Administering a Keyboarding Course On The World Wide Web (The Georgia Experiment)

By Dr. Jack E. Johnson, Director of Business Education, Department of Management and Business Systems
State University of West Georgia

Dr. Terry D. Roach, Director of Graduate Business Programs, College of Business
State University of Arkansas

Mr. Roderick Hames, Computer Science Teacher, Alton C. Crews Middle School, Lawrenceville, Georgia

Abstract

Distance learning is an emerging model for the presentation and administration of educational content in schools across the country, at both secondary and post-secondary institutions. The forum used at the State University of West Georgia combines both distance learning and on-line Internet instruction. This study addresses the implementation of distance learning instruction in a selected business education graduate course in keyboarding methodology. Keyboarding experts across the country were identified to collaborate with the instructor and a class of graduate students at West Georgia. Distance learning technology was used to link the experts with the students as they discussed 86 issues in teaching keyboarding. Through the use of chat rooms, bulletin boards, e-mail, and telephone conversations, the group of experts and students discussed keyboarding methodologies pertinent to today's keyboarding classrooms. The study demonstrated a successful and rewarding experience for both students and keyboarding experts.

Introduction

The decade of the '90s has introduced a revolutionary forum for the dissemination of information from instructor to student. The traditional classroom in which instructor and students are placed in the confines of four walls is in some educational establishments being supplemented by a new concept known as distance learning. Distance learning (DL) is used to provide instructional programs to those students who are separated physically from the instructor. Moore and Kearsley describe DL as that education that "...occurs in a different place from teaching and as a result requires special techniques of course design, special instructional design, special instructional techniques, special methods of communication by electronic and other technology, as well as special organizational and administrative arrangements."

Distance learning courses have been implemented at several colleges and universities in the country, and at the State University of West Georgia both distance learning initiatives and on-line learning have been used for the past two years to diversify curricular offerings. The Business Education Unit within the Richards College of Business has been one of the leaders in offering distance learning classes in the Southeast. Business education courses at both the undergraduate and graduate levels have been taught in this environment. Graduate courses have been specifically designed for distance learning formats to allow students who are physically removed from the campus to continue their graduate studies.

Purpose

The purpose of this experiment was to determine the feasibility of offering Strategies of Teaching Keyboarding as an on-line Internet-based course to graduate students at the State University of West Georgia. The program used for this class was WebCT, a tool that facilitates on-line learning on the World Wide Web.

Definitions

The following definitions are included to assist the reader and interested researchers in interpreting selected terms as they apply to this study:

- DL -- This acronym pertains to "distance learning," a learning environment in which students are physically separated from the point at which a lesson is being presented. DL is used frequently in the pages of this study.
- Keyboarding Expert -- For the purposes of this study, a keyboarding expert is one of 31 business education instructors from 27 states who participated in the Strategies of Teaching Keyboarding class offered via DL at the State University of West Georgia during the Winter Quarter, 1998.
- WebCT -- courseware used in both synchronous and asynchronous environments to offer courses on the World Wide Web. A combination of traditional classroom instruction and WebCT distance learning instruction was used to offer Instructional Strategies for Teaching Keyboarding to 26 students located as far as 150 miles from the broadcast site on campus at the State University of West Georgia.

Procedures

The following procedures were used to develop the course, provide instruction, and promote interaction between the instructor and students during the ten-week Strategies of Teaching Keyboarding class.

Preliminary Planning. The primary purpose of this course was to identify and discuss successful methods for teaching keyboarding. During the Christmas holidays of 1997, the instructor--Dr. Jack E. Johnson--requested the collaboration of colleagues across the nation to participate in the course by discussing methodology with students who would be enrolled in the class. These visiting "experts" were invited to share their views and opinions on teaching keyboarding with students via e-mail correspondence and in "chat rooms" provided in WebCT.

Selection of Keyboarding "Experts": A total of 31 business educators from 27 states volunteered to participate in this class and work with the students. All keyboarding "experts" were identified through (1) e-mail addresses of business educators who participated in the 1998 NBEA Convention in San Antonio, Texas, [as listed in a *Business Education Forum* fall 1997 issue] and (2) professional contacts known to the authors of the study. Educators from the following states participated in this study (See Table 1 below).

