What Instructional Modification Implementations Bring Adult Education Learners To Success And Retention? Analysis Of An Online Adult Basic Education Program

2005

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WHAT INSTRUCTIONAL MODIFICATION IMPLEMENTATIONS BRING ADULT EDUCATION LEARNERS TO SUCCESS AND RETENTION? ANALYSIS OF AN ONLINE ADULT BASIC EDUCATION PROGRAM

by

BERNADETTE A. PROPST
B.S. Miami Christian College, 1986

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Education in the Department of Elementary Education in the College of Education at the University of Central Florida Orlando, Florida

Summer Term
2005
ABSTRACT

What Instructional Modification Implementations Bring Adult Education Learners to Success and Retention? Analysis of an Online Adult Basic Education Program.

Adult learners enrolled in my online Adult Basic Education program showed low completion rates for the course. This study’s purpose was to discover what instructional modifications would bring these learners to a successful outcome in the program. I implemented the following instructional modifications: asynchronous email communication, weekly progress reports emailed to each participant and a minimum requirement of 10 assignment completions on a weekly basis. Teacher-student interaction increased because of these implementations.

I reviewed literature that discussed distance education, adult learners and teacher-student interaction to discover strategies that would improve student achievement in an online course. After reviewing the literature, I determined that there were three missing elements in my program: structured communication between the teacher and student (Palloff & Pratt, 1999), standards for online coursework completion (Comings et al., 1999) and a system to inform students of their progress in the program (Comings et al., 1999).

I found that teacher-student asynchronous communication, a weekly requirement of 10 completed lessons and weekly progress reports of student accomplishments encouraged students to complete coursework on a regular basis. Students were conscientious, taking more responsibility for their learning. Students had a higher rate of coursework completions during the research study period, with performance increasing 73%.
I am dedicating this thesis to my husband, Pete. Thank you for believing in me, and all of your encouragement. I could not have done this had you not told me I could. You are the best thing in my life.
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# LIST OF ACRONYMS/ABBREVIATIONS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABE</td>
<td>Adult Basic Education</td>
</tr>
<tr>
<td>GED</td>
<td>General Educational Development</td>
</tr>
<tr>
<td>TABE</td>
<td>Test of Adult Basic Education</td>
</tr>
<tr>
<td>IRB</td>
<td>Institutional Review Board</td>
</tr>
<tr>
<td>UCF</td>
<td>University of Central Florida</td>
</tr>
</tbody>
</table>
LIST OF DEFINITIONS

Distance Education/Learning: The process of learning that takes place away from the traditional classroom setting.

General Educational Development (GED): A test that determines if a student has attained high school level academic skills. Students passing this test receive a diploma equivalent to that of a high school diploma.

Adult Basic Education (ABE): Coursework designed to educate adults with learning levels below the ninth grade. Through the successful completion of Adult Basic Education coursework, learners increase their learning level to ninth grade or higher.

Test of Adult Basic Education (TABE): A norm-referenced test used to determine the learning level of students.

Asynchronous Communication: Communication taking place in delayed time. Communication via email is an example of asynchronous communication.

Synchronous Communication: Communication taking place in real time. A telephone conference is an example of synchronous communication.

Retention: Students completing coursework and promoting to higher levels of coursework.
CHAPTER ONE: INTRODUCTION

Hassen (2004) stated, the tens of millions of adults in America without a high school diploma represent a social challenge that intensifies each year as society demands a more highly skilled and educated workforce,” said David Ward, president of the American Council on Education. “Rather than a final goal, a high school diploma is a launching point for each individual and critical to the success of our larger community. Passing the GED Tests provides adults with an opportunity to earn their jurisdiction’s or state’s high school credential and move forward to pursue further education and training and better jobs, and to serve as role models for their families and generations to come (Hassen, 2004, p. 1).

In my undergraduate studies, a professor stated that a teacher is only as successful as the lowest achiever in the class. This statement guided me through many years of classroom teaching, as I desired to help all students grow in educational success. Now that I have a new position in higher education, I want to find the best instructional techniques that will assist my students in achieving their goal of earning their General Educational Development (GED) diplomas.

The General Educational Development (GED) test serves the purpose of measuring the major concepts and outcomes associated with four years of high school education. Begun by the United States Armed Forces Institute (USAFI) in 1942, only military personnel took the original test. Due to not having completed high school, many World War II veterans needed the ability to attend college or vocational schools (Dave Thomas Education Center, n.d., p. 1). The GED made this possible for these veterans. The GED has come to be an acceptable means of
awarding high school diplomas. Each of the 50 United States use the GED as a means of
awarding a high school diploma (Dave Thomas Education Center, p. 1)

Prior to enrolling in a General Educational Development program, students must be at a
ninth grade learning level. Administered to each potential student is the Test of Adult Basic
Education (TABE) to determine the learning level of each student. Students who test below the
ninth grade level begin enrollment in the Adult Basic Education (ABE) courses designed to bring
their learning levels up to the ninth grade. Centered on students enrolled in the online ABE
courses that I am instructing, this study investigates the success of implementing the following
instructional modifications: asynchronous communication between teacher and student via
email, a required 10 assignment completions weekly and a progress report emailed to each
participant of the prior weeks online coursework completions.

Effortlessly taught are students whose schoolwork and learning come easily to them.
However, a student who may have social factors impairing success or simply be a delayed
learner can oftentimes be challenging. Social factors that I see affecting my students are low
income, teen pregnancy and lack of basic skills due to having dropped out of school many years
ago. They now want to earn their General Educational Development (GED) diploma and find
that these factors can be limitations to their success.

When I began my position as the teacher of the Adult Basic Education (ABE) courses at a
local community college, I knew that communication between teacher and student as well as the
technical ability of the students would both play a part in the building of a successful learning
community. Many of the students came to me wanting to work online but having no computer
skills. I determined that these students were often attracted to distance education because it was
convenient. I found myself wondering what I could do to keep these students from becoming frustrated and quitting.

For the first six months after I began working with students enrolled in the online Adult Basic Education (ABE) study course at my community college, I did not feel successful as the instructor. Inactive students far outweighed the actively participating students in the course. Studies have shown that no significant difference in the overall outcome of success in face-to-face classrooms versus online instruction Wilson (2002). “The Teaching, Learning and Computing Survey” of K-12 teachers came to this same finding (Berg, 2002). The questions that became this thesis came from my concerns about online instruction and the lack of success I saw in the program.

The participants in my online ABE preparation course come from varying socio-economic backgrounds, educational experiences and age levels. Students in my online classes include a sixty-seven year old man who raised 10 children and successfully supported his family without a high school diploma. His purpose in earning his GED is simply for himself. He works diligently most every day overcoming a limited knowledge of computer techniques and skills. He began in the low levels of the ABE program, has now progressed to the GED level, and continues to make progress.

Another student, a single mother raising three children, promised her mother she would complete her high school education. Though her mother passed away several years ago, she is determined to keep her promise. She is making progress and is planning to test in the near future.

A third student who enrolled in my program is a man starting over after a life-changing event. He has had to begin his life again with a new home, new employment and struggles
through the sadness he has experienced in the loss of a loved one. He struggles with the changes he has faced along with time constraints limiting the time he can spend online. He is progressing, but at a slow rate and requires a lot of encouragement from me.

Other students include adults who did not complete high school and would like to be able to further their education to improve employment possibilities, mothers who had children at a young age and can now focus on educational studies, and many others with differing reasons for entering an online program. The students enrolled in my online class are unique with varying factors affecting their educational studies.

My goal for this study was to identify ways of meeting the unique needs of these nontraditional students whose challenging life experiences kept them from earning high school diplomas. I wanted to find the best possible means to help them succeed, not only in online studies, but also to transfer that success to their personal lives. Frequently, students upon hearing that they have passed the General Educational Development (GED) exam, tell me that they feel so much better about themselves. I want each of my students to experience a feeling of success such as this.

The purpose of this study was to determine what instructional interventions I could utilize to improve retention and success of students enrolled in my online Adult Basic Education (ABE) program. Retention, defined in many ways, is the promotion of students to the next level of instruction for the purpose of this study. Individuals selected for this study had previously enrolled in my online ABE program at the local community college where I am an adjunct instructor.

The ABE programs exist in a variety of venues. They can be taken in a classroom setting on a campus, at an off site location, through a telecourse or online. The instruction in every
mode is very similar; however, there were fewer completions in the online environment. I wanted to determine what factors were affecting the low levels of success and how I could implement changes. My personal experience as an online student led me to wonder if a lack of asynchronous discussion between teacher and student was a factor in the lack of coursework completions. Through communication with the student, instructors are able to determine a negative attitude toward learning and help to guide the student to more positive thought patterns to what they are learning (Wlodkowski, 1999, pp. 135-136).

Finally, I wondered if it would be helpful if I took the time to send students a progress report that would tell them what they had completed online each week. Progress reports were not originally a part of the program outline. Students were on his or her own, receiving no guidance or assistance from the instructor. Would a progress report showing students’ coursework completions encourage them to continue and keep working? On the other hand, would a progress report that showed little or no completed coursework encourage students to increase their activity in the days to follow?

The online Adult Basic Education (ABE) program at this community college, structured to allow students to work at their own pace with no daily, weekly, or monthly coursework requirements, is a self-paced program. Students can register for the course at any time and no limits are set for the length a student can remain in the program. On the other hand, students enrolled in the face-to-face classes must adhere to a schedule. A reason for the lower achievement in the online course may be due to the lack of teacher-student contact and the unrestricting guidelines for coursework completions provided to the students.

When I began teaching in the online program, there was no contact between teacher and student aside from the original registration process. I observed that the majority of the students
in my program were not completing assignments for months at a time or doing a minimal amount of work on the assignments. However, grading the students and implementing a deadline for course completion for the program was not an option. I gained information about student completions from reports generated from the online program itself.

The online classes were successful as far as numbers for enrollment were concerned. However, in seeking to improve coursework completions, the former instructor found little success due to a lack of communication with the students. She found that students had moved and left no forwarding address information. Her primary means of communication with the students was via the United States Postal Service. She was frustrated when so many of her attempted student contacts returned due to the recipient having moved. We discussed this as a weak point in the program. She encouraged me to find a means of overcoming this weakness.

For this study, I implemented three instructional modifications: asynchronous communication between the students and me, a requirement of 10 completed assignments weekly and the delivery to students of a weekly progress report via email. Through the institution of email communications between the students and me, I found that student success and retention increased greatly. I came to have a deeper relationship with the students as we conversed in our emails. The requirement of 10 coursework completions on a weekly basis for each student seemed to keep students focused on their goals. They began to share with me in their emails how many assignments they had completed and what their goal for completion was the next day. The progress reports gave students a concrete knowledge of their completed coursework as opposed to what they thought they had completed without the reports.

Prior to collecting data, I researched various sources to research what had already been determined about distance education, student-teacher communication and learning communities.
This review of literature helped in guiding me to the three instructional modifications implemented. Chapter Two contains the review of literature showing a progression of distance learning from the early 1800’s until the present.
CHAPTER TWO: LITERATURE REVIEW

Introduction

This teacher research study focused on students enrolled in the online Adult Basic Education (ABE) program. After completing the ABE program, the students planned to enroll in the General Educational Development (GED) program to prepare for the GED test. The online ABE program was originally set up in a fashion that allowed students to set their own pace with no daily, weekly, or monthly goals. I observed that the majority of the students were not completing coursework for months at a time and/or on a minimal basis.

Through the process of completing the literature review, I concluded that the online course I taught needed to have instructional modifications implemented. Therefore, I implemented teacher-student asynchronous communication, via email, as well as a minimum requirement of coursework completions on a regular basis. To reinforce these implementations, I emailed a weekly progress report of coursework completions to each participant. These progress reports gave students the ability to see what assignments they completed and how much time they spent on each individual assignment.

History of Distance Education

Many definitions for distance education were available, but in its simplest form distance education is the process of learning that takes place away from the traditional classroom setting. Distance education can include remote classes, teleconferencing, television courses, correspondence courses and online courses, just to name a few. Winslow (2004) defines distance education as,
a type of education, typically college-level, where students work on their own at home or at the office and communicate with faculty and other students via e-mail, electronic forums, videoconferencing, chat rooms, bulletin boards, instant messaging and other forms of computer-based communication (Winslow, 2004, ¶ 3).

