THE VALUE AND USEFULNESS OF INFORMATION TECHNOLOGY IN FAMILY AND CONSUMER SCIENCES EDUCATION AS PERCEIVED BY SECONDARY FACS TEACHERS

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This study addressed the value and usefulness of information technology in the Louisiana family and consumer science (FACS) education program. In this study, information technology includes technology such as computers, the Internet, laser discs, and video conferencing. A researcher-designed questionnaire was used to gather data from a random sample of secondary FACS teachers in Louisiana. FACS teachers value information technology, and information technology in program and instructional management is of moderate usefulness to FACS teachers. A low positive relationship exists between how teachers value information technology and the availability of computer technology at home and school. At least half of the FACS teachers have Internet connections. Though FACS teachers value the Internet and other types of information technology, the interrelatedness may yet to be realized. This may be evidenced by the low negative relationship between teachers' perceived value of information technology and whether the individual teacher's school is connected to the Internet.

Many changes have taken place in family and consumer science (FACS) education over the past decade, particularly in the area of information technology. This change is even more important for FACS and other vocational teachers since vocational course students are about twice as likely to use computers as academic students (Heaviside, et al., 1992). How valuable and useful is information technology in family and consumer sciences education programs?

Pomeroy (1990) found that 50% of the vocational teachers in Southern Nevada were not computer literate and 62% of the computer literate vocational teachers indicated that they were self?taught. In addition, 71% indicated that they learned their computer skills after beginning to teach. Daulton (1997) reported that FACS teachers' adoption rate for computer technology had increased from 5% in 1983 to 83% in 1993. She concluded that, "Although the microcomputer had not reached a 100% adoption rate by 1993, the adoption of microcomputers for educational purposes by FACS teachers had dispelled the belief that microcomputers would eventually end in the closet like so many other pieces of audio-visual equipment" (p 59).

In a 1996 study of Idaho teachers, Mathews, Davis and Hamilton found that up to one-half of all teachers never actually used technology for any instructional purpose. Over half rated themselves as novices in all areas studied. In a national study of technology in the classroom conducted for the National Education Association (Princeton Research Associates, Inc., 1993), it was revealed that schools have been slow to replace outmoded technology. One in four teachers had used instructional laser discs/videodiscs, hypermedia/multimedia software, and CD-ROM discs. They also reported a lack of access to essential resources; only 16% had computers in the classroom and only 18% had access to computer networks.

Chin and Hortin (1994) found that

> numerous recent studies have shown that most teachers want to use the newest technology and to prepare their students for the world of technology outside of the school. Apparently, what teachers really need is more time to acquire the knowledge and understanding of technology, and to absorb what instructional technology can do for them. (p. 87).

McCaslin and Torres (1992) found that three factors accounted for over half of the variance in vocational teachers attitudes toward using microcomputers during in-service training: their educational value, confidence in their use, and apprehension about their use. Although no recent research has been conducted regarding the computer anxiety levels of family and consumer science teachers, related studies in agriscience education by Fletcher and Deeds (1994), and Kotrlik and Smith (1989) found that agriscience teachers' computer anxiety ranged from mild to severe with regard to the aspects of computer anxiety measured by Oetting's Computer Anxiety Scale (COMPASS). Teachers anxiety decreased as their computer skills increased.

Technology is a part of pre- and in-service teacher education. Pre-service teacher education has traditionally occurred at the university level, as has a substantial amount of the in-service teacher education. Torisky et al. (1997) described the multimedia technology needed to teach a basic nutrition course at the college level. Her classroom is equipped for presentation of lecture materials from computer, laserdisk player, TV/VCR, document camera, compact disk, or any combination of these features. Although universities often have technology that is much more advanced than the technology that exists in secondary schools, FACS teachers should be moving toward the use of these technologies in their instruction. Threlfall (1998) stated that students of fashion merchandising and clothing design must be prepared on state?of?the?art equipment. Although these are only two examples of how technology impacts FACS programs, it is evident that technology transcends all aspects of FACS programs.

Several studies have been conducted that addressed relationships between selected demographic variables and the use of information technology. Zidon and Miller (1990) found that weak relationships existed between demographic variables such as age, gender, and years of teaching with perceptions of computer use. They concluded that "such demographic variables need not be considered when planning in-service training or planning to include computers in a secondary agriculture curriculum" (p. 237). This opinion was not voiced by other authors and no evidence was found that this has ever been studied with regard to FACS teachers.

In a national study of technology in the classroom, a study for the National Education Association (Princeton Research Associates, Inc., 1993) found that almost two-thirds (59%) of teachers under 35 years of age believed computers in the classroom were essential, while only 29% of teachers over age 55 shared this belief. Half of the teachers in low technology schools had home computers. Low technology schools were those schools that had incorporated the least amount of information technology into their curriculum.

Mathews et al. (1996) found that college degree held was the best predictor of teachers' perceptions of their ability to use technology in preparation of instructional materials, with higher levels of technology use being reported by teachers with the Bachelor's degree than was reported by those with advanced degrees. Fletcher and Deeds (1994), and Kotrlik and Smith (1989) reported that younger teachers were more likely to have higher levels of computer literacy

and that computer anxiety decreased as computer literacy increased. No studies were found that documented a significant relationship between participation in professional conferences and conventions, and the value placed on information technology by teachers. In summary, no recent study had been conducted regarding how FACS teachers value information technology. This study was designed to answer this question for Louisiana's FACS teachers. The results will be useful in planning pre-service and in-service training programs for FACS teachers.

Purpose and Objectives

The purpose of this study was to determine the value of information technology in Family and Consumer Science Education programs as perceived by Family and Consumer Science (FACS) teachers. The objectives were to determine: (a) teachers' demographic characteristics (degrees held, age, gender, ethnicity, years teaching experience, area where school is located [rural, urban or suburban], school level [high school, junior/middle school, or both], participation in professional associations); (b) the value of information technology as perceived by teachers; (c) teachers' perceptions of the potential usefulness of information technology in program and instructional management; and (d) if relationships exist between selected variables and the value placed on information technology by teachers.

Procedures

The population for this study included all 589 secondary (grades 7-12) FACS teachers in Louisiana during the 1997-1998 school year. This study was part of a larger study of secondary vocational teachers in which a stratified random sample was taken of each distinct vocational teacher population. The minimum returned sample size for the FACS teacher population was determined to be 133 using Cochran's sample size formula (Cochran, 1977). The sample size used for the FACS teacher group was 264 teachers because a 50 percent response rate was anticipated. After two mailings and a phone follow-up, responses were received from 141 teachers (53.4% response rate). Of these responses, five were not usable.

The instrument was developed based on the study's objectives. The scales and items used in the instrument were selected after a review of the literature. The face and content validity was evaluated by an expert panel of university vocational education faculty and doctoral level graduate assistants. As a part of the larger study, the instrument was field tested with 40 vocational teachers. Eight of these teachers were FACS teachers who had not been selected in the sample for the study. Minor changes suggested by the validation panel and from the field test results were made. These changes occurred in the wording of items and in the instructions for completing the instrument. Cronbach's (1977) internal consistency coefficient for the "Value of Information Technology in Instruction" scale was .89 and the coefficient for the "Usefulness of Information Technology in Program and Instructional Management" scale was .91.

To determine if the sample was representative of the population and to control for non-response error, the scale means for the two primary scales were considered to be the primary variables in the study and the scale means were compared by response mode (mail versus phone) as recommended by Borg (1987) and Miller and Smith (1983). There were no statistically significant differences between the means for the two scales in the instrument by response mode. It was concluded that no differences existed by response mode and the data were representative of the population. The mail and phone responses were combined for further analyses. Data analyses consisted of descriptive statistics for objectives 1 - 3 and appropriate

correlation coefficients for objective 4 (based on variable type). The alpha level for the study was set a priori at .05.

Findings

Objective one was to determine the demographic characteristics of secondary FACS teachers. When teachers were asked about their level of education, almost half (45.6%) reported they possessed a bachelor's degree, 27.9% had a master's degree, 25.7% had a master's + 30 hours or the education specialist certificate, and 0.7% had doctoral degrees. All (100%) were female. Most of the teachers were white (74.3%), while 22.1% were black. Their average age was 45.0 years (range= 23-60, mode=50) and the average years teaching was 18.1. Most (46.3%) taught in rural areas, 23.5% in urban areas, and 25.7% in suburban areas. Most (65.4%) taught at the high school level, 21.3% taught at the junior/middle school level, 10.3% taught at both the high school and junior/middle school level, and 2.2% taught at other levels. Less than half (44.8%) had attended the state vocational in-service conference convention at least once in the past three years while only 15.4% had attended a regional or national vocational association convention in the past three years. Over half (57.4%) of the teachers' schools were connected to the Internet.

Objective two was to determine the value of information technology as perceived by Louisiana's FACS teachers. The respondents rated each statement on the following scale: 1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, and 5 = strongly agree. The data revealed that FACS teachers placed a high value on information technology by strongly agreeing (M = 4.5) that teachers should know how to use computers and that teachers should have computers available for instruction. The respondents agreed (M =3.5-4.49) that all of the technology listed should be available and also agreed (M =3.5-4.49) with all of the positive worded statements regarding the value of information technology in the instructional program. They were undecided (M =2.5-3.49) as to whether information technology is too expensive to be cost effective, and disagreed (M =1.5-2.49) with all of the other negatively stated value statements. These data are presented in Table 1.

