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THE EFFECTIVENESS OF POST-SECONDARY WEB BASED COMMUNICATION IN THE UNIVERSITY OF CENTRAL FLORIDA'S ONLINE EDUCATIONAL SETTING

by

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ABSTRACT

While technology continues to advance, so do methods of learning. In post-secondary education during the twentieth century, the traditional classroom setting was geared toward auditory instruction and face-to-face peer interaction. Not only was this the most efficient means of instruction for the time period but the only means. Along with the advent of communication technology came the concept of Web courses.

Web courses have expanded the means by which students can experience course lectures and have beckoned the use of updated media by which such lectures can take place. Such media include threaded discussions, chat rooms and e-mail. At the University of Central Florida, the gradual change from WebCT to Webcourses offered students more direct contact with updated threaded discussions and more centralized communication on the whole. The quality of such communication measures has been in question, though, and the effectiveness of such online communication methods is the focus of my research.

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CHAPTER I: INTRODUCTION

Since the mid nineties, online courses have proven to be nothing other than revolutionary. In today's educational setting, online courses are prevalent. They are frequently offered and appeal to many different types of students. As a result of being completely online, the method of communication changes from face-to-face correspondence to include e-mail, Instant Message, threaded discussions or chat room correspondence. There is a debate as to whether or not Web courses can offer a sufficient mode of communication. I will disclose to my reader why online course correspondence is an effective mode of post-secondary communication.

In the mid-1990s, e-learning became known to post-secondary education (Weitong *New Horizon in Web-Based Learning* 3). Ever since the beginning of e-learning, peer interaction has never been the same. It has opened a window for many non-traditional students that previously had little hope of attending college with busy work schedules and lifestyles. Whereas traditional students are those that go immediately from high school into a post-secondary, college setting, non-traditional students vary in age and background, many of whom have not taken a class in twenty or more years. Online courses help many would-be students follow through and make strides towards obtaining their degrees whereas before, distance, time and overall accessibility acted as constraints. Without any doubt, e-learning "break[s] through the restrictions of the space-time, helps people to study whenever and wherever possible, [and] let[s] more users share outstanding educational resources" (Weitong *New Horizon in Web-Based Learning* 3). However,

there is the question of the actual utility of communication methods in online classes. Is Web course communication as effective as traditional, face-to-face communication? Do the students have the same sense of camaraderie as they typically do in the traditional classroom setting, whether in group work or merely by hearing a lecture and verbally interacting with the professor in an environment that allows immediate, synchronous feedback?

Online courses are convenient in a number of ways that the traditional classroom setting is not. Students can access course materials while living out-of-state; they can complete assignments in the comfort of their homes while still having families and not sitting in traffic for hours after work; they can reference course materials and texts for reassurance during online examinations; for instance, they can turn in assignments and undergo lessons regardless of their location in the United States during vacations, whereas otherwise they would have to schedule time out and potentially miss one or more classes. These are a few of the communicative conveniences of Web based learning. However, it is imperative that convenience is not automatically assumed to be a benefit.

To determine the usefulness of Web courses, their quality must be determined, but where does the quality lie? Considering the difficulties students sometimes encounter with Web classes, communication is on the forefront. If a student holds the necessary intelligence along with the will to complete assignments accurately and punctually, the one impediment that could work against them is the lack of understanding of how to navigate the Web class or the instructor's lack of insight into how to relay the course expectations to the students across the Web medium.

In essence, insufficient communication could prevent otherwise intelligent, apt and willful people from completing a course.

When considering whether or not online instruction at the University of Central Florida is sufficient, the most important element is communication. It is necessary for the instructor to communicate his or her expectations to the student. It is necessary for the student to communicate his or her understanding of the lesson to the instructor. As a result, there should be a lot of emphasis put means by which this communication takes place. Aside from the many obvious enhancements that Web courses can offer, it is more important that the quality of such courses be considered.

After preliminary research, it became apparent that much consideration is taken to the effectiveness of online course communication. This level of effectiveness is determined by the level of confidence that students exhibit towards online course communication. As long as students believe that certain methods of online communication are effective, the qualitative results will be labeled as such and vice versa for indeterminate or contradictory results. For the aforementioned reasons, I am researching the effects of online communication offered by the Webcourses computer program (utilized by the University of Central Florida's Blackboard online course software) because I want to determine if its measures offer Web based communication that is effective in order to help my reader understand why online courses offer beneficial methods of course communication.

CHAPTER II: LITERATURE REVIEW

The online courses at the University of Central Florida hold the same goals as its face-to-face courses do: to successfully provide the means to teach the class. A major determinant of successful instruction at the University of Central Florida is efficient communication. In essence, the goal of online course communication is to use whatever multi-media tools are necessary to sufficiently administer lessons with successful assimilation of the course material by the students. The means by which this takes place are diverse, which is why it is important to determine the best way the University of Central Florida students respond to instructor-to-student communication as well as which routes to avoid due to their lack of effectiveness.

Strengths and Weaknesses in Online Course Communication

Since it is apparent that a main goal of the University of Central Florida's Web instruction is effective communication of the lesson, it is important to examine the strengths and weaknesses of such instruction in order to strengthen such means of communication in order to further progress the effectiveness of online courses.

A distinct strength of the University of Central Florida's online courses is that they enable post-secondary institutions to have more courses taught without spending money on building extra classrooms. There is a cost for online course software, but this is minimal in comparison to building a whole classroom or another building for on campus instruction. The

amount of student enrollment can also be expanded due to the space saving, which proves useful to the University of Central Florida since it is amid the fastest growing universities in the country. Online courses are financially beneficial for post-secondary institutions since many students do not have to relocate, commute or take time off work to go to class.

In his *Value of E-Learning Systems*, Yair Levy suggests that when taking into consideration the effects of e-learning at University of Central Florida, what is needed is the bonding of the [instructor]/[student] relationship in order to enhance Web based communication (Levy 51). The main theme throughout the text is the effectiveness of Web courses and in particular online communication. Through surveys and questionnaires, Levy determined that e-learning systems are consistently increasing in their effectiveness as compared to the communication growth experienced prior to the incorporation of technology in instruction (Levy 129). Applying the Internet to academia appeals to many students for a number of reasons. The Internet…

- "provides an interactive contact, activating the learner,
- makes multi-media transmissions available,
- makes the access to the information according to the principles of hyper-media,
- permits remote monitoring and recording of student's performance and progress,
- allows quick updating of the teaching materials,
- gives the unlimited access to unrestrained resources of learning materials any time from anywhere" (Kusiak *New Horizon in Web-Based Learning* 172).

One aspect of e-learning worthy of addressing is “computer-mediated communication,” or CMC, which includes all forms of electronic messaging (Jones et al *Culture in the Communication Age* 214). The main weakness of CMC is the lack of “non-verbal cues,” which would be the only reason to prefer face-to-face communication versus Web based correspondence (Jones et al *Culture in the Communication Age* 214). However, this lack of non-verbal correspondence is a potential strength rather than a weakness. The reason for this is due to the lack of data, which often interferes in face-to-face communication in that it makes the communicators stray from more interpersonal dialogue (Jones et al *Culture in the Communication Age* 215). Basically, context is what makes communication successful, which makes sense when viewing the potentially bland and uninvolved aspect of Web courses (Jones et al *Culture in the Communication Age* 215). At their worst, Web courses have the chance of being misinforming, scattered and overall confusing. However, it is the responsibility of the instructor to make sure that students have appropriate context and understanding of the class Web site navigation; this is, in a sense, a measure to help ensure a good grade in the class. Success in Web courses is mostly swayed by the adherence of the instructor to enhancing the level and quality of student-to-student and student-to-instructor correspondence (Gunga et al 296). Through interactive dialogue, real world problems should be the focus of Web based students, and this can be augmented by the devotion of the instructor to maintaining qualitative feedback sessions of both student-to-student interaction and student-to-instructor interaction (Comeaux 177). Another salient point is that interaction climbs to an all-time high in Web correspondence. The professor is usually able to respond to students’ inquiries within two days and typically the Main

section of any discussion board is a collaborative area where peers can help answer common questions and respond to typical concerns. There are a few reasons why students in the traditional classroom may not benefit as much as Web students: for one, the professors may not have the time to wait after class, two, Teaching Assistants may be assigned to answer those questions (thus making professor/student interaction low) and three, on campus classes are usually only offered three times a week, limiting the amount of time to effectively seek answers to academic queries.

Course materials are more prevalent to online students than to on campus students. Online students have access to course materials at all times whereas students in on campus classes are limited to quickly writing down notes from the professor's auditory lecture as well as those from the projector or blackboard. Some professors take the time to make worksheets for the students, which definitely augments the learning process by making course materials available in between classes; however, this is merely one aspect of the course material that is available to students at all times.