Surprisingly, distance education has been in existence since 1837. This may seem impossible because of the recent interest in the area primarily focused on technological provisions; however, Isaac Pitman began teaching a correspondence course on shorthand in Great Britain in 1837. His brother, Ben Pitman, introduced the concept to the United States in 1852. Pitman’s shorthand principles are still one of the most used in the world, as stated by Hubbard (2004).

History further shows the development of distance learning as seen in development of the radio at the time of World War I and then again by the development of the television in the 1950’s. Radio and television came to be techniques of delivering information in a way other than a traditional classroom setting (Winslow, 2004). These early forms of distance education allowed Americans to experience what was happening so far from home.

Distance learning has become more popular and acceptable as the years pass. In 1987, less than 10 states were in favor of distance learning, while just one year later nearly two-thirds of the states favored distance education. Virtually every state was in favor of distance education by the year 1989 (Winslow, 2004).

Comparison of Face-to-Face and Distance Learning Classes

Both face-to-face education and distance learning have similarities. Varying methods, utilized in the delivery of the information and assessment techniques, determine effectual
learning for both the face-to-face and the distance education classroom. The central foundation for either setting is that of teaching and learning. Virtually no difference in the overall achievement or satisfaction between the two classrooms was evident (Wilson, 2002; Berg, 2002).

Differences do occur between the two, however, in the overall setting and participation models. The face-to-face classroom requires that teacher and students meet in an assigned location at the same prescribed time, while the distance education classes have a separation of time and space. Interaction between teacher and student varies greatly between the two settings during instruction. In a face-to-face setting, the interaction mainly depends on synchronous (real time) discussions. On the other hand, the distance education class relies heavily on asynchronous (time delayed) discussions. The following chart shows the positive and negative aspects in the comparison of a face-to-face classroom and that of a virtual classroom (Kahn, K. B., Miller, C. W., & Benson, M. K., 2004).
Table 1: Pro’s and Con’s of Face-to-Face and Online Concept Generation

<table>
<thead>
<tr>
<th>Pro's</th>
<th>Online</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face-to-Face</td>
<td>Online</td>
</tr>
<tr>
<td>• Spontaneity</td>
<td>• It may be faster to read a message than to listen to it</td>
</tr>
<tr>
<td>• Visual cues</td>
<td>• Can re-read messages</td>
</tr>
<tr>
<td>• Interactivity</td>
<td>• Time and location flexibility</td>
</tr>
<tr>
<td>• Familiar interpersonal context</td>
<td>• Can precisely track and store participants’ responses</td>
</tr>
<tr>
<td>• Adaptable to participants and setting</td>
<td>• Participants can take their time to respond</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Con's</th>
<th>Con's</th>
</tr>
</thead>
<tbody>
<tr>
<td>Con's</td>
<td>Con's</td>
</tr>
<tr>
<td>• Can miss participants' comments and ideas</td>
<td>• No spontaneity</td>
</tr>
<tr>
<td>• Fixed time and location parameters</td>
<td>• No visual cues from participants</td>
</tr>
<tr>
<td>• Session can become dominated by one or a</td>
<td>• There is a learning curve for program use</td>
</tr>
<tr>
<td>few individuals</td>
<td>• Can overlook screen information</td>
</tr>
<tr>
<td>• Participants have limited time to</td>
<td>• Constrained by the software capabilities</td>
</tr>
<tr>
<td>digest information and ideas being</td>
<td></td>
</tr>
<tr>
<td>presented</td>
<td></td>
</tr>
<tr>
<td>• Constrained by the capabilities of the</td>
<td></td>
</tr>
<tr>
<td>facilitator</td>
<td></td>
</tr>
</tbody>
</table>

Both classrooms have the ability to use lecture, printed or spoken, and to implement the use of technology. Communication differences of asynchronous and synchronous discussion modes are differing factors of the two classroom settings. Personal contact takes on a different personality in each of the two settings.
Constructivism

Constructivism, while not a new idea, has greatly shaped the personality of the learning classroom in education today. Early theorists that supported the constructivist theory were Dewey, Bruner, Vygotsky, and Piaget. Constructivism holds that environment affects learning, and students construct their learning based on prior knowledge and build on their experiences (Schunk, 2000, p. 229). Vygotsky wrote that learners take an active part in constructing meaning (Dixon-Krauss, 1996, p.18). This learning theory is student-centered as opposed to the traditional teacher-directed style of instruction. In this type of instruction, teachers guide students to learning. This style of teaching/learning fosters higher-order thinking and moves beyond students’ memorizing facts to their solving open-ended problems (Green & O'Brien, 2002). The teacher who implements the constructivist theory must assume a new role. Instead of dispensing knowledge, the teacher guides students in communication and higher-order thinking to come to their own conclusions and learning.

Constructivism emphasizes allowing students to become motivated to be actively involved in their learning (Schunk, 2000, p. 233). Motivation is a key factor in the retention of the adult education learner. Incorporating the factor of distance in the education of the adult learner demands that a method of retention must be in place. Motivation is a key factor that encourages the continued education of the adult learner (Wlodkowski, 1999).

Motivation covers many areas. Communication, assessment, learning community, and technical facets all play a part in the motivation of the adult learner. Some learners have a negative attitude toward the learning process. Positively approaching these attitudes will help maintain the student. The instructor should discover exactly what the learner is saying to him/herself and suggest a positive thought pattern (Wlodkowski, 1999).
The constructivist, Vygotsky, wrote that a person could overcome problems or skills when given the appropriate help and support. This type of learning, known as assisted learning, provides a scaffold of support. This support consists of giving clues, information, prompts, reminders, and encouragement. The giving of this information and guiding the learner allows the learner to increase learning on an individual and independent level. Scaffolding is a way of decreasing the teacher’s responsibility as the student’s increases in their ability (Dixon-Krauss, 1996, p. 19). In essence, the instructor arranges the learning environment, through scaffolding, so that the student can attain a greater understanding of the lesson at hand (Dixon-Krauss, 1996, p. 61).

The Zone of Proximal Development (ZPD) is active when the learner is taking advantage of assistance (Wlodkowski, 1999). The Zone of Proximal Development means that the teacher’s role is that of a mediator as the students interact socially. As they share meaning through social interaction, the teacher becomes the gap between the child’s current or actual level of development determined by independent problem solving and the child’s emerging or potential level of development determined by problem solving supported by an adult or through collaboration with more capable peers (Dixon-Krauss, 1996, p. 196).

The Zone of Proximal Development (ZPD) is the act of learning taking place in four areas: the learner, teacher, content and a problem. It “…suggests that the more we know, the more we can come to know.” (Boettcher & Conrad, 2004, p. 266)

The Internet is a positive factor in students directing their own learning and sharing that knowledge with each other and teachers. By teaching on the Internet, teachers come to realize that they do not own the information (Green., & O’Brien, 2002). The use of the constructivist
theory in distance education guides and encourages students to access information on their own using the Internet for research and communication.

**Technical Facet**

The technical facet of distance education is important to the success of an online course. Technology is a field that is ever changing on a daily basis, and the world of distance education must keep up with these changes. Technical difficulties can be a setback to the online learner. Technical support should be a consideration of the institution offering online courses. This support team should be well versed in communication skills. The online learners needing support may find themselves frustrated and in need of someone not only with technical skills, but also with acceptable communication skills as well (Kahn, 2004).

The twenty-first century calls for instruction to transfer from a teacher-centered to a student-centered directive (Chute, Thompson, & Hancock, 1999). Technology allows the student connection to various forms of information and data. A model seen in the following table indicates this transfer of instruction (Chute, Thompson, & Hancock, 1999, p.206). The focus of instruction changes from the teacher to the student. The student then becomes an active participant in the learning process (See Table 2).
<table>
<thead>
<tr>
<th>Twentieth-Century Learning (Instructor-Centered)</th>
<th>Twenty-First Century Learning (Learner-Centered)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td>Facilitation</td>
</tr>
<tr>
<td>Individual Learning</td>
<td>Team Learning</td>
</tr>
<tr>
<td>Student as listener</td>
<td>Student as collaborator</td>
</tr>
<tr>
<td>Instructor as source</td>
<td>Instructor as guide</td>
</tr>
<tr>
<td>Stable content</td>
<td>Dynamic content</td>
</tr>
<tr>
<td>Homogeneity</td>
<td>Diversity</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Performance</td>
</tr>
</tbody>
</table>

**Components of an Online Educational Program**

The online world of education is one of many varying degrees and components. However, some basics are universal to any online class. The American Council on Education (1997), states an online class consists of three entities. The first entity is the participants, the teacher and students. Separated from one another are the students and the instructor. The second component found in any online course is that of communication and interaction between instructor and student and among the students themselves. This interaction occurs even though the students and instructor have distance as a separator between them. The third component consists of the provider that facilitates the course. Examples of providers are schools, colleges, universities, technical institutions, private businesses, the military, or any institution desiring to take advantage of teaching online (American Council on Education, 1997).

Taking the distance out of distance education becomes a matter of necessity so that students do not feel disconnected. Varying methods and technical skill take a part in closing the gap of distance that one may feel in an online course (Draves 2002).
Communication in an Online Course

Communication plays a key role as well in closing the gap that one finds in distance education. Asynchronous discussion threads are a vital part in a distance education environment. Asynchronous indicates that communication is taking place in a time-delayed fashion. Discussion boards are an example of this. The instructor posts a question or an idea and asks for comments and thoughts. The students create postings in response to the discussion prompt. The delay in time is not a factor. Students log on to read and respond on their own timeframe (Palloff & Pratt, 1999, p. 46).

Live chat rooms are another means of communication in an online course. In this forum, students “talk” to one another in a live forum online. This form of contact is synchronous communication (Cyrs, 1997). Synchronous communication takes place in real time. Information is given and received in an ongoing format without a time delay. A challenge to synchronous discussion comes through organizing the discussion so that all members can take part at the same time. Time zones factor into this difficulty as well (Palloff & Pratt, 1999).

Some communication issues involve etiquette, updating information and plagiarism. Cultural issues are serious and need considered in a distance-learning forum. Online learners come from varying cultures. Due to this, avoiding the use of jargon and humor is necessary in online discussion forums. A thumbs-up symbol may indicate a job well done in many cultures; however, in Bangladesh, this is an indication of disregard to someone. Therefore, it becomes necessary to avoid telling jokes and making references that might offend another from a different culture (Khan, 2004).

Another communication issue of point is plagiarism. In online instruction, one issue that needs addressed is whether the student is actually doing the work him/herself. Is there a valid
means of assessment to ensure that the student is learning and meeting objectives? Every course must have a valid means of assessment to ensure that the student is learning and meeting objectives. Dishonesty is a consideration when evaluating course content and the activity of the student. Students need specific information concerning the illegal use of another’s work. Through the evaluation/assessment processes of the online course, the facilitator is usually able to determine if the student is doing his/her own work. There would be no real way to determine who is actually completing the work without a classroom form of testing (Kahn, 2004).

Research shows that allowing students to see their progress through technology-based tracking mechanisms gives the student a greater awareness of actual progress. This leads to involvement in self-evaluation. Instructors can use asynchronous communication methods to deliver technology-based progress reports to the students (Comings, Parella, & Soricone, 1999).