Table 1
Value of Information Technology as Perceived by Louisiana Family and Consumer Sciences Teachers

Value of Information Technology	M	SD
Teachers should know how to use computers.	4.59	.80
Teachers should know how to use the Internet.	4.33	.93
Programs should have the following technology available for use in instruction computers for teachers	4.64	.80
computers for students	4.48	.85
multimedia computers for teachers	4.35	.90
Internet connections for teachers	4.34	.92
multimedia computers for students	4.14	.90
Internet connections for students	3.96	1.03
video conferencing capability for teachers	3.88	1.01
laser disc players for teachers	3.78	1.09
satellite downlink capability for teachers	3.73	.97

compressed video capability for teachers	3.58	1.00
laser disc players for students	3.56	1.05
Information Technology helps individuals apply knowledge.	4.49	.74
adds interest in instruction	4.40	.74
is essential to prepare students for the workplace	4.38	.92
can improve the quality of programs	4.38	.78
is a useful instructional tool	4.37	.80
can improve teacher effectiveness	4.31	.77
is necessary for the success of students in the workplace	4.28	.91
enhances student learning	4.19	.85
allows teachers flexibility in planning their instruction	4.13	.78
encourages teacher innovation	4.13	.77
is important in instruction	4.10	.85
promotes self-directed learning	4.02	.80
is too expensive to be cost effective	2.61	.97
will limit student-teacher interaction	2.32	.98
makes learning too mechanical	2.30	.89
will isolate teachers from one another	2.22	1.02
creates problems for the teacher	2.22	.91
has an adverse effect on teachers	2.14	1.05
causes more problems than it solves	2.13	.90
has little value in vocational education	1.72	.93

Note. N for the study was 136; all items had at least two missing responses although all 136 respondents completed most of the questionnaire; therefore, the N for each item ranged from 132 to 134. The respondents rated each statement on the following scale: 1=strongly disagree, 2=disagree, 3=undecided, 4=agree, and 5=strongly agree. The negatively stated items were interspersed throughout the scale.

Objective three was to determine Louisiana FACS teachers' perceptions of the potential usefulness of information technology in program and instructional management. The respondents rated each statement on the following scale: 1 = not useful, 2 = low usefulness, 3 = undecided, 4 = moderately useful, and 5 = highly useful. The data revealed that FACS teachers perceived that information technology was moderately useful (M =3.5-4.49) in each of the ten program and instructional management areas listed in the scale (Table 2).

Table 2
Usefulness of Information Technology in Program and Instructional Management as Reported by Louisiana Family and Consumer Sciences Teachers

Usefulness of Information Technology	M	SD	n
Instructional Management (Grade Reports, Student Records)	4.38	.81	132
Instructional Planning (Lesson/Unit/Curriculum Planning)	4.27	.78	132
Instructional Evaluation (Testing, Assessment)	4.24	.84	131
Program Planning, Development and Evaluation (Examples: youth organization activities, program reports, budget, equipment/maintenance, long-range planning, funding requests, fund raising, instructional material, equipment	4.24	.83	124

purchases, etc.)			
Student Guidance and Career Development	4.14	.79	131
Professional Role and Professional Development	4.11	.87	132
Student Vocational Organizations	4.05	.86	130
Instructional Execution (Presentation of Instruction)	4.03	.85	130
Coordination of Cooperative Programs	4.01	.87	132
School Community Relations (Public Relations)	3.97	.86	132

Note. The respondents rated each statement on the following scale: 1=not useful, 2=low usefulness, 3=undecided, 4=moderately useful, and 5=highly useful.

Objective four sought to determine if relationships existed between selected variables and the value placed on information technology by Louisiana's FACS teachers. The data in Table 3 show that one variable (availability of computer technology at home and school) had a low positive relationship and one variable (whether the school was connected to the Internet) had a low negative relationship with the value of information technology.

Table 3
Relationships between Perceived Value of Information Technology and Selected Variables

Variable	Corr.	Interpretation[a]
Availability of computer technology at school and home[b]	.14	Low
Teaches at both junior/middle and senior high school level (0=no, 1=yes)[c]	.02	Negligible
Whether school is connected to the Internet (0=no, 1=yes)[c]	-.10	Low
Numbers of regional or national AVA Conventions attended during past three years[b]	.07	Negligible
Teaches at the junior/middle school level only (0=no, 1=yes)[c]	.03	Negligible
Degree held (1=bachelor's, 2=master's, 3=above master's)[e]	-.08	Negligible
Number of state vocational conferences attended during past three years[de]	.04	Negligible
Age[b]	-.08	Negligible
Years teaching experience[b]	.01	Negligible
Teaches at high school level only (0=no, 1=yes)[c]	-.06	Negligible

Note: The scale used for the value of information technology is shown in Table 1. n=131.[a]Correlation coefficients interpreted according to Davis (1971): .01-.09=negligible association, .10-.29=low association, .30-.49=moderate association, .50-.69=substantial association, .70 or higher=very strong association. [b]Pearson Product Moment Correlation Coefficient. [c]Point Biserial Correlation Coefficient. [d]Respondents received one point for each source of training and an additional point if training was received within the last three years. [e]Spearman Correlation Coefficient *p<.05

Conclusions, Recommendations and Implications

Conclusions

Louisiana's FACS teachers value information technology. Information technology in program and instructional management is of moderate usefulness to FACS teachers. A low positive relationship exists between how teachers' value information technology and the availability of computer technology at home and school. At least half of the FACS teachers have

Internet connections. Though FACS teachers value the Internet and other types of information technology, the interrelatedness may yet to be realized. This may be evidenced by the low negative relationship between the teacher's perceived value of information technology and whether the teacher's school is connected to the Internet.

Recommendations

Since low or negligible correlations existed between teachers' perceived value of information technology and the demographic variables selected for this study (age, degree held, years experience, school level assignment, professional conference participation), it appears that universities and other teacher preparation entities do not need to incorporate these demographic variables into decisions regarding the planning of information technology training. Further investigation of teachers' perceived value of information technology is recommended. Even though the relationship was low, further research that addresses the low negative correlation between teachers' perceived value of information technology and whether they are connected to the Internet is warranted. Although teachers value information technology, this study did not address their information technology skills levels. Further research is needed to determine these levels and how these levels impact the quality of FACS programs.

Implications

This study documents the fact that FACS teachers value information technology. FACS programs must prepare students for the workplace and society, both now and in the future. Teachers must continue to value information technology and seek ways to connect program and instructional management with appropriate information technology, especially the Internet. This is essential if they are to be successful in its use and transfer to their students. Certainly, this information technology foundation is a necessity for all teachers and students.

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COMPUTER USAGE IN FAMILY AND CONSUMER SCIENCES CLASSROOMS

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This study examined New Mexico Family and Consumer Sciences (FCS) teachers' use of computers in their classrooms. A survey instrument was developed and mailed to all New Mexico FCS teachers. Data analyses included descriptive measures, correlation coefficients, and nonparametric procedures. The majority of respondents had one computer in their classrooms. Few had classroom Internet access. Teachers did not regularly incorporate computers into their curricula. The majority used home computers regularly. Most teachers used computers professionally outside of class. The principle barriers to classroom usage were the lack of software and hardware. The teachers desired more computer training. Frequency of teachers' classroom computer usage was significantly related to hours of training, availability of classroom computers, and level of education. Implications for Family and Consumer Sciences educators included the importance of incorporating computer training in college methods courses and the necessity of cultivating alternative means for the acquisition of computer technology.

Since the advent of the personal computer, the United States has been in the midst of a computer revolution. In 1964, computers were considered a curiosity and only large companies could afford them (Juliussen & Petska-Juliussen, 1994). Schofield (1995) noted that recent changes in computer technology have been dramatic in both their magnitude and speed. Lepper (1985) drew a parallel between the computer and the automobile to illustrate this rapid development. He stated:

> Had improvements in efficiency and reductions in the cost of automobiles followed patterns similar to the computer industry, each of us would be able to buy a Rolls-Royce today for roughly $2.75; it would get nearly 3,000,000 miles to the gallon and deliver enough power to tow an aircraft carrier. Many in the computer industry predict that the computer is, at most, at the half-way point in its impact on our world (Juliussen & Petska-Juliussen, 1994). It is expected that the use of computers will continue to grow and expand in businesses, homes, and schools.

United States Department of Education personnel have established a goal of having one computer for every five students in American schools (Henry, 1997). Currently, the average ratio is one computer for every seven students. Ten years ago, there was only one computer for every 25 students (Henry, 1997). The current federal administration has also made computer integration into classrooms a main focus. Specifically, President Clinton has made a pledge to place every student on the 'information highway' (Barr, 1997).

Similarly, since 1994, New Mexico education technology policy has mandated computer competency for all students. In February 1997, the New Mexico State Department of Education

received a Technology Literacy Challenge Fund grant to equip classrooms with computers, link schools to the Internet, and train teachers in new information technologies (Barr, 1997).

Several surveys were done to ascertain the amounts and types of technology available in schools (Global Strategy Group, Inc., 1997; Quality Education Data, 1997a, 1997b; U.S. Department of Education, 1996; Office of Technology Assessment, 1995). However, little data have been gathered directly from teachers regarding how they implement computer technology and what degree of computer access is afforded individual classrooms. To get a more complete picture of what is done in the classroom, it is essential to poll teachers collectively and determine what is required to stimulate further utilization of this technology in the schools (Office of Technology Assessment, 1995). Though research has found that Family and Consumer Sciences teachers have positive attitudes towards the use of computers (Martin & Lundstrom, 1988; Mehlhoff, 1985; Pickard, 1983), research is lacking on ways they are incorporated into the classroom.