Class Structure. The class met for 10 weeks, from January 5 to March 9, 1998. The first class meeting on January 5 was scheduled on-site at West Georgia for all but 5 of the 26 students. These students, who were located approximately 150 miles from campus, received a videotape of the class. Two additional on-site classes were held, one on February 2 and one on March 9. The

remaining seven classes were conducted via the Internet, using WebCT as the medium for class activities. Classes met from 4:45 to 9:15 p.m. on Monday evenings throughout the 10-week session.

Table 1

States Participating in the Georgia Experiment

Arizona	Kentucky	Ohio
Arkansas	Louisiana	Pennsylvania
California	Michigan	South Carolina
Colorado	Missouri	Tennessee
Georgia	Montana	Texas
Idaho	Nebraska	Utah
Illinois	New Jersey	Virginia
Indiana	North Carolina	Washington
Iowa	North Dakota	Wisconsin

Class Assignments. The purpose of the class was to discuss keyboarding methodology. Students were assigned two major projects in the class:

- to identify specific strategies for teaching keyboarding to include motivational techniques, introductory activities, focus activities, technology tips, multicultural activities, cross-curricular activities, and summarizing activities.
- to identify specific methods for teaching keyboarding that could be applied to the topics shown in Table 2 below.

Students were formed into groups to identify questions that would be appropriate for addressing each of the above topic areas. A total of 118 questions were identified; and, after eliminating all similar, duplicate, and/or irrelevant questions, the class focused on 86 questions to pursue. Of the 86 questions, the instructor accented 26 questions considered essential to keyboarding instruction. These 26 questions were asked of several "keyboarding experts" so that responses could be compared and discussed. The remaining 60 questions were addressed individually by only one expert. The following questions were asked of the keyboarding experts. (*Note:* the starred items indicate questions that were asked of more than one expert.)

Table 2

Topical Areas of Discussion

1. Evaluation in Keyboarding
2. Teaching Keyboarding in the Middle School
3. Teaching Keyboarding to Ninth Graders
4. Teaching Production in Keyboarding
5. Teaching Skillbuilding in Keyboarding
6. Teaching Software/Technology in Keyboarding
7. Teaching Special Needs in Keyboarding

8. Teaching Speed and Accuracy in Keyboarding
9. Philosophy of Teaching Keyboarding
10. Teaching Technique in Keyboarding

Evaluation in Keyboarding

- Should a technique grade be given throughout the entire semester or just through the alphabet units? Why or why not?
- *How should students be evaluated while learning the keyboard?

*25. How many errors should be allowed when a student starts typing 1-minute timed writings? How many errors should be allowed in a 3-minute timed writing? In a 5-minute timed writing?

- Do you average technique grades or take the highest with improvement?
- We use the highest 3-minute grading scale the entire semester and take the highest grades (5), then average them for their timed writing portion. Do you see anything wrong with this practice?

*39. What are the weights and categories that you use for grading in a first semester keyboarding course?

*47. What weight do you give to typing technique, timings, document processing, tests, etc. to determine the final grade in a beginning keyboarding class?

- Should keyboarding grades be based on a bell curve or average of peer grades? For example, the average speed of a typical class is 40 wpm for Unit 1 test. Can I base Sarah's and Johnny's grades on the average grade by adding or subtracting from their grades based on the average scores?
- How do you determine the speed which students should be typing during the course of a semester? How do you determine what is an A, B, C, etc.?

Teaching Keyboarding in the Middle School

- In our school district, middle school business courses devote only four weeks to teaching keyboarding. Given this amount of time, what specific area(s) of keyboarding skill(s) should be developed?

*60. What purposes and goals should keyboarding have in middle school given the course only lasts 45 days and word processing, spreadsheets, and other skills must be taught as well?

*61. Should beginning keyboarding be taught in the elementary grades, in middle school, or in high school?

*81. Our school system is proposing to teach beginning keyboarding in the elementary grades. If this is done, who should teach the course and what training should they have. What role can high school business teacher play in this arrangement?