Students usually receive grades for participation in classroom discussions, be they synchronous or asynchronous. The following grading rubric used in evaluating student discussions, guides teacher and student alike in the discussion expectations (Edelstein & Edward, n.d., p. 1).
Table 3: Discussion Board Rubric

Assessing Effectiveness of Student Participation in Online Discussions

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>Contribution to the Learning Community</strong></td>
<td>Does not make effort to participate in learning community as it develops; seems indifferent</td>
<td>Occasionally makes meaningful reflection on group's efforts; marginal effort to become involved with group</td>
<td>Often presents reflections that become central to the group's discussion; interacts freely and encourages others</td>
<td>Consistently presents creative reflections on topic; aware of needs of community; frequently prompts further discussion of topic</td>
<td></td>
</tr>
<tr>
<td><strong>Relevance of Post</strong></td>
<td>Posts topics which do not relate to the discussion content; makes irrelevant remarks</td>
<td>Occasionally posts off topic; most posts offer no further insight into the topic</td>
<td>Posts are related to discussion topic; makes some connections with readings</td>
<td>Posts consistently are related to discussion topic; brings readings into discussion; cites additional references related to topic;</td>
<td></td>
</tr>
<tr>
<td><strong>Expression Within the Post</strong></td>
<td>Does not express opinions or ideas clearly; no connection to topic</td>
<td>Unclear connection to topic evidenced in minimal expression of opinions or ideas</td>
<td>Opinions and ideas are stately clearly with occasional lack of connection to topic</td>
<td>Expresses opinions and ideas in a clear and concise manner with obvious connection to topic</td>
<td></td>
</tr>
<tr>
<td><strong>Delivery of Post</strong></td>
<td>Utilizes poor spelling and grammar in most posts; posts appear “hasty”</td>
<td>Errors in spelling and grammar evidenced in several posts</td>
<td>Few grammatical or spelling errors are noted in posts</td>
<td>Consistently uses grammatically correct posts with rare misspellings</td>
<td></td>
</tr>
<tr>
<td><strong>Promptness and Initiative</strong></td>
<td>Does not respond to most postings; rarely participates freely</td>
<td>Responds to most postings several days after initial discussion; limited initiative</td>
<td>Responds promptly to most postings; requires occasional prompting to post</td>
<td>Responds promptly to postings; demonstrates good self-initiative</td>
<td></td>
</tr>
</tbody>
</table>

Using the above discussion rubric for online discussions makes the student fully aware of expectations in the area online communication. Asynchronous and/or synchronous communication is vital to the success of online learning. As previously discussed,
Suggestions for Online Learners

Discussed in nearly all of the literature were key factors for the success of the online learner. One key factor in the success of online learners is the location of the computer and the room designated for learning (Draves 2002). Recommended is a laptop computer if possible. A laptop will allow one to change learning locations, go on trips, etc… The learner must choose a place that will be conducive to learning. One student might choose a very quiet place, while another might choose a place with action and noise. The benefit of online learning is that the learner can choose the atmosphere of learning that best meets his/her learning style.

Enhancing an online learning room might include closing the door for privacy and for minimal interruptions. Having a well-lit room as well as adjusting the monitor screen brightness and turning off e-mail/Instant Messaging (IM) indicators of new mail contribute to a student’s success. These enhancements might decrease the temptation to stray away from the online learning process. Playing music, using aromatherapy and having food/drink available are also recommendations to enhance a student’s learning outcome (Winslow, 2004). The learner can adjust the learning environment as another benefit to distance education.

Many institutions ask questions similar to those asked by the Illinois Online Network (ION). It surveys potential online students as a way of determining if they will be successful in the online learning community. A sample of the survey, all yes/no questions, follows (Illinois Online Network, n.d.)
1. Do you have (or are you willing to obtain) access to a computer and phone line at home?

2. Do you feel that high quality learning can take place without having face-to-face interaction?

3. Can you dedicate 4 to 6 hours a week (anytime during the day or night) to participate in the learning process?

4. Are you a self-motivated and self-disciplined person?

5. When it comes to schoolwork and deadlines, are you a procrastinator?

6. Are you comfortable communicating in writing?

7. Do you enjoy reading?

8. Are class discussions helpful to you?

9. Do you subscribe to the value of introducing critical thinking into the learning process?

10. Do you think increased learning will take place through sharing your work, life, and educational experiences as part of the learning process?

11. Are you comfortable with email, computers, and new technologies?

12. Does your lifestyle (family, work, or personal schedule) make it difficult for you to attend courses during the day?

Using this survey, institutions can help to guide future students in determining if distance education will fit their circumstances, lifestyle and educational needs (Illinois Online Network, n.d.).

**Building a Learning Community**

In meeting the needs of the growing diversity of college students, many institutions are turning to distance education as a solution to meeting the needs of all. Sixty-two percent of high
school graduates go to college after graduation. The remainder of the college population consists of non-traditional students, many who have been out of school for years, many are changing careers and others who need to advance in education in order to advance in their jobs. Age and life situations are the determining factors that place a student into the non-traditional category (Palloff, R., & Pratt, K., 1999).

To avoid frustration, the online facilitator must consider the type of content delivered in the course and ensure that the content is up-to-date. The two types of course content are static and dynamic (Kahn, 2004, ¶7). Static content is information that does not need updating. Dynamic information needs updating. Dynamic information not updated can cause the online learner to become disturbed. According to Kahn (2004), content analysis must be an ongoing process.

Seen as a factor in building a learning community is the implementation of the constructivist theory. Students are empowered, gaining a new view of themselves and a newfound confidence as they interact with knowledge. Their pursuit of knowledge is encouraged regardless of the path it may take. The participants in a learning community will work together as they give and receive feedback through communication (Palloff, R., & Pratt, K., 1999).

The central theme of a learning community is that of the learners working together. Communication, asynchronous and synchronous, is a key factor in the building of a learning community in distance education. Through email, discussion boards and chat rooms students and instructors can learn one from another. The learning community will support not only the intellectual growth, but also the personal growth of its members (Palloff, R., & Pratt, K., 1999).
In building a learning community, a successful learning experience for students is necessary. One facet that can lead to this success is that of proper instructor training. Training for the instructor needs to reach beyond the basic online training required to cover software basics, notions of online pedagogy and teaching strategies. Networking opportunities provide instructors a multi-service approach to online support and development. Increasing instructor skills to match those of the students will increase the building of an online community and a successful experience for the learner (Ko & Lieberman, n.d.).

The Future of Online Learning

Twenty-first century education is on its way to becoming web-based from elementary school through adult education and beyond to graduate and post-graduate studies. Education online becomes an activity and not a place. Being web-based, it relies heavily on self-discipline. Individual learning plans will be integrated as the learner and teacher interact together to produce a learning plan that meets the need of each individual learner. Fewer buildings, in the 21st century will become necessary as the traditional style of learning, replaced with web-based learning, becomes more popular. The teacher will become, as stated by Draves (2002) a “guide on the side” instead of being the “sage on the stage.” In this medium of online instruction, knowledge of the student becomes more important than the knowledge of the subject matter (Draves, 2002). This type of education is in keeping with the changing dynamics of the 21st century society.
Conclusion

The literature reviewed showed that communication and motivation are the most important variables of bringing about success for the adult education online learner. In distance education, the term “distance” needs to remain related to the idea that the teacher and student remain separated. The teacher-student relationship does not find itself confined to the four walls of a classroom setting. However, with the teacher and student being “separated” there must be a means of connecting them. Effective communication is the connection to close the distance between teacher and student. A learning community fosters communication not only between the teacher and student, but also among students themselves. Such a community relies heavily on communication being the bridge between the distance and the learning community. Communication is a key ingredient in an online course. The teacher must regularly interact with the class as a whole and with individual students. This interaction is apparent in a traditional classroom setting and must be included in the online classroom as well.

What would come of a face-to-face class where the teacher and students never communicated through verbal or nonverbal methods? No doubt, the class would not be successful and meaningful learning would not have taken place. Apathy would be the atmosphere of a learning situation such as this.

Through the means of effective communication and motivation, the teacher/facilitator has the opportunity to bridge the gap that distance plays in an online classroom setting. The process of incorporating email, asynchronous discussions and chat rooms will bring about a sense of community. Students will come to know one another and, through these relationships, the students will become facilitators one to another. Life-long learning in education is becoming, “a process that occurs throughout one’s life…” (Watts, 2003, pg. 27).
CHAPTER THREE: METHODOLOGY

Introduction

This teacher research study conducted with my lower level students in the Adult Basic Education (ABE) program studying to obtain their General Educational Development (GED) diploma, focused on implementing instructional modifications to bring these learners to a higher level of success and retention. The three instructional modifications that were implemented were: asynchronous communication between teacher and student via email, a requirement of 10 completed assignments each week and a progress report emailed to each student of their online coursework accomplishments, weekly, for the prior seven-day period.

Retention, defined as the promotion of students to higher levels of learning in the institution, was at a minimal level prior to the implementation of the instructional modifications. Data in the form of testing results from the Test of Adult Basic Education (TABE), pre and post coursework completion statistics, analysis of teacher-student communication and pre/post study surveys were the evaluation tools in determining the progress of each participant. A 73% rate of increase in coursework completions became evident for the participants because of implementing the above instructional modifications.

Online Adult Basic Education Course Background

Sponsored by the Florida Adult Technical Distance Education Consortium, and developed by Skills Tutor, are the online Adult Basic Education (ABE) classes offered through the community college where I am the adjunct instructor. To be enrolled into the program, a student must first take the Test of Adult Basic Education (TABE), which was previously
discussed, to determine his/her current learning level in the areas of reading, mathematics and language. The Assessment Center of the institution administers this test.

Students who score between 1.0 and 5.9 learning levels are required to complete coursework at Level 3 and Level 4. Designed to bring the learning level up to the sixth grade, are the Level 3 coursework assignments. Students who test between the levels of 6.0 and 8.9 are only required to complete Level 4 coursework. Completion of Level 4 coursework will remediate the learning level up to the ninth grade. Learning levels are determined for each individual subject listed above. Students enrolled directly into the GED program tested at the ninth grade learning level or higher on the TABE test.

Currently, the online Adult Basic Education (ABE) program lacks regulation with few guidelines imposed on the student after the initial testing. Students are required to first take the TABE test and sign a registration form. After registration in the course, students may proceed at a pace they choose, completing each lesson on a schedule they determine. The program’s design allows students to learn independently. I observed that there were very few students completing coursework and promoting to the online General Educational Development (GED) program, as seen in the progress reports I was able to generate through the online program. For example, students might skip several weeks without completing a single assignment.

After reviewing student records, I questioned whether students would be more successful and would have better retention rates if they had more teacher support and stricter standards and requirements for this course. For this study, I define success as a student completing work in any subject and level, and retention as promotion from ABE Level 3 to Level 4, and further promotion from the online ABE program to the online GED program. Students independently study as they progress through the online ABE program. Students contact the teacher during the
registration process, when students complete a unit, or if a student wishes to ask a question. Since the ABE online program design auto-grades all assignments, the student never has to contact the teacher after the initial registration process.

**The Adult Basic Education (ABE) Online Course Design**

After taking the Test of Adult Basic Education (TABE), I place students into the appropriate levels of coursework determined by the TABE results. The TABE test is a norm-referenced test designed to measure achievement of basic skills in reading, mathematics and language. The scores reflected from the exam place students into one of four levels in each of the three content areas (reading, mathematics and language). Level 1 scores range from 0.0-1.9, with Level 2 ranging from 2.0-3.9. Level 3 ranges from 4.0-5.9, and finally Level 4 ranging from 6.0-8.9.

The online program design requires a student earn a minimum score of 80% before progressing to the next lesson. If the student earns an inadequate score, the computer program requires the student to repeat the assignment earning an acceptable score. Lessons, graded by the computer program instantly upon submission, give the student immediate feedback. The student can then proceed to the next lesson, or repeat a lesson if necessary.

Students log onto the program and select the subject assignment (reading, mathematics or language) to complete. Located at the top of each list of assignments is a rectangle with the following sentence inside: “Your next recommended activity is...” An example of this is:

| Your next recommended activity is Place Value of Digits |

Students are to select the lesson they will complete from this location by clicking on the underlined lesson name so that they complete lessons sequentially. Earning an 80% or higher on
each assignment causes the rectangle and the sentence of assignment choice to disappear. This disappearance allows the student to know that he/she completed all the assignments successfully at 80% or higher.

Once the student has completed all of the lessons in a level, they should be sufficiently prepared to retest on the TABE and progress to the next level (See Appendix A for a Scope and Sequence of the Skills Tutor ABE program titles). Should a student find later in the program, that they have forgotten a skill, they can go back and re-access the lesson. Re-accessing a lesson is especially helpful for students who progress at a slower rate and realize they have not studied a particular subject in a long time. The ability to re-access assignments brings about the reinforcement often needed for students in their educational process.

Students receive upon completion of all Level 3 and Level 4 coursework and a retest TABE score of 9.0 or higher, a certificate from me for their accomplishment of completing the Adult Basic Education (ABE) program (See Appendix B). Further information includes the new online website for the General Educational Development (GED) website and directions for the steps to follow in the continuance of their educational studies.