Purposes of the Study

Important goals of Family and Consumer Sciences (FCS) teachers are to prepare students for enriched home and family lives and to raise their ultimate earning power by preparing them to enter the work force. Computers play ever increasing and important roles in these arenas. In order to assist New Mexico FCS teachers in fulfilling classroom goals related to technology, it was necessary to obtain information about computer usage. The purposes of the study were to assess computer technology available in New Mexico FCS classrooms, the level of FCS teacher training in classroom computer usage, ways computers are currently incorporated into classrooms, perceived barriers to increased computer usage, and ways teachers utilize computers for their own professional use.

Literature Review

In a report, Teachers & Technology: Making the Connection, personnel in the Office of Technology Assessment (1995) stated, “Technology is a fact of American life” (p. 3). Microcomputer chips and boards are now found in all types of equipment ranging from microwave ovens, TVs, stereo systems, automobiles, cash registers, telephones, and toys, to military weapon systems (Juliussen & Petska-Juliussen, 1994). Technology exerts an influence on how we live, work, and play. This influence will continue to expand.

In 1997, it was estimated that 40 million adult Americans browsed the Internet with some regularity, about twice the number as one year earlier. By the end of 1997, that number had grown to more than 100 million users world-wide, including 62 million Americans. More than half (61%) of Americans access the Internet at least two or three times a week. ("Internet Traffic Growing Rapidly”, 1998; "Twenty-three Percent of Americans", 1998).

Computer Usage in Homes

One manifestation of the technology explosion in the United States is the increased number of computers found in homes. Goodnow (1998) found that in 1998, 40% of all American households had computers. It is expected that by the time today’s students become adults, they will use computers regularly to communicate with friends, relatives, and business associates. In the future, many people will use computers to plan vacations, shop for goods and services, balance their checkbooks, and even vote (Furger, 1998).

Bennett (1996) found students' experiences away from school are generally technology based; computers are an integral part of their lives. Playing with computer games can be beneficial since they help students develop an array of learning skills such as focusing, concentration, and problem-solving (Brzowsky, 1998). Additionally, chatting, sending e-mail, and posting messages on electronic bulletin boards can help students improve valuable communication skills and articulate their opinions on many issues (Furger, 1998).

Computer Usage in the Work Place

Computers change the way people work. It was projected that by the year 2000, 60% of all jobs would require high tech computer skills-the 'new basics' (Riley, 1998). Bennett (1996) has noted that the private sector demands a technologically-literate, skilled work force. He has stated the educational system in the United States is failing to prepare " ... graduates capable of succeeding in our rapidly changing, high-tech, information-oriented society" (Bennett, 1996, p.1). Goodnow (1998) has noted that having facility with computers is now a life skill.

Youngsters who are denied the opportunity to use technology will be limited in the future job market (Walker, 1997). As future workers in American society, today's students will require familiarity with computers and the Internet.

Computer Usage in Schools

Education has been changed by the introduction of computers into the classroom. Mehlhoff (1985) contended that computer literacy is as necessary as reading, writing, and mathematics. Roblyer, Castine, and King (1993) noted that children in our society will never know schools without computers.

Roblyer et al. (1993) found that computer usage has a positive impact on both the student's attitude toward school and his/her learning. Schofield (1995) found many positive changes when computers were introduced into the classroom. One was heightened interest and involvement of the students. Others included a shift in the role of the teacher from lecturer to coach or guide in the classroom.

Starr (1996) found student outcomes in language arts, math, social studies, and science were enhanced by using technology. Computers tend to better link students and teachers with information and resources. Computers allow students to combine resources and work in novel ways. Unger (1996) stated, "Perhaps the most important teaching tool ever developed, the computer is a multimedia instructional device with the potential of bringing the entire body of world knowledge into the classroom ... at the touch of a button" ... (p. 246). As well as supplying vast quantities of knowledge, computers have the potential to mentally transport students to any time or place in history (Unger, 1996). Technology can extend and enliven education (Starr, 1996). Education Secretary Riley (1998) stated computers offer the opportunity of a lifetime. Students living in a rural areas can experience the greatest museums and libraries around the world. A recent study by Global Strategy Group, Inc. (1997) found nearly 70% of the teachers and superintendents surveyed agreed that computers contribute to improving students' skills, especially in vocational and language arts programs.

One recent report from business and education leaders (Viadero, 1997) noted only 3% of U.S. schools are effectively integrating technology. The National Center for Education Statistics found only one out of five teachers uses a computer regularly for teaching (Henry, 1997).

Barriers to Computer Usage in Schools

Many barriers exist which reduce the effective usage of computers in the classroom, including costs, resistance to non-traditional methods and concepts of conducting school business, reluctance by administrators to allow teachers more control over their professional environment, and the fear that teachers will 'misuse' technologies (Office of Technology Assessment, 1995). Schofield (1995) found teachers often avoided computers because of inertia, anxiety about technology, or the belief that computers have little or nothing to offer to the current curriculum. Other constraints teachers face include the lack of tools, the virtual absence of computer and software training, and existing time demands on teachers (Office of Technology Assessment, 1995).

Computers are of little value if teachers cannot use them effectively (Riley, 1998). Charp (1998) cited lack of time to practice as the greatest barrier to effectively using the Internet as a teaching tool. Teachers need time to attend training and workshops, experiment with equipment, explore software, and plan lessons using computer technologies.

Research Design

Overview

This study examined the computer usage of New Mexico FCS teachers. The data collected included numbers and types of computers in FCS classrooms, utilization of computers at home, and frequency of Internet access in classrooms and at home. The respondents were asked how often, in what ways, and in which content areas computers were utilized. The survey examined the types of computer applications currently used and determined computer programming and software desires of the teachers. Respondents were also asked how computers were used professionally outside of class time. Both prior and desired computer training were examined. Barriers the teachers perceived as limiting the use of computers were also identified.

The relationships between the amount of classroom computer usage and teachers' ages, prior hours of computer training, and years of teaching FCS were examined. Differences in the percentage of time teachers used computers in their classrooms were examined when teachers were classified based on highest college degree earned, urban or rural location of the school, and access to a computer and the Internet both at home and in the classroom.

Sample

The population targeted in this study included all of the 267 New Mexico secondary FCS teachers who taught in grades 6 through 12 in the public schools in 1998.

Instrumentation

A survey instrument titled "Survey of New Mexico Family and Consumer Sciences Teachers' Use of Computers in the Classroom" was developed by the researchers. The questionnaire contained closed and opened-ended questions regarding computer issues and demographics.

Content validity of the survey instrument was determined using a panel of ten experts, including authorities in computer usage, educational methodology and curriculum, and adolescence. A pilot test of the instrument was conducted using 12 FCS teachers from the El Paso School District in Texas.

The pilot test respondents were asked to complete the instrument, make comments that would improve the questions, and indicate how long it took to complete the questionnaire. In

order to determine the reliability of the questionnaire, another survey was mailed in two weeks to the pilot test teachers. After getting the test-retest results, reliability of the questionnaire was determined in consultation with a statistician by a visual comparison of the responses of the teachers on the first survey with their responses on the second survey. Based on this assessment, one question was reformatted.

Data Collection

The "Survey of New Mexico Family and Consumer Sciences Teachers' Use of Computers in the Classroom" was mailed in April 1998 to 267 New Mexico FCS teachers at their school addresses. The first mailing included a cover letter, the survey instrument, and a postage-paid return envelope. After 11 days, postcard reminders were mailed to all non-respondents. One week later, a second survey instrument, along with another cover letter and postage-paid return envelope, were mailed out to each non-respondent.

A total of 196 surveys were completed and returned, for a 73% response rate. To control for non-response error, three of the non-respondents were selected and contacted by telephone. The responses of these three teachers, which were similar to the other respondents, were added to the 196 respondents leading to a final respondent pool of 199 or a 75% response rate.

Analysis of Data

Descriptive statistical measures such as frequencies and percentages were calculated in addition to Spearman's rank correlation coefficient and Wilcoxon Scores (rank sums).

Findings of the Study

Almost three fourths (74%) of the teachers had at least one computer in their classrooms. The majority were older computers lacking the capacity to run current CD-ROM programs or connect to the Internet. More than three fourths (78%) of the teachers had computers at home. A vast majority (87%) of the teachers having computers at home used them at least once a week. Slightly more than half (56%) of the teachers reported having access to the Internet at home, and three fourths (79%) of them accessed the Internet at least weekly.

Less than one fourth (22%) of the teachers reported having Internet access in their classrooms; however, many indicated access was available at other locations in the school. Just over one fourth (27%) reported using the Internet as part of their classroom teaching at least monthly. Almost half (49%) of the teachers reported they never used the Internet in teaching. Lacking an Internet connection was cited as the prime reason for not using it. Teachers reported sending students to other school locations in order to use Internet resources or assigning projects for them to do at home.

The vast majority of the teachers (71%) used computers in their classroom teaching less than 13% of the time. Another 13% of the teachers used computers from 13-25% of the time in classes.

Data in Table 1 indicate that assigning word processed papers was the most frequent classroom usage of computers. Other frequently noted classroom uses were utilizing Internet resources (33%), conducting research (28%), and facilitating Family, Career, and Community Leaders of America (FCCLA) activities (22%).