Combining text and graphics to augment lessons is not limited to online classes, but online instructors certainly have more variety in doing so. Students that access Webcourses have the luxury of accessing such multimedia applications at all times whereas face-to-face classes offering PowerPoint presentations and other on campus instruction supplementary materials are generally limited to the classroom. The professor can send the PowerPoint slides to students by e-mail, but the degree to which the student can understand the bulleted bits of information is strongly determined by the auditory understanding of the verbal lecture given by the professor in

the classroom. In Web courses, asynchronous communication allows students to more qualitatively understand supplementary multimedia applications. For instance, in one face-to-face class I took during my Bachelor's degree, we rapidly took notes during one of the PowerPoint presentations. In an online class I simultaneously took in that same term, we were given a similar PowerPoint presentation that we had personal access to throughout the duration of the course. As a result, I learned much more from the online lesson than the one where I rapidly took the notes and was unable to re-view the presentation because I had more time to consider each slide. Granted professors can now submit PowerPoint presentations in face-to-face classes, all lessons hold this quality in online courses versus face-to-face courses requiring a video taping or at least audio taping of the lessons to ensure a similar level of understanding. .

Course material organization is one of the best attributes of Web learning. Many students have trouble keeping course materials organized in a binder. If one worksheet or page of notes goes missing, in most cases it is gone for good unless a peer is willing to help out. Web courses, however, frequently offer unlimited access to past assignments, notes from past classes, previous discussions in threaded format and so forth. Whether out of the country or in their living rooms, students can access Web course materials at all times, which puts to rest any fear involved in not keeping up with class information. Another benefit is that Web course software is programmed to remind students of scheduled assignment, due dates, quizzes and pending discussions.

Lastly, instructors rarely have to pay anything for course materials. Aside from providing a personal type of software, instructors simply have to invest time in organizing the course. The course materials take the same amount of effort to make and the lessons are of the same depth,

but being on the Web, there is no paper expense needed, no markers for the blackboard, et cetera. Everything is completed online and as a result, institutional expenses are as minimal as possible. A few of the negative aspects of e-learning are as follows:

· Diversity of multi-media designs might be overused.

· By accessing the Internet [i.e., search engines], students might be tempted to access the same information that the teachers provide, but the information might be oversimplified and stray from the lesson.

· Internet information may be false and made by novice or unauthorized authors.

· Students might begin to rely on Internet information in place of actual textual research (Kusiak *New Horizon in Web-Based Learning* 176-177).

There are some difficulties in University of Central Florida Web course instruction that are worth mentioning. For one, instructors have the capability to use the same lessons over and over without adaptation or variety. Group work can be tougher than usual as many students are new to Web based learning and do not communicate as effectively as when they are face-to-face with peers. Though instructors may be able to view the number of pages opened by students and the amount of time spent on those pages, this does not guarantee that the students have in fact read the material. Some experts believe that the Internet actually poses a possible negative tendency in students to become lazy because of the convenience factor of search engines (Steve Jones *The Internet Goes to College* 12). This is mainly due to the expansion of technological advancement that not only benefits the hard-working students but to the students that do just enough to get by. As long as the work is monitored by the professor, this should be easily avoided. Electrical

outages interfere with instruction as the students are unable to learn in such conditions. Lack of familiarity with Web course software could impede students from turning assignments in on time. Lastly, students can become conditioned to relying on classmate responses to e-mails since students are usually in a position to answer questions faster than the professor; sometimes the professor even suggests writing peers first to answer what may be a common question. Due to the numerous potential hazards of online instruction in the post-secondary setting, I will address the most salient ones referenced in Steve Jones's work (Steve Jones *The Internet Goes to College* 12):

Instructors have the capability to use the same lessons over and over without adaptation or variety.

The threat of using the same lessons, which over time leads to dilution, is omnipresent in all modes of instruction. The same can happen in any classroom setting, but with online instruction, the course set-up varies from classroom to classroom. The instructors that choose to enable a chat feature and require responses to postings, for example, can simulate in-class discussions. Whereby the same lessons may be taught and only slightly altered term-to-term, the insight of the students is real. As a result, it is apparent that reusing former lessons is not necessarily a bad thing. As long as the instructor takes the students' needs into consideration and updates information where necessary, the lesson will be successfully understood by the students.

The auditory learner often doesn't have the right mode of learning to really understand the lessons.

There is the potential that the auditory learner doesn't have the same chance of grasping the information as the other students in the class. The only chance of this having a truly devastating effect on a college student's career, though, is if a required course is taught only online. Normally, though, online courses are a choice. Students that opt to enroll in such courses go in with realistic expectations—and usually prior experience—that enable them to succeed. Also, the mixed mode of instruction offers students the chance to have auditory stimulus to aid in learning.

Group work can be tougher than usual as many students are new to Web based learning and do not communicate as effectively as when they are face-to-face with peers.

In my experience, this has been the toughest aspect of online courses. It is true that if group members aren't as devoted to the lesson as you that their communication dwindles. However, this happens in all sorts of classes. To the student who is set on being on time and doing the lesson right, the Internet is no hindrance. In-classroom instruction is just as fraught with the potential for such lazy students. One difference, though, is that when students lack good communication, it can seem like a long time between conversations whereas in actuality online communication is much more frequent than typical classroom interaction being limited to three days a week on average. Another point to highlight is that nothing stops students from trading phone numbers and conversing over the phone if need be.

Though instructors may be able to view the number of pages opened by students and the amount of time spent on those pages, this doesn't guarantee that the students have in fact read the material.

It is true that students can easily find ways out of doing the necessary readings for class. However, this happens in regular classroom settings as well. Many students skim the readings or don't read at all. Many students cram in readings the night before an exam and others study diligently all term long. In actuality, when the student skips the postings of lessons and discussions, he hurts himself since much of the course material is based on such discourse. Overall, there are always ways for students to procrastinate and beat the system. This is merely one of them.

"Educators […] are concerned that [the convenience of the Internet] may be creating poor research habits" (Steve Jones *The Internet Goes to College* 12)**.**

It is true that the Internet offers a plethora of information at all times to all types of students. It is also true that despite the innate disposition of online instruction to take place while using the Web, students in traditional classroom settings are by no means more restricted. Students of all kinds typically browse the Internet for information before committing to a research project or going to a library to browse the stacks. This is due to the convenience of it. However, convenience does not make something inherently negative. In fact, if utilized properly, the Internet is an amazing tool. The same goes with a library. Students could easily get distracted on

popular culture magazines when the truly informative books are a few stacks onward. It all depends on the discipline of the student.

Electrical outages interfere with instruction as the students are unable to learn in such conditions.

It is true that the Internet is dependent on the right setting. The same principle holds to the traditional classroom setting, though, as hurricanes, snow storms and so forth can impede students from coming to class. In my experience, the professor is always willing accommodate students that experience such impediments.

Lack of familiarity with Web course software could impede students from turning assignments in on time.

Although a lack of familiarity with software can indeed increase the difficulty surrounding students in turning in documents, this is easily prevented by proper preparation both by the student and the instructor. Instructors usually take the time to give an overview of the Web class in the course syllabus. This should tip off students to check into certain facets of the course software. Usually such difficulty is brought about by the student waiting until the last minute to turn in an assignment and panicking as a result. With proper preparation and patience, any Web course construction and instructor expectations can be fully comprehended.

Students can become conditioned to relying on classmate responses to e-mails since students are usually in a position to answer questions faster than the professor; sometimes the professor even suggests writing peers first to answer what may be a common question. In this scenario, students can either be a bit patient and wait on the instructor's response or take an immediate one from a peer. The same goes for the traditional classroom setting. If, for instance, the traditional classroom has a line of students waiting to ask the professor questions after class, the student can just as easily ask his question to a peer and usually get a valid response. Otherwise patience is the key here. As for instructors that recommend posting questions for peers to answer first, the posting is usually made public whereby the professor can see the responses and correct any if needed.

There are a number of reasons why the Internet is useful in online courses. In the article *Virtual versus Classical Learning and Teaching. Conflict or Mutual Strengthening?*, Jan Kusiak and Ryszard Tadeusiewics state that "the Internet is an attractive solution for several reasons:

· Provides an interactive contact, activating the learner.

· Makes multi-media transmissions available.

· Makes the access to the information according to the principles of hyper-media.

· Permits remote monitoring and recording of student's performance and progress.

· Allows quick updating of the teaching materials.

· Gives the unlimited access to unrestrained resources of learning materials any time and from anywhere" (Kusiak *New Horizon in Web-Based Learning* 172).

Are the previously mentioned conveniences as beneficial to Web course students at University of Central Florida as the merits of the traditional classroom? The traditional classroom, as previously mentioned, offers the immediate response of professors to any burning questions the student might have. Peer interaction is often considered to be more intimate than when students are typing e-mails to each other and conversing in an online chat. For students that prefer to have an auditory aspect to the lesson, Web courses are not appealing since there is rarely any form of auditory feedback or discourse. For more traditional individuals, Web courses are an undertaking of fear as they have never utilized such technology for anything other than basic Word processing and Internet access. Kusiak and Tadeusiewics go on to offer a few negative aspects of e-learning:

· Diversity of multi-media designs might be overused.