The online program at my college only offers Level 3 and Level 4 coursework options. Therefore, students wishing to enroll in this particular online program have only two distinct course levels to complete, Level 3 or Level 4. I categorize students who test in the 0.0-5.9 range into Level 3 and students with TABE scores ranging from 6.0-8.9, I categorize into Level 4. Table three below, outlines the standard level in TABE scoring, the title of the level, the grade equivalency the student is scoring at in that level and the online level. A score reading 1.5 would indicate a learning level of first grade / fifth month. The purpose of the learning level is to guide me in knowing which coursework level to begin the student. If a student has a remedial level
requiring Level 3 and I place them in Level, successful achievement is doubtful due to the coursework being above the intended grade level of the student. Students need to begin working at the level in which they test so that they can study, bringing their learning level to a higher range. See Table four below for the TABE assessment level guide. The lack of Levels 1 and 2 offered is a cause for lack of success for some students. Therefore, students may need transferred to the face-to-face class settings for remediation to Level 3.

Table 4: TABE Assessment Level Guide

<table>
<thead>
<tr>
<th>Standard Level</th>
<th>Title</th>
<th>Grade Equivalency Score</th>
<th>Online Level/Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
<td>Beginning Literacy</td>
<td>0.0-1.9</td>
<td>Level 3</td>
</tr>
<tr>
<td>Level 2</td>
<td>Beginning Basic</td>
<td>2.0-3.9</td>
<td>Level 3</td>
</tr>
<tr>
<td>Level 3</td>
<td>Intermediate Low</td>
<td>4.0-5.9</td>
<td>Level 3</td>
</tr>
<tr>
<td>Level 4</td>
<td>Intermediate High</td>
<td>6.0-8.9</td>
<td>Level 4</td>
</tr>
</tbody>
</table>

Students scoring a learning level range of 6.0-8.9 have only Level 4 coursework to complete. The next step, upon completion of all Level 3 and Level 4 coursework is the retaking of the TABE to determine increase in learning levels. If the student scores a ninth grade learning level, I promote them to the General Educational Development (GED) online study course. Occasionally, a student tests, again, below the ninth grade learning level. In this instance, the teacher and student work together in the areas where the student is having difficulties.
Preparation Phase

To begin the study, I first gained permission from both my college and the University of Central Florida Institutional Review Board (IRB) committees to perform a teacher research study using the Adult Basic Education online students (See Appendix C). I mailed letters to each student enrolled in my online ABE course explaining the research study. I included in the mailing consent forms (Appendix D), research methodology (Appendix E), and a Pre-Study Survey (Appendix F). Self-addressed, stamped envelopes were included for the return of the consent form and the survey. Prior to collecting data, it was necessary to inform the students of the research study and receive their consent. The self-addressed, stamped envelopes were included as a means of helping to increase student response.

Currently enrolled in the program are 87 students. Two of the packets came back to me in the mail because of students’ moving and no forwarding address specified. Of the 85 packets that the online students received, 32 were returned to me giving permission to use their coursework and progress in the study, a 38% return rate. I graphed the participants’ current levels of coursework completions. This baseline allowed future comparison to coursework completions at the end of the research study. I then converted these results to charts for a quick overview of the study results (See Appendix I).

In order to implement asynchronous communication, I acquired the email address for each student in order to implement the asynchronous teacher-student communication component of the study. I was able to acquire the email addresses for the participants through phone calls. I created an address book within the email system for the ability to access the participants email addresses for asynchronous contact.
In order to increase student participation and coursework completion rates, I began regular email communications with my students, established a minimum requirement of 10 assignments each week, and emailed weekly coursework progress reports to students. I recorded data for a six-week period and compared it to data collected for the six weeks prior to the beginning of the study (See Appendix I).

To determine the effectiveness of the implementations, I mailed Post-Study Surveys to the participants upon the completion of collecting online data. Discussed in chapter four is data analysis.

**Procedures Followed**

As a means of promoting success and retention, I established new procedures for assignments and communication with students. I implemented the following procedures:

1. Students were required to work on a weekly basis completing a minimum of 10 assignment completions.
2. Each Monday, I contacted students, via email, who had not completed 10 online assignments for the previous seven days.
3. To encourage student participation I emailed all students in the study on Tuesday mornings. I used this as a means of encouragement, inquiring if they had any questions or concerns.
4. Each Friday, I emailed a progress report to participants showing only their progress for the previous seven days. The report included each assignment, the score received, the amount of time spent on each assignment, and a total amount of time spent online for that week.
5. To determine the effectiveness of the implementations, I conducted a Pre-Study Survey as a baseline. I compared this survey to a Post-Study Survey upon completion of collecting the online data (See Appendices F and G).

I graphed the progress of each participant according to subject and completion percentage. I transferred these graphs to charts so that I could easily examine the progress of each participant. I discuss the results of this information in the following chapter of findings.
CHAPTER FOUR: FINDINGS

Introduction

I am the instructor of an online Adult Basic Education (ABE) course offered through a local community. My students are adult learners with learning levels below the ninth grade. My teacher research study focused on implementing instructional modifications to bring these learners to a higher level of success and retention. The original online ABE program, before I was hired, had unacceptable completion rates. I believed that more students would complete the course if I began communicating with the students on a regular basis, required that they complete a certain number of assignments each week and kept them informed of the work they were completing. Therefore, I implemented the following three instructional modifications: asynchronous communication between teacher and student via email, a requirement of 10 completed assignments each week and a progress report emailed to each online student of their coursework accomplishments, weekly, for the prior seven-day period.

Each of the students participating in this study scored low learning levels ranging from grade levels 1.0 through 8.9 when first assessed using the Test of Adult Basic Education (TABE). Assessment for this study occurred in four areas: TABE results, pre/post study surveys, analysis of coursework completions and an analysis of the teacher-student asynchronous communication.

Pre-Study Survey Results

I mailed each participant a Pre-Study Survey to get an idea of their thinking on the instructional modifications I would implement. I also used the information gained from this survey to help me determine the amount of assignment completions to require of the students.
did not want to require too much of them in my efforts to bring about success and retention. I knew the possibility existed of the students refusing to communicate asynchronously and no completing a required amount of lessons each week. In addition, I considered the idea that they may not care about receiving a progress report. The following questions were included in the Pre-Study Survey in an effort to help me determine the specifics of the instructional modifications that I would implement (See Appendix F):

1. Is teacher-student contact beneficial to your online studies?

2. Would you benefit from receiving a weekly report of your assignment completions?

3. Would a required number of assignment completions help to increase your online coursework completions?

4. Do you feel that setting a date for completing your work would increase your online studies?

5. Do you feel that signing a contract to work weekly would increase your online studies?

The results of the Pre-Study Survey helped me in determining the amount of asynchronous communication, how many completed assignments to require, and how often I would send out progress reports to the students. Following are the Pre-Study Survey results for each of the above five questions (See Table 5):
Table 5: Pre-Study Survey Results

<table>
<thead>
<tr>
<th>Questions</th>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>Better</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td>22</td>
</tr>
<tr>
<td>Progress Reports</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>Required Assignments</td>
<td>2</td>
<td>0</td>
<td>11</td>
<td>6</td>
<td>13</td>
</tr>
<tr>
<td>Completion Date</td>
<td>1</td>
<td>5</td>
<td>7</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Work Contract</td>
<td>3</td>
<td>4</td>
<td>8</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td>5</td>
<td>11</td>
<td>30</td>
<td>36</td>
<td>77</td>
</tr>
</tbody>
</table>

I analyzed the Pre-Study Surveys receiving the following information. Thirty-two of the 89 online students enrolled in the online ABE program, responded to the Pre-Study Survey. The analysis of the survey responses revealed that 69% of the participants specified teacher-student contact as beneficial to their studies scoring in the (excellent) range. According to my analysis of the responses, 75% felt that they would benefit from a weekly report of their progress. These responses fell in the (excellent) range. Answers to question three indicated that 34% of the students denoted that it would be (good) to have a required amount of assignments due each week. Responses from 31% of the participants felt that it would be (better) to set a completion date for their coursework and 28% percent of the participants indicated that it would be (excellent) to receive a weekly report of their accomplishments.

The over-all tabulations of the Pre-Study Survey revealed that there were 3% (poor) answers, 6% (fair) answers, 19% (good) answers, 23% (better) answers, and 49% (excellent)
answers. The results of Pre-Study Survey led me to design the instructional interventions, which were: asynchronous teacher-student contact, 10 required lesson completions weekly, and a progress report of weekly work accomplished would each be beneficial to the over-all success and retention of the participants.

**Coursework Completions**

I graphed each student’s coursework completions for the six weeks prior to the research study beginning to establish a baseline (See Appendix G). I also graphed, upon completion of the six-week study, student coursework completions and compared them to the baseline. The 31 active participant’s coursework completions greatly increased by 73% (See Table E below). Coursework completions totaled 163 pre-study and 282 post-study because of implementing the three instructional modifications.

At the beginning of the study, four participants’ (A, M, Z, CC,) had enrolled, but never began working online. This common problem, seen in the history of my program, was one of the reasons leading me to make the instructional modifications. Ninety-nine percent of the students were active online because of the implementations instituted. One student, (participant C) had no online activity prior to or during the study dates. He sent me a letter concerning his inactivity online (See Appendix H).

The increased amount of student coursework completions was dramatic because of implementing the following three instructional modifications:

1. Teacher-student asynchronous communication, via email.
2. A required amount of coursework completions on a weekly basis.
3. Progress reports delivered to each participant, via email, weekly for the previous seven-day period.

Coursework completed below 70% was 21% pre-study and 32% post-study. Coursework completed above 70% was 79% pre-study and 68% post-study. Coursework completions did increase, however, completion percentages lowered during the study period. While the study did not focus on completion percentages, this information is guiding me in discovering techniques that will bring assignment percentages up to 80% or higher the first time an assignment is completed.

Prior to implementing the 10 required coursework completions on a weekly basis, I questioned if this number was too low or too high. To help in determining the amount of 10 assignments, I completed 10 assignments myself. Each assignment took approximately 15 minutes for me to complete. I knew that it would take my students longer to complete them because of their low learning levels. Therefore, I determined that if it took an approximate 30 minutes for my students to complete one assignment, 10 assignments weekly would take them approximately five hours weekly. Assuming a student worked online daily, this would take less than one hour per day. If a student worked at a slower rate than this approximation, I felt that requiring 10 assignments weekly was not too much of a time constraint for their adult lives knowing that many of them have varying responsibilities that consume their time. Following are the coursework completions pre and post study (See Table 6).
## TOTAL CLASS COURSEWORK COMPLETIONS

Table 6: Coursework Completions

Chart 1: Assignment Categories Completed Pre-Study

<table>
<thead>
<tr>
<th>Skill Category</th>
<th>Number of Categories Completed</th>
<th>Categories Completed Below 70%</th>
<th>Categories Completed Above 70%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading Skills</td>
<td>35</td>
<td>8</td>
<td>27</td>
</tr>
<tr>
<td>Math Skills</td>
<td>59</td>
<td>15</td>
<td>44</td>
</tr>
<tr>
<td>Writing Skills</td>
<td>29</td>
<td>6</td>
<td>23</td>
</tr>
<tr>
<td>Language Skills</td>
<td>20</td>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>Information Skills</td>
<td>13</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>Workforce Readiness Skills</td>
<td>7</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>

Chart 2: Assignment Categories Completed Post-Study

<table>
<thead>
<tr>
<th>Skill Category</th>
<th>Number of Categories Completed</th>
<th>Categories Completed Below 70%</th>
<th>Categories Completed Above 70%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading Skills</td>
<td>63</td>
<td>26</td>
<td>37</td>
</tr>
<tr>
<td>Math Skills</td>
<td>95</td>
<td>34</td>
<td>61</td>
</tr>
<tr>
<td>Writing Skills</td>
<td>36</td>
<td>11</td>
<td>25</td>
</tr>
<tr>
<td>Language Skills</td>
<td>38</td>
<td>9</td>
<td>29</td>
</tr>
<tr>
<td>Information Skills</td>
<td>33</td>
<td>7</td>
<td>26</td>
</tr>
<tr>
<td>Workforce Readiness Skills</td>
<td>17</td>
<td>2</td>
<td>15</td>
</tr>
</tbody>
</table>
The above chart indicates that there were 163 coursework categories completed during the six-weeks prior to the study beginning. During the six-week study, there were 282 coursework categories completed. This is a 73% rate of increase in coursework completions. This evidence shows that the implementations of the study were successful in bringing the adult education online learners to success.

I found that the students were very conscientious in contacting me to give notification if something occurred, which kept them from meeting the weekly goal of 10 assignment completions. Two participants had babies during the research dates. It was interesting to note that they were both active up to the time of delivery. Likewise, they each returned to online activity shortly after the babies were born. This surprised me because I expected that they would not be successful during the research dates. They did not use the pregnancies or deliveries as an excuse.