- If keyboarding is taught in the elementary grades, what keyboarding-related skills should we teach at the high school level?

Teaching Keyboarding to Ninth Graders

- How much word processing should be taught in a beginning ninth grade keyboarding class?

- How long should a ninth-grade keyboarding class run on 90 minute periods. Should it be 6 weeks, 9 weeks, or 1 semester?

*20. If you had to teach a 9-week course of keyboarding (with 90-minute class periods) to ninth grade students, what would you cover?

Teaching Production in Keyboarding

*6. What should be measured in a production test? How often should you test a student's production skills?

- Should letterhead paper be used when printing business letters and forms to further enhance the student's understanding of formatting? Why? Why not?
- How long should a production test last (number of minutes)?

Teaching Skillbuilding in Keyboarding

2. How many alphabetic letters should be introduced in each lesson?

- Is there a set pattern as to the introduction of new keys?

*16. How much time should be spent in presenting the alphabetic keyboard?

- How much time should be spent on skill building between the completion of the letter keyboard and the introduction of the number keys?
- Should students be allowed to practice on, or at least view, a copy that will be timed for a grade?
- Should teachers emphasize improving straight-copy skills or document processing skills? Why?
- How much daily/weekly time should be given to skillbuilding after the keyboard is learned?

Teaching Software/Technology in Keyboarding

- How long should a ninth-grade beginning keyboard class run on 90 minute periods. Should it be 6 weeks, 9 weeks, or 1 semester?
- Is it better to use individualized instruction software that allows students to progress at their own pace, or should beginning keyboarding students be kept together until the keyboard has been completely covered?
- Is there evidence indicating that the ergonomically designed keyboard improves performance?

*42. What do you predict the impact of voice input technology will be on keyboard usage and instruction?

- Do you prefer using industry standard software such as Microsoft Word or WordPerfect for preparing production activities (i.e. letters, tables, reports, and memos) in keyboarding, or would you recommend a student typing program such as those prepared by text book publishers? Why?
- With the case of error correction and the automatic spelling correction features on software programs, do you believe students should have the freedom of backspacing during timed writings? Why or why not?
- Many printers are unable to properly set up envelops. What is the best teaching technique for introducing and explaining envelops?
- With spell check and grammar check available, should teachers emphasize proofreading documents before printing? Why or why not?
- Do you think that keyboarding software will ever take the place of an instructor/facilitator?

- With today's software packages for keyboarding instruction, do you feel that we are moving more toward the role of facilitators and self-taught keyboarding classes? Is this a positive or negative trend?
- As voice recognition software continues to improve, will keyboarding become less necessary? How will the role of keyboarding change?
- With many of the new multimedia workstations including a CD-ROM, how do you feel about allowing students to listen to their own CD's with headphones while typing?
- Do you feel that computer software helps or hinders an individual's ability to improve keyboarding skills? Why?
- If you are using a publisher's keyboarding software program (i.e. Glencoe, Southwestern, or Paradigm), would you suggest that students move at their own speed through the program, or would you suggest that they move through the program together? Or would you use the program as a reinforcement after using the textbook/teacher method?

*80. What advancements in technology are going to have the greatest impact on teaching keyboarding in the next two or three years?

Teaching Special Needs in Keyboarding

*21. What type of modifications should be made for teaching keyboarding to special needs students?

- If a student is physically challenged and can only use one hand, how many words a minute should that student be required to type in comparison to a student who is not physically challenged?

Teaching Speed and Accuracy in Keyboarding

*8. Upon completing a beginning keyboarding class, how many wpm should the average student be able to type? Have you found that the average is consistent from class to class? What errors do you consistently see and what recommendations do you make to the students to correct them?

- Are employers interested more in keyboarding speed and accuracy or with the computer knowledge of their employees?
- In timed writings, should an instructor evaluate and grade both speed and accuracy?

*29. During a nine-week keyboarding course, what should be the timed writing goal for the course?

*50. Can a timed writing that is repeated be an accurate predictor of a student's skill in keyboarding? How often can a timed writing be repeated before it no longer represents a student's true skill?

*57. What should be stressed more--speed or accuracy? Why?