Table 1
Ways Computers are Used in Family and Consumer Sciences Classrooms

Way used	N	%
Assigning work processed papers	82	41.2
Internet resources	65	32.7
Assigning research on the computer	56	28.1
Students preparing FHA/HERO materials	43	21.6
Educational games	34	17.1
Students preparing lesson materials	33	16.6
Assigning computer-generated presentations	31	15.6
Simulaton activities	30	15.1
Individualized learning packets/activities	30	15.1
Other	24	12.2
Demonstration	18	9.0
Drill and Practice	17	8.5

The most frequent FCS content areas in which teachers reported using computers are presented in Table 2. Foods and nutrition and child care and development topped the list.

Table 2
Content Areas in Which Family and Consumer Sciences Teachers Most Frequently Use Computers in Their Classrooms

Content Areas	N	%
Food and nutrition	73	57.0
Child care and development	40	31.3
Careers	16	12.5
Fashion/clothing, sewing and textiles	11	8.6
Life skills/independent living	11	8.6
Consumer economics/education	10	7.8

Word processing programs were the most common types of programs mentioned (75%) as being used. Graphics programs (14%) and Internet search tools (8%) were also used in FCS classrooms. Many teachers were unaware of the programs available for FCS. The most frequent requests for types of software were for programs on nutrition (39%), child care and development (20%), and diet analysis (18%).

An overwhelming majority of the teachers (96%) used computers for professional activities outside of class time. As noted in Table 3, the types of activities for which the teachers used computers most were preparing tests (84%), preparing assignments or lesson materials (78%), preparing curriculum (73%), and grade keeping (64%).

Table 3
Family and Consumer Sciences Teachers Professional Use of Computers Outside of Class Time

Ways Computers are Used	N	%
Preparing tests	167	83.9
Preparing student assignments/lesson materials	155	77.9
Preparing curriculum (units and lesson plans)	145	72.9
Grade keeping	127	63.8
Preparing classroom presentations	108	54.3
Research on a specific subject matter	92	46.2
Professional development	89	44.7
Preparing newsletters	75	37.7
Grant proposal writing	54	27.1
Other	29	14.6
Do not use at all	8	4.0

While some teachers had received extensive computer training, many had experienced little or no training during the past five years. Half of the teachers (54%) reported having received ten hours or less of training in that period of time. Many indicated they would like additional training in the use of computers, especially in the classroom setting. Almost three fourths of the respondents (73%) requested training to enhance their teaching of FCS.

Every respondent identified at least one barrier that limited her use of computers. As noted in Table 4, the predominant barrier respondents noted was a lack of software to use in teaching (75%). Other barriers were a lack of hardware (64%) and a lack of time (55%). They specifically mentioned needing time allocated to learn to use both the hardware and software as well as to prepare lesson plans to allow for student computer usage.

Table 4
Barriers Family and Consumer Sciences Teachers Perceive as Limiting Their Use of Computers in their Classrooms

Barriers that Limit Computer Usage	N	%
Lack of software	150	75.4
Lack of hardware	128	64.3
Lack of time	110	55.3
Lack of training in specific software	94	47.2
Lack of training in specific hardware	80	40.2
Lack of information on content of programs	76	38.2
Other	46	23.1
Lack of administrative support	40	20.1
Fear of using computers	15	7.5
No desire to utilize computers	6	3.0

There were no significant relationships between the frequency with which New Mexico FCS teachers incorporated computers into their classroom teaching and their age or years of

teaching. There was a significant relationship, however, between the frequency with which New Mexico FCS teachers incorporated computers into their classroom teaching and the number of hours of computer training they had received in the past five years. The more hours of training a teacher had received, the more likely she was to use the computer in her teaching.

No significant differences were found in the frequency with which computers were incorporated into New Mexico FCS classroom teaching when teachers were classified by rural versus urban school locations, access to a computer and/or the Internet at home, and access to the Internet in the classroom.

Significant differences were found in the frequency of computer usage when teachers were classified by highest college degree earned and access to a computer in the classroom. Teachers with Masters or doctoral degrees were more likely to utilize computers in teaching than those with Bachelors degrees. There was a greater likelihood that those having computers used them in teaching.

Conclusions and Implications

Before teachers can fully integrate computer activities into their classroom teaching, they need the hardware that enables them to do so. State and local administrators, as well as teachers, need to be proactive in the pursuit of technology for the classroom. Administrators should equitably distribute computer resources and ensure that all teachers have comparable access to available technology. Teachers need to actively pursue alternative means of funding, such as grants through corporate sponsorship and advisory council contacts, to procure classroom technology. Teachers of FCS need to make their technology needs known to their respective administrators. State administrators should guide the efforts of teachers in their quest for up-to-date computer technology.

National surveys have found that 40% of American households have computers (Goodnow, 1998). New Mexico FCS teachers are far above that average with 78% having computer access at home. Of the teachers in this study having computers at home, 87% used them at least weekly. Responses from these teachers indicated that 58% of them used the Internet at home two to three times a week. These findings indicate a familiarity with and willingness on the part of most New Mexico FCS teachers to use computer technology. It appears logical to conclude that given equipment and facilities, many of these teachers will make use of computer technology in their teaching.

The current emphasis from the U.S. Department of Education is to have Internet access for each classroom (Riley, 1998). Nationally, 27% of classrooms are connected to the Internet (Riley, 1998), but according to this survey, only 22% of New Mexico FCS teachers have classroom access. While many teachers reported Internet access located somewhere else in the school, use was not easily scheduled. Teachers are ready and willing to utilize the Internet in their teaching activities, but they lack the hardware allowing them to readily do so.

Even without Internet access in their classrooms, many New Mexico FCS teachers are incorporating the Internet into their teaching. It is expected that more teachers will utilize this technology as it becomes more readily accessible to them in their classrooms. For those teachers not able to connect computers directly to the Internet in their classrooms, administrators need to ensure that computer lab facilities allow for sufficient Internet access for both teachers and students.

Teachers should look to the businesses in their communities for additional support. Businesses will eventually hire graduates of high school programs and could be brought on board

as partners with the schools to provide funding and other technology resources. This would assist teachers in preparing students as future employees within the local economy and national or international communities.

Teachers must teach the technological skills students will need to compete for and succeed in FCS careers. It is vital that teachers communicate on a regular basis with members of their advisory committees to explore emerging technologies and business needs.

Teacher educators at the university level need to ensure that all teachers receive training in the use of computers, a basic teaching skill. Teacher educators in FCS at the university level should also incorporate teaching with computers into the methods classes students take during their teacher preparation. Secondary teachers currently using computers could be asked to make presentations in the college classroom. In light of the large percentage of teachers using computers professionally outside of class time, future teachers also need the computer skills to adequately perform many necessary professional duties.

Responses indicated that most New Mexico Family and Consumer Sciences teachers would welcome further computer training. A majority of the teachers would like a course or courses dealing with the employment of computers in teaching. Almost three fourths would like that course to be tailored towards teaching Family and Consumer Sciences. Teachers need to be informed of resources and methods of incorporating computers through workshops, bulletins, and newsletters. State vocational directors and other organization leaders need to plan workshops on using computers in the classroom.

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THE SOCIALIZATION PROCESS OF NEW COLLEGE FACULTY IN FAMILY AND CONSUMER SCIENCES TEACHER EDUCATION

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This study examined the socialization experiences of ten new Family and Consumer Sciences (FCS) teacher educators in four-year college institutions in nine states elicited through 60- to 90-minute, tape-recorded interviews conducted either by telephone or in person. Data were analyzed using the constant comparative method. All participants believed their experiences in secondary teaching provided the foundation for their careers and formed the basis for their career decision of being a teacher educator. Participants believed graduate school professors provided the role modeling crucial in preparing them for their future career. Challenging, relevant coursework and opportunities for a variety of professional experiences during graduate school prepared most participants well for their faculty roles. Other participants believed their transition to a faculty role was an overwhelming and unhappy experience. All respondents reported their second year to be more positive than their first year and made recommendations for improving the socialization process of new FCS teacher educators.

Implications for teacher education programs include examining graduate program coursework for relevance and application and including opportunities for increased responsibility in professional experiences related to teaching, research, and service. Graduate students without mentors in the profession should be matched with prominent mentors from other institutions to enhance their professional success. Department chairs should reduce the teaching, advising, and service loads for new faculty during their first year. Administrators should provide detailed, written information regarding workload, performance expectations, evaluation, promotion and tenure, and should organize meetings for new faculty to discuss with them this information.

The field of Family and Consumer Sciences Education (FCSE) has not experienced much faculty turnover or attrition in the last twenty years. However, this situation may soon change as increasing numbers of professors leave their careers for retirement (Kellett & Beard, 1991). In order to retain current FCSE faculty or hire replacements for retiring FCSE faculty, Family and Consumer Sciences (FCS) departments must face the challenge of finding ways to engage the talent and enthusiasm of new faculty while supporting them through the period of orientation and socialization into the academic culture of the university.

Student recruitment is one of the many important tasks FCS teacher educators are being asked to manage (Gritzmacher, 1997). Low student enrollments in teacher education programs jeopardize the existence of programs. The national directory of the family and consumer sciences division of the association for career and technical education (Kreutzer, 1999) provides information regarding the total number of graduates in undergraduate and graduate programs of colleges and universities. The numbers of graduates in recent years have been decreasing, with many institutions showing one or none in the 1998-99 school year. It is imperative that teacher

educators are able to fulfill their commitment to teaching, research, and service and have the time and resources for successful recruitment of new students (Gritzmacher, 1997). This responsibility adds stress to the already stressful "publish or perish" environment of new FCSE faculty members in research universities who are trying to "learn the ropes" in departments where they are often the only faculty member in FCSE.