**Post-Study Survey**

I mailed Post-Study Surveys to each participant via the United States Postal Service. I asked participants to answer the following questions:

1. Was the teacher-student contact beneficial and encouraging?
2. Did you benefit from the weekly progress reports?
3. Did the required minimal amount of completed assignments motivate you to work online weekly?
4. Did setting a goal to complete your work encourage you to complete your coursework?
5. Do you feel that signing a contract to work weekly increased your online studies?
Post-Study Survey results graphed on the following table indicate the answers to each of the above five questions (See Table 7):

Table 7: Post-Study Survey

<table>
<thead>
<tr>
<th>Questions</th>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>Better</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>32</td>
</tr>
<tr>
<td>Progress Reports</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>30</td>
</tr>
<tr>
<td>Required Assignments</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>30</td>
</tr>
<tr>
<td>Completion Date</td>
<td>5</td>
<td>8</td>
<td>10</td>
<td>5</td>
<td>4</td>
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<td>2</td>
<td>3</td>
<td>1</td>
<td>1</td>
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<td>11</td>
<td>12</td>
<td>7</td>
<td>121</td>
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My analysis of the Post-Study Surveys indicated that there was a strong, positive effect of the instructional modifications implemented (See Table 6). One hundred percent of the participants indicated an “excellent” rating for increased teacher-student communication. The weekly progress reports were favorable with a 93% (excellent) rating of their effectiveness. Requiring a minimum of 10 assignment completions weekly received a 93% rating in the (excellent) range. Setting a goal to complete coursework received varied responses with the majority, 31%, rating it with a “good” rating. Signing a work contract received a response of 78% in the (excellent) range.
The over-all tabulations of the Post-Study Survey showed that of the 32 respondents there were 3% (poor) responses, 2% (fair) responses, 1% (good) responses, 1% (better) responses, and 93% (excellent) responses. The implementations of asynchronous teacher-student contact via email, 10 required lesson completions weekly, and receiving a progress report of work completed weekly was beneficial to the over-all success and retention of the participants. Participant responses indicate a positive reaction to each of the instructional modifications. Following is an analysis of the implementation of asynchronous communication between the 32 participants and me.

**Asynchronous Communication Analysis**

I implemented teacher-student asynchronous communication via email and found that many participants were genuinely appreciative of the personal contact. Examples of email contact include the following: I sent an email wishing the students a good weekend each Friday afternoon. One particular week, the weather had been stormy and non-computer friendly. A note was included that stated due to the weather it was understood if the assignment requirement was not met. This email message received many responses thanking me for the concern and understanding. All emails, even in the event of lack of online activity, were positive and caring in nature. Within emails, I encouraged the students to continue working and thanked them for the work, which they had completed. If a student had been inactive or had minimal online activity, I inquired if everything was indeed okay with the participant. Students sent me many emails expressing their gratitude for the concern.

An example of positive feedback from the weekly emails came from one of the women who had a baby during the research study dates. She had been working online very aggressively,
intent on completing as much as possible before the baby was born. When I ran the weekly progress reports, I realized that she had zero online activity. I immediately sent her an email, which received no response. Not responding to my communications was uncharacteristic of her. I sent a card, via the United States Postal Service to her home. In the card, I simply expressed my concern for her. She emailed me that day to let me know that she had incurred complications with her pregnancy and had had an emergency Cesarean section. She was very appreciative of the time I had taken to check on her. Shortly after this contact, she returned to online activity.

In view of the fact that this course is online, I often do not physically meet the students. In these instances, all information and contact between teacher and student is via email or the United States Postal Service. As the asynchronous communication between teacher and student increased, I came to have a more personal knowledge of each participant. This added information allowed me to have a better understanding of the participants, and to follow up with them concerning their individual situations. It seemed that the participants appreciated the care shown by myself.

**Required Assignment Analysis**

I required that the students in my online Adult Basic Education (ABE) program complete 10 assignments on a weekly basis. This requirement was a large step for many of the students. They were accustomed to working only if they wanted to due to a lack of standards in original course design. As I began to run reports generated through the online program design, I was able to see that the students were meeting this challenge. For the majority of the six-week period, 99% percent of the students were active completing the 10 weekly assignments. There were occurrences that prevented a few students from meeting the weekly goal, but they were diligent
in communicating to me why they were unable to complete the assignments. The majority of
students would then try to complete additional lessons the following week to make up for
assignments not previously completed. I was pleased with the responses to the 10 required
assignments.

Seen during the 2 weeks following the conclusion of the study, was retention as four
participants completed their coursework, retook the Test of Adult Basic Education and were
promoted to the General Educational Development (GED) program with learning levels of 9.0 or
higher. All four of these participants had been in the program for several months prior to the
study beginning. These four students completed a minimal amount of coursework prior to the
implementations of my research study.

**Progress Report Analysis**

I emailed weekly progress reports to each of the participants. The progress reports were
very detailed, including what assignments were completed, how much time students spent on
each assignment, scores and a time total of online activity for the previous seven-day period.
Students did not send me any feedback on the progress reports throughout the study. Prior to
sending out the Post-Study Surveys, I determined that the progress reports were not beneficial.
However, after I analyzed the Post-Study Surveys, I found that they had a 93% favorable rating.

When I took over the instruction of the online Adult Basic Education course at my
community college, success and retention rates were low. I implemented three instructional
modifications: teacher-student asynchronous communication, 10 weekly assignment
completions and progress reports emailed to students weekly of their online coursework
completions. The outcome of these implementations was a 73% increase in coursework
completions. I was very pleased not only with the increase in coursework completions but also with the positive feedback I received through the analysis of the Post-Study Surveys. The analysis of these surveys indicated that the implementations did not overwhelm the students. Each of the three implementations received favorable responses from the participants. Therefore, I will continue to implement these modifications placing new efforts on increasing completion percentages to 80% or higher the first time a student completes an assignment. In the following chapter of conclusions, I discuss the over-all study results as well as outlooks for the future and lingering questions.
CHAPTER FIVE: CONCLUSION

Introduction

In July 2004, I began teaching an online Adult Basic Education course at a local community college. I discovered that student success and retention rates were very low, and students were not completing assignments within a consistent timeframe. My challenge was to find ways of raising the rates of student success and retention. I knew that if I wanted this increase to occur, I would need to discover specific instructional modifications to improve the number of assignments my students successfully completed. Of the 89 students enrolled in the course, 32 agreed to participate in my teacher research study.

I reviewed literature that discussed distance education, adult learners and teacher-student interaction to discover strategies that would improve student achievement in an online course. After reviewing the literature, I determined that there were three missing elements in my program: structured communication between the teacher and student (Palloff & Pratt, 1999), standards for online coursework completion (Comings et al., 1999) and a system to inform students of their progress in the program (Comings et al., 1999).

Then, I surveyed my students to determine their reactions about placing these missing elements into the course. The analysis of the survey responses revealed that 69% of the participants specified teacher-student contact as beneficial to their studies. Seventy-five percent of the students felt they would benefit from a weekly progress report. Thirty-four percent of the students responded that it would be “good” to have a required amount of assignment completions weekly. Therefore, I implemented each of these modifications into my online Adult Basic Education Program for a six-week period. I began a teacher research study in an attempt to find
out if the three interventions were going to help increase student success and retention after recognizing these factors were missing from the program.

The analysis of data indicated that these modifications had a positive impact on the overall coursework completions of the students. Only one student enrolled in the online Adult Basic Education program remained inactive.

**Conclusions from the Research**

The results of my data analysis showed that student coursework completions increased by a rate of 73% after I implemented asynchronous communications with students, a requirement of 10 assignments completed each week and providing students with weekly progress reports. Furthermore, participants were consistent in maintaining contact with me concerning their progress in the course. These results are consistent with the findings of Comings (1999) and Kahn (2004) that increased teacher-student interaction leads to an increase in student achievement.

For the majority of the six-week period, 99% percent of the students completed the required 10 assignments per week. There were occurrences that prevented a few students from meeting the weekly goal, but they were diligent in communicating to me why they were unable to complete the assignments.

Upon completion of the study, I asked the students to complete a Post-Study Survey. The analysis of the responses indicated that the students gave positive feedback to each of the implementations. The asynchronous communication received a 100% “excellent” rating as being beneficial and encouraging. The 10 required weekly assignments received a 93% “excellent” rating as being beneficial to the students. Finally, 93% of the students rated the progress reports
as “excellent” in motivating them to work online. I was pleased to find that the students found
the innovations beneficial, encouraging and motivating. Motivation is a key factor in the
successful education of the adult learner (Wlodkowski, 1999).

One final note is that no students dropped out of the program during the study dates.
Commonly, students enroll in my program and then do not follow through with working online.
The asynchronous communication was a positive factor in bringing each of the new students, as
well as the existing students to success and retention.

**Implications for a Future Study**

Producing weekly progress reports for the maximum of 107 student enrollments would be
very time consuming for a teacher. The generation and delivery time for the progress reports of
the 32 study participants took three hours weekly during the study. Further study is needed to
determine if the effect of a monthly progress report would produce the same results as the
weekly progress report.

Increased teacher-student asynchronous communication was beneficial to me as the
instructor. I began realizing that the students had individual personalities and educational needs
that required an additional level of understanding on my part. I enjoyed the interaction with the
students and used the information that they shared with me to better meet their educational
needs. A future study should investigate whether increased teacher-student communication
would be beneficial to the instructor as well as the students.

Finally, I would like to see my institution implement a survey, such as the one used by the
Illinois Online Network (2005), to help students determine if online learning is appropriate for
them.
**Recommendations**

I found through the implementations of asynchronous teacher-student communication, requiring 10 assignments completed each week, and providing students with weekly progress reports produced a positive impact on the success and retention of my online Adult Basic Education students. Therefore, I recommend that online instructors increase or implement higher rates of communication with their students. These findings were consistent with the research that communication is a vital component in the success and retention of students (Cyrs, 1997; Khan 2004). Teacher-student communication is a means that a teacher can use to foster higher-order thinking (Green, & O’Brien, 2002).

Finally, I recommend that instructors provide students with timely feedback. When students have greater awareness of their actual progress, they are more likely to remain in an educational program reaching higher levels of achievement and retention (Comings et al, 1999).

I will continue to implement each of the modifications studied in this research. My only adjustment will be in the delivery of a monthly progress report as opposed to a weekly report. I would like to research strategies to implement that would encourage my students to further their education after earning their General Educational Diploma (GED). The implementations of this study have influenced my teaching. I came to realize that the personal contact I made on a regular basis with my students is valuable to their success and retention and is a strategy that must continue. I am going to use the asynchronous communication as a means of building my students’ writing skills. Since we have begun conversing in this manner, I will begin asking the students higher order communication questions to promote fluency in writing. I further believe that this study will continue to add to the changing paradigms that exist with students in adult education settings.
APPENDIX A: SKILLS TUTOR SCOPE AND SEQUENCE
**SkillsTutor™ Scope & Sequence... With More Than 1100 Lessons and Activities, You’ll Have All the Basics Covered.**

**Indicates Spanish Voice-Over Available**

1. **READING COMPREHENSION LL**
   
   **Pretest**
   - Skill Lesson: Main Idea
   - Skills Lesson: Cause & Effect!

   **Health**
   - Skin: The Great Protector
   - Life in Space
   - The Food Guide Pyramid
   - Health Quiz: Getting Enough Exercise?
   - Skill Lesson: Inference
   - Skill Lesson: Author’s Purpose

   **Countries and Regions**
   - Australia: Making the Great Barrier Reef Greater
   - India: Saving World Treasures
   - Antarctica: Antarctica Shaves Ice
   - Countries and Regions Quiz: China: Weird Dinosaur Found
   - Skill Lesson: Sequencing
   - Skill Lesson: Important Details

   **Animals**
   - Animal Speeds
   - Protecting the Magnificent Monarchs
   - Exploring the Manatees
   - Animals Quiz: Amazing Amazon

   **Holidays**
   - A Day to Celebrate Earth: Earth Day
   - Black History Month
   - Honoring Our Veterans
   - Holidays Quiz: Giving Thanks

   **The United States**
   - California: Threatened Giants
   - Alaska: Great Quakes
   - Hawaii: Volcano Watch
   - The United States Quiz: T-Rex Roundup