- When teaching beginning typists, should speed or accuracy be emphasized first? Why?

*66. What are some effective techniques or practices for improving accuracy?

*67. What are some effective techniques or practices for improving speed?

- What is the optimum length for a timed writing?

- How often each week should you give timed writing tests?

Teaching Strategies/Philosophy of Keyboarding

- What is the most difficult keyboarding application for students to master?
- Should students be allowed to work at their own pace with assignment sheets or stay together as a class?

*22. At what grade level should keyboarding instruction be introduced?

- When should an instructor begin timed writings with students?
- Is their evidence to indicate that playing music during keyboarding can improve performance?
- What should be the maximum class size in an introduction to keyboarding course?
- Should students all stay on the same lessons, even if some are more advanced?
- What are your thoughts on allowing students to correct errors on 3-minute and 5-minute timings?

*41. Do you feel that having students graph gross words on 30-second and 1-minute speed and accuracy drills is an effective motivation strategy?

- How important is speed and accuracy as opposed to grammar, punctuation, spelling, formatting, and other non-keyboarding skills? Where should we spend more class time?

*49. What method of teaching number typing do you suggest?

- Should students be allowed to take a mini-break from keying after a designated period of time? If so, what would you recommend in terms of time and activity?
- At what point for a beginning typist should speed be introduced and emphasized?

*62. What are the top three things (key elements) that a beginning typist must do consistently to become a good typist?

- Given only 10 minutes each day for 45 days a year to teach typing, using no typing books (just Mavis Beacon), what different strategies should be used to teach keyboarding?
- Do you feel that teaching word processing skills in keyboarding hinders a student's ability to build keyboarding skills? Why or why not?
- Our keyboarding class has one semester of keyboarding using one textbook and a second semester of word processing using another textbook. (a) Do you think this is a good arrangement, or would it be better to have one textbook that integrated the two? (b) If we have to use both textbooks, should we integrate the two or stick to one semester of each?

Teaching Technique in Keyboarding

- Do you have any suggestions on teaching and having students maintain good technique?
- Should students use a cover shield to reinforce home-key technique?
- Should wrist supports be used in keyboarding?

*34. What is the best way to evaluate technique? How often do you grade technique?

- Do you find it helpful to cover student's hands while teaching new keys to prevent them from watching their hands and the keyboard? Why or why not?
- How much should technique count the first half of a one-semester keyboarding course?

*86. How do you break the habit of looking at the keys when typing?

Assignment of Students, Questions, and Keyboarding Experts. Students were assigned questions at random from the total of 86 questions. To obtain an even distribution of questions and experts, each student was assigned 8 or 9 questions and 3 or 4 experts. Each expert received no more than 3 questions from each student. The questions and experts were assigned at random, giving the distribution of students, questions, and experts shown in Table 3 below.