Related Literature

The pre-tenure years for new college faculty include a period of organizational socialization during which faculty adjust to the expectations of their new roles. Depending on what happens during the socialization period of new faculty, they may adapt very successfully to their new environments, becoming effective organizational members. However, they may also adapt poorly and become cynical, adopting values, attitudes, and behaviors at odds with the organization culture (Baum, 1990).

Socialization or "learning the ropes" of being a college faculty member can be exhilarating, but it can also be highly stressful (Mezei, 1994). New college faculty often describe their socialization experience as a painful and difficult process because they struggled with unclear performance expectations (Boice, 1992). They face the challenges of teaching under-prepared, ethnically diverse, and nontraditional students (Roueche & Roueche, 1993); they sometimes work in isolation from potentially helpful peers (Boice, 1992); and they usually find full-time college teaching to be more demanding than they anticipated (Sorcinelli, 1988).

The socialization process is generally experienced in three phases over a period of several years: (a) the anticipatory socialization phase, which includes special training and preparation for the new career, developing personal expectations of their new career, and acquiring their first position (Wanous, 1991); (b) the entry and induction phase, where the newcomer confronts the differences between their expectations and the actual role that exists, compares the new position to their previous position, and learns the new role (Corcoran & Clark, 1984); and (c) the continuing socialization and career development phase, which occurs as the newcomer masters skills, adjusts to the new job and new colleagues, and begins to feel like an "insider" (Corcoran & Clark, 1984).

The literature on the socialization process of new and beginning college faculty tends to be based on new faculty who may or may not have had teacher education and who may have come straight from graduate school to teach in a university setting with no prior teaching experience at all. What about new FCS teacher educators? What is the socialization process like for them?

Purpose of the Study

Research is needed to understand the socialization process of new faculty in FCS education in order to provide better preparation for and smoother transition to their new positions. Historically in FCS education, teacher educators have not been a primary focus of research (Chadderdon & Fanslow, 1996; Nelson, 1982). This lack of research on teacher educators was evident in the Review and Synthesis of Research in Home Economics Education (Redick & Gritzmacher, 1986); however, the importance of teacher educators is not disputed. The satisfaction and support teacher educators feel regarding their work affects their interaction with and preparation of pre-service teachers, which in turn affects future programs and students.

The purpose of this study was to examine the socialization process into college teaching experience of tenure-track FCS teacher educators in four-year institutions. Included in the study

were their interpretations of career preparation, the first job, the first year of socialization, continuing socialization and career development, and their recommendations for improving the socialization process. Critical issues addressed in this research project were focused around the following research questions:

1. What were the socialization experiences of FCS teacher educators who began their college teaching careers after 1990?
2. How were the socialization experiences similar and different among new college faculty members in FCS education?
3. How did the tenure-track FCS teacher educators' socialization experiences relate to aspects of organizational socialization theory?

If new faculty in FCSE experience a smooth socialization into college teaching, they may feel a higher level of satisfaction with their career decisions, which could result in increased productivity in terms of recruiting, retaining, and certifying quality teachers, service to the community and the profession, and informed research to support FCS professionals in the field.

Method

Selection of Participants

In May of 1998, requests for the names of new teacher educators since 1990 were sent to the supervisors of FCS education in departments of education in each of the 50 states. Responses were received from 22 states, resulting in 25 names of possible participants. In June, 1998, follow-up letters were sent to the 28 state supervisors who had not responded. Seven additional responses were received with the names of three more possible participants. Finally, the major institutions of the states from which responses had not been received were contacted by phone to request names of new FCS teacher educators. As a result of the phone calls, the names of 15 additional new teacher educators were received. This brought the total number of state responding to 44, with 43 possible participants for the study.

In September of 1998, letters of invitation for participation and forms requesting demographic information were sent to the 43 possible participants. Follow-up letters were sent to non-respondents after three weeks. Of the 34 responses received, 24 indicated willingness to participate. The 24 willing participants were screened based on the following criteria: holds a doctoral degree; began a college tenure-track position later than 1990; is a full-time, non-tenured faculty member; has taught at least one full academic year; and is teaching at least one education course in FCS. Fourteen of the 24 respondents who were willing to participate were eliminated from the study as they did not meet the selection criteria. The final sample consisted of ten female respondents.

Pilot Study

A pilot study was conducted with two new faculty members who fit the profile. One faculty member was in education foundations and one was in FCSE . One interview was conducted on the telephone and one was conducted in person. Each interview lasted approximately 60 to 90 minutes. Revisions were made to the interview instrument and process as suggested by the pilot study participants.

Data Collection

This study utilized the phenomenological approach, in which human experiences are examined through the detailed descriptions of the people being studied (Moustakas, 1994). A qualitative methodology was chosen because it seemed best suited for encouraging faculty to "tell their stories," reflect on and describe their experiences, and explore their perceptions of their socialization into full-time college teaching.

The final interview instrument consisted of 49 open-ended questions which were designed around six topics or phases related to the new college professor's journey: participant information, career preparation, the first job, the first year of socialization, continuing socialization and career development, and respondents' recommendations. The instrument was designed as a result of the major topics and themes generated from an extensive review of the literature on college faculty socialization.

The participants were given the choice of being interviewed by telephone or in person at the upcoming annual meeting of the Association for Career and Technical Education (ACTE) in New Orleans. Five interviews were conducted in person at either the researcher's or the participant's hotel room at the ACTE meeting, and five were conducted by telephone from the researcher's residence to either the personal residences or the university offices of the participants. A late program change at the meeting in New Orleans caused one personal interview to be cancelled. It was conducted the next week as a telephone interview.

Analysis of Data

The audio-taped interviews were transcribed into working copies for the researcher. The authenticity of the transcripts was verified by the researcher who listened to random selections. As each transcription was read, code words were developed by the researcher to identify key ideas and concepts being expressed by the respondent. The data was continually contrasted, compared, and then classified into a taxonomy of themes using the categories which had been identified by the researcher (Miles & Huberman, 1984).

Findings and Discussion

The typical FCS teacher educator who participated in this study can be characterized as a white females in her mid-40s. She had eight to ten years of secondary teaching experience and less than five years of non tenure-track college teaching or other experience in higher education. She typically received her doctorate in a Research I institution in the eastern region of the United States. In her first position she was the only FCS teacher educator in a research or doctoral institution in the central region of the country. At the time of the interview, the typical FCS teacher educator was in her fourth year of tenure-track college teaching and taught education classes in both undergraduate and graduate programs in a department of FCS, as well as courses in other content areas.

Having a background that included secondary teaching experience played an important role in shaping the belief system of new FCS teacher educators; however, most of the respondents believed they had not been adequately prepared for their job as an FCS teacher in a secondary school. They believed society's impact on families has changed the way teachers should teach, but they also believed teaching at the secondary level provided a foundation for their careers and formed the basis for their future career decision of being a teacher educator.

A description of the socialization experiences of new FCS teacher educators highlighting similarities and differences among new college faculty follows. The discussion includes related

organization socialization theory to help in the interpretation of the findings. The interview data resulted in findings categorized as themes related to career preparation, the first tenure-track position, socialization during the first year, continuing socialization and career development, and recommendations for improving the socialization process.

Career Preparation

The majority of respondents remarked about the relevancy and challenge their graduate coursework provided Their comments were consistent with Wanous' (1980) theory which identified training skills as a socialization tactic during anticipatory socialization. One respondent in particular mentioned graduate courses that focused on curriculum change and reform, which she viewed as a strength her preparation as a teacher educator because she now knows "the bigger questions to ask." Another respondent mentioned lesson planning and evaluation courses as providing her with the training skills she would need for her career. Yet another described the opportunities her coursework provided for application of learning. One respondent described a common feeling among this group of beginning college faculty that some courses were valuable, while others were not.

> I think I had particular courses that I really enjoyed, some I did not. Some I will still be figuring out the rest of my life… because they were so challenging….Some of them were drawbacks and… some courses were not challenging to me….I wish I had pursued some particular content areas more so, where now I feel gaps and wish I had that information and don't really have time at this point to go take another course.

Louis, Posner, and Powell (1983) found that graduate school was a primary source of anticipatory socialization for faculty members. Fisher (1986) believed organization newcomers developed personal expectations of their careers during the anticipatory socialization phase of socialization. All ten respondents referred to their professors as role models who made certain they "had the necessary experiences for our careers as teacher educators." Role models served as the base for the respondents to develop their expectations for their own careers. They felt their professors were strongly committed to mentoring and preparing the next generation. Even the respondent whose doctoral professor was losing her position because of elimination of the program believed she saw the whole picture of what it meant to be a teacher educator from her advisor's experiences. One respondent described her professors in the following way:

> I think I had the best. I wouldn't be here if it wasn't for many of them. And that is really what convinced me that this is what I wanted to do. And I had people that were strongly committed to mentoring and preparing the next generation….I was very fortunate that I had lots of people that knew how to do that.

The majority of respondents had opportunities to maximize their teacher educator training while in graduate school with experiences related to teaching, advising, supervising student teachers, conducting research, and publishing their work. The experiences of the respondents represented the elements valued by their institutions, elements that Boice (1992) found new faculty carried into their new institutions after graduate school. In fact, one

respondent actually felt she was "able to go to my first university position and hit the ground running with publication."

> I felt they helped us do [the writing and publishing]. We [wrote and published] as part of our graduate programs…. They helped me put together an agenda so that when I left I was already launched. I wasn't starting cold. I was able to go to my first university position and hit the ground running with publication. And I think that is such an obligation that we have. I am really committed to doing that for my own graduate students….

