University of Northern Iowa

UNI ScholarWorks

2003

Females and computer-mediated communication : new technologies, new challenges

Kelly Coleman
University of Northern Iowa

Let us know how access to this document benefits you

Recommended Citation

Females and computer-mediated communication : new technologies, new challenges

Abstract

Advanced technologies are changing the face of higher learning by creating opportunities for those who wish to continue their education. On-line education, currently the most common mode of education delivery, has revolutionized the way in which learning takes place. Adult females appear to benefit greatly from computer-mediated communication distance learning due to its flexibility. However, there has been a general lack of research and focus on the females as distance learners and their success in on-line learning. This literature review examines the reasons why females comprise the majority of computer-mediated students and also looks at those barriers that keep women from being successful distance education students. This literature review also examines programs and procedures that have been successful in implementing distance education programs for the adult female learner and offers advice to administrators.

FEMALES AND COMPUTER-MEDIATED COMMUNICATION: NEW TECHNOLOGY, NEW CHALLENGES

A Graduate Literature Review Paper

Submitted to the

Division of Educational Technology

Department of Curriculum and Instruction

In Partial Fulfillment

Of the Requirements for the Degree

Master of Arts

UNIVERSITY OF NORTHERN IOWA

Kelly Coleman

University of Northern Iowa

August 2003

This Literature Review by: Kelly Coleman

Titled: Females and Computer-Mediated Communication: New Technology, New, Challenges

has been approved as meeting the research requirement for the

Degree of Master of Arts.

Terri McDonald

_8/14/03_
Date Approved   Graduate Faculty Reader

Mary Herring

_8-14-03_
Date Approved   Graduate Faculty Reader

Rick Traw

_8/14/03_
Date Approved   Head, Department of Curriculum and Instruction

Abstract

Advanced technologies are changing the face of higher learning by creating opportunities for those who wish to continue their education. On-line education, currently the most common mode of education delivery, has revolutionized the way in which learning takes place. Adult females appear to benefit greatly from computer-mediated communication distance learning due to its flexibility. However, there has been a general lack of research and focus on the females as distance learners and their success in on-line learning. This literature review examines the reasons why females comprise the majority of computer-mediated students and also looks at those barriers that keep women from being successful distance education students. This literature review also examines programs and procedures that have been successful in implementing distance education programs for the adult female learner and offers advice to administrators.

Table of Contents

Introduction

Recent advances in technology have revolutionized the world of higher education, greatly increasing the options and opportunities for students of all ages. Distance education is one of these technological advances, which has provided many people a second chance at a college education or an update of skills necessary to compete in the workplace.

What is distance education? Distance education is where the teacher and student(s) are separated by physical distance and technology is used to bridge the instructional gap (Levine & Cureton, 1998). Distance education is not a new concept. At one time, it was called "correspondence learning". The biggest change is how the learning is delivered. Using computer and video links, higher education students do not have to physically attend class, instead, college comes to them.

The number of students enrolling in distance education programs is growing. According to the U.S. Department of Education (2002), a study was conducted examining who enrolls in distance education programs. This study showed that there is close to 5 million students enrolled in higher education distance programs in the U.S. Among all undergraduate students, 8.5% of women taking college level classes do so through distance education, while 6.5% of men choose the distance education option. The study's authors were not surprised, as distance learning has been marketed to females, particularly single, working females, as the ideal way in which to complete a degree or improve job related skills (Carnevale, 2002).

How successful have women been in participating in computer-mediated programs? Despite the efforts of institutions to create and promote distance learning

programs, these same institutions often fail to examine the particular needs of female distance education. Since females comprise the majority of distance students, their welfare should be a major concern for those involved in education (Levine & Cureton, 1998). This review will examine the success and barriers that females have faced as distance education students. Through examination of the successes and failures of female distance students, those involved in distance education will possess further insight when designing programs, in order to better meet the needs of adult female students.