   **Posttest**

2. **READING COMPREHENSION A**
   
   **Pretest**
   - Skill Lesson: Main Idea
   - Skill Lesson: Inference
Communities
A Place for Children - Part 1
A Place for Children - Part 2
The Juvenile Street Cleaning Leagues
Following the Path of Your Trash - Part 1
Following the Path of Your Trash - Part 2
Communities Quiz

Skill Lesson: Sequencing
Skill Lesson: Important Details

Native Americans
Games of Family, Games of Fun - Part 1
Games of Family, Games of Fun - Part 2
Passamaquoddy Drum Ceremony
Questions and Answers About the Cherokees - Part 1
Questions and Answers About the Cherokees - Part 2
Native Americans Quiz

Skill Lesson: Cause and Effect
Skill Lesson: Author's Purpose

Customs and Traditions
China: The Full Month Party
Japan: Something Old, Something New - Part 1
Japan: Something Old, Something New - Part 2
City Games
Customs and Traditions Quiz

People Who Made a Difference
Growing Up at Ivy Green - Part 1
Growing Up at Ivy Green - Part 2
Why Lincoln Grew a Beard
Fascinating Facts About Einstein - Part 1
Fascinating Facts About Einstein - Part 2
People Who Made a Difference Quiz

Science and Technology
The Story of a Daydreamer - Part 1
The Story of a Daydreamer - Part 2
The Youngest Female Inventor: Jeanie Low
Big Chief Mason - Part 1
Big Chief Mason - Part 2
Science and Technology Quiz
Posttest

3. READING COMPREHENSION B

Pretest
Skill Lesson: Inference

Content and Reading
Grades 5-6

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Skill Lesson: Cause and Effect

Early Civilizations
Maya Ballplayers - Part 1
Maya Ballplayers - Part 2
Fabulous Ur - Part 1
Fabulous Ur - Part 2
Pyramids and Royal Cemeteries - Part 1
Pyramids and Royal Cemeteries - Part 2
Early Civilizations Quiz

Skill Lesson: Main Idea
Skill Lesson: Important Details

The Early Colonies
The Voyage of the Mayflower - Part 1
The Voyage of the Mayflower - Part 2
Craftspeople in Colonial Williamsburg - Part 1
Craftspeople in Colonial Williamsburg - Part 2
A Gift of Friendship - Part 1
A Gift of Friendship - Part 2
The Early Colonies Quiz

Skill Lesson: Author's Purpose
Skill Lesson: Sequencing

American Revolution
Sybil Sounds the Alarm - Part 1
Sybil Sounds the Alarm - Part 2
The Fifer of Boxborough
The Boston Massacre - Part 1
The Boston Massacre - Part 2
American Revolution Quiz

Civil War
The Eagle that Went to War - Part 1
The Eagle that Went to War - Part 2
Frederick Douglass: The Early Years - Part 1
Frederick Douglass: The Early Years - Part 2
Gettysburg: From Farmland to Battlefield - Part 1
Gettysburg: From Farmland to Battlefield - Part 2
Civil War Quiz

North American Countries and Cultures
Weaving: Past and Present - Part 1
Weaving: Past and Present - Part 2
To Montreal! - Part 1
To Montreal! - Part 2
Wind, Sea, & Fire
North American Countries and Cultures Quiz
Posttest
4. READING COMPREHENSION C

Pretest Content and Reading Grades 7-8

Skill Lesson: Cause and Effect
Skill Lesson: Important Details

Past Civilizations
Huanuco Pampa: A City Built for Festivals - Part 1
Huanuco Pampa: A City Built for Festivals - Part 2
The Brilliant Dynasty - Part 1
The Brilliant Dynasty - Part 2
The Janissaries
Past Civilizations Quiz

Skill Lesson: Inference
Skill Lesson: Main Idea

Westward Expansion
The Builders of the First Transcontinental Railroad - Part 1
The Builders of the First Transcontinental Railroad - Part 2
Bent’s Old Fort - Part 1
Bent’s Old Fort - Part 2
Wagons on the Oregon Trail - Part 1
Wagons on the Oregon Trail - Part 2
Westward Expansion Quiz

Skill Lesson: Sequencing
Skill Lesson: Author’s Purpose

Civil War
Struggle for an Education: Booker Taliaferro Washington - Part 1
Struggle for an Education: Booker Taliaferro Washington - Part 2
The Battle of Antietam - Part 1
The Battle of Antietam - Part 2
Chancellorsville: A Cunning Win and a Stunning Loss - Part 1
Chancellorsville: A Cunning Win and a Stunning Loss - Part 2
Civil War Quiz

Life Around the World
Who Eats the Fish Head? Tips on Table Manners in Hong Kong
How French Haute Cuisine Was Born - Part 1
How French Haute Cuisine Was Born - Part 2
Members of the Wedding: Barbers in India
Life Around the World Quiz

U.S. Government
The United States: Democracy in Action - Part 1
The United States: Democracy in Action - Part 2
Are You Under Eighteen? - Part 1
5. **READING VOCABULARY A**

**Mathematics and Science**

**Mathematics and Science Pretest**
- It's That Time Again
- Lots of Fun at Camp
- Springtime Excitement
- Do You Know How to Help?
- Trees, Trees, Trees!
- Keeping an Eye on the Weather
- Land of the Dinosaurs
- Now There's an Idea!

**Mathematics and Science Posttest**

**Social Studies**

**Social Studies Pretest**
- Let's Ask Dee
- Running on Empty
- The Big Surprise
- The Family Vacation
- Who Will Lead Us?

**Social Studies Posttest**

**Family and Consumer Sciences**

**Family and Consumer Sciences Pretest**
- Anything Else?
- Neat as a Pin
- I’ll Pay You Back Later
- There’s Work to Be Done
- Jack’s Clothes House
- Good Food, Good Times
- What's Next?
- A Letter to Grandma

**Family and Consumer Sciences Posttest**

**Student Life**

**Student Life Pretest**
- Old Friends, New Friends
- Partners and Poems
- Tough Times
- A Letter From Mr. Banes
- Calk and Children

**Student Life Posttest**
Hobbies and Activities
Hobbies and Activities Pretest
Breaking News
Computer Wizard
It’s a Hit!
A Letter from Camp
The Big Day
A Sports Star and Me
Do You Want to See a Show?
Hobbies and Activities Posttest

Special Words
Special Words Pretest
Multiple Meanings
Homonyms I
The Suffix "-y"
Homonyms II
Compound Words I
The Prefix "un-"
The Suffix "-ly"
Compound Words II
Special Words Posttest

6. READING VOCABULARY B

Mathematics and Science
Mathematics and Science Pretest
A Zoo in My Backyard
Bill: The Human Body
Mr. Morf
Friends and Scientists
Flu Hits the East Coast
Sonny Dewdrop
Seascape
Mathematics and Science Posttest

Social Studies
Social Studies Pretest
Where Would You Live?
Our Salem Witch Trial
The Wild West
Planet Hopping
The Mapmaker
Vote for Me!
Social Studies Posttest

Family and Consumer Sciences
Family and Consumer Sciences Pretest
New Homes for Oak View
The Used-Clothing Store

Content and Reading
Grades 5-6
The Perfect Gift
When I grow Up
A Letter About Troy
Something Different From Aunt Sarah
Smelling Like a Rose

**Family and Consumer Sciences Posttest**

**Student Life**
**Student Life Pretest**
Birthday Blues
The Case of the Missing Shoes
Pleasing Your Parents
Moving On
The Family Who Reads
Write it Down, Devon
In the News
**Student Life Posttest**

**Hobbies and Activities**
**Hobbies and Activities Pretest**
The Booneville Blasts
The Power of Computers
Soccer Standout
Summers with Grandpa
My Best Friend
Who’s Afraid of a little Mouse?
**Hobbies and Activities Posttest**

Special Words
**Special Words Pretest**
Homonyms
The Prefixes "non-" and "dis-"
The Prefixes "pre-" and "re-"
The Suffix "-ly"
Multiple Meanings
The Suffixes "-ful" and "-less"
The Suffix "-tion"
Easily Confused Words
**Special Words Posttest**

7. **READING VOCABULARY C**

**Mathematics and Science**

**Pretest**
I never Would Have Thought
Where Will We Keep Him?
Did You Study?
The Young Scientist
The Emergency Room
A Rainy Forecast
She’s Here!

**Content and Reading**
Grades 7-8
A Letter to Save The Environment

Social Studies

The Big Move
My First Solo Flight
Ghost Towns
Guilty or Innocent?
Our Amazing Earth
Election News
We Want Freedom!

Family and Consumer Sciences

Helpful Hint For Baby-Sitters
The Penny Saver
First-Job Jitters
Save Room for Dessert
Growing Up Is Hard to Do
Notes From Professional Journals

Student Life

A Letter to a Friend
So Alike, Yet So Different
‘A’ for Effort
From Across the Sea
Buster, the Greek God of Silliness
A Letter Home

Hobbies and Activities

Getting Back to Nature
My Adventure at Sea
Look, but Don’t Touch!
The World at Your Fingertips
Cooking With Mr. Dough
Getting in Shape

Special Words

The Prefix ‘in-’
The Suffix –able
Multiple Meanings I
Multiple Meanings II
The Prefixes ir- and mis-
The Suffix –ly
Easily Confused Words

**Posttest**

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<td>Latin Roots Representing Motion</td>
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| **Posttest on Vocabulary Building** |          |          |
| **Word Knowledge** |          |          |
| **Pretest on Word Knowledge** |          |          |
| Introduction to Words with Multiple Meanings | <3 | 4-7 |
| Words with Multiple Meanings II | 3.1 | 4-7 |
| Introduction to Homonyms | <3 | 3-6 |
| Homonyms II | <3 | 3-6 |
| Quiz on Lessons 1-4 |          |          |
| Thinking Skills Lesson: Analogies: Decoding a Message | 3.2 |          |
| Introduction to Synonyms | 4.0 | 5-8 |
| Choosing Precise Synonyms | 3.3 | 5-8 |
| Synonyms with Similar Emotional Intensity | 4.6 | 5-8 |
| Connotative Meanings in Synonyms | 4.8 | 5-8 |
| Quiz on Lessons 5-8 |          |          |
| Thinking Skills Lesson: Classification: Choosing the Right Word | 3.7 |          |
| Introduction to Antonyms | 3.9 | 3-6 |
| Antonyms II | 4.0 | 3-6 |
| Introduction to Idioms | <3 | 3-8 |
| Idioms II | <3 | 3-8 |
| Idioms III | 3.4 | 3-8 |
| Quiz on Lessons 9-13 |          |          |
| Thinking Skills Lesson: Analogies: Decoding a Note for a Child | 3.6 |          |

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**Posttest on Word Knowledge**

**Reading Comprehension**

**Pretest on Reading Comprehension**
- Identifying People, Places, and Things <3 3-6
- Identifying Events and Sequences <3 3-6
- Main Ideas <3 3-6
- Causes and Effects <3 4-6
- Character Analysis <3 4-9

Quiz on Lessons 1-5
Thinking Skills Lesson: Prediction: Predicting a Person’s Future 5.9
Author Bias/Viewpoint 3.0 6-9
Techniques of Persuasion <3 4-9
Similes and Metaphors <3 6-9
Hyperbole and Personification 3.4 4-9

**Posttest on Reading Comprehension**

9. **WRITING**

**Language Mechanics**

**Pretest on Language Mechanics**
- Capitalization and Punctuation in Letters 5.2 7-12
- Identifying Errors in Personal Letters 3.1 7-12
- Identifying Errors in Business Letters I 3.7 7-12
- Identifying Errors in Business Letters II 3.8 7-12

Quiz on Lessons 1-4
Thinking Skills Lesson: Decision Making: Who Should be Interviewed? 4.8
Capitalization and Punctuation in Quotations 5.3 5-12
Identifying Errors in Prose Passages I 3.6 5-12
Identifying Errors in Prose Passages II 3.5 5-12
Using Commas with Clauses and Phrases 5.6 8-12
Identifying Errors in Prose Passages III 4.1 8-12
Identifying Errors in Prose Passages IV 4.0 8-12

Quiz on Lessons 5-10
Thinking Skills Lesson: Induction: Sticky Keys and Sticky Rules 3.9

**Posttest on Language Mechanics**

**Language Usage**

**Pretest on Language Usage**
- Nouns — A Review 5.1 4-10
- Identifying Errors in Prose Passages I 5.6 4-10
- Pronouns — A Review 4.5 4-11
- Identifying Errors in Prose Passages II 3.5 4-11
- Verbs — Number and Form 3.8 5-12
- Identifying Errors in Prose Passages III 4.3 5-12

Quiz on Lessons 1-6
Thinking Skills Lesson: Analogies: Teaming to Prepare for a Test 4.9
- Verbs — The Six Tenses 4.2 8-12

Identifying Errors in Prose Passages IV 4.2 8-12
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<th>Reading</th>
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**10. ** **LANGUAGE ARTS**

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**Grammar and Usage**

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Posttest on Grammar and Usage

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Posttest on Punctuation

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### MATH A

**Understanding Numbers 1**

**Understanding Numbers Pretest**

- Place Value
- Numbers and Word Names
- Quiz on Lessons 1 and 2
- Comparing and Ordering Numbers
- Temperature
- Quiz on Lessons 3 and 4

**Understanding Numbers Posttest**

**Using Addition and Subtraction**

**Using Addition and Subtraction Pretest**

- Basic Addition Facts
- Basic Subtraction Facts
- Open Sentences
- Quiz on Lesson 1 through 3
- Problem Solving: The Science Project
- Estimation by Rounding
- Addition
- Subtraction
- Patterns
- Quiz on Lessons 4 through 7
- Problem-Solving: Extra! Extra! Read All About It!