The First Job

Acquiring the first job is a major component of the anticipatory socialization phase. Personal expectations of careers are developed from messages and information received from a variety of sources (Fisher, 1986). In this study, respondents learned about their positions from announcements in their departments, higher education journals, and through their professional organizations.

In an interesting variation to the findings of a study by Gibbs, Gold, and Jenkins (1987), the respondents' expectations continued to form throughout the interview process and through any communication related to acquiring their first position. However, several of the respondents in this study found that the impressions they had formed during their interviews later turned out to be false, such as believing a specific faculty member had the most decision-making power, believing the collegiality of the faculty was better than it really was, or believing the program had a larger enrollment than it really did.

According to Tierney and Rhoads (1993), various cultures such as faculties, disciplines, individuals, and institutions affect the socialization process. This was found to be true with the respondents of this study. When respondents were asked what type of position they preferred, all but one had a preference for the faculty, such as FCS education, general education, textiles and clothing, or position, such as tenure or a non tenure-track, which they sought. Respondents also had preferences for a type of institution, knowing there was a different emphasis on work roles within various types of institutions. Another cultural aspect was the respondents' views of the quality of their programs. About one-half of the respondents believed the quality was high; the other one-half believed the quality of the program could be improved.

> What I'm concentrating on right now is trying to look for good students. I'm not interested in just students who are just trying to find some way to get out of college. I'm interested in looking at high quality teachers and I am taking these students although I only see them technically for two courses, I try to do a lot with them as far as technology is concerned. They are doing things like PowerPoint presentations….I'm looking for a good quality student who is a hard worker. I am pretty selective about what I'm looking for because I believe that is the only way we are going to improve the image of home economics in the secondary schools too.

Peer groups were described as invaluable and included various combinations of individuals, from new to senior to emeriti faculty, and from other departments as well as their own. They described commonalities with members of their peer groups, such as newness to

institution, students, research, personal interests, religion, and family types. This appears to align with Fisher's (1986) research, whch found that newcomers usually selected their own peer groups according to similarity of roles, perception of their expertise, and availability. This also supports the findings of Gibbs et al., (1987), who found that integration of newcomers seemed to occur faster when they held positions where their lifestyles were similar to those of the existing faculty. One respondent mentioned specifically that she interacted with members of her peer group on a daily basis, which is consistent with findings of Louis et al., (1983), who found that daily interaction with peers was the most helpful strategy for achieving feelings of effectiveness in newcomers.

> [The other new FCS faculty] are my peer group because we have this commonality being non-tenured and trying to figure out this process, and I feel like there is a sense of camaraderie in that. A sense of peer group has evolved since I've been here because over the last year my department chair has organized us into being kind of a support group and we meet regularly, once or twice a semester. Sometimes we have met for full days, sometimes we have met for lunch or whatever and [talk] about issues in relationship to becoming tenured, and talk about our [specific philosophical writings] and things like that.

Socialization During the First Year

The second phase of the socialization process is referred to as entry and induction (Corcoran & Clark, 1984), encounter (Van Maanen, 1975), initial entry (Tierney & Rhoads, 1993), and accommodation (Feldman, 1976). Feldman found that upon entering a new organization, the newcomers confront the differences between their expectations (which were formed in the anticipatory socialization phase) and the actual role that exists.

Louis (1980a) referred to the comparisons of various differences that are made in this stage as "sensemaking." The existing environment is an important component in this process. One respondent referred to the comparison of her new position with her old job as a secondary teacher in another region of the country as "reality shock." Louis (1980a) called it "culture shock" and labels this form of comparing old to new as "sensemaking of change."

Also in the entry phase, some respondents compared the differences in the faculty's approach to work and others compared differences in the faculty's approach to socializing. Louis called this "sensemaking of contrast." All the respondents revealed differences between their expectations of the job and the realities of the job, most of which were related to the demands and the intensity of the job. This is referred to as "surprise" (Louis, 1980a).

Respondents' entry into their new career and position was experienced primarily in two ways. Most respondents were overwhelmed with the numerous responsibilities of their positions and with the struggles to balance job responsibilities with family lives and/or personal lives. The impact of the job in these cases was severe, and in some cases the respondents felt they were at a point of breakdown and inability to function. However, some respondents seemed to react very differently to their new environment. Some found it similar to their previous level of workload as a graduate student and were able to manage with lots of adjustments in their attitude and time management. Others found their new position to be fairly easy, even to the point of calling it "a rest." Reynolds (1992) referred to these two types of experiences as the difference between socialization and acculturation. Socialization occurs when the newcomer's worldview is compatible with the new environment. Acculturation exists when one's worldview is extremely

different and the new experience is much more demanding. Those who are being acculturated are less likely to survive in the new environment. The acculturation experience of the participants in this study revealed descriptions of confusion, isolation, stress, and exhaustion. The following comments from various respondents illustrate the extreme differences in the way their new positions impacted their lives.

> I think it has taken me [three years] to figure out that it is okay to have an outside life, that I don't need to work on homework every night. Now that I have sort of figured out I don't dread it so much if I work in the evening or something like that. Whereas before I was just avoiding doing that because I felt like I was supposed to be doing it all the time. So now I kind of control what I bring home so that even if I don't work on it over the weekend I don't feel so guilty about it Monday morning….I think that part of being a faculty member right now and being really involved also means that it does become part of your overall life.

> It was not a whole lot of difference for me, the way I had been working before. We think that things might get different but responsibilities just shift and change…I still have a life. I mean, I will never not make room for my family but I do a lot of work at home and I do a lot of reading, I mean that just becomes my free time. Instead of watching television I am probably reading and writing an article. And that is the only way here with the teaching load that I could do what I've done…I was used to working that way and I have always been that kind of a student so it wasn't a whole lot different.

> [I felt] excitement…at teaching because this is the first time that I sort of felt security and I was going to get to teach in an area that I really wanted to be teaching in. [I felt] autonomous in a way because again, there is a little bit of security… sort of renewed—like a whole new phase of life...

> …you are inundated with everything under the sun…like insurance and your retirement plan. That in addition to the overwhelming feeling that you've got to get a syllabus together and getting your courses out there and what it is you are going to teach and how you are going to do it and figuring out who the contact people are that you want to use for resources and that kind of thing. My first year out was really pretty rough, just to figure out what all you needed to know….

> I think I went in a severe state of depression. I came home every night and I slept. I slept on the couch or I went to bed every night as soon as I got home from work. I was so depressed I couldn't stand it. I was so exhausted from trying to finish my dissertation and having that defense…I felt burned out when I got here. I was so tired all the time. I just felt like I was not functioning….I just think I was really truly at a breaking point before I got here. So I was very stressed out. I did not seek out help. I wish I would have.

One of the key elements of the entry and induction phase of socialization is the learning of new roles. Dirsmith and Covaleski (1985) found that mentors may affect the degree of

socialization success for newcomers; however, Bragg (1981) found that pairing an experienced person, or an insider, with a newcomer was the most effective way for newcomers in an organization to learn a new role. Wanous (1980) referred to this practice as apprenticeship and Van Maanen and Schein (1979) referred to a role model or mentor as a serial tactic. The majority of participants in this study did not formally have a mentor assigned to them by their department or institution; however, almost all had role models either within or outside of their institution whom they called upon for support and assistance.

Most of the respondents learned their job responsibilities from the department chair or from a combination of sources, including colleagues, vacating faculty member, job announcement, and emeriti faculty. There experiences were consistent with the findings of Fisher (1986) who reported that job-related information came from a variety of sources. Some respondents did not know what their job responsibilities were until they arrived on the job. One respondent found her responsibilities were different from what she had expected when she arrived. Williamson (1993) also found that new faculty face confusion regarding their new roles. Corcoran and Clark (1984) found that job expectations are not made clear to new faculty. Two respondents had course overloads during their first year, which confirmed Fink's (1984) finding that lack of support for new faculty included heavy workloads.

As the respondents learned their new roles, they seemed to struggle to do only what was required of them during their first year in the new position. Van Maanen and Schein (1979) referred to this as content custodial, or maintaining the status quo. In order to accomplish their jobs, several of the respondents had to change the content or environment of their classes, change their approach toward the course, or figure out new ways to manage time and accomplish research responsibilities. This was referred to by Van Maanen and Schein as content innovation.

The majority of respondents believed there were unwritten rules at their institution or department, most of which related to values, promotion, and tenure. One respondent described her perception of promotion and tenure as three different sets of guidelines on three different levels. Consistent with Boice's (1992) findings, another respondent believed promotion and tenure procedures were subjective.

> I hear the dean say one thing…I hear the vice-chancellor saying another, and then what is written down is a third thing about achieving tenure.…How do you show that you are doing your job or performing, and the idea that we are supposedly moving toward a different culture, a different paradigm but we are still being measured on these old guidelines.

> The department chair met with each of us new hirees at least once a month, but it might have been once every two weeks at first….We were to bring any questions….In my case it was my concerns, my questions. So anything that I lacked clarification on, I got.

The first week of classes for most respondents was a positive experience; however, in spite of the fact that all the respondents had previous teaching experience, several had a difficult time planning courses and writing syllabi. They were uncertain about how much to include, how long it would take, and what needed to be on the syllabi (Fink, 1884; Boice, 1991).

The participants of this study made several adjustments in their approach to the class or in the content of the class in order to improve the academic success of their students. This conflicts with Fink's study (1984) which found that new faculty became disillusioned with the academic success of their students and in turn lowered their expectations of students.

