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A STUDY TO DETERMINE THE DEMOGRAPHICS AND PERSONAL REASONS STUDENTS CHOOSE TO TAKE COMPUTER MEDIATED COURSES ON THE INTERNET

RESEARCH PAPER
PRESENTED TO
THE GRADUATE FACULTY OF THE DEPARTMENT OF
OCCUPATIONAL AND TECHNICAL STUDIES
OLD DOMINION UNIVERSITY

IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE
MASTER OF SCIENCE IN EDUCATION

BY ROBIN MARSH SIMMONS APRIL 1997

APPROVAL PAGE

This research paper was prepared by Robin Marsh Simmons under the direction of Dr. John M. Ritz in OTED 636. It was submitted to the Graduate Program Director as partial fulfillment of the requirements for the Degree of Master of Science of Education.

APPROVAL BY:

M. Ritz D

Program Director

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This study would not have been possible without the help of the students who were willing to take the survey and trust a person they would never meet. I am grateful for the chat room conversations and the direction they gave me.

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Finally, thanks to Dr. Ritz who provided the format and structure for this study. Without the excellent Research Methods in Education class, I would have been writing a virtual paper about virtual classrooms.

Robin Marsh Simmons

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CHAPTER I

INTRODUCTION

Throughout the history of human communication, advances in technology have powered advances and shifts in education (Berge and Collins, 1995, p. 1). Technology changes not only what we can do but how we do it. The printing press is an example. Before its invention there were people who could read and write but not much reading and writing took place because books were costly and scarce. The printing press enabled widespread literacy. The spread of literacy changed the educational system, the class structure, and teaching methods. The first distance courses were possible because of the printing press. "In the Boston Gazette of 20 March, 1728, Caleb Phillips, Teacher of the New Method of Short Hand advertises that any person in the country desirous to learn this art, may by having the several lessons sent weekly to them be perfectly instructed as those that live in Boston" (Holmberg, 1986, p. 6). And so the first virtual classroom was actually a person's home.

The advent of electricity fostered the use of such inventions as radio, television, and increasingly, computers. Computer mediated communication, in its simplest form is "the process of exchanging thoughts, ideas, and information via a computer keyboard and a screen connected to other computers" (Berge and Collins, 1995, p. 2). Students can carry on a conversation without having to be simultaneously at a particular place. This mode of education and communication appeals to many people. The purpose of this study is to compare

the demographics of students who take computer mediated courses and the personal reasons for such choices.

Statement of the Problem

The problem of this study was to compare the demographics of survey respondents to those of published findings and to determine the personal reasons students choose to take computer mediated courses on the Internet.

Research Goals

The following goals were established to guide the research:

- Assess the demographics of students choosing to take computer mediated courses.
- Determine the personal reasons students choose virtual classrooms over traditional classrooms.

Background and Significance

For many years, educators have been exploring ways to combine theories of differing learning styles and student-constructed knowledge with the theory of practice centered learning. Students are now capable of constructing their own knowledge with the guidance of a teacher who acts as a facilitator. An environment that will provide the students with the instruction necessary for independent exploration can be found using computer resources. In using computer based technology as a resource, students are encouraged to explore

their own interests and to take an active role in their education. But research shows that computer mediated communication is not for everyone. If so, why do students choose to take courses via a computer as opposed to traditional classes. This study will provide a demographic profile of the average computer mediated course user and the personal reasons they chose to study computer-to-computer instead of face-to-face.

This information can be used by course developers and instructors to analyze their population when developing course materials and curriculum. In addition, students considering computer mediated instruction can determine if they fit the profile of such a user in order to help them choose the best method of instruction for their needs.

Limitations

The following limitations were established to guide this study:

- 1. The research period was from 1995 1997.
- The research was limited to computer mediated communication forms of distance education.
- The research was limited to institutions of higher education and not extended to training organizations.
- 4. The information was gathered from surveys placed on the Internet and on-line conversations with students.

 The courses were limited to only those granting college credit hours.

Assumptions

The following assumptions have been made to assist in the completion of this study:

- Past and present participants in computer mediated courses will be willing to participate in this study.
- Only those students who actually took courses on the Internet will complete the survey.
- The results of this study will be used to help determine if students learn comfortably from computer mediated communication courses.