Table 3

Assignment of Questions and Authorities

Student	Questions	Keyboarding Expert
Beiter	6, 17, 25, 30, 42, 57, 65, 66, 86	Chiri, Imdieke, Perry
Brown	10, 13, 21, 31, 34, 49, 61, 68, 80	Chiri, Imdieke, Perry
Campbell	6, 17, 25, 32, 42, 57, 67, 69, 86	Cooper, Joyner, Prigge
Clifton	11, 13, 21, 33, 34, 49, 62, 70, 80	Cooper, Joyner, Prigge
Copeland	6, 17, 35, 60, 67, 71, 72, 80, 86	Crews, Klemin, Rankin
Evans	6, 17, 25, 37, 47, 60, 67, 73, 86	Durkee, LaBarre, Rice
Griggs	4, 13, 21, 38, 39, 50, 62, 74, 80	Durkee, LaBarre, Rice
Hager	6, 17, 29, 40, 47, 60, 67, 75, 86	Eklund, Lewis, Roach
Hames	13, 15, 22, 39, 41, 50 62, 76	Eklund, Lewis, Roach, Toole
Hawkins	6, 20, 29, 43, 47, 60, 67, 77, 86	McCannon, Salce, Switzer
Johnson	13, 18, 22, 39, 44, 50, 62, 79, 80	McCannon, Salce, Switzer
Kelley	1, 8, 20, 29, 45, 47, 60, 67, 82	Fisher-Larson, McCauley, Schepf
Kowalsky	16, 19, 22, 39, 46, 50, 62, 83	Crews, Fisher-Larson, McCauley, Schepf
McClung	2, 8, 20, 29, 47, 48, 60, 78, 84	Gordon, McElvey, Schultz
Miller	16, 22, 23, 39, 50, 51, 66, 81, 85	Gordon, McElvey, Schultz
Mitchell	3, 8, 20, 29, 34, 47, 52, 61, 78	Greathouse, Meche, Swanson
Morris	16, 22, 24, 39, 49, 53, 57, 66, 81	Greathouse, Meche, Swanson
Odom	4, 8, 20, 29, 49, 54, 61, 67, 78	Greene, Moore, Zeliff
Owenby	16, 22, 26, 42, 55, 57, 62, 66, 81	Greene, Moore, Zeliff
Pecht	5, 8, 20, 34, 49, 56, 61, 66	Harrin, Klemin, Morgan, Toole
Roberts	16, 17, 25, 27, 42, 57, 58, 66, 81	Harrin, Henson, Ober
Shealy	7, 8, 21, 22, 34, 49, 59, 61, 78	Henson, Ober, Chambers
Vermillion	16, 25, 28, 39, 42, 57, 63, 66	Holmes, Morgan, Patton, Rankin
Walcott	9, 17, 20, 21, 34, 49, 61, 64, 78	Chambers, Holmes, Patton

Collection of Responses. After the experts and questions had been identified, students were instructed to e-mail their assigned questions to the experts, asking for a response to each question. In the initial e-mail contact, students were asked to (1) identify themselves as being students in ABE 820 at West Georgia, (2) provide the expert a brief synopsis of themselves, (3) state the questions to be asked, and (4) ask for a response to each of the questions.

On-Line Activities. At the beginning of the class, students logged on to the World Wide Web and proceeded to the West Georgia home page. From there they accessed the home page for ABE 820, Instructional Strategies for Teaching Keyboarding. Several links were available on the home

page and several were created to allow students to access information for the course, receive or send messages, obtain the syllabus, review class notes, participate in on-line chat sessions, and receive other information from the instructor. A sample of some of the home page "links" is shown in Illustration 1 below.

After e-mail responses had been received from the experts, students were ready to share and discuss their findings with the other class members. At 4:45 p.m., students logged on to the ABE 820 home page, using a preassigned user name and password. All 31 keyboarding experts were also assigned a unique user name and password so that they could participate in the class any evening they preferred.

Illustration 1.

- On-line Chat
- Private Mail
- Chat Progress
- Syllabus
- Lessons
- Authority Assignments
- Internet Participants
- Keyboarding Questions
- Chat Room Notes
- Group Work

From the home page, students accessed Chat Room 1 from the Online Chat icon. Chat Room 1 was one of four that could be accessed in WebCT during class sessions, as shown in Illustration 2 below.

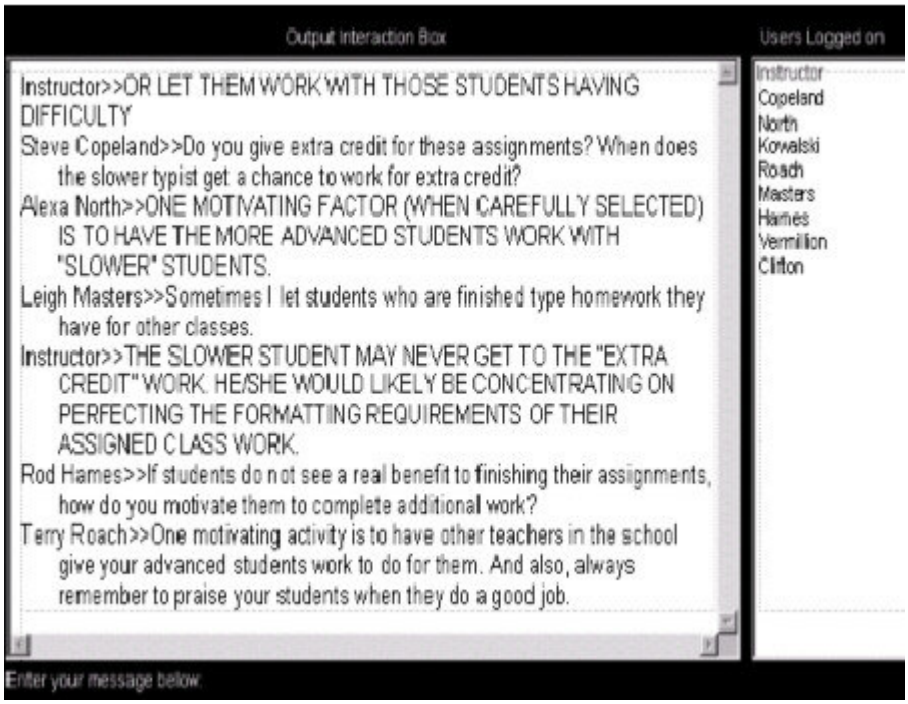
Illustration 2.