This review seeks to answer the following questions:

1. Why is distance education popular with females?

2. What external barriers hinder females in distance learning programs?

3. Does the way in which females learn affect their success in computer-mediated communication?

4. Do females' feelings about technology affect their confidence levels with computer-mediated communication?

5. How should distance education programs be structured to help females be successful? The author of this paper has a personal interest in the subject of females and distance education, because of her personal experience as a working female with a family who will be completing a Masters degree through distance education.

Methodology

The guidelines, when choosing resources to review, were based on content, subject matter and age of the material. Resources used were not older than 10 years, since trends in education usually last no longer than that. The focus of the search specifically centered on females and the experiences that they have had with distance

education. Due to a lack of resources dealing only with females and distance education, the search broadened to include gender and distance education. This allowed the comparison of the experiences of both sexes.

Most of the journal articles were found on the ASKERIC (Educational Resources Information Center) on the Internet, and then ordered through the University of Northern Iowa's Rod Library. Barnes and Noble.com provided titles on gender and higher distance education. The author of this paper also looked for books and journal articles with technology themes, as distance education deals directly with technological advances in education.

Articles that discussed female experiences with distance learning and the use of technology (most specifically computer-mediated communication) were selected regardless if the experience was positive or negative. A final characteristic reviewed was the research on the effectiveness techniques that colleges and universities have used in assisting female distance education students be successful.

Analysis and Discussion

For many adult working females, distance education is the best choice for furthering their education, whether for personal or professional reasons. One of the main reasons females choose distance education is the potential flexibility of scheduling and time commitments. Instead of set times for classes to meet, learners can self-determine when to study. May's (1994) research found that the primary reason females enrolled in distance education programs was due to the flexibility of the schedule. One participant in the study, "Jean", said that for females with children who need to be at home, distance

education provides the opportunity to take courses without having to leave the home or even the community. This can be done by using the Internet for on-line classes or by taking classes through satellite or teleconferencing. Carlson (2001) suggests that another benefit of distance education is that for females with small children, particularly single-mothers, remaining at home and taking classes means that they do not have to find and pay for childcare.

Sullivan (2001) found in his research on gender and computer-mediated communication classes that both male and female distance education students identified flexibility as the main reason for enrolling in the program. He also found that more females (80 out of 157 or 50%) than males (18 out of 38 or 47%) identified flexibility as the major positive factor. Sullivan attributed this discrepancy to the need by females to take care of their home and children, which is more often performed by females rather than males.

Although there are definite advantages to distance education for women, there are external barriers that can hinder a female's experience in distance education. According to Carlson (2001), females who take distance education courses face substantially more challenges than men do, as reported by the findings made by the American Association of University Women. This report, titled *The Third Shift*, notes that most of the females surveyed were both the primary care givers in their families and also worked outside the home. Thus, the "third shift" then becomes the distance education class

May (1994) found that all females, in her study, experienced some difficulty in trying to schedule learning time around their family responsibilities and jobs. Most of the females believed that this difficulty was a tension that men involved in distance education

experienced to a lesser degree, since they are less likely to be the main caregivers. One

of the females interviewed commented on her experience with studying and distance

education:

> "It's a lot easier for a man because they can say, "I've got to get this done, and
> you can keep the kids and everyone else away from me, and shut the door." But I
> find sometimes that that's not a two-way street. Because I still have to make
> supper and I still have to make everybody happy. So I think it is really difficult
> for women to juggle it." (p. 86).

This quote illustrates the "double duty" that many women experience in trying to study

for class, but the family and housekeeping responsibilities do not decrease.

Furst-Bowe and Dittman (2001) reported that of the 40 returning adult females

distance learners, 75 % said that balancing a job, family, community and academic

responsibilities was a major challenge. The authors also found a majority of the female

participants in their study commented that although their spouses and children were

supportive of their continuing with education, the demands of their jobs and family often

forced them to drop out for a semester or longer. Estimates show that 70 % of students

who enroll in distance education programs drop out for a short time or even permanently

before completing the program in which they were enrolled (Levine & Cureton, 1998).