**Using Addition and Subtraction Posttest**

**Using Multiplication and Division**

**Using Multiplication and Division Pretest**

- Basic Multiplication Facts
- Basic Division Facts
- Open Sentences
- Quiz on Lessons 1 through 3
- Problem-Solving: Let Me See Your Picture
Estimation by Rounding
One-Digit Multipliers
One-Digit Divisors
Quiz on Lessons 4 through 6
Problem-Solving: The Good Deed
Two-Digit Multipliers
Two-Digit Divisors
Quiz on Lessons 7 and 8
Problem-Solving: Water Wings
Using Multiplication and Division Posttest

Using Decimals and Fractions
Using Decimals and Fractions Pretest
Fractions
Decimals and Percents
Addition of Decimals
Subtraction of Decimals
Quiz on Lessons 1 through 4
Problem-Solving: Puppy’s Pen
Multiplication of Decimals
Division of Decimals
Equivalent Forms
Quiz on Lessons 5 through 7
Problem-Solving: School’s Out
Addition of Fractions
Subtraction of Fractions
Multiplication of Fractions
Quiz on Lessons 8 through 10
Problem-Solving: Lemonade Stand
Using Decimals and Fractions Posttest

Working With Data
Working with Data Pretest
Pictographs
Bar Graphs
Graphing Ordered Pairs
Quiz Lessons 1 through 3
Line Graphs
Circle Graphs
Quiz on Lessons 4 and 5
Working with Data Posttest

12.  MATH B

Understanding Numbers 2
Understanding Numbers Pretest
Place Value
Numbers and Word Names
Quiz on Lessons 1 and 2
Comparing and Ordering Numbers
Changes in Temperature

Reading and Content
Grades 5-6
Time Zones
Quiz on Lessons 3 and 4

Understanding Numbers Posttest

Using Whole Numbers
Using Whole Numbers Pretest
Frond-End Estimation
Estimation by Rounding
Addition
Subtraction
Quiz on Lessons 1 through 4
Multiplication
Compatible Numbers
Division
Quiz on Lessons 5 through 7
Equations
Patterns and Sequences
Quiz on 8 and 9
Using Whole Numbers Posttest

Using Decimals
Using Decimals Pretest
Addition of Decimals
Subtraction of Decimals
Quiz on Lessons 1 and 2
Multiplication of Decimals
Division of Multiplication
Quiz on Lessons 3 and 4
Using Decimals Posttest

Using Fractions and Percents
Using Fractions and Percents Pretest
Equivalent Forms
Addition of Fractions
Subtraction of Fractions
Quiz on Lessons 1 through 3
Multiplication of Fractions
Division of Fractions
Percent of a Number
Quiz on Lessons 4 through 6
Using Fractions and Percents Posttest

Working with Data
Working with Data Pretest
Bar Graphs
Graphing Ordered Pairs
Quiz on Lessons 1 and 2
Line Graphs
Circle Graphs
Quiz on Lessons 3 and 4
Working with Data Posttest

13. MATH C

Understanding Numbers    Reading and Content
Grades 7-8

Pretest
Place Value and Scientific Notation
Word Names and Scientific Notation
Quiz on Lessons 1 and 2
Comparing and Ordering Numbers
Quiz on Lesson 3

Posttest

Using Decimals

Pretest
Addition of Decimals
Subtraction of Decimals
Quiz on Lessons 1 and 2
Problem-Solving: The Gift of Song
Multiplication of Decimals
Division of Decimals
Number Sequences
Quiz on Lesson 3 through 5
Problem-Solving: Pedal Power

Posttest

Using Fractions and Percents

Pretest
Equivalent Forms
Addition of Fractions
Subtraction of Fractions
Quiz on Lessons 1 through 3
Problem-Solving: Pass the Popcorn
Multiplication of Fractions
Division of Fractions
Quiz on Lessons 4 and 5
Problem-Solving: Rolling in Dough
Percent of a Number
Finding the Whole
Finding the Percent
Using Percents
Quiz on Lessons 6 through 9
Problem-Solving: Kick Up Your Heals

Posttest

Working With Data

Pretest
Bar Graphs
# BASIC MATH

## Number Concepts

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## Thinking Skills Lesson: Classification: A Trip to Numberland 4.3

## Equations and Inequalities

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## Thinking Skills Lesson: Comparison: Renting a Car 3.0

## Computation

## Thinking Skills Lesson: Induction: A Treasure Hunt 4.8
Subtraction of Like Fractions <3 4-6
Subtraction of Unlike Fractions <3 5-7
Subtraction of Mixed Numerals <3 5-7
Multiplication of Fractions 3.5 5-7
Multiplication of Mixed Numerals <3 6-8
Division of Fractions <3 5-7
Division of Mixed Numerals
Quiz on Lessons 9-18
Thinking Skills Lesson: Problem Solving: Planning a Pizza Party 4.5
Introduction to Ratio and Percent <3 4-6
Interchanging Fractions and Decimals <3 5-7
Interchanging Percents and Decimals <3 5-7
Interchanging Fractions and Percents <3 6-8
Finding the Percent of a Number <3 6-8
Quiz on Lessons 19-23
Thinking Skills Lesson: Decision Making: A Job at the Ballpark 4.5

Posttest on Computation

Word Problems Reading Taught
Pretest on Word Problems
One-Step Addition Problems <3 3-5
One-Step Subtraction Problems <3 3-5
One-Step Multiplication Problems <3 4-6
One-Step Division Problems <3 4-6
Two-Step Problems for Addition and Subtraction <3 4-6
Two-Step Problems Using Multiplication <3 5-6
Two-Step Problems Using Division <3 5-6
Needed Operations <3 4-6
Needed and Extra Information
Quiz on Lessons 1-9
Word Problems About Money <3 3-5
Menus and Price Lists <3 5-7
Averages <3 4-6
Decimals and Fractions <3 4-6
Standard Units of Measure <3 5-7
Quiz on Lessons 10-14
Thinking Skills Lesson: Comparison: Pondering Puddings 3.9

Posttest on Word Problems

Measurement and Geometry Reading Taught
Pretest on Measurement and Geometry
Reading a Ruler <3 3-5
Appropriate Units of Measure
Time and the Calendar <3 2-4
Temperature <3 3-4
Money <3 2-4
Roman Numerals <3 4-6
Fractional Part of a Set
Quiz on Lessons 1-7
Terms in Geometry
Plane and Solid Figures

67
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### Geometry

**Pretest on Geometry**
- Units of Length <3 3-5
- Units of Weight and Capacity
- Time Zones
- Angles <3 4-6
- Lines and Angles
- Quiz on Lessons 1-5
- Area of Polygons
- Circumference of Circles
- Area of Circles
- Surface Area
- Volume of Prisms and Cylinders
- Formulas in Geometry
- Pythagorean Theorem
- Quiz on Lessons 6-12
- Thinking Skills Lesson: Problem Solving: Building a Sandbox

**Posttest on Geometry**

**Statistics and Probability**

**Pretest on Statistics and Probability**
- Pictographs
- Bar Graphs <3 5-7
- Line Graphs
- Circle Graphs
- Measures of Central Tendency
- Quiz on Lessons 1-5
- Simple Probability
- Counting Outcomes
- Predicting Outcomes
- Quiz on Lessons 6-8
- Thinking Skills Lesson: Prediction: The Real Cost of Living 4.7

**Posttest on Statistics and Probability**

**ALGEBRA I**

**Equations, Inequalities, and Polynomials**

**Equations, Inequalities, and Polynomials Pretest**
- Linear Equations in One Variable
- Applications of Linear Equations
- Direct and Inverse Variation
- Literal Equations
- Linear Inequalities in One Variable
- Combined Inequalities
- Absolute Value Equations and Inequalities
- Quiz on Lessons 1 through 7
- Monomials and Properties of Exponents
- Adding and Subtracting Polynomials
- Multiplying a Polynomial by a Monomial
- Multiplying a Polynomial by a Binomial
- Dividing Polynomials
- Quiz on Lessons 8 through 12
Equations, Inequalities, and Polynomials Posttest

Factoring and Rational Expressions
Factoring and Rational Expressions Pretest
Common Monomial Factors
Factoring Trinomials
Factoring Completely
Solving Equations by Factoring
Quiz on Lessons 1 through 4
Simplifying Rational Expressions
Multiplying and Dividing Rational Expressions
Adding and Subtracting Rational Expressions I
Adding and Subtracting Rational Expressions II
Solving Rational Equations
Quiz on Lessons 5 through 9

Factoring and Rational Expressions Posttest

Functions, Graphing, and Systems of Equations
Functions, Graphing, and Systems of Equations Pretest
Relations and Functions
Evaluating Functions
Graphing Linear Equations
Slope of a Line
Equations of Lines
Graphing Linear Inequalities
Quiz on Lessons 1 through 6
Systems of Linear Equations: Graphing
Systems of Linear Equations: Substitution
Systems of Linear Equations: Linear Combination
Applications of Systems of Equations
Systems of Linear Inequalities
Quiz on Lessons 7 through 11

Functions, Graphing, and Systems of Equations Posttest

17. **SCIENCE I**
Life Science

Life Science Pretest
The Cell I
The Cell II
Life Processes I
Life Processes II
Genetics
Quiz
Mechanisms of Change
Classification
Animal Life
Plant Life
Life Science Posttest

Physical Science

Physical Science Pretest
Measurements
Matter
The Periodic Table
States of Matter
Chemical Reactions
Quiz
Energy
Force and Motion
Sound
Light and Illumination
Physical Science Posttest

Earth Science
Earth Science Pretest
Universe
Solar System
Earth and Space
Atmosphere
Weather
Quiz
Oceans
Water
Dynamic Earth
Rocks and Minerals
Earth Science Posttest

18. SCIENCE II

Biology
Biology Pretest
Cell Structures and Functions
Cellular Processes
Genetics
Classification & Diversity
Quiz
Plant Life
Animal Life
Humans I
 Humans II
Microbes and Disease
Biology Posttest

Chemistry
Chemistry Pretest
Matter
Measurements in Chemistry
Molecules and Compounds
States of Matter I
States of Matter II
Quiz
Nonmetals
Metals
Energy
Reactions

**Chemistry Posttest**

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**Physics Posttest**

19. **INFORMATION SKILLS**

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**Posttest on Using Dictionaries and Books**

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Developing Outlines 3.1 4-12
Using a Time Line <3 4-12
Quiz on Lessons 8-10
Thinking Skills Lesson: Constructing Support: The Art of Persuasion 4.8

Posttest on Using References

Using Consumer Information Reading Taught
Pretest on Using Consumer Information
The Index of the Newspaper 6.4 7-12
Separating Fact from Opinion 4.1 7-12
Classified Ads in the Newspaper 4.2 7-12
Quiz on Lessons 1-3
Thinking Skills Lesson: Investigation: Learning About a New Town 5.4
Directories and Schedules <3 7-12
Following Written Instructions 3.4 7-12
Warnings and Labels 3.8
Quiz on Lessons 4-6
Thinking Skills Lesson: Sequencing: Loading the User-Friendly Camera 4.8
Written Warranties 4.6 7-12
Leases and Contracts 3.7 7-12
Filling Out Forms
Quiz on Lessons 7-9
Thinking Skills Lesson: Deduction: Buying FONOVISION 5.2