For the first few minutes of class, the instructor focused on specific methodology issues that had been identified from the master list of questions. Students were then assigned to one of four chat rooms where they could discuss specific questions in detail. To discuss the 26 critical questions, all students assigned that question were placed in the same chat room. The instructor opened all four chat rooms to observe the discussions that were taking place, inputting remarks and directing the discussion to specific issues. At the end of a specified timetypically 15 to 20

minutesstudents were directed to return to Chat Room 1 where each of the four groups summarized their discussions.

A partial chat room discussion appears in Illustration 3 below. Note that the instructor's comments appear in all caps, while student input appears in upper and lower case. This format was set intentionally so that students would immediately recognize the instructor's and/or keyboarding experts' responses from the students' responses.

Illustration 3.



In this particular chat session, Dr. Alexa North from the State University of West Georgia and Dr. Terry Roach from Arkansas State University visited the chat room and participated as experts in the discussion. The window appearing at the right of the chat room notes is used to let the instructor know which students have logged on to the chat room. In Illustration 3, 6 students, 2 keyboarding experts, and the instructor were engaged in the discussion. Other students were involved in discussions in Chat Rooms 2, 3, and 4.

Posted Chat Room Notes. At the end of class, the instructor posted chat room conversations on the WebCT home page so that students could review all discussions that took place in the various chat rooms, even though they may have spent the entire evening assigned to a different chat room. The posted chat rooms appeared as links from the home page as shown in Illustration 4 below.

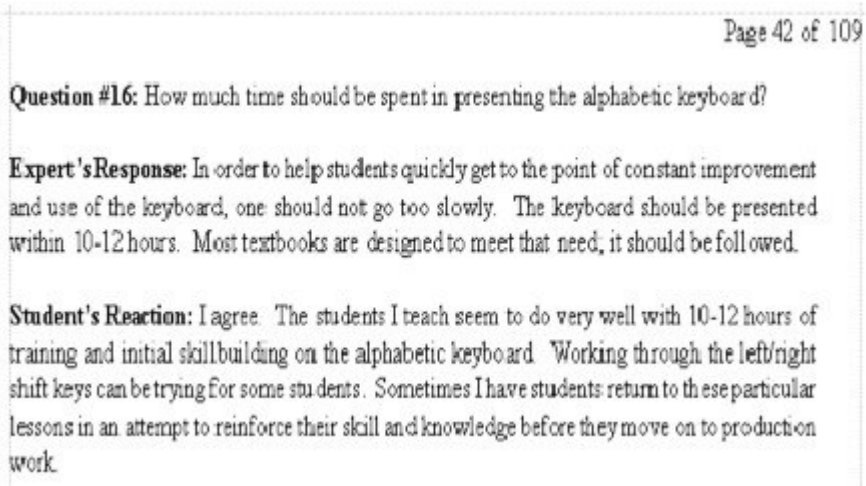
Illustration 4.

This page allows you to edit the path through your document tree. You may add and delete topics, as well as move topics to different locations in the tree. Click on 'Reorganize Nodes' to move topics to different locations in the tree.