Von Prümmer (2000) looked at the challenges of distance education for females

with children, and found that females were more likely to say that family or domestic

responsibilities were the main reasons for not being able to study. Conversely, the men

identified only employment related factors as keeping them from studying, instead of

home and family responsibilities. Interestingly, Von Prümmer (2000) found that even

those women with their own employment responsibilities listed home and family

responsibilities as interfering with their studies.

The way in which females learn appears to have an effect on success with distance education programs. One of the female learning characteristics is that most females learn better by collaboration with others in a non-competitive environment, rather than alone or in a competitive learning situation. Men, on the other hand, appear to learn better independently and in a competitive environment (Care & Udod, 2000).

Barnett and Lally (1999) concluded from a study that they conducted on students in an on-line class that females appeared to be more intimidated than males when looking at the frequency, length, and style of their on-line responses. Male contributions were more numerous and longer in the on-line public forums. All of this suggests that males thrive in a competitive, autonomous learning environment while females need a less competitive, more collaborative type environment.

Sullivan (2001) found that of the respondents in his research, a majority of both males and females believed that the lack of face-to-face interaction was a negative aspect of computer-mediated communication classes. Not surprisingly, more females than males identified this as a criticism. The author concluded that female students appear to need more group interaction when studying at a distance than males. He also found in his research that only female students had negative comments on being self-disciplined to take computer-mediated communication classes. Sullivan believed this data showed that males feel more comfortable working alone on-line and that females miss the interpersonal part of traditional classes. Sullivan (2001) points to the fact that much of the differences in which males and females learn can be attributed to the way in which males and females are socialized in our society. Boys are often taught to be rough, tough, and aggressive, while females are often taught to be shy, sweet, and passive. Other

studies on the topic of gender and learning styles have had similar results showing that boys tend to dominate discussions in class and get the majority of the teacher's attention, while girls typically are more passive (Lunneborg, 1994).

Sadker and Sadker (1986) cite a study from the National Institute of Education that boys in elementary and secondary schools were eight times more likely to verbally address a teacher in class than females. Furthermore, teachers responded differently depending on the gender of the student speaking. The study indicated that teachers accept boys speaking out of turn or interrupting in class; girls who did the same were admonished and often told to raise their hands first. According to the authors, the net effect is to train boys to be assertive and girls to be passive. The data also showed that these learned behaviors persist into higher education.

Blum (1999) also found that the majority of males and females taking computer-mediated communication classes preferred to learn the same as males and females in a face-to-face environment. Males tended to prefer to work autonomously, while females preferred to work with small groups. Blum also discovered that when males dominated the conversation in computer-mediated communication classes, females were less likely to participate in on-line discussions.

Von Prümmer (2000) found in her research that learning styles of males and females do appear to have an effect on success rates of females in computer-mediated communication classes. Females prefer to learn face to face and to be provided with tutorials or help sessions. Women who were provided with tutorials or assistance were more likely to respond when they felt confident and less isolated, in contrast with

distance education females who had no support and as a result felt completely alone and isolated.

The most common mode of delivery for distance education is on-line using the computer. Other modes of delivery for distance education include video conferencing and other interactive technologies. Because of this, many females, particularly older females who have been at home taking care of children, suffer from low academic self-confidence and fear of technology, particularly the computer (Lunneborg, 1994). This fear of using technology is a real phenomenon, particularly for females, according to Brosnan (1998). He calls this "technophobia," which is "the psychological impact of information technology" (p.1). His research on technophobia indicated that females experience this twice as often as males. The author attributes much of this fear of technology to the fact that in today's society, males dominate computers and other sophisticated technologies. Proof of this domination is in the low numbers of females majoring in computer science and the fact that the majority of computer games are created with male consumers and computer operators in mind. Brosnan (1998) attributed this fear of computers by females to the fact that in our society, girls at an early age are taught that only boys are good with computers and boys are taught that girls lack technological skills.

Care and Udod (2000) found evidence of a technological gender gap among high school students. They found that boys saw computers as more masculine than feminine, that females do not receive as much contact with computers as males, and that males are more likely to have taken programming or more advanced computer classes while females were more likely to have taken more introductory computer classes.

