporate advanced multimedia communication, the contacts between the instructor and students is hampered by many factors including telecommunication speeds and lack of body language and voice tone. Students who are new to this form of communication may face a learning curve and the increased chance of anxiety and miscommunication in the classroom. While some educational institutions incorporate class meetings and exams as part of the course requirement that are held in a face-to-face setting, the majority of the class objectives are still met in the virtual classroom.

Interaction with Peers:

Developing a system to encourage interaction among students is a challenge faced by both traditional and

online courses. Despite the numerous advantages that interaction among students may generate, creating such interaction is not without difficulties and challenges. Different theories have been developed in regards to the learning styles and projects that can be given to encourage communication among peers. Various terms are introduced in this regard to explain the role of interaction and the communication techniques implemented. Some of these terms include collaborative/cooperative learning and team-based learning.

While the distinction between both methods of learning is not totally clear, research attempts made to explain the difference between these two modes. Smart and Csapo [11] noted the difference between cooperative and team-based learning:

> "Cooperative learning can be characterized by three things: (1) Using assigned roles within groups; (2) having the teacher monitor the groups to see how they are handling the contents and how well the groups are working; and (3) spending time after the small-group exercise to process the small-group activity. Team based learning differs in that it relies on the teams themselves to individual and group performance and to improve performance as necessary (p. 317)".

One of the tools that may be used in cooperative learning is assigning projects that are completed by different students working together or what is termed as "group projects". Assigning group projects to students in any course gives different advantages to the students as well as to the teachers alike. Smart and Csapo [11] have identified four such benefits:

- Enhancing communication and decision making.
- Increasing productivity with higher level of involvement, commitment and motivation.
- Improving processes.
- Distributing workload.

Despite the numerous advantages that group projects bring to the courses, the same projects may also introduce challenges. Among these challenges are the decisions regarding forming the groups and selling the idea to the students.

In the process of forming groups, the instructor is faced with two challenges. First, he/she needs to establish a procedure or mechanism for selecting group members and second providing accountability mechanism where all group members participate in the projects. Michaelsen [7] suggests several methods when creating groups such as selecting members based on interests, background, and grades achieved in pre-testing (match highest achieving scores with lowest). Regarding accountability of the students, a procedure or mechanism may be established to measure performance individually. Within this procedure students can evaluate each other's performance or the individual work completed by each group members.

Interaction among students in online courses faces two additional challenges regarding space and time for meeting among the group. In traditional classes, students can meet in the classroom, library, or at any other location within the college or university. Such students are usually available on campus, thus finding a common location does not pose a problem. In online courses students may be geographically dispersed. Students may also be located in different time zones which poses additional difficulty. Therefore, setting a place and time for meeting in online courses pose additional challenges for similar meeting in traditional classes.

Interaction with Interface:

The interface provided by different online platforms vary significantly and require certain knowledge and training in order to effectively design and communicate the content of the course. There are numerous online platforms such as WebCT, Blackboard, eCollege and others. While each platform provides a series of training manuals and online help, the fact remains that novice users must have special knowledge of the configuration options offered within each system in order to be able to work effectively with the content of the course. In other words, some students may need to be assimilated into the interface provided in online courses.

While the interfaces may vary from one platform to another, it remains a fact that knowledge of the different tools within the platform helps in simplifying the content of the course. In most platforms, the use tools such as discussion boards, announcement, and chat areas are readily available, but the use of voice and streaming video is not guaranteed within all systems. Numerous additional

options such as posting lecture notes and building exams may also differ from one web platform to another. Based on all these differences, course designers may need to take into consideration to introduce the students to the various tools provided within the interface selected for the course.

DEVELOPING THE ONLINE COURSE AT THE TST PROGRAM

The Technology Support and Training (TST) Department at Indiana University of Pennsylvania (IUP) has launched a new initiative to develop graduate courses in information technology for delivery in an online format. The department holds different courses in an online format, but the attempt this time is to offer the degree purely online. Thus new courses are introduced for this purpose. While the development of these courses is still in the infancy stage, the faculty members need address the points of difficulties that were alluded to earlier in this study.

Interaction with Contenting

The content of the course is based on previously taught material from a traditional class setting. While the course materials will be the same, the instructors have to assure that the delivery is organized and efficient. The lectures are posted online and the chat sessions are planned to be held regularly. Additional content of streaming video is in the planning stage for this course.

Most of the work for this course requires the use of specific software tools. All the software tools are installed in the computer labs and are accessible to the students online. Further effort is made by the instructors to incorporate "open source" or free software that the students can download to work on projects within the class.

Interaction with Instructor:

While this form of interaction is limited in most online courses, specific steps are taken to increase communication in the course. Each online course begins with an introductory email informing the students of the instructor's expectations for the course, office hours, and other crucial information to help with learning process. In addition the instructors hold an orientation chat session on the first day of the semester. This orientation session is well publicized

and explains the course syllabus, expectations, and course objectives. Assigned times will be set by the instructors to make themselves available for face-to-face meeting or phone calls with the students during posted office hours.

Interaction with Peers:

To encourage interaction among students, group projects will be assigned. Various tools are included in this course to encourage and facilitate such interaction and to overcome the difficulty points described earlier regarding communication with peers. These tools include establishing common folder on the server, creating different group chat rooms, and holding group discussion board in convenient times.

Each course at I.U.P. is designated a particular computer hard drive to hold course content and for the students projects. This drive is termed as the P: drive and is assigned to all courses whether they are online or taught in the classroom. The P: drive contains multiple folders, among them the student's individual folder. The P: drive can be accessed remotely, thus resolving distance communication issues in the course. The instructors can create a folder for the each group where only assigned members have access. Different works of the group may be saved on this folder and the work of the group can be facilitated accordingly.

Group chat sessions are held at specific times during the week and chat logs are saved and reviewed separately. A different chat room is assigned to each group so they can meet and chat privately. Facilitating the time of the chat session is handled by the instructors. Each student is required to provide convenient times for meeting and the instructors attempt to assign a time that is convenient for everyone in the group. Similar to group chat sessions, additional discussion boards for the different groups are going to be provided to further facilitate communication among members of the group.

Interaction with Interface:

The TST department at I.U.P. uses the WebCT platform in delivering their online courses. This platform is known for its comprehensiveness and ease of use. Some faculty at the university use WebCT as a complement to their traditional courses while others use it exclusively for online delivery.

Various free workshops and training sessions are offered continuously throughout the year on the features of WebCT. Students also have free access technical support that can be accessed through phone calls and email. Furthermore, the instructors are planning to offer "interface" orientation session if needed. Thus the interaction with the interface is not expected to pose major problems for this course.

SUMMARY AND FUTURE PLAN

Understanding the cause and effect relationship of transaction distance theory and the role that it plays in distance education is critical when designing online curriculum. This study emphasized four factors of Moore's transaction distance theory and explained the challenges that instructors face in designing and delivering online courses. The study also explained the experiences of the TST Department at Eberly College of Business and Information Technology at I.U.P. and their attempts to address the challenges of designing and delivering a class in the online world.

While this course is still in the design stage, additional efforts are being made to include the latest technology available. This includes multimedia, streaming video, voice, and additional formats necessary when facilitating an online class. A follow up study is required to assess the effectiveness of the planning and the delivery of this course, thus additional reviews and audits during the building process are necessary.

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