1. January 12 Chat Notes
2. January 26 chat
3. February 9 Chat Rooms
4. February 16 Chat Room Notes
5. February 23 Chat Notes
6. March 2 Class Notes

Keyboarding Expert Responses and Student Reactions. At the end of the course, students had to submit the responses they received from each of the keyboarding experts assigned to them (See Table 3 above). In addition, they had to provide reactions to the expert's position on a particular issue, agreeing or disagreeing with the expert's response. Since some issues were responded to by more than one expert, varying opinions were gathered on 26 critical keyboarding questions. The end result was a 109-page document that contained all questions, expert responses, and student reactions. The document was saved to a disk and shared with all students as well as with all participating keyboarding experts. Since the document was organized by the topic areas identified in Table 2, it will become an extremely useful "help file" for both beginning and veteran teachers who are assigned to teach keyboarding classes at their schools. An example of Page 42 of 109 from the methodology document is shown in Illustration 5 below.

Illustration 5.



Page 42 of 109

Question #16: How much time should be spent in presenting the alphabetic keyboard?

Expert's Response: In order to help students quickly get to the point of constant improvement and use of the keyboard, one should not go too slowly. The keyboard should be presented within 10-12 hours. Most textbooks are designed to meet that need, it should be followed.

Student's Reaction: I agree. The students I teach seem to do very well with 10-12 hours of training and initial skillbuilding on the alphabetic keyboard. Working through the left/right shift keys can be trying for some students. Sometimes I have students return to these particular lessons in an attempt to reinforce their skill and knowledge before they move on to production work.

Students' Perspectives

The success of this experiment must be measured in part by the reactions of students who participated in this study. Overall, student perceptions were very high, partly because of the opportunity they had to enroll in a graduate course that would have otherwise been impossible because of their physical isolation from the campus site.
Other incentives were mentioned, however, that lead the researchers to conclude that this experimental classroom was an overwhelming success that should be repeated when the course is next offered. Following are some of the comments made by the students in the class:

- {#}_ab # *"Taking this on-line course was fun, exciting, and a unique learning adventure. This experiment exemplifies how the needs of a world class education system are being met by the leading technology of our time."*
    - {#}_ab # *"There was really never any question about taking this class. Distance learning courses like this one have made such a tremendous difference in my professional development."*
    - {#}_ab # *"As you might imagine, communication was a key to the success of this experiment. In the course, we communicated through chat rooms, e-mail, electronic bulletin boards, and telephone conversations. The teacher-student relationship remained effective and consistent throughout the course."*
    - {#}_ab # *"Clear rules of etiquette are essential for learning in this environment. My connection speed was not as fast as some of the other students, and I often found myself responding to questions when the class had moved to another point. The instructor noticed this and therefore changed the focus by asking specific people to respond to random questions. This helped everyone get involved in the `chat' conversation."*
    - {#}_ab # *"A very special part of this experiment that made this course profitable was the use of experts from around the country. Their live conversations on-line were a unique experience to taking a college course. It was like asking questions of my textbook authors. Their experience, professional contacts, and resources were a major benefit to the class. I received valuable feedback along with other professional contacts from my on-line experts."*

Recommendations for Further Study

Although the on-line keyboarding methodology course was considered a tremendous success, several changes will be made when the course is again offered at West Georgia. The authors make the following recommendations to improve this on-line course:

- {#}_ab # Limit the size of the class to 15 students. A smaller class size would allow greater depth in discussing each of the methodology issues in keyboarding.
- {#}_ab # Increase the number of in-class meetings to allow students to discuss input from the experts they contacted via e-mail. Additional in-class meetings would also provide students an opportunity to demonstrate their teaching expertise in keyboarding.
- {#}_ab # Increase the number of experts participating in the on-line discussions.
- {#}_ab # Have the experts "chat" with one another for practice before they "chat" with the students.
- {#}_ab # Inform the experts which topics are going to be used for discussion during each of the chat sessions.
- {#}_ab # Send a list of the questions that the students developed to each of the experts.