Procedures

This research was developed to determine not only the demographics but personal reasons students chose to take computer mediated courses. The data used to complete this study was collected by surveying virtual classroom students on the Internet. The survey was designed to obtain demographic information and personal reasons for selecting a virtual classroom course over a traditional classroom based education course. After collecting the data, the information was compiled and analyzed to draw conclusions about distance education and virtual classroom audiences.

Definition of Terms

The following definitions will provide the reader with a better understanding of the terms used in this study:

- Distance education/virtual classroom: Delivery method featuring
 non-contiguous communication between students and faculty.
- Computer Mediated Communication: Students are networked through a modem to a central computer and participate in courses over the phone lines via their computer. They communicate through E-mail and the Internet.
- Electronic Mail (E-mail): Use of a modem to send messages and documents over telephone lines to a receiving computer.
- 4. Internet: Global network of more than 12,000 computer networks that allows computer conferencing and access to databases among approximately 1800 user groups.
- Chat room: Location where Internet users can participate in open electronic conversations with one or more other internet users.
- 6. Diversity University: Virtual university set up to provide a learning environment accessible to everyone with telnet capability.

Overview of Chapters

Chapter I of this study introduces the earliest examples of distance education and explains the basic idea of Computer Mediated Communication. In

its simplest form, it is the process of communicating by using a computer as a voice.

Chapter II will review the literature in order to provide information on the concept of distance education, an understanding of computer mediated communication and some attributes of distance learners. A discussion of the methods and procedures used to gather and analyze the information will be discussed in Chapter III. Chapter IV will contain the findings of the research.

Chapter V will provide a summary of what was learned, conclusions drawn, and recommendations for the future use of the findings.

CHAPTER II

REVIEW OF LITERATURE

The concept of distance education is a term that is in transition. A formal recognition occurred in 1982 when the <u>International Council for Correspondence</u> Education changed its name to the <u>International Council for Distance Education</u> (ICDE minutes, 1982, p. 30). Its beginnings lie in correspondence study which has gradually developed to include a number of media including video, audio, telephone, and computer communication.

This chapter will serve to introduce the history of distance education, explain the concept of computer mediated communication and explain how the internet provides a virtual classroom to the world.

Distance learning is not a new phenomenon. Correspondence courses have been offered by various post and secondary institutions for over a hundred years. Pennsylvania State University offered its first agricultural courses in the 1890s and added credit correspondence courses for professional engineers in 1918 (Burgess, 1994, p. i). Today, the availability of academic, professional, and continuing education opportunities from colleges and universities are limitless.

The nature of distance education is that it serves the individual learner individually while at the same time serving the masses electronically. A student can sit at their computer, download course material, send e-mail to other students, and ask the professor questions without ever leaving their home or

meeting face to face with professors or university administrators. At the same time, hundreds or even thousands of other students are doing the exact same thing, enrolled in the same course. These students are all taking a course in a virtual classroom- the newest trend expanding the original concept of distance education

Virtual classrooms refer to the environment in which students are participating in educational experiences without actually being in the same location as the instructor or facilitator of the knowledge. This facilitator of knowledge could be a human or some form of media technology. One growing form of media is Computer Mediated Communication.

COMPUTER MEDIATED COMMUNICATION

Computer Mediated Communication (CMC) is the name given to a large set of functions in which computers are used to support human communication. There are three broad categories of CMC functions. These categories are distinguished by the nature of the human computer interaction and by the role taken by the computer in mediating the human communication process.

The first category involves direct human-to-human communication, with the computer acting simply as a transaction router. This category includes such functions as electronic mail, interactive messaging, and group conference support systems and is also known as computer based conferencing (Berge and Collins, 1995, p. 14). This method of communication incorporates aspects of

written as well as oral communication. The students are required to complete written assignments on the computer and place them in an electronic mailbox to be retrieved by the instructor. In addition to the on-line course work, they are required to participate in live group conferencing (usually achieved via satellite transmissions to a receiver location).

The second category of CMC is one in which the computer has a more active role as the maintainer of organized information. This form of CMC is often referred to as informatics. People access the desired computer system through a variety of methods and execute a series of commands to locate and retrieve the desired information. Connection to the Internet facilitates this process.

Professors can put the course work in their mail box and students can connect to that mail box "on-line" and retrieve the course work.