Von Prümmer (2000) indicated that females were less likely to be enthusiastic in working with technology than were the males. She concluded that females considered themselves to be less competent than males when using technology, especially the Internet.

Canada and Brusca (1991) found a technological gender gap among college students and perceived skills. Female students saw themselves as less skilled in using computer technology than their male counterparts.

Additional research on male and female perceptions of technological skills and the effect on distance learning can be seen in a study conducted by Proost and Elen (1997). These researchers found that females have more negative attitudes toward computers than males and that males tend to own computers more often than females. They concluded that gender attitudes must be considered when designing distance education programs, especially ones that rely heavily on computers.

Understanding this technological gap is very important for institutions that provide distance education, especially computer-mediated communication, because the main mode for delivery is using technology. Furst-Bowe and Dittman (2001) found that technical problems that arose during some of the distance education classes were very frustrating, especially to the females enrolled in these programs. Several of the females were intimidated to ask questions or found no technological support provided by the college or university. This was especially true at night or on weekends, which are times when female distance learners are more likely to be studying.

When designing distance education programs, faculty, staff, and administrators must consider several factors in order to meet the needs of adult females. This is

especially true since distance education appears to be a cost-effective way for universities to reach non-traditional students and provide a convenient option for females. May (1994) concluded that professors and administrators must be sensitive to female's personal and unique circumstances, particularly to their family needs. Administrators and faculty need to find ways to help females develop support systems. She also believed that in order for distance education to be successful for females, they must be properly trained in using the technology necessary for the class and to have adequate help for technical questions or failings.

Furst-Bowe and Dittman (2001) actively solicited recommendations on how to better meet the needs of their female students who were enrolled in computer-mediated communication distance education classes. Their focus groups of returning adult female students identified five general categories of women's needs: communication with the instructor, interaction with other students, technical assistance, campus support services, and personal needs, specifically including the support of family and employers. To aid the design and implementation of distance education courses at their institutions of higher learning, administrators and faculty members used the information gathered from these focus groups. A total of 40 women participated in the focus group. The pool of women students was composed of those enrolled in an Internet-based course at the time of the study.

Furst-Bowe and Dittman (2001) reported that many of the females from their focus group responded that they wanted and needed to interact with their instructors, in order to be successful with the class. Many expressed frustration with professors who failed to respond back in a timely manner. Several of the focus group members

commented that the lack of communication with the instructor made it difficult to maintain their motivation in finishing the class. Those members that were successful commented that they received a great deal of feedback from their on-line instructors and did not feel intimidated in asking questions or making comments.

Furst-Bowe and Dittman (2001) also found from their focus group that many of the females commented that although they missed the direct interaction that is experienced with traditional classrooms, many of the women felt more comfortable expressing their opinions on-line than in a classroom. What really assisted the students, the authors reported, were informal, on-line discussions with other students in the class that were monitored by the instructor. This is particularly helpful for the majority of female students who prefer to learn in a more collaborative, small-group atmosphere.

Program administrators and instructors of distance education classes are recommended to develop their own focus groups of participants, particularly females, to help make distance learning more effective and responsive to the needs of the female students. Instructors who understand the needs of females and learning should design programs with the students' perspective in mind. The success of higher education institutions to help female distance learners effectively will depend on their ability to obtain information on the needs and expectations of the females enrolled in computer-mediated communication classes (Furst-Bowe and Dittman (2001).

Conclusions and Recommendations

Distance education, particularly computer-mediated communication classes, has radically changed educational opportunities for many in our society, particularly females.

Today, higher education distance students can attend school anywhere in the world, any time of day, without ever leaving home. Because of this flexibility, distance education is an attractive option for females, particularly older females with children, who need to further their education for personal or professional reasons. This fact supports why females make up the majority of distance education students.

Distance learning is helpful for females with families because of its flexibility. Females can study when they want and complete course work on their own schedule. This is especially important for females with full time jobs who work during the day and have equal full time jobs taking care of children and a family at night.

As positive as distance education is for females, there are barriers that need to be taken into consideration that can inhibit female's success with distance learning. Males and females generally learn differently and the learning style of females, more experiential and collaborative, is difficult when learning by computer-mediated communication. Because of this, many females reported that they felt alone and isolated when enrolled in distance education classes.