Posttest on Using Consumer Information

Using Maps, Charts & Graphs Reading Taught
Pretest on Using Maps, Charts, and Graphs
General Reference Maps <3 4-12
Transportation Maps <3 4-12
Special Maps <3 4-12
Large-Area Maps 3.1 4-12
Latitude and Longitude 3.3 4-12
Quiz on Lessons 1-5
Thinking Skills Lesson: Decision Making: The Muddy Gap Concert 3.3
Charts <3 4-12
Tables <3 4-12
Quiz on Lessons 6-7
Thinking Skills Lesson: Prediction: Using a Clearer Crystal Ball 4.3
Picture Graphs <3 4-12
Circle Graphs <3 4-12
Bar Graphs <3 4-12
Line Graphs <3 4-12
Quiz on Lessons 8-11
Thinking Skills Lesson: Prediction: Predicting Where the Money Is 4.6

Posttest on Using Maps, Charts, and Graphs

20. WORKFORCE READINESS SKILLS

Life Skills High School
Life Skills Pretest Reading Level 5+
APPENDIX B: ABE CERTIFICATE OF COMPLETION
Daytona Beach Community College
Certificate of Excellence

is hereby granted to:

John Doe

for outstanding performance on

ABE Coursework Completion

Granted: June 22, 2005

______________________________
Bernadette Propst
GED/ABE Online Coordinator
January 26, 2005

UCFIRB Office of Research (Attn: IRB Coordinator)
12443 Research Parkway – Suite 207
Orlando, FL 32826

To Whom It May Concern:

The proposed research study by Bernadette A. Propst, which analyzes the success and retention of the Adult Basic Education online students at Daytona Beach Community College, has been reviewed and approved. The research methodology, consent form, survey forms and research dates were part of the review.

Should you have any questions, please contact me at my office.

Sincerely,

Frank A. Lombardo
Vice President of Academic Affairs
Daytona Beach Community College
(386) 506-3417
lombardo@dbcc.edu
February 18, 2005

Bernadette Propst:
175 Country Road 335
Bunnell, FL 32110

Mrs. Propst:

With reference to your protocol entitled, “An Analysis of the Adult Basic Education (Pre-GED) Online Classes at Daytona Beach Community College” I am enclosing for your records the approved, expedited document of the UCFIRB Form you had submitted to our office.

Please be advised that this approval is given for one year. Should there be any addendums or administrative changes to the already approved protocol, they must also be submitted to the Board. Changes should not be initiated until written IRB approval is received. Adverse events should be reported to the IRB as they occur. Further, should there be a need to extend this protocol, a renewal form must be submitted for approval at least one month prior to the anniversary date of the most recent approval and is the responsibility of the investigator (UCF).

Should you have any questions, please do not hesitate to call me at 407-823-2901.

Please accept our best wishes for the success of your endeavors.

Cordially,

Barbara Ward
Barbara Ward, CIM
IRB Coordinator
THE UNIVERSITY OF CENTRAL FLORIDA
INSTITUTIONAL REVIEW BOARD (IRB)

IRB Committee Approval Form

PRINCIPAL INVESTIGATOR(S): Bernadette Propst  IRB #: 05-2368

PROJECT TITLE: An Analysis of the Adult Basic Education (Pre-GED) Online Classes at Daytona Beach Community College

[X] New project submission  [ ] Resubmission of lapsed project #
[ ] Continuing review of lapsed project #  [ ] Continuing review of #
[ ] Study expired  [ ] Initial submission was approved by expedited review
[ ] Initial submission was approved by full board review but continuing review can be expedited
[ ] Suspension of enrollment email sent to PI, entered on spreadsheet, administration notified

Chair

[ ] Expedited Approval
Dated: 29 Jun 2005
Cite how qualifies for expedited review:
minimal risk and

Signed: ________________________________
Dr. Sophia Dziegielewski

[ ] Exempt
Dated: ________________________________
Cite how qualifies for exempt status:
minimal risk and ________________________________

Signed: ________________________________
Dr. Jacqueline Byers

[ ] Expiration
Date: 31 Jan 2006

[ ] Waiver of documentation of consent approved
[ ] Waiver of consent approved

NOTES FROM IRB CHAIR (IF APPLICABLE):

Approved for expedited review with researcher resubmitting the on-line survey with directions relative to on-line completion. How can someone circle responses on-line? 

(Clarification received by email and letter 2/17/05, BU)
APPENDIX D: CONSENT FORM
CONSENT FORM

March 1, 2005

Dear Student,

I am a graduate student at the University of Central Florida working under the supervision of faculty member, Dr. Donna J. Camp. You are being asked to participate in an experiment designed to gather information on how online student performance is affected by positive teacher-student communication, encouragement and the setting of goals and standards within the confines of the classes you are currently taking. This research project is designed solely for research purposes and no one except me will have access to any of your testing scores or personal information. Your identity will be kept confidential using a numerical coding system. The research will conclude on or before May 15, 2005.

Your participation in this project is voluntary. You will not be required to spend any additional time working online than you desire too. Please be advised that you may choose not to participate in this research, and you may withdraw from the experiment at any time without consequence. Non-participation will not affect your enrollment in the ABE (Pre-GED) online program. There are no direct benefits or compensation for participation. There are no expected risks associated with participation.

If you have any questions or comments about this research, please contact Bernadette Propst at (386)560-3018 / propstb@dbce.edu or her faculty supervisor, Dr. Donna J. Camp, College of Education, Orlando, FL; (407) 823-0000. Questions or concerns about research participants’ rights may be directed to the UCFIRB office, University of Central Florida Office of Research, Orlando Tech Center, 12443 Research Parkway, Suite 207, Orlando, FL 32826. The phone number is (407)823-2901.

Sincerely,

Bernadette Propst

☑️ I have read the procedure described above.

☑️ I voluntarily agree to participate in the procedure and I have received a copy of this description.

☑️ I have received a copy of the above procedure.

Participant Signature ___________________ / ___________________

Date ___________________
APPENDIX E: RESEARCH METHODOLOGY
RESEARCH METHODOLOGY

The GED/ABE coordinator questioned as to whether or not a lack of standards and requirements, as well as teacher support, was affecting student success and retention in this program. Thesis statement: What contributes to successful completion and retention of students who participate in Adult Education / Distance Learning programs: An analysis of the online Pre-GED program at Daytona Beach Community College. Questions to be answered through the study using a likert scale survey are:

1. Is a lack of teacher-student engagement affecting the completion rate of the students?
2. Will a weekly progress report be beneficial to the student?
3. Would the institution of standards and requirements be sufficient to bring about success and retention?

For this study, success is defined as a student completing work in any subject and level. Retention is defined as being promoted from ABE level 3 to level 4, and for being promoted from the online ABE program to the online GED program. It should also be noted that the online ABE program is designed for a student to self-teach. There is no teacher-student contact aside from the original registration process or the student informing the instructor that they have completed all assigned work.

As a means of promoting success and retention, the researcher will be administering and implementing the following procedures:

1. Students will be required to work on a weekly basis.
2. A minimum of ten assignment completions each week will be recommended.
3. Each Monday the researcher will contact, via E-mail, each student who has not worked for the past seven days.
4. Students will be asked to set a time frame in which they believe they can complete their work.
5. Each Tuesday, the researcher will contact participants via E-mail to encourage them and to inquire as to whether or not they are having any problems or concerns.
6. Each Friday, a report will be E-mailed to participants showing their weekly progress. The report will be individualized, have only that students progress included. The report will include each assignment, the score received as well as the amount of time spent on each assignment, and a total amount of time spent for that week.
7. Participants will be surveyed using the stratified sampling method.

In the case of participants who have not provided an email address, the above information will be mailed to their residence.

Progress of the participants will be illustrated and/or tabulated in graphs according to subject level and completion. Each subject (reading, math, and language) by levels, will be graphed on a weekly basis. The desired outcome is that participants become motivated, completing their work and being promoted to the online GED program. It is my desire to help the adult education learner be successful in this program and transfer that success into their everyday lives.
APPENDIX F: PRE-STUDY SURVEY
# PRE-GED ONLINE SURVEY

**Name** (Optional):

**Age**
- (18-24)  
- (25-29)  
- (30-34)  
- (35-39)  
- (40-44)  
- (45-49)  
- (50-54)  
- (55-59)  
- (60+)

(Circle age range)

**Gender** (Circle one): Female / Male

---

For each item identified below, circle the number to the right that best fits your judgment of its quality. Use the scale above to select the quality number.

<table>
<thead>
<tr>
<th>Pre-Research Study Survey</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please note: All names will be disclosed with only the researcher having access to them.</td>
<td>Poor</td>
</tr>
<tr>
<td>1. Is teacher-student contact beneficial to your studies?</td>
<td>1</td>
</tr>
<tr>
<td>2. Would you benefit from receiving a weekly report on your assignment completions?</td>
<td>1</td>
</tr>
<tr>
<td>3. Does a required amount of assignment completions help to increase your online studies?</td>
<td>1</td>
</tr>
<tr>
<td>4. Do you feel that setting a date for completing your work would increase your online studies?</td>
<td>1</td>
</tr>
<tr>
<td>5. Do you feel that signing a contract to work weekly would increase your online studies?</td>
<td>1</td>
</tr>
</tbody>
</table>

Sign here if you will agree to work on a weekly basis:

Signature: ________________________________

Please write the date that you believe you can complete your pre-GED work: ________________________________

---

86
# PRE-GED ONLINE SURVEY

**Name** (Optional):

**Age:** (18-24) (25-29) (30-34) (35-39) (40-44) (45-49) (50-54) (55-59) (60+)
(Circle age range)

**Gender:** (Circle one): Female / Male

For each item identified below, circle the number to the right that best fits your judgment of its quality. Use the scale above to select the quality number.

<table>
<thead>
<tr>
<th>Post-Research Study Survey</th>
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</thead>
<tbody>
<tr>
<td>Please note: All names will be disclosed with only the researcher having access to them.</td>
<td></td>
</tr>
<tr>
<td>1. Was the increased teacher-student contact beneficial and encouraging?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2. Did you benefit from the weekly progress reports?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>3. Did the required minimal amount of completed assignments motivate you to work online weekly?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>4. Did setting a goal to complete your work encourage you to complete your course work?</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>5. Do you feel that signing a contract to work weekly increased your online studies?</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>

Circle yes or no to the following question:
Did you complete your online studies by the date you chose? 

No | Yes
APPENDIX H: LETTER FROM PARTICIPANT C
Dear Bernadette,

The reason I have not consistently been working online is that I work really weird hours. I picked this course so I could work at my pace. So please work with me on this situation.

Sincerely,
APPENDIX I: PARTICIPANT COURSEWORK COMPLETION CHARTS
# PARTICIPANT A
Coursework Coding Sheet
Gender: Female

## Chart 1: Assignment Categories Completed Pre-Study

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Categories Completed</th>
<th>Categories Completed Below 70%</th>
<th>Categories Completed Above 70%</th>
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<tbody>
<tr>
<td>Reading Skills</td>
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<tr>
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## Chart 2: Assignment Categories Completed Post-Study

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PARTICIPANT B
Coursework Coding Sheet
Gender: Female

Chart 1: Assignment Categories Completed Pre-Study

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Chart 2: Assignment Categories Completed Post-Study

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PARTICIPANT C
Coursework Coding Sheet
Gender: Male

Chart 1: Assignment Categories Completed Pre-Study

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PARTICIPANT E  
Coursework Coding Sheet  
Gender: Female

Chart 1: Assignment Categories Completed Pre-Study

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Chart 2: Assignment Categories Completed Post-Study

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PARTICIPANT F  
Coursework Coding Sheet  
Gender: Female  

Chart 1: Assignment Categories Completed Pre-Study

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</table>
PARTICIPANT I  
Coursework Coding Sheet  
Gender: Female

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Gender: Female

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Gender: Female

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Gender: Female

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Gender: Female

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Gender: Female

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Chart 1: Assignment Categories Completed Pre-Study

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PARTICIPANT FF
Coursework Coding Sheet
Gender: Female

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REFERENCES