The third category includes the computer structuring and managing of both the presentation of information and the possible choices available to the user. Computer assisted instruction falls into this category. The main idea behind CAI is that most instruction can be systematized into an algorithmic process. Once this has been done, it is possible to write a computer program to interactively deliver the instruction. With this type instruction, professors are not used in the traditional ways. They do not always develop the course material and never actually present material. Curriculum specialist develop the courses and educational programmers write the programs the computers will use to execute instruction. With this method, courses can be sold like off the shelf

software and students can visit their local computer store to purchase the newest class. A complete degree from Entre U. could be in our future.

Although not an educational environment for all learners, the virtual classroom provides an alternative for those seeking non-traditional education.

One such alternative can be found by surfing the Internet.

THE INTERNET AND THE VIRTUAL CLASSROOM

The widespread use of computers and networking has opened the door for courses on the Internet. The Internet allows discussion, file transmission, access to electronic journals, and personal communication. By using a computer keyboard and a modem, anyone can access other computers and assorted information at any time. This means courses can be put on the Internet and anyone with a computer and access can review the material and participate in the course. The Internet was the key to increased electronic conferencing at colleges and universities. At the University of Connecticut alone, more than 50 classes have set up virtual classrooms on the Internet (Young, 1995, p. A 27). Both faculty and students recognize the implications of being able to expand the learning community.

The Internet provides a forum for honing ideas and exchanging opinions without the risk of exposing yourself to conflict. The system allows professors and students to talk to research companies, institutes, think tanks, and other interested or disinterested parties from the comfort of their home, office, or any

virtual classroom. In essence, the Internet creates a transparent university of the mind (Hiltz, 1986, p. 103).

Many students hesitate at the idea of attending traditional classroom courses, much less taking a course in a "transparent university of the mind." For others, it is the most comfortable way to learn. This group of others have been found to share some common attributes.

ATTRIBUTES OF DISTANCE LEARNERS

Distance education features non-contiguous communication between students and instructors. According to research done by Feasley, these students have certain common characteristics:

- Individuals in college-level distance education courses are usually older than their campus peers (ages typically range between 30 and 35 years),
- 2. A majority have taken some previous college courses,
- Individuals who have been out of school a long time prefer to master the content in a personal, private place,
- A study of 244 external degree programs in the U.S. showed the student population to be 20 percent nonwhite,
- 5. In America, more women than men are generally enrolled, while in Europe more men than women are enrolled (Feasley, 1983, p. 5).

Unfortunately, this information does not tell us why students choose virtual classrooms over traditional classroom situations. It also does not tell us anything about their computer habits, professional life, and other demographics that may give a clue to their character that make them open to the idea of non traditional classrooms and distance education.

SUMMARY

Research has been completed that shows us the basic demographics of virtual classroom students but what are the personal reasons for taking a course via a computer instead of attending a traditional education course with human-to-human interaction. The following chapters are designed to answer that question.

CHAPTER III

METHODS AND PROCEDURES

Chapter III, Methods and Procedures, outlines and discusses the population studied, the instrument used, the procedures used to collect data, the statistical analysis used, and the summary. This information will aid the reader in understanding how the data for the research was collected and analyzed.

POPULATION

The population studied consisted of past and present students who took courses on the Internet from any college or university granting college credit. All 32 students who responded to the survey were included in the population for this study. The population included students who enrolled in on-line classes between January 1996 and April 1997.

INSTRUMENT DESIGN

The instrument used to gather information for this research was a survey. The survey was developed by asking questions of instructors and researching proper survey writing techniques. The survey contained questions designed to obtain information about basic demographics, including age, sex, race, employment status, academic enrollment status, and number of courses taken on-line. An open-ended question was included for respondents to express their

personal reasons for choosing to take a course on-line. The survey consisted of open and closed ended questions and is included in the Appendix.

METHODS OF DATA COLLECTION

The survey was placed in the on-line mail boxes of twenty students who were enrolled in courses through Diversity University, students who responded to a solicitation for help in a Web University chat room and students who were given my e-mail address and volunteered to complete the survey.

My electronic mail box was checked daily and all data collected was compiled and totaled at the end of the survey period. The information was used for making determinations about the users and their reasons for choosing the Internet's virtual classroom.