The respondents in this study mentioned numerous kinds of support, at both the university and department levels. The majority experienced new faculty orientation sessions and socials sponsored by important university individuals or groups. Sometimes organizations employ "manipulation by guilt" of their newcomers by investing effort and time into their socialization and reinforcing an expectation of being repaid by loyalty, hard work, and rapid learning (Schein, 1968). One respondent was flown in from another state to attend her university's week-long orientation of new faculty because she would not be starting her job until mid-year. Van Maanen and Schein (1979) would characterize this type of socialization as: (a) collective, because it involves a group rather than one-on-one socialization;(b) formal, because it involves new faculty only rather than new and returning faculty mixed together; and (c) fixed, meaning it was held at a specified time as opposed to events held with no set schedule.

All ten respondents mentioned their department chair as a facilitator for their successes. This is in contrast to Whitt (1991) who found that department chairs believed themselves to be supportive, but that their faculty members did not feel supported by them at all.

On the other hand, Whitt (1991) also found that administrators expected their new faculty to be able to hit the ground running, but that new faculty didn't know how to do this. The participants of the study did experience this expectation and pressure from their administrators and believed it was unrealistic. The results of Williamson's (1993) study revealed the same pressure to perform among his respondents.

Several participants were members of new faculty groups, some of which met occasionally and informally while others met formally with the department chair on a pre-arranged schedule. Van Maanen and Schein (1979) refer to these tactics as collective, formal, and either fixed or variable depending on whether there was a schedule. Conflicting with findings from other researchers (Boice, 1991; Fink, 1984; Sorcinelli, 1988; Turner & Boice, 1987; Whitt, 1991), collegial support was reported by the majority of respondents in this study.

Two other inhibitors of the respondents' success were lack of time and the related problem of balancing work, family, and personal responsibilities. Sorcinelli (1988, 1992) also found that faculty did not have enough time to do their job well without jeopardizing their physical and personal self.

> Time [is an inhibitor], trying to manage your classes and…manage the work load, the papers, trying to get them back. And staying abreast of the content and then looking at the service that is required of you, the research… trying to balance all of these.

Continuing Socialization and Career Development

According to Corcoran and Clark (1984), the third phase of socialization, called role continuance, occurs when newcomers master skills, achieve roles, adjust to their work groups, develop professional identity, and show an interest in promoting change in the organization. Related to this phase, respondents answered in a variety of positive ways when asked to compare their second year to their first year. They mentioned not being as overwhelmed, increasing their research and service, establishing a reputation, and gaining respect. None were at the point of

being an insider after their second year, but many were well on their way. As one participant said,

> I think the teaching—I am more comfortable with it, working between two departments, so that some of the stress that I felt in that first year, I no longer feel that. I have managed and I am doing quite well so I have had some time there that I have filled up with these other kinds of things….I'm taking on more service and I'm trying to do more research. That first year was really like a learning for me. I was being oriented into what was actually required of me so it was really a lot of still learning…Even though there is still a time constraint, I don't feel just completely overwhelmed. I don't feel that there is someone else dictating my time…

The promotion and tenure process is part of that journey to becoming an insider. One-half of the respondents received information from their department chairs regarding promotion and tenure; however, most respondents were informed through a variety of sources. Even though the majority of respondents had been provided with information regarding tenure, confusion and uncertainty still existed. One respondent began her new position working very hard to make sense of her split appointment and organize the content and method of her classes. Not until her peer review did she realize she had been putting too much emphasis on her teaching and not enough time on research and publishing. Sorcinelli's (1992) found that new faculty received inadequate feedback from supervisors. This is also consistent with Boice's (1991) findings that new faculty spend too much time on preparing for teaching and not enough time on research and Gibbs' et al., (1987) findings that newcomers misinterpreted cues given regarding performance expectations. The same respondent's peers told her to ignore the teaching to do what she needed to do for the research, supporting Williamson's (1993) and Fink's (1984) findings that teaching was not highly valued.

> The one thing I don't like very well is our peer review process of work. It was fine the first year because…my tenure clock didn't start ticking until the fall because I came mid-year. I got good feedback and the next year, because I didn't have anything written, I got a negative mark because I didn't have anything published. So…that just made me sick…and then I started realizing in order to have anything count, you have to practically have it in the year before… this whole cycle of writing has been very difficult for me…I feel like what I am doing now is trying to spend time writing and ignore the rest because that is what they told me to do…I still don't know who has more credibility…is it the peer review committee saying, "okay, you haven't done this," or is it your department chair evaluation….People are coming from different perspectives …then if you have a gap, "why do you have a gap?" So I get the message that is going to be questionable, then about why do I have three things in one year, or four things in one year…that maybe I was just playing catch up in order to make up to get tenure. You know, it is like a no win situation…

At the time of the interview, seven respondents were in at least the fourth year of their tenure-track position. When asked to compare their career at that time to the beginning of their

career, they mentioned the following: can see the "big picture," actually enjoy teaching, have increased department and college involvement, have proven themselves across college, are more stable, feel greater meaning in their work, have an increased knowledge of job, are able to focus, and have more confidence.

> The first couple of years, people would see me and go and say "yeah, we've seen you before but we really don't know who you are or what you do." I now feel like I can go to other departments, other colleges, other buildings on campus, and they know who I am and they know what I can do. That is making a difference. I feel comfortable there and I feel comfortable with them knowing who I am and what I am. I would probably say it took the first two or three years I was here.

> The non-tenured group of people and meeting with the department chair has been one of the best experiences for me for really understanding about promotion and tenure. We talk about our [specific philosophical writings] and it was risky sort of starting to share those in the beginning….Having the chance to really talk about that, talk about our concern and questions, along with the formal written information that is in this handbook, that has been more meaningful. I think I have grown more through that experience than anything else.

One-half of the respondents viewed themselves at the time of the interview as an "insider." One respondent stated she had made a conscious choice to not become an insider at the university level, but instead felt she was an insider in her professional organization.

The majority of respondents' greatest satisfactions with their careers were related to their students—either teaching, advising, supervising, or observing their progress. This finding is consistent with Feldman's (1976, 1981) research which found outcomes of continuing socialization to be either affective or behavioral. Job satisfaction is considered by Feldman to be an affective outcome.

> The most satisfying things in my career [are] helping them figure out or affirm that this is where they want to be, this is the direction they would like to take, letting them know it is okay if they don't really want to be in education. As I have found out, students seem to be in fear of telling us that. I would rather them have a happy life figuring out their direction….That makes me really happy.

While some respondents viewed student evaluations as supportive, one respondent felt that student evaluations were the least satisfying thing to her.

> I will give them a glance and I put them away and I will put them away and never look at them again….I am forced to look at the numbers to put them in my annual report and I don't like it. I hate it.…I get more feedback from students during the process of the class that I could figure out things are not working or working than those final course evaluations.

The aspect of their work that gave respondents the most career dissatisfaction was the difficulty they experienced in trying to balance personal and professional responsibilities.

> It is still very difficult for me to draw the line between [work responsibilities and family responsibilities]….and my husband and kids let me know about it….Then you have colleagues who don't have family responsibilities and it's not so much that they don't understand, it's just that you don't understand sometimes because you are really trying to make everything fall together, and you are really trying not to let your family be a negative part of your professional responsibilities. And I don't mean that negatively….I've never liked to use the fact that my kids kept me from getting this done….I still believe I have a responsibility to get something done.

These outcomes and sources of satisfaction and dissatisfaction illustrate the professional growth that evolved for the respondents over time. Growth opportunities affect the self-efficacy of respondents, which affects the capability to accomplish research tasks, and in turn results in progress toward promotion and tenure.

When respondents were asked what they would change regarding their careers, all but one said they would change nothing because they appreciated the process that shaped them into the professional they had now become. One respondent, however, believed if she would have been more focused on her career goal at an earlier time she would have finished sooner and felt more confident when she began her first job as a teacher educator. When respondents shared their one-year and five-year goals, they mentioned earning tenure, being promoted, increasing the size of their programs, designing distance education and Internet classes, taking on more leadership in their departments, and increasing their service across the university. These are examples of behavioral outcomes, according to Feldman (1976, 1981), which are defined as role dependability, innovation, and cooperation to achieve or exceed organization expectations. Other respondents mentioned expanding their research, becoming professionally involved at the state, national, and international levels, acquiring more resources for schools in the community, and becoming involved with areas schools through in-service work.

When asked whether they would be continuing at their same institution, the vast majority responded affirmatively; however, the few who expressed a possible change stated the reason to be a desire to be closer to their family roots.

> I really would like to be closer to home—to my family. And if I could find something, I would consider moving, I really would. But it would have to be something that I would almost have to pick where it was because I really am happy with what I have. I have a home here. I've got some roots here. But I would like to be a little closer to family.

In spite of being classified as new and non-tenured faculty, the vast majority of the respondents expressed a deep commitment to their universities. According to Buchanan (1974), adopting the university's goals of teaching, research, and service illustrates identification. The respondents' goals of designing distance education and internet courses illustrate involvement because of the intellectual investment required. Goals of expanding service and taking on

leadership positions reflect attachment and dedication toward the university and are referred to by Buchanan (1974) as loyalty.

Respondents' Recommendations for Improving the Socialization Process

Respondents offered their recommendations for improving the socialization process at both the university level and department levels. Recommendations for improvement at the university level were: provide assistance in facilitating collaboration across departments and the campus; offer workshops for new faculty on student advising, policies and procedures, and tenure; establish a new faculty mentor program; match FCSE mentors from other universities with doctoral students at universities without FCSE mentors; and allow new faculty members to ease their way into university committee work by offering them a role as an alternate committee member.