Another barrier that females must deal with is the idea that education or going back to school, no matter how the class is delivered, becomes a "third-shift" for females. Technology does not eliminate the home and family responsibilities for women. Many of the females researched, felt overwhelmed because they are the primary caretakers of their family, as well as having expectations of earning money outside the home. Sensitivity to these domestic and work responsibilities is essential for professors and school officials when designing distance education programs for females.

The key to ensuring such sensitivity to domestic and work responsibilities is to promote the flexibility, which leads females into computer-mediated communication classes in the first place. Supplying these students with numerous options in scheduling, registration, and communication with the institution will make the simultaneous obligations much easier.

Finally, the way in which females perceive their technological abilities appears to play a factor in success when learning at a distance. Because the majority of distance learning takes place via the computer in on-line classes, many females feel inadequate or inept at using such technology. Much of this attitude appears to be ingrained in our society as a belief that males are more technologically competent than females, Although this problem appears to be improving for younger females, school officials will need to make sure that ample support is available for females, especially at night and during weekend hours.

Despite making up the majority of distance education students, there has been a general lack of attention to the needs of female distance learners. Further studies into the successes and failures of females in distance education programs are necessary if females are going to succeed in the future. Other studies should be conducted with minority females as well to see if their needs are greater or unique than for white females. The challenge for educators is to find effective strategies that can assist all learners to excel in the distance education environment. In failing to do so, universities who offer distance learning education programs run the risk of disenfranchising women who would otherwise benefit from distance education.

References

Barrett, E., & Lally, V. (199). Gender differences in an on-line learning environment. *Journal of Computer Assisted Learning*, 15, 48-60.

Blum, K.D. (1999). Gender differences in asynchronous learning in higher education: Learning styles, participation barriers and communication patterns. [Electronic Version], *Journal of Asynchronous Learning Networks*, 4(1), 1-25.

Brosnan, M. (1998). *Technophobia: The psychological impact of information technology*. London: Rutledge Publisher.

Canada, K., & Brusca, F. (1991). The technological gender gap: Evidence and recommendations for educators and computer-based instruction designers. *Educational Technology Research and Development*, 39(2), 43-51.

Care, W.D.,& Udod, S.A. (2000). Women in distance education: Overcoming barriers to Learning. *New Horizons in Adult Education*, 14(2), 4-12.

Carlson, S. (2001). Distance education is harder on women than on men, study finds. *Chronicle of Higher Learning*, 48(5), A48.

Carnevale, D. (2002). Distance education attracts older women who have families and jobs, study finds. *Chronicle of Higher Learning*, 49(11), A33.

Furst-Bowe, J., & Dittman, W. (2001). Identifying the needs of adult women in distance learning programs. *International Journal of Instructional Media*, 28(4), 405-413.

Levine, A., & Cureton, J. (1998). *When hope and fear collide: A portrait of today's college students*. San Francisco, CA: Jossey-Bass.

Lunneborg, P.W. (1994). *OU women: Undoing educational obstacles*. New York, NY: Cassel.

May, S. (1994). Women's experience as distance learners: Access and technology. *Journal of Distance Education*, 9(1), 81-98.

Proost, K., & Elen, J. (1997). Effects of gender on perceptions of and preferences for telematic learning environments. *Journal of Research on Computing in Education*, 29(4), 370-385.

Sadker, M. & Sadker, D. (1986). From grade school to graduate school. [Electronic Version] *Graduate School: The University of Colorado at Boulder Graduate Teacher Newsletter*, 2(3), 1.

Sullivan, P. (2001). Gender differences and the online classroom: Male and female college students evaluate their experiences. *Community College Journal of Research and Practice*, 25, 805-818.

U.S. Department of Education, National Center for Educational Statistics. (2002). *The condition of education 2002*. Washington, DC: U.S. Government Printing Office (NCES 2002-025).

Von Prümmer, C. (2000). *Women and distance education: Challenges and opportunities*. London: RoutledgeFalmer.