- {#}_ab # Coach the experts before coming on-line about "staying with the topic" and allowing students to do most of the talking. Some of the experts unintentionally became "too expert" and monopolized the discussion.
- {#}_ab # Once the experts responded to the students' questions, provide an opportunity for both parties to follow-up and establish continued dialog on the topics discussed.
- {#}_ab # Provide an opportunity for students to establish a dialog with other expertsthose who were not initially assigned to them to answer the questions. Such discussions could lead to second or third opinions on the topics.
- {#}_ab # Have students send all responses they received from "their experts" to all other participating experts. [Note: The initial responses to all the questions were forwarded to participating experts at the conclusion of the course. Furthermore, the authors have decided to post all experts' responses on the World Wide Web after this study has been accepted for publication. By doing so, keyboarding instructors and students across the country can take advantage of the abundant information that was provided by the 31 experts who participated in this study.]

Conclusions

This article has provided considerable support for the premise that distance learning can be a rewarding experience for both students and instructor. It is not solely the environment that determines the success or failure of learning. Whether instructor and students are located within the same four walls of a classroom or separated by great distances is not the only factor to consider when measuring to what extent learning has taken place. As Simonson (1995) stated in his article, "It is well documented that students do not learn any better at a distance, nor do they learn any less. Considerations other than distance have greater impact on learning."
Through this experiment, the researchers have recognized the value that technology plays in providing a quality learning environment. Distance learning will continue to be perceived as an acceptable teaching and learning strategy only if the quality of learning that takes place is perceived as equal to all students, both those in the classroom and those at the remote sites. Based on student and expert reactions to this experimental course, the authors believe that distance learning as evidenced in this experiment was both positive and rewarding for all participants.

References

Blumenstyk, G. (1996, May). "Learning from afar." *Chronicle of Higher Education*, 38.

Cutshall, R., Waltz, D. (1997, February). Utilizing two-way interactive audio/video for distant audiences. *Business Education Forum*, 22.

Dede, C. (1996, March). "Emerging technologies in distance education for business." *Journal of Education for Business*, 197-204.

Eddy, J. P. (1996, Spring). "Internet, computers, distance education, and people failure: research on technology." *Education*, 391.

Itzel, J. (1996, March/April). Distance learning through wide area networking. *Media & Methods*, 6.

Kearsley, G. (1996, March). "Structural issues in distance education." *Journal of Education for Business*, 191-95.

Mather, M. A. (1996, May). "Resources for learning at a distance." *Technology and Learning*, 29.

Miller, M. (1997, February). *Distance Educator*, State University of West Georgia.

Moore, G., Kearsley, G. (1996). *Distance Education, A Systems View*. Wadsworth Publishing Company, 2.

Simonson, M. (1995, October). Does anyone really want to learn..." *Techtrends*, 127.

Smith, C. (1996, May). "Taking the distance out of distance learning." *Training and Development*, 87- 89.

Smith, K. (1994, May). Two-way video distance education: responding to learning styles for preparing teachers. Paper Presented at the Video and Literacy Special Interest Group Symposiums, 39th Annual International Reading Association Conference, Toronto, Ontario, Canada.

Verduin, J. R. Clark, T. A. (1991). *Distance Education: The Foundations of Effective Practice*. San Francisco, CA: Jossey Bass.

Biographical Statement

Dr. Jack E. Johnson is Director of Business and a Professor in the Department of Management and Business Systems, Richards College of Business, at the State University of West Georgia, Carrollton, GA 30118. Phone: 770-836-6475; Fax: 770-836-6774; E-mail: jjohnson@westga.edu.

Dr. Terry D. Roach is Director of Graduate Business Programs, and an Associate Professor of Business Systems in the College of Business at Arkansas State University, Jonesboro, AR 72467. Phone: 870-972-3035; Fax: 870-972-3744; E-mail: tdroach@cherokee.astate.edu.

Mr. Roderick Hames is a Computer Science Teacher at Alton C. Crews Middle School, 1000 Old Snellville Hwy., Lawrenceville, GA 30044. Phone: 770-982-6957; Fax: 770-982-6942; E-mail: rodhames@crews.org.

Online Journal of Distance Learning Administration, Volume II, Number I, Spring 1999
State University of West Georgia, Distance Education

Back to Journal of Distance Learning Administration Contents