· By accessing the Internet, students might be tempted to access the same information that the teachers provide, but the information might be oversimplified and stray from the lesson.

· Internet information may be false and made by novice or unauthorized authors.

· Students might begin to rely on Internet information in place of actual textual research (Kusiak *New Horizon in Web-Based Learning* 176-177).

Among the elements of Web based communication in online courses, the sense of community among classmates is likely the most important. At best, online courses would "be structured to encourage social interaction among participants…to build a community of e-learners. Collaborative learning activities, simulations, case studies, and problem-based learning can support the development of this community" (Bullen et al 186).

The insight into a sense of community is an important one. Without any form of communal gathering in online courses, things can get a bit haphazard. This underlies the necessity of the instructor to utilize the components of the University of Central Florida's Webcourses (by means of the Blackboard software) to aid the students in building rapports necessary for social—and ultimately academic—growth. Its functions can be used to increase class discourse and understanding by means of chat room and threaded discussions and Web mail correspondence, each which provide effective means of asynchronous communication. Instructors can do this by providing social discussion threads, academic discussion threads and weekly or monthly chat room involvement. After the students thoroughly understand such components, group work is an activity that is aided by such understanding.

Means to Success in Online Course Communication

There are many different ways to look at the benefits of online courses. Getting to utilize those benefits, however, is a more detailed process. In determining the means by which Web courses can hold successful modes of communication, one of the most important things to consider is the type of communication that pertains to online instruction: asynchronous communication. Asynchronous communication is correspondence that is time-delayed as opposed to synchronous communication, which has immediate feedback (e.g., the face-to-face setting). Asynchronous communication "is especially suitable for learners who may be apprehensive about interacting directly of 'standing out,' so that if this particular model of interaction is recognized and actively pursued, cross-cultural online communication in an

education setting will provide more choices for learners of various learning styles and from various cultural backgrounds" (Chorney 268). Research has shown that maintaining asynchronous communication is highly effective in online courses because it enables the instructors and students to take the necessary amount of time in between correspondences to properly analyze the situation at hand, although it is more difficult to engage in with larger classes. For this reason, graduate classes can especially benefit from asynchronous communication because of the amount of quality reached and since the classes are typically smaller in size.

When considering the benefit of Web based asynchronous communication, the older method of the professor giving an assignment, the student researching and answering the question followed by the professor grading the assignment with limited feedback is outdated (Chickering 1). Asynchronous communication is more qualitative since one, communication is more thoughtful (more time exists in between correspondences, which allows the student or professor to thoroughly research the issue at hand), two, communication methods are faster (as opposed to waiting for face-to-face sessions and office hours to ask questions) and three, there is more communication (as opposed to single questions which are limited to face-to-face meetings merely a few times a week) (Chickering 1). These methods are beneficial due to the immediacy and quality in responses. Granted face-to-face correspondence is advantageous, Web courses offer a more enhanced version of such communication via asynchronous means. Such advantages to asynchronous communication are evident after considering the wide range of possibilities that it holds as opposed to the more linear, limited synchronous communication.

In helping to determine and illustrate the means to successful Web instruction, a "4-Plex Model of Networked Learning" best categorizes the different modes of learning that students undergo in Web based classes (LaRue *Handbook of Online Learning* 289). The four components are as follows: Question, Test, Reflection and Theory. LaRue denotes how the Question and Test aspects are interrelated as are the Reflection and Theory aspects. This system helps instructors categorize the different elements of Web course learning by students in order to better implement course design to aid the students' needs. Instructors can better understand students' online course acquisition by thinking of the four primary facets of e-learning: Question, Test, Reflection and Theory (LaRue *Handbook of Online Learning* 289). Questions and tests are geared towards practicality whereas reflection and theory focus on the academic side of e-learning in which students interact with the instructor in order to learn the course information or lesson. For instance, any student that addresses a problem on a test must first access his acquisition of theory by reflecting on past lessons, which in turns answers the question on the test. This formula is taken for granted in face-to-face courses, though it proves imperative for the instructor to take into consideration during Web course composition. Not only does the lesson theory need to be clear for the student's assimilation (which promotes eventual reflection), but the questions need to be concise and relevant to give a fair yet challenging test. The instructor holds the largest role in determining the outcome of students' success, and in taking care in administering clear lessons with effective multimedia (via PowerPoint slides or clarification by asynchronous methods like e-mail, for example) (LaRue *Handbook of Online Learning* 289).

In *Dr. Fox Rocks: Using Data-mining Techniques to Examine Student Ratings of Instruction*, Ida J. Cook, Charles D. Dziuban, Patsy D. Moskal and Morgan C. Wang offer a unique examination of surveys obtained from University of Central Florida students. The University of Central Florida, like many other institutions, offers a student evaluation form at the end of each class for each term. (Cook et al 5). "The investigators used three approaches to validating the decision tree model—two logical and one statistical. The logical approaches involved harvesting all instructors across the university that conformed to the excellent and poor decision rules and examining the degree to which the rules leveled college differences" (Cook et al 5). This allows university researchers to accurately examine the effective areas of online instruction, including communication.

In their article *Blended Learning*, Charles D. Dziuban, Joel L. Hartman and Patsy D. Moskal obtained results from such research, it was determined that between 2001 and 2003, an average of 91% of students engaging in fully online courses were successful (obtained grades of C or higher) in their Web courses (Dziuban et al 5). Dziuban et al maintain that "the success of these courses [is due to] effective instructional design and the extensive support provided for both faculty and students" (Dziuban et al 6). It is important to mention that this is true for both fully online and blended courses. "Sound instructional design becomes critical, with the most successful faculty reevaluating their course design as a whole rather than looking for chunks to transfer to the Web while leaving the remaining instruction untouched" (Dziuban et al 6). This aids the reasoning with other sources that online design is a major determinant of success in online courses since, in a big way, the effectiveness of communication is often determined by the

course layout. If the means by which students turn in assignments and speak with the instructors is straight forward and intelligible, the communication will be straight forward and intelligible.

In my personal experience, online courses in Technical Writing were much more comprehensive than face-to-face courses in the same subject. The reason for this was because of the clarity of kinesthetic demand and quality of communication I had with the instructors. I have taken numerous face-to-face courses involving writing, although because I was able to clearly understand the requirements of my instructors and because I had access to many of my past assignments and instructor presentations and due to the quality of electronic feedback I had from instructors, I learned a lot more in my online classes than I did in my face-to-face classes. This is not to say that face-to-face courses are inherently less than online classes; instead, I intend to offer insight into how online classes can hold just as beneficial as--and even more qualitative than—face-to-face course communication.

In considering the potential success of Web based classes, an important area to examine is the integration of communication standards in Web based education. In examining the relationship between successful communication in online instruction, it can be determined that such success is highly influenced by the devotion of the instructor to making correspondence available, punctual and sincere (Gunga et al 296). Since classmate collaboration is imperative in many types of Web based courses, the organization of individual chats, class chats, team management and online structural management are imperative for students to succeed. These elements are all controlled by the instructor, which is who the authors claim is responsible for the level of growth the students experience in the class (Gunga et al 310). If there is effective

communication management by the instructor, Web courses are just as effective as face-to-face courses; however, “if e-learning is to compete with face-to-face delivery for richness in terms of psycho-social and emotional flexibility, there is a need to enhance audio-visual and interactive capabilities…..” (Gunga et al 295). In essence, what is needed in e-learning is as much stimulus as the Web courses offer. This means that the alternative senses involved in instruction—namely auditory and visual—should be pursued. This comes about by means of creativity on behalf of the instructor by perhaps including a mixed mode of instruction as well as group meetings in person, et cetera.

There are many factors to consider when examining the affect that online classes have on Web students. In relation, one of the biggest issues to consider is the practicality of such courses. Will the student be able to use the class to his or her benefit? If so, how? Is the course geared towards helping the student improve projects and correspondence at work? Is it geared towards improving the quality of work performed at the student’s current or future job? Many of these variables depend on what type of student is engaged in the online class. However, the issue of practicality is paramount whether the student is either studying full-time while being unemployed or in an unrelated job (e.g., part-time or seasonal work) or currently employed and engaging in Web courses for vocational supplementation.

Success in an online class is widely determined by the attempt at real-situation collaboration (Comeaux 177). Through interactive dialogue, authentic problems that students will eventually face in the working world are what instructors should focus on (Comeaux 177). “Since problem solving tasks are similar to the challenges that students face in the real world,

they are more engaging and provide more opportunities for learners to explore all possible relevant perspectives through interaction and dialogue" (Comeaux 178). By communicating with the students through interactive, real scenarios, students will succeed in Web based education as well as they would in any face-to-face class.