STATISTICAL ANALYSIS

Each of the student's surveys was analyzed and responses to questions were categorized for ease of interpretation. Each close-ended question was calculated into percentages as to how many students responded to a given question. The open-ended question was categorized and numbers were presented as collected. The data was presented in tables in the following chapters.

SUMMARY

This chapter compiled the results of the instrument as well as outlining the procedures to collect information. The data collected will be presented in Chapter IV, Findings.

CHAPTER IV

FINDINGS

The purpose of this chapter is to report the findings of the research study.

The study's purpose was to compare the demographics of survey respondents to those of published findings and to determine the personal reasons students chose to take courses on-line as opposed to a traditional classroom setting.

The method of collecting data for this study was a survey. The survey was placed in the on-line mail boxes of twenty students who were enrolled in courses through Diversity University, students who responded to a solicitation for help in a Web University chat room and students who were given my e-mail address and volunteered to complete the survey.

The survey consisted of close-ended questions asking basic demographic information and one open-ended question giving the respondents the opportunity to express why they chose on-line courses.

REPORT OF THE FINDINGS

A total of 47 surveys were distributed on-line and 32 were returned. The percentage of surveys returned was 68%. Table I indicates the number and percentage of surveys distributed compared to the number completed.

TABLE I SURVEY RESPONSE

Surveys Distributed	47	
Surveys Returned	32	
Not Returned	15	
Percentage Returned	68%	

Table II begins the demographic results reporting of responses. The first question addressed sex of the respondent. Of the 32 respondents, 18 or 56% were Female and 14 or 44% were male.

TABLE II

SEX

	TOTAL	PERCENTAGE (N=32)
Female	18	56%
Male	14	44%

Table III represents the age ranges for the respondents. Of the 32 respondents, 18 were 18-23 years old, 9 were 24-29 years old, 3 were 30-35 years old and 2 were 36 or older.

TABLE III

AGE

AGE RANGE	TOTAL	PERCENTAGE (N=32)
18-23	18	56%
24-29	9	28%
30-35	3	9%
36 or older	2	6%

Table IV depicts the race of the respondents. Caucasians comprised 15 of the 32 respondents, with the remainder being 6 African Americans, 7 Asians, and 4 Hispanic.

TABLE IV

RACE

	TOTAL	PERCENTAGE (N=32)
Caucasian	15	47%
African American	6	19%
Asians	7	22%
Hispanic	4	12%

Table V represents the employment status of the respondents. The collection resulted in the following breakdown: employed full-time - 9 or 28%, employed part-time - 23 or 72%.

TABLE V
EMPLOYMENT STATUS

	TOTAL	PERCENTAGE (N=32)
Employed Full-time	9	28%
Employed Part-time	23	72%

Table VI records the responses concerning academic enrollment status.

Nineteen students were enrolled in degree granting programs full-time and 13 students were enrolled in degree granting programs part-time.

TABLE VI ENROLLMENT STATUS

	TOTAL	PERCENTAGE (N=32)
Full-time	19	59%
Part-time	13	41%

Table VII represents the individual on-line courses taken by the students. The results are presented in the table by the numbers given. No percentages were calculated for this question. Some respondents had taken more than one computer mediated course, thus the numbers exceeded the number of survey respondents.

TABLE VII
COURSES TAKEN ON-LINE

Biology	2
Health	6
History	5
Library Science	12
Computer Applications	5
Writing Composition	. 7

Lastly, Table VIII compiled the responses to an open-ended question requesting the personal reasons students chose to take courses on-line. Their responses were grouped into the following areas: time convenience, necessary for completion of studies/no other option, scheduling conflicts, and cost. Several of the respondents cited many reasons for choosing the on-line course so the response total is greater than the number of respondents.

TABLE VIII

PLEASE SPECIFY THE PERSONAL REASONS YOU CHOSE TO TAKE COURSES ON-LINE AS OPPOSED TO TAKING COURSES IN A TRADITIONAL CLASSROOM ENVIRONMENT.

More convenient to take on own time than regularly scheduled class	32
Course only offered on-line/ No other option	4
School or work conflicts with scheduling	18
Do not live close to the university offering the course	6

SUMMARY

Chapter IV illustrated the findings of this study by means of eight tables compiling information from the survey given to 32 students who are currently or have taken courses on-line. In Chapter V, the research will be summarized a conclusion of the data gathered will be presented and recommendations on how the research can be of value to course developers and instructors will be discussed.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The purpose of Chapter V, Summary, Conclusions and Recommendations was to summarize the contents of the first four chapters. Conclusions were made in relation to the research goals stated in Chapter I and recommendations are given as a result of the findings reported in Chapter IV.