CHAPTER III: METHODOLOGY

One important step in understanding the effect of online communication at University of Central Florida is to take into consideration the types of learners that take online courses. What is required is a measure of the perceived value of online courses in comparison to traditional, in-classroom courses. After all, the intention of instruction is to help the students gain an understanding of the lesson, and the students themselves are the best measure of how effective Web based learning is in comparison to the traditional classroom setting. In considering the medium by which students engage in online learning, a whole set of attributes, some of which are similar to classroom instruction and others of which are obscure to the online community itself, should be taken into consideration. These attributes create a functional framework by which online instruction can be judged. The attributes are as follows:

Media Characteristics: "Visual display characteristics […] appear to have the most impact [on learning]. These characteristics include image quality and size, viewing distance, proportion of a user's visual field occupied by an image, motion, color, and dimensionality" (Fontaine *Handbook of Online Learning* 35). Using the appropriate technology ensures that students will have enough stimulus to understand the lessons and effectively complete assignments (Fontaine *Handbook of Online Learning* 35).

Orientation and Movement in Space: This is geared towards how the students perceive their online environment. The more people that interact in the online environment and the more kinesthetic variables available, the more students will have the necessary diversity to examine

the coursework in all aspects and thus attain understanding of the lesson that much more efficiently. Kinesthetic variables include, for example, mediated classes as well as fieldwork observations (Fontaine *Handbook of Online Learning* 36).

Freedom from Distractions: "Both isolation […] and selective attention […] facilitate presence (Fontaine *Handbook of Online Learning* 36). By isolation, Fontaine is signifying that online courses have a degree of anonymity and lack of traditional, physical connection to other students, the classroom, the professor, et cetera. By selective attention, Fontaine is describing the degree to which students can remain task oriented without voluntary interruption (Fontaine *Handbook of Online Learning* 35).

Degree of Control, Interaction, and Exploration: "The degree to which a medium is interactive depends on (a) the number of inputs from the user that the medium accepts, (b) the number of characteristics of the mediated presentation or experience that can be modified by the user, (c) the range of change possible in each characteristic of the mediated presentation or experience, (d) the degree of correspondence between the type of user input and the type of medium response, and (e) the speed with which the medium responds to user inputs" (Fontaine *Handbook of Online Learning* 36). This means that one, it is imperative that the online medium is geared towards the student in that the instructor make certain the course objectives are intelligible and comprehensive and two, technology might limit the experience the student can have with the lesson, which is why other means (such as the aforementioned kinesthetic types of apprehension, for example) should be considered to complement online learning (Fontaine *Handbook of Online Learning* 35).

Number of Participants and "Copresence": "The greater the number of participants [in online discourse], the greater the presence experienced (Fontaine *Handbook of Online Learning* 37). "The issue as to whether there is some 'optimal' number is still largely unexplored. As key […] is the degree to which each participant is *aware* of the presence of others in the task or activity" (Fontaine *Handbook of Online Learning* 37). This emphasizes the necessity for discourse. Copresence is the feeling of togetherness that sometimes lacks in an online setting since there is no traditional interpersonal interaction. The instructor should make sure that there is a sense of camaraderie amongst the students despite the distance factor (Fontaine *Handbook of Online Learning* 35).

Trait and State Characteristics of the Participants: "There are likely to be individual and cultural differences associated with the experience of presence in [Web based instructional software]" (Fontaine *Handbook of Online Learning* 37). Instructors should take into consideration the level of exposure their peers have had with modern technology as there is almost certainly always at least one individual whose first time it is to take an online class and who isn't very familiar with the newer forms of media, such as Web chats, video conferences, discussion board, et cetera (Fontaine *Handbook of Online Learning* 35).

The primary purpose of this online framework is to measure the level of connection the students at University of Central Florida feel they have with the online course materials, their peers, their acquisition of the lessons and their overall education. It covers the necessary aspects of undergraduate and graduate level education despite the difference in attention to detail on behalf of the graduate level professors. A feeling of presence in students of online courses is a

necessity. For example, using emoticons is helpful. Using emoticons can help instructors add personality to feedback of essays and threaded comments as well as in personal e-mails (Weight 7, 31). Students often feel overwhelmed with online courses because of the pressure to adapt to the unfamiliar mode of education, which is why the instructor must make sure that the course is intelligible and clearly labeled (Weight 69). Particular variables to isolate for measurement of the quality of online education include "arousal, enjoyment, memory and motivation to complete the task" (Fontaine *Handbook of Online Learning* 34). Arousal pertains to the interest level of the students that helps them maintain focus. Enjoyment is the reaction to the information obtained and lessons learned. Memory focuses on the functionality of the class and whether or not the information was actually obtained, and motivation to complete the task hones in on the tenacity of the student to want to finish the lesson as much as he or she would in the traditional classroom setting.

There are different modes of instruction in Web based classes: technology enhanced face-to-face classroom, mixed mode (reduced face-to-face + online) and distance education (Bates 22). After examining a review of one study performed at University of Central Florida, it is apparent that mixed mode instruction is beneficial because "grades are higher when face-to-face classes are combined with [online] learning (mixed mode), compared with straight face-to-face teaching or solely distance education courses" (Bates 22-23). In a large way, this is aided by the asynchronous communication of the online portion. Overall Web course enhancement is encouraged because of a number of reasons:

· Access to educational resources from outside the institution on a global and instant basis.

· Increased and flexible interaction with students through e-mail and discussion forums.

· Course notes, diagrams, reading lists and other course materials available to students at any time.

· Ability to combine text, graphics and a limited amount of multimedia, enabling a wide range of educational applications.

· Professional/subject discipline links on an international basis for research and teaching purposes.

· Opportunities for international, cross-cultural and collaborative learning.

· Ease of creating materials and courses through low cost, off-the-shelf software such as WebCT [currently Webcourses] and Blackboard.

· Organization of course materials through [online] ‘portals’ (one-stop shopping for students for all learning resources).

· Relatively low cost for teachers in terms of technology (Bates 23).

There are a few noteworthy reasons that Web courses are beneficial to all types of students. For one, the Web is filled with information, and online courses help students sufficiently locate the right materials at all times. If students know how to collect proper data and answer a specific, carefully developed question, the Web is a great source with a plethora of information to offer. Moreover, students will be able to find authoritative Web sources whereas the neophyte to online research may be tricked into thinking one source is more valuable than another based on how the Web site looks. In this sense, it might be beneficial for all post-secondary institutions to implement a Web research course into its core curriculum (Bates 22-23).

In a survey performed by John A. Capocci and Lillian Nasca, it was demonstrated that the range of learning diversity amongst post-secondary online students varies. It was the first time that a few of the students had taken an online course, though the majority had taken at least one in the past. Capocci and Nasca compared the findings to the same questionnaire posted to the same course taught on campus and also given to thirteen students. It covers the effectiveness of online courses versus face-to-face courses. Focusing on the online dynamics and mode of instruction in comparison to an analogous course taught face-to-face and how the instructor is responsible for making sure the course expectations and lessons are accurately conveyed via effective communication.

The results of the aforementioned questionnaires show a similarity in that in both types of classes, the majority of students were visual learners. The distinction comes when comparing the auditory and kinesthetic learning styles (kinesthetic referring to performing real-world tasks rather than hearing or reading about them). The face-to-face students used auditory learning as 30% of their capacity whereas the online students were only 8% auditory. Kinesthetically, face-to-face students utilized only 10% of this learning style whereas online students utilized it beyond 30% (Capocci 9). The following charts are from Capocci's article on page 9:

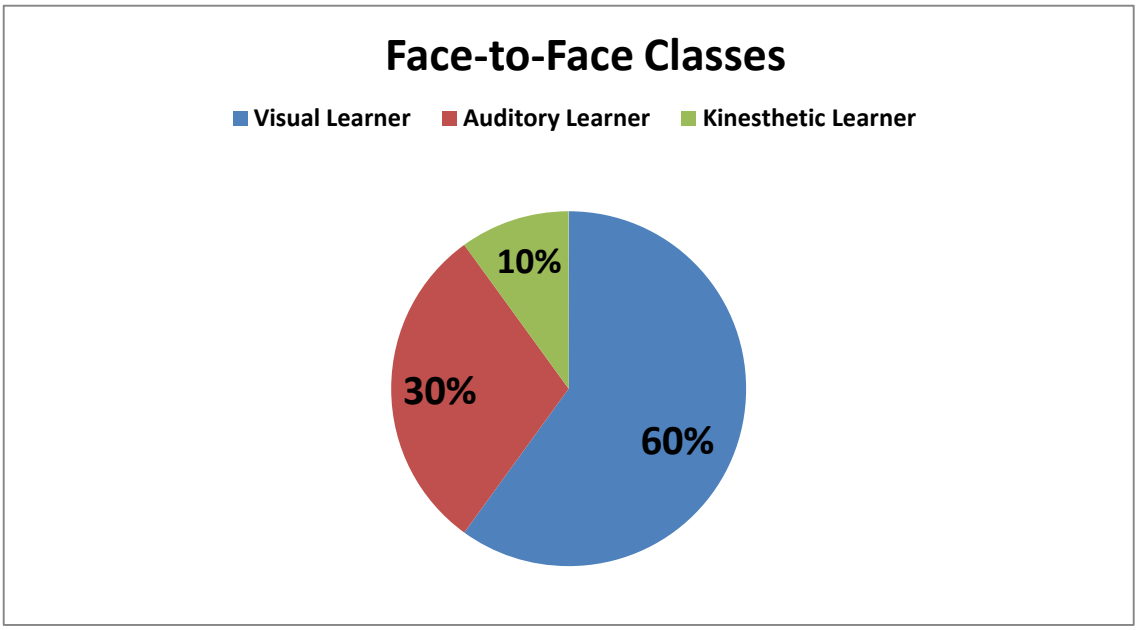

Figure 1: Types of Learners in Face-to-Face Classes

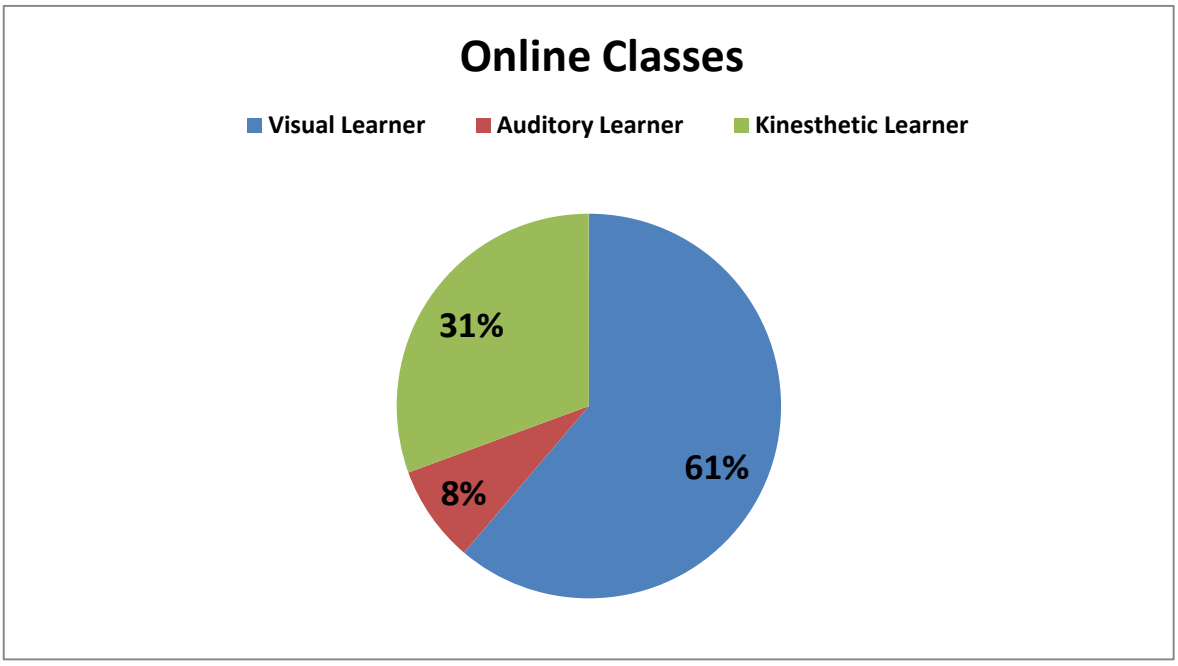

Figure 2: Types of Learners in Online Classes

The results show that as long as the instructor accurately communicated his or her expectations for the students that there were "no significant difference[s] in student achievement" when the academic progress of online students was compared to the progress of face-to-face students (Capocci 2). It is evident in the sample that online learners need less auditory instruction and more kinesthetic instruction than the face-to-face students. The online students are roughly equal to on campus students in terms of visual need. One can assume from this study that online students prefer to have a hands-on approach while being able to read instructions versus solely vocally being told instructions. In essence, it appears that successful online learners must have excellent reading proficiency and kinesthetic variety whereas the on campus students seem to rely on vocal instructions and need hands-on activities to understand the lessons. By giving these diagrams and summarizing this survey, my purpose is not to qualitatively measure which students are better but to distinguish which types of learning apply to on campus and online students. This makes the case for incorporating real world, relevant hands-on projects for Web students. As a result, group work may be required to put together portfolios and massive projects, which instills a need for optimum instructor involvement and course management.

There are a number of different media applications used in e-learning with which University of Central Florida Web students must be familiar. The two necessary and most basic components in online learning are the computer and the Internet. Web students must also be familiar with the particular program used to access their Web courses. Such software typically holds e-mail capability, chat room capacity and discussion board access. There are often sections

for quizzes and document uploads, and familiarity with these applications is imperative to succeed in any online course.

The importance behind any form of education is learning. Fontaine's framework measures the success rate that online students will attain granted its six attributes are found. Not only is it imperative that students taking online courses at University of Central Florida are familiar with the software with which they turn in assignments, post discussions and take quizzes but how the information is transferred. Students need to assimilate the information taught, and given that many will have different learning styles (as evident by the aforementioned questionnaire results), lessons need to be geared in such a way that they are accessible to every student. It is the role of the instructor to make sure the lesson is comprehended by the students whether by typical or extraordinary means. Still, course management is imperative, and this responsibility lies with the instructor. The components of the Webcourses Blackboard software provide enough for instructors to organize the layout of the course Web site with ease. However, it is important to note that the instructor should not alter the course expectations to facilitate a few students that do not prefer to do the online assignments the way the instructor intends. That is to say that simply because the instructor is responsible for course management does not mean that the instructor should take the burden of learning away from the students. It is still the student's responsibility to turn in assignments that are accurate with the instructor's expectations. University of Central Florida students have until the end of the late add/drop period to drop courses without any financial obligation, and this should aid the imperative for instructors to give realistic expectations at the very beginning of the course (or even before the course begins by forwarding

the syllabus to currently registered students, for instance). Such methods not only help the students but the instructors as well. Although the instructor must make such expectations intelligible and understood, a student that is unwilling to put forth the necessary effort to learn should not reflect on the instructor in any way. It is therefore necessary to view online education at University of Central Florida as being a two-part whole; the instructor must properly manage the course materials to fuel a learning environment while the student must simultaneously assimilate the information and punctually turn in sufficient work.

The degree to which the students are able to comprehend the layout is very important since it can determine the amount of success the student achieves in the course. For instance, if a student is thoroughly working on a project and ensures that the project is finished by the deadline but needs to submit it by first converting it to PDF, then changing it from a .docx to a regular .doc file, these measures can be time consuming and expensive, potentially costing the student a grade. This example is taken from my personal experience. If the professor first makes sure that the class understands the requirements of the course, though, and has the students test the system from the beginning, then the success rate will increase since the instructor's expectations are intelligible and realistic. In essence, the information transfer of Web based lessons to the understanding of the student lies in the hands of the instructor (Kusiak *New Horizon in Web-Based Learning* 177-178). This is due to the instructor’s ability to determine the level of clarity of an assignment. If there is a lack of clarity, students will not understand the concept and vice versa.

How can an instructor implement online lessons to auditory learners that have difficulty keeping up with the written instructions? Some professors vary their instruction style by incorporating on campus classes into the schedule. The curriculum can be part Web based and part in-classroom instruction. Many University of Central Florida instructors choose to have students take tests on campus and do all other lessons online. Some classes meet for a lecture once a week and do all the assignments online. It all depends on the needs of each class. Some classes require no face-to-face meetings. Such include the majority of English and Humanities courses. Some courses might benefit from partial face-to-face atmospheres, such as in the Sciences whereby students may have the option of performing lab work or in the Health and Public Affairs where students can implement lessons regarding safety protocol. It is safe to say that some courses can benefit highly from synchronous feedback, and the instructor should always have the option of having one or two portions of the class as being more traditional as needed.

In determining the effects of Web based technology and whether user interpretation is as effective as older modes of communication (conference calls, hand written letters, in-person conferences, et cetera), the goal of online software is to act as an aid in teaching (Mayor et al 297). As a result, it is up to the instructor to use the Webcourses software components to aid the lesson and to make sure that students are properly and effectively corresponding with one another. The advantages of Web based instruction and communication are listed by the authors, which include convenience of proximity (not needing to drive to attend class), a learner-centered approach (where the student becomes more motivated since he or she is the sole determinant of

success in the course) and having the instructor as an organizer of materials as well as an instructor as opposed to someone merely telling students what to read and choosing whether or not to pass the students (Mayor et al 298). Again, the focus is on the instructor being responsible enough to properly manage the Webcourses layout, which often includes focusing it around the student as a learner rather than having the student attempt to decipher what the instructor is attempting to communicate.

Means to Success

When thinking about Web correspondence on Webcourses, two methods should come to mind: synchronous and asynchronous communication. Synchronous communication is as enables "the teacher and learners [to be] in the same space at the same time" whereas asynchronous communication is described as "[providing] 'anytime, anyplace' flexibility to learners…in that they do not require learners to be online or connected to a teacher at a specific time for specific purposes" (Cherniavsky *Web-Based Learning: Theory, Research, and Practice* 88). In essence, asynchronous communication refers to a delayed correspondence such as e-mail or threaded messages. The person initiating correspondence will not expect an immediate answer as asynchronous correspondence takes time in between messages and responses. Asynchronous communication is the more efficient form of post-secondary communication it requires more consideration on behalf of the instructor when responding to students (Chickering 1).

When considering the strengths of Web based education, it is beneficial to examine the different benefits and difficulties of technology integration in the educational setting (Reimer *Integrating Technology in Higher Education* 52). The assimilation of technology into curriculum is essential

to the growth of students since they will all need to be familiar with such applications to be successful in the modern-day communication methods of the business world (Reimer *Integrating Technology in Higher Education* 57). There are certain concerns present in students taking Web classes. For one, "Students [are] concerned about their ability to complete the coursework, technology malfunctions, appropriate directions to access information, navigating the Web to submit assignments," et cetera (Van Keuren 29). In order to help students overcome these fears, the instructor must "[become] a facilitator [by] making learning student-centered, with the students using online study groups, chat rooms, private e-mails, and threaded discussions to do their coursework" (Van Keuren 29). This student-centered approach includes one, making sure chat room sessions are stimulating and engaging, two, making a variety of sites accessible for accumulating knowledge about the course theory and three, making sure the turn-it-in test and assignment functions are easy to navigate and convenient in terms of the amount of time to turn the assignments in; for instance, by 11:59 p.m. on the due date (Van Keuren 30). The bad experiences include having a text solely online and peers that are uncooperative or difficult (Engvig 56, 57). The two most salient good experiences include strong support of peers as well as positive, helpful and supportive professors (Engvig 55, 56). Each of these points pertains to communication, whether in the sense that book information is communicated to the student through writing or in that some classmates can withdrawal themselves from communicating entirely. If the professor makes it a point to require successful Web correspondence, there will be distinct consequences for difficult students since such students can possibly affect others' grades in a drastic way. Such pros and cons must be taken into account by the professor of the course.

For instance, if the professor ensures that the book information is accurately communicated by clarification and lectures, communicative accuracy is aided in the instructor's intention to clarify the lesson. Again, though, the emphasis should still be put on the necessity of students taking the time to learn the material. Even though it is the responsibility of the instructor to properly manage such accuracy, the necessary second half of the whole is the intention of the student to finish the work punctually and accurately. As a result, there is just as much responsibility of the student to ensure quality of assignments as there is of the professor to efficiently manage the class on Webcourses.

Teamwork in at least some respect is necessary for the integration of online communities. The authors maintain that one of the most important elements in online instruction is communication via team building (Garcia 485). As a result, online instruction can benefit from using teamwork to help build this rapport, or as described earlier, copresence. For the difficulties in team work, instructors should suggest rapport building strategies, such as classmate introductions, exchanging background information, sharing which degree program the student is pursuing, et cetera. These all create a sort of persona that helps peers relate to one another. In fact, the ultimate aim of this article is to suggest such effective team-based strategies that aid in the advancement of peer rapport building that enhance Web based communication. The authors are accurate in pointing out that due to the lack of face-to-face contact, online communication is more difficult than traditional communication, though this does not mean that it has to be less effective. In other words, the demand should be the same of online courses as it is of face-to-face courses.

This brings to light the necessity of socialization in the online community. It is necessary for the instructor and students to form a rapport in any face-to-face course, and the same rule applies to Web courses. Students are given social space via virtual communal areas, which help initiate social interaction and, as a result, promote the sharing of knowledge and it is necessary for students to understand the Blackboard system in order to bring about the social aspect that is necessary for academic growth (Aggarwal 211). The reason these social functions of Blackboard are necessary for academic development is because it is proven that when students have a sense of community, that rapport aids their learning through the ease of communication versus intermittent feedback from professors and students. Continual discourse provides further understanding of the lesson as well as an atmosphere of autonomy as rapport building allows students to feel more confident and secure in learning. In one survey, nearly 80% of college students believe that the Web has augmented their education (Steve Jones *The Internet Goes to College* 3). Such a number is immense, which definitely adds to the benefit of Web courses. Also determined from this survey is that nearly half of college students express concerns to instructors via e-mail that they normally would not express in person. This offers insight into the benefit of online instruction in that the level of anonymity and lack of confrontation adds to the overall amount of learning. It enables the instructor to teach better since any gap in instruction is more effectively addressed and ultimately fixed. Among the elements of Web based communication in online courses at University of Central Florida, the sense of community among classmates is likely the most important. At best, the online course would aid students in helping them to build rapports (Bullen et al 186). Without the sense of community that face-to-face classes hold, there

would be little standing in the way of failure because students need to feel welcomed and part of a group versus feeling like an independent, autonomous unit.

The majority of works I have reviewed have all acknowledged the necessity behind the students holding a sense of community in online classes. Without this, partners and peers appear to be nothing more than intermittent, inattentive and uncaring machines. Delayed or unintelligible responses would be comparable to a student in a face-to-face class looking at his or her peer, speaking directly to them and having the classmate completely ignore the student. The instructor must make sure the class effectively introduces themselves and, in a sense, create an atmosphere similar to one in face-to-face classes. The instructor has many different options for making online communication effective by means of peer bonding. The level of success that students experience is really based on how effectively the instructor clarifies the expectations of the course and how much the instructor is willing to help students in need (Brewer 67). As a result, the authors give a list of criteria of communication for instructors to meet that will ensure student contentment. The strongest ones are as follows: one, outline the presentation; two, keep directions simple; three, “use a conversational approach;” and four, vary the presentation (Brewer 67-71). These steps bring the focus on the student whereas a conversational approach has proven to be especially useful. In online education as a whole, the shift has gone from needing to keep up with the professor to the professor focusing the material around the student. As a result and by using the aforementioned guidelines, clear communication with the professor holding the role of mediator is not only possible but imperative. Online communication is an evolution of sorts. The main reason for this is because it allows correspondence across distances

and with anytime access, which broadens the level of communication as well as the demographic that it appeals to, which can be termed “distributed learning” (Bates 21). This deals with the different types of Web based learning. These include mixed mode instruction (which uses partial Web and partial face-to-face) as well as Distance Education (fully online). One element is common in any form of distance or online learning: asynchronous communication is just as beneficial as—and in many ways more beneficial than—synchronous, face-to-face correspondence because of the depth, attention to detail and amount of communication.

CHAPTER IV: RESULTS OF ADMINISTERED SURVEY

The survey that I administered was sent to thirty different students at University of Central Florida. The survey takers mainly included undergraduate students, though there are samples from graduate students. Since my goal was to obtain a balanced sample of the students' perceptions and opinions of Web based communication at University of Central Florida, I carefully distributed the questionnaire to five different students from each major college at the University of Central Florida: the College of Arts and Humanities, the College of Business, the College of Education, the College of Engineering and Computer Science, the College of Health and Public Affairs and the College of Sciences. The emphasis was neither put on whether or not a student was at the undergraduate or graduate level nor whether the student was full-time or part-time; instead, the questionnaire was geared towards current students who have taken at least one online course at University of Central Florida using the Webcourses software that is administered by the university.

After administering the survey, I found that the some of the results held discontinuity. For example, many students believe that on the whole, online courses do not hold as effective means of communication as face-to-face courses, but the majority of students simultaneously hold that Webcourses offers the means necessary to keep in sufficient contact with instructors. Otherwise the results were fairly straight forward. 70% of the surveyed students believed that course discussion via online threads was not as beneficial as face-to-face course discussion. Another negative result surrounded the rapport that students felt they had with their online classmates.

56% of surveyed students believe that they could form better relations in face-to-face courses; that online courses do not allow or at least do not facilitate such intimacy. On the contrary, many students agreed that it was easier to include their points of view online than in a face-to-face class. Students also claimed to prefer having anytime access (communicating asynchronously with instructors) as opposed to waiting for office hours or after face-to-face classes. The majority of students also agreed that a well managed class would behoove group work sessions and that if an online course is well managed that it will be just as beneficial as a face-to-face course. Below are the transcription and results of the administered survey:

I believe that modes of communication in online courses are as effective as modes of communication in face-to-face courses.
36.6% agreed, 50% disagreed and 13.3% were unsure.