SUMMARY

The problem of this study was to compare the demographics of the survey population to those of published findings and to determine the personal reasons students chose to take courses on-line as opposed to a traditional classroom setting.

In Chapter IV, Findings, the data gathered from the returned surveys was presented. The demographic information revealed that the survey population did not share all the common characteristics of the published findings. The survey population was younger than the averages reported, more worked part-time as opposed to full-time and more were enrolled in school full-time as opposed to part-time. Like the published findings, more women than men were enrolled in on-line courses and more whites than non-whites were enrolled. Several of the survey respondents had taken more than one computer mediated course and

their reasons for taking the on-line courses were similar. In fact, they all fell into four basic areas: time convenience, no other option, scheduling conflicts, and location. Because the courses are on-line, students can begin whenever they are ready, schedule classes around their jobs and family life, and make progress toward a degree on a schedule they can maintain as long as necessary.

CONCLUSIONS

The research has shown that the population of students choosing to take courses in a virtual classroom are as varied as the world population itself. The research goals were established to help provide guidelines for the study and verification of the results. Following are the data responses to each of the goals.

1. Assess the demographics of students choosing to take computer mediated courses. The population surveyed were 56% Female and 44% Male, the highest percentage of respondents were between 18-23 years old, 47% of respondents were white, 19% African American, 22% Hispanic and 12% Asian. Of the 32 respondents, 28% were employed full-time and 72% were employed part-time. The enrollment status of the students was 59% were enrolled in school full-time and 41% were enrolled in school part-time. The students were currently or had in the past taken one or more on-line courses in Biology, Health, History, Library Science, Computer Applications and Writing Composition.

2. Determine the personal reasons students choose virtual

classrooms over traditional classrooms. While the reasons were expressed in different terms, all the responses could be grouped into four reasons. Many students liked the idea of being able to take a course whenever they felt like doing the course work. The flexibility of the computer mediated courses allowed some students to take more courses because it freed up time. Some respondents liked that they had more flexibility in their work schedule because they did not have to schedule it around classes. In some cases, the course was only offered on-line so the respondents did not have a choice. Because the students do not have to physically attend courses, it allows students to take courses at universities outside their area. Several respondents were taking online courses at universities other than the one they were registered at full-time and were going to transfer the courses to their school. If all the responses had to be summed in one word, it would be freedom. Virtual classrooms allow students and instructors the freedom to think about a subject when they are ready to think about it, not when they are scheduled to think about it. They widen the access to education and made education a feasible option when traditional education is difficult or impossible.

RECOMMENDATIONS

At the beginning of this research, it was assumed the data could be used by course developers and instructors to analyze their population when

developing course materials and curriculum for computer mediated courses. The data collected on the demographics of the population surveyed stresses the importance of identifying the target population. While the populations shared some of the same characteristics, they are diverse enough to prohibit broad generalizations. It is recommended that course developers and instructors take the time up front to evaluate their individual population and understand the importance of incorporating enough structure to the material to make it relevant but at the same time allowing the students the freedom to complete the work on their own time.

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APPENDIX

SURVEY

My name is Robin Marsh Simmons and I am a graduate student at Old Dominion University, completing a Masters Degree in Adult Education. As a requirement for this degree, I am writing a thesis on the demographics and personal reasons students choose to take computer mediated courses on the Internet. For this I need your help!

I am very interested in your responses and appreciate you taking the time to complete the following questions. Please download the survey, complete it and e-mail it to me at rsimmons@csm.com. Your honest responses are much appreciated.

DEMOGRAPHIC IN	NFORMATION		
SEX: Male	Female		
AGE: 18-23	24-29	30-35	36 or older
RACE:Caucasian_	African <i>A</i>	American	Asian
	Other		
			Part-time
Enrollment Status	: Full-time	Part-tim	ne
DISTANCE EDUCA List courses taker			
•	•	•	e to take courses on-line as sroom environment.
Thanks again for y	our help. If I car	n be of any he	elp to you, do not hesitate to

e-mail me.