I believe that it is easier to include my point of view in online discussion rather than in face-to-face discussions.
56.6% agreed, 33.3% disagreed and 10% were unsure.

I prefer to have anytime access to communication with professors versus waiting for office hours or after class to ask important questions.
90% agreed and 10% disagreed.

I prefer having a rapport with my classmates in online courses versus not knowing my classmates and remaining completely anonymous.

53.3% agreed, 20% disagreed and 26.6% were unsure.

I find that my professors respond to my e-mails/threaded discussions as effectively as they would in a face-to-face class.

56.6% agreed, 30% disagreed and 13.3% were unsure.

I believe that I have as close a rapport with my classmates in online classes as I do in face-to-face classes.

33.3% agreed, 56.6% disagreed and 10% were unsure.

Webcourses offers sufficient modes of communication that enable me to effectively keep in contact with my instructor and classmates.

76.6% agreed, 6.6% disagreed and 16.6% were unsure.

I believe that discussing the course lesson via threaded discussions is just as effective as having a discussion in a face-to-face course.

16.6% agreed, 70% disagreed and 13.3% were unsure.

I believe that if the instructor properly manages the classroom that the overall experience

is as beneficial as a face-to-face course could be.

63.3% were agreed, 23.3% disagreed and 10% were unsure.

I believe that as long as the instructor effectively and professionally manages the online course, group work in online classes is just as effective as group work in face-to-face classes.

60% agreed and 40% disagreed.

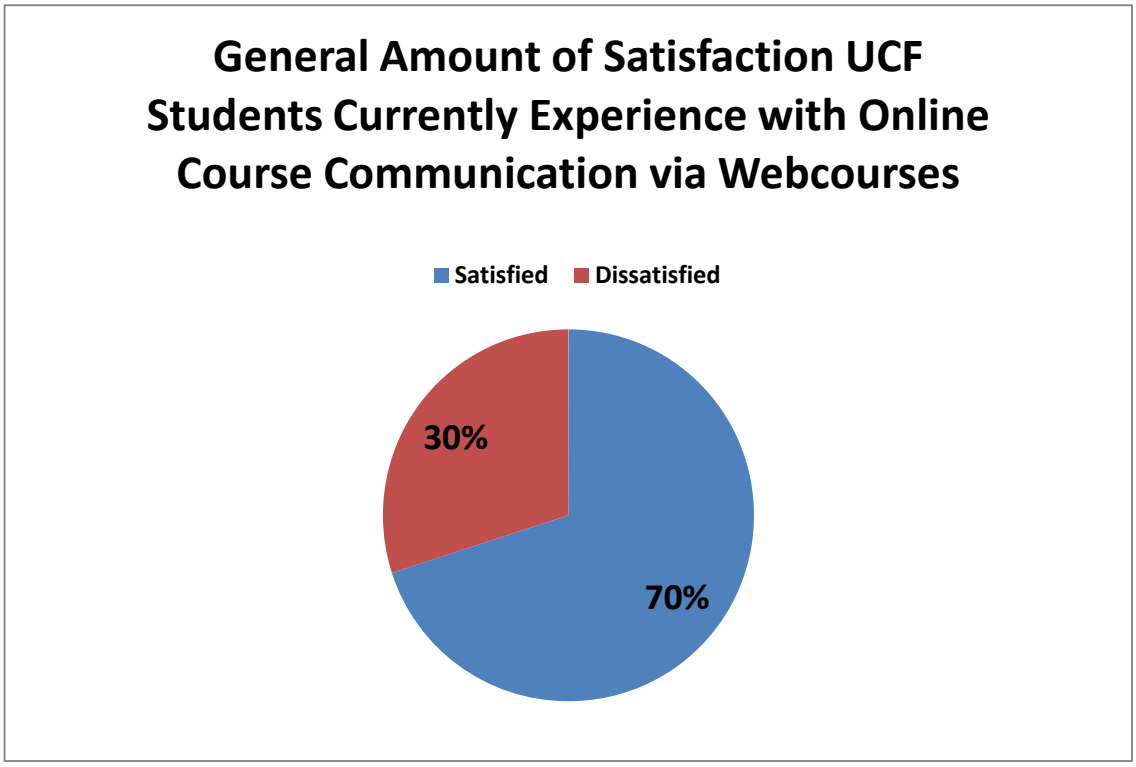

Figure 3: Results from Survey Administered to University of Central Florida Students by the Author

CHAPTER V: WHAT WORKS AND WHAT NEEDS IMPROVEMENT

Online group work, overall course benefit, instructor communication via online functions, online rapport building, anytime (asynchronous) communication with instructors, confidence in online chats and threaded discussions providing sufficient modes of communication all work in the online environment. The majority of students believe that as long as the instructor effectively and professionally manages the online course, group work in online classes is just as effective as group work in face-to-face classes. This is useful since much benefit from kinesthetic learning comes from group work, and this shows that the University of Central Florida offers great instruction techniques involving online group projects. Students also believe that if the instructor properly manages the classroom that the overall experience is as beneficial as a face-to-face course could be. Confidence in the students suggests that there is success in the assimilation of online demands in that the students' expectations coincide with the instructors' expectations and that clarity is reached in this interface. Students generally agreed that their professors respond to their e-mails/threaded discussions as effectively as they would in a face-to-face class. Again, and important point because communication relies on the ability to be understood, and most students at the University of Central Florida believe that their concerns are effectively addressed. Many prefer having a rapport with their classmates in online courses versus not knowing their classmates and remaining completely anonymous, and the majority prefer to have anytime access to communication with professors versus waiting for office hours or after class to ask important questions. This goes hand-in-hand with the texts I researched. All

sources surrounding online instruction examined and urged the need for rapport and team-building in the online environment. Also, the majority of students believe that it is easier to include their points of view in online discussion rather than in face-to-face discussions and that Webcourses offers sufficient modes of communication that enables them to effectively keep in contact with their instructors and classmates. This was also valid in the sources I referenced as many students believe that they can learn much more in the online setting since they have more open (less intrusive) means of communicating with professors and peers and that the level of relative anonymity can be determined as they deem fit; for instance, the student can choose to address his or her concerns to the class in a public chat or public thread, which would be synonymous with speaking out in class, or the student can send a personal e-mail to the instructor or even utilize the anonymous function in social threads that some University of Central Florida online classes offer.

As far as weaknesses in online course communication, there are a few areas that should be noted. The majority of students believe that modes of communication in online courses need enhancement. This responsibility can in part be put on the instructors, but this also may indicate a weakness in the Webcourses structure. For instance, many students had difficulty with WebCT—the former program used to administer Web classes as the University of Central Florida—but oftentimes the instructors did everything they could do make the courses efficient and such course construction was due to the limitations that WebCT would allow. Another point to consider is that many students beginning in Web classes are skeptical, and given their traditional schemata, they will initially compare the structure of Web classes to the structure of

face-to-face classes. Granted Web classes must at least match the level of instruction and learning that takes place in face-to-face courses, the means to reaching such instruction and learning will ultimately be different due to the inherently different environment. Students also do not believe that they have as close a rapport with their classmates in online classes as they do in face-to-face classes. This is an area that can be easily fixed by instructors making more team-based assignments from the beginning. As long as the students understand the interface functions that they are working with, communication can take place just as efficiently as it can in the face-to-face environment, and due to the asynchronous aspects or aspects of anonymity, online discourse may indeed be easier than in the online setting. Another issue that students have a problem with is discussing the course lesson via threaded discussions. They do not believe that it is just as effective as having a discussion in a face-to-face course. Again, this might always be an issue in online course communication as everybody has gone through school in a face-to-face environment for their entire lives. Naturally people will prefer to have auditory discourse over electronic conversation, but this survey was not attempting to determine student preference of communication—merely effectiveness of online communication. Nevertheless, these issues bring about areas that need to be further developed and enhanced.

In order to enhance Web based communication at the University of Central Florida, instructors should take further measures to ensure that students understand the different components of the Webcourses communication functions. A useful tactic for instructors in beginning any Web course is to send the syllabus to the student via e-mail, which they are already familiar with. This will put the students at ease since they will know what is expected of

them before having to learn to first navigate the Web site and find the syllabus. Another effective way of helping ease the students into the Web classroom atmosphere is by perhaps giving the first assignment by e-mail. In fact, many first-time Web students benefit from having the first assignment involve using the different communication tools available on Webcourses. For example, the first assignment may be to access the class Web site, open a thread for discussion and post a personal history while responding to at least two others' personal histories. This exercise will also help students build a rapport with one another. I have personally benefitted from rapport building exercises such as these as opposed to just jumping into a Web based atmosphere and working with students that I know nothing of. As far as perfecting the threaded discussion, perhaps more punctuality and depth should be considered, but this sort of discussion is inherent to Web based instruction and should be expected by the students enrolling in the course. Nevertheless, further measures by the instructor can be taken. The instructor could implement a mandatory chat room session once a week to make sure that students are actually conversing about the issues. I have personally experienced this and it makes Web courses much more comprehensive. Another consideration is to make the course partial Web/partial face-to-face by having a few face-to-face sessions throughout the term that could even be voluntary if some students are worried about making the commute. Of course, instructors can always resort to having the students personally e-mail them, call them over the phone or show up during office hours for further details concerning a lesson.

My study helped determine the effectiveness of Web based communication at the University of Central Florida, and as a result, it helps pave the way for future research. Hopefully

these insights will be taken into consideration, and further rapport building and course management will take place—both by the initiation of the instructors and the students. One strong point to reiterate in reference to the survey results and aforementioned research is the need for a team-based environment on both ends—by the instructors and by the students. It is easy for instructors to assume full responsibility for the outcome of courses, but the truth of the matter is that no matter how diligently an instructor tries, students can defy and even sabotage such efforts if they choose to. Nothing in my research states that students attempt to do this, but to ignore its possibility would prove detrimental to future research. The intentions of the instructors and the students must be fair and balanced before learning can take place. As a result, it is important to note that even though course enhancement must first stem from the willingness of the institution to improve the quality of its instruction, without the willingness of the student to continue to succeed in a constantly changing and upgrading atmosphere, learning will be lost. It is more important to focus on the team-building between instructor and student than to isolate one side of the equation and assume that by fixing it that the whole problem will be fixed. Nevertheless, assuming the good nature and high academic character of students (which has been sufficiently proven throughout the entire duration of instruction at the University of Central Florida), I am confident that online communication methods by means of Webcourses and future online instruction components and programs will continue to improve, upgrade and enhance one of the fastest growing universities in the United States of America.

CHAPTER VI: CONCLUSION

Through examining the basic methodology, strengths and weaknesses of communication in Web based instruction, it is apparent that the two most important components are the sense of community amid students and effective course management of the instructor. Both of these responsibilities are initiated by the professor. As a result, whether or not communication in any given online course is sufficient is—in essence—determined by the level of devotion the instructor offers to his or her class. The students, of course, must play a role in such effectiveness as communication itself is dependent on one party offering information and another party assimilating it and offering necessary feedback. However, post-secondary education holds instruction as its basis. Without instructors being willing to organize and relay the instructions, theory, practicality and depth of the lesson, the communication will utterly be lost. However, by simply ensuring that the facets of communal relation and structural management are established, the success rate of online course communication is highly improved.

In researching key works to determine whether or not online course communication is truly effective, I discovered that as long as the instructor takes ample time to ensure that the classes have a manageable number of students, that he or she is timely in responses to students' correspondences and that he or she helps the students create a sense of community in the classroom that Web courses carry very effective means of communication—in many ways as effective as (if not more than) face-to-face classes carry. The means by which the instructor takes

to ensure a sense of community are important since many face-to-face courses merely imply peer communication. In other words, it is taken for granted in the face-to-face setting that students will form peer bonds since the only necessary method of communication is verbal. In online classes, however, the instructor needs to creatively weave the lesson in with peer rapport building. As long as this is achieved as well as clarity of directions and timely responses by the instructor, communication will be viable.

In considering the improvements needed for Web courses, it is important to maintain the understanding that such courses are already successful. However, as mentioned, there is room for improvement. It should be assumed from the research in this thesis that Web courses are complex and need the right amount of care to ensure success. One should not assume that this research provides an accurate comparison of face-to-face classes and Web classes in the university setting. Instead, this research is meant to determine the efficiency of online course communication at the University of Central Florida. As provided, it can be determined that the level of efficiency of online course communication at the University of Central Florida is efficient—70% efficient according to the survey administered to UCF students. As a result, what is needed is a honing of current success to aid the 30% remainder and help complete the whole. Online courses currently hold the faculties needed to promote the necessary level of success students require at the University of Central Florida. As long as there is a joint effort between instructors and students, Web course communication at the University of Central Florida is well on its way to growing to an even more efficient level.

APPENDIX A: SURVEY

THE EFFECTS OF ONLINE COMMUNICATION IN THE POST-SECONDARY SETTING

By Brandon Hinchman

Please begin here:

I believe that modes of communication in online courses are as effective as modes of communication in face-to-face courses.

I agree / I disagree / I am unsure

I believe that it is easier to include my point of view in online discussion rather than in face-to-face discussions.

I agree / I disagree / I am unsure

I prefer to have anytime access to communication with professors versus waiting for office hours or after class to ask important questions.

I agree / I disagree / I am unsure

I prefer having a rapport with my classmates in online courses versus not knowing my classmates and remaining completely anonymous.

I agree / I disagree / I am unsure

I find that my professors respond to my e-mails/threaded discussions as effectively as they would in a face-to-face class.

I agree / I disagree / I am unsure

I believe that I have as close a rapport with my classmates in online classes as I do in face-to-face classes.

I agree / I disagree / I am unsure

Webcourses offers sufficient modes of communication that enable me to effectively keep in contact with my instructor and classmates.

I agree / I disagree / I am unsure

I believe that discussing the course lesson via threaded discussions is just as effective as having a discussion in a face-to-face course.

I agree / I disagree / I am unsure

I believe that if the instructor properly manages the classroom that the overall experience is as beneficial as a face-to-face course could be.

I agree / I disagree / I am unsure

I believe that as long as the instructor effectively and professionally manages the online course, group work in online classes is just as effective as group work in face-to-face classes.

I agree / I disagree / I am unsure

Which type of degree are you currently pursuing at the University of Central Florida?

□ Bachelor's degree

□ Graduate Certificate

□ Master's or Specialist degree

□ Doctoral degree

Under which college do you study at the University of Central Florida?

□ The College of Arts and Humanities

□ The College of Business Administration

□ The College of Education

□ The College of Engineering and Computer Science

 The College of Health and Public Affairs

 The College of Sciences

APPENDIX B: IRB SUBJECT PERMISSION LETTER

Informed Consent for an Adult in a Non-medical Research Study

Researchers at the University of Central Florida (UCF) study many topics. To do this we need the help of people who agree to take part in a research study. You are being invited to take part in a research study which will include about 30 people. You can ask questions about the research. You can read this form and agree to take part right now, or take the form home with you to study before you decide. You will be told if any new information is learned which may affect your willingness to continue taking part in this study. You have been asked to take part in this research study because you are a student at the University of Central Florida. You must be 18 years of age or older to be included in the research study and sign this form.

The student doing this research is Brandon Hinchman, a graduate student at the University of Central Florida. Because the researcher is a Master's student, he is being guided by Dr. Jeffrey Kaplan, a UCF faculty supervisor the College of Education.

Study title: Determining the Validity of Web Based Communication via the University of Central Florida's Webcourses in Comparison to Face-to-Face Class Communication.

Purpose of the research study: The purpose of this study is determining the Effects of Web Based Communication via the University of Central Florida's Webcourses in Comparison to Face-to-Face Class Communication**.**

What you will be asked to do in the study: The only requirement of the student is to honestly answer the twelve questions of the questionnaire as well as the additional demographic questions surrounding the level of school taken up to this point in time.

Voluntary participation: You should take part in this study only because you want to. There is no penalty for not taking part, and you will not lose any benefits. You have the right to stop at any time. Just tell the researcher or a member of the research team that you want to stop. You will be told if any new information is learned which may affect your willingness to continue taking part in this study.

Location: Due to this being a Web based survey, you may simply access your personal computer to comply.

Time required: Approximately 5 minutes.

Audio or video taping: This study does not include any audio or video taping.

Risks: There are no expected risks for taking part in this study. You do not have to answer every question or complete every task. You will not lose any benefits if you skip questions or tasks. You do not have to answer any questions that make you feel uncomfortable.

Benefits: There are no expected benefits to you for taking part in this study. As a research participant you will not benefit directly from this research, besides learning more about how research is conducted.

Compensation or payment: There is no compensation or other payment to you for taking part in this study. There is no compensation, payment or extra credit for taking part in this study.

Anonymous research: Aside from e-mail identification, this study is anonymous. That means that no one, not even members of the research team, will know that the information you gave came from you.

Study contact for questions about the study or to report a problem: Brandon Hinchman, Graduate Student, Interdisciplinary Studies Program, College of Graduate , (321) 544-1610 or by e-mail at bnhinchman@aol.com or Dr. Jeffrey Kaplan, Faculty Supervisor, College of Education at (407) 823-2041 or by e-mail at jkaplan@mail.ucf.edu.

IRB contact about your rights in the study or to report a complaint: Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901.

How to return this consent form to the researcher: Please e-mail the completed questionnaire to bnhinchman@aol.com. As a back-up e-mail address, please send it to hinchman@mail.ucf.edu or jkaplan@mail.ucf.edu.

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