Recommendations from the respondents for improving the socialization process at the department level included offering more informal socialization opportunities; having organized, regularly scheduled meetings or brown bag seminars; and providing critical information and clear expectations and guidelines for research and publishing timelines. Similar recommendations were made by Hipps (1980) and Freedman (1979) to increase contact among all faculty and to hold open seminars to address questions about faculty roles. One respondent believed existing administrators and faculty members should appreciate new faculty for who they are and for what they bring to the job. This aligns with Boice (1992), who found that new faculty will carry their skills over into their new institution especially if they are what is valued by the new institution. Several respondents felt mentor programs should be improved, which is consistent with Boice's (1992) and Clark and Corcoran's (1986) recommendations to strengthen serial relationships, which are role model/understudy relationships, by providing access to appropriate role models for faculty.

Conclusions

In this study, new college faculty in FCSE experienced all three phases of the socialization process: anticipatory socialization, entry and induction, and role continuance. Each of the participants experienced anticipatory socialization during their graduate school and job search experiences, at which time the anticipatory socialization phase ended.

The entry and induction phase began when the participants started their first position. Some of the participants were still in that phase during the year in which the interviews for this study took place, having been in their positions only two or three years. However the participants who had been in their positions for four years or more were experiencing the changes that occur in the role continuance phase of socialization.

The experiences of the ten FCS teacher educators in this study help us to understand the socialization of a secondary FCS teacher who becomes an FCS college professor. The majority of respondents in this study believed that even though they were not originally well-prepared to teach secondary students in today's world, they felt strongly about the importance of being able to teach effectively in diverse environments. They also believed their secondary teaching experience laid the foundation for their career decision to become an FCS teacher educator.

Their family or another strong, personal relationship played a key role in determining when they would pursue their doctoral degrees and where they would take a position in higher education. The majority of the respondents' FCS professors and advisors in graduate school became their role models, and their university department chairs and colleagues generally

became their mentors and sources of support. The participants who did not have a FCSE professor or advisor in graduate school recommended that mentors be made available through another institution so that they could benefit from their knowledge and expertise.

Most of the participants in this study had fairly positive experiences. However, those who were very unhappy and disillusioned during their first year of college teaching stated that their second year was much improved. All but one of the respondents stated they would not change a thing about their career decisions, if given an opportunity. All of the respondents have very ambitious professional goals and stated a very high degree of dedication to their students and loyalty to their institutions while working very hard at balancing their work with their family lives.

Recommendations for Improved Practice

Program leaders in FCS teacher education should examine the prior work experiences of applicants for their doctoral degrees to determine if they have sufficient teaching experience in FCS and a congruent belief system to provide a foundation for a career in teacher education. Coursework in graduate programs should be examined to ensure the content is relevant, the level is challenging, and the learning is applied. Professors in graduate school should realize the impact they have on their graduate students in terms of providing the role modeling necessary for their students' future careers. In order to prepare them for the faculty role, professors should provide opportunities for their students to take on projects that carry with them a reasonable level of responsibility. These projects could be related to assistantships, research studies, or funded projects.

Because FCS teacher educators in this study made the decision to begin their doctoral programs after having taught in public schools for many years, they are also at the point in their lives when they have other commitments to consider, such as a husband or other significant partner, children, and extended family members. Prospective doctoral students may not live near an institution that has a prominent FCS professor to serve as a role model or mentor for a mature graduate student who wants to begin a career in teacher education. Graduate students without mentors in the profession could be matched with prominent mentors from other institutions to enhance their professional development. Perhaps this type of mentoring process could be facilitated through the national professional organization.

Departments should provide mentors for new faculty members. Colleagues within the department are valuable to new college faculty members because they provide important information and serve as sources of support and encouragement. Mentors should be recognized by their colleges or departments for their efforts with tangible rewards. Professional organizations, too, could recognize the efforts of members who serve their profession by mentoring new colleagues at their own or other institutions.

The major inhibitors of lack of time and inability to balance professional and personal commitments could be lessened if department chairs would support new faculty by reducing their teaching, advising, and service loads during their first year. Establishing scheduled time for new faculty to meet informally as a support group would provide them with an environment where they feel safe to express thoughts and feelings without fear of repercussion. With the help and support of peers who have similar concerns they could work out how to maintain both professional and personal lives.

To eliminate confusion and uncertainty over new faculty work roles, college deans and department chairs should provide detailed, written information regarding their workload and

performance expectations to new faculty before they arrive to begin their new jobs. They should have a current faculty handbook that states the exact procedures and timelines regarding evaluation, promotion, and tenure. To alleviate the pressure to perform that new faculty feel, administrators could organize meetings with new faculty members to discuss the contents of the handbook so that they understand expectations regarding evaluation, retention, tenure, and promotion.

Beyond the department level, the university should sponsor professional development workshops and seminars for teaching and research, as well as supportive resources in the area of technology, grant-writing, and project development. Upper level administrators of the university should demonstrate their commitment to nurturing and developing new college faculty in order to gain the support necessary at the college or department level for successful implementation of socialization strategies.

Recommendations for Further Research

Because this study was limited to a small number of FCS teacher educators, a replicated study in other FCS content areas or vocational areas might provide useful comparisons. Research could be conducted on the features and quality of the doctoral degree granting programs in FCS teacher education to determine if there is a relationship between the participants who had positive socialization experiences and the programs where they earned their doctorates. Gender differences related to the socialization process should be examined to determine if male teacher educators have similar or different experiences associated with the socialization process of new college faculty. Research should be done involving the identification of the participants' personality types and coping behaviors in combination with their socialization experiences because personality differences could have an impact on the way certain individuals experience organizational socialization. Research could be done on an international level to examine the socialization experiences of new FCS teacher educators. Replicating the study in other countries could reveal similarities and differences in the socialization process and could provide valuable insights into how to improve the socialization process of new college faculty.

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RETENTION OF CERTIFIED FAMILY AND CONSUMER SCIENCES TEACHERS: IMPLICATIONS FOR TEACHER SUPPLY AND DEMAND

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This study examined the opinions of certified family and consumer sciences (FCS) teachers from a large Midwestern State who are not currently teaching. A total of 188 useable surveys were received. Respondents emphasized how choices for their own families affected their choice not to teach. These reasons including moving, care giving for children and other family members, better paying job opportunities, and inability to find a teaching position in the location they chose to live. Other respondents indicated that the extra responsibilities of FCS teachers and the types of students in classes today were deterrents to staying in the classroom. The results of this study indicate that the solution to the teacher shortage in FCS is not simply a matter of supply, but one of retention. More effort needs to be made to keep practicing FCS teachers in the classroom.

Meeting the need for Family and Consumer Sciences (FCS) teachers is of great concern to the profession. It was one of the important outcomes of the Critical Issues Committee Report to the Strategic Planning Committee of AAFCS (Vincenti, Crase, Barnes, Duncan, Eubanks, Jorgensen, Mimbs, & Wooldridge 1998). The teacher shortage in FCS although well documented (Jackman & Rehm, 1994; Miller & Meszaros, 1996; Mimbs, 1995; Morse, 1988) has not provided solutions to increase the supply of teachers. The foci of such studies about supply and demand have been opinion surveys directed at school administrators and practicing teachers. A recent study by Mimbs, Stewart & Heath-Camp, (1998) about career motivations of graduates of FCS teacher education programs recommended further research of a qualitative nature to determine why many recent graduates are not teaching. They also suggested finding a target audience who has a commitment to the FCS profession. Understanding why certified teachers are not teaching may help FCS teacher educators and administrators develop placement and retention strategies.

Purposes and Research Questions

The purpose of this study was to examine issues related to retention of certified FCS teachers. The critical issues addressed in this research project were focused around the following three research questions.

1. What are the personal, employment, and educational characteristics of certified FCS teachers who are not teaching?
2. Why are FCS certified teachers choosing not to teach?
3. How can FCS teacher educators, teacher preparation, and state certification personnel facilitate retention and retraining programs?

Related Literature

Teacher education professionals have begun the challenge of finding solutions to the FCS teacher shortage. Lee (1998) encourages irregular certification for non-traditional preservice teachers. Irregular certification includes more flexible scheduling of classes, credit for life and work experiences, special summer sessions, and collaboration with school systems. Travers (1999) targeted specific groups in a successful specialized recruitment effort. Potential teachers were recruited from alumni who were already degreed in related disciplines, teacher assistants who were already working in schools, and undeclared majors.

Those who choose to be teachers do so for the same reasons that take them out of the classroom; caring about others, wanting to help young people, nurturing, family values, and other altruistic reasons (Mimbs, Stewart, & Heath-Camp, 1998; Serow, 1993, 1994; Bullough, Knowles, & Crow, 1992). Lee (1998) noted that non-traditional preservice FCS teachers indicated that balancing many work and family responsibilities was as a barrier to pursuing certification. Non-traditional teachers are mostly female, over 30 years of age, and have multiple responsibilities in their lives. Adding traditional teacher education delivery systems to the mix makes it very difficult for some students to obtain certification.

Other studies have identified the same barriers to becoming and remaining teachers including time, family, work, and financial concerns (Griffin, 1997; Hammer & Rohr, 1992). Providing more financial assistance to FCS preservice teachers would help with recruitment of professionals. Other sources of economic support for teachers include scholarships and other incentives. Sarason (1993) suggested that economic conditions such as low pay and time away from work to seek certification are hindering many that would like to teach from doing so. Nearly one half of the graduates in the study by Mimbs, (1997) indicated scholarships and grants as one way their education was financed. Some of the graduates surveyed in that study were aware of the teacher shortage. One respondent wrote,"I would like to see FACS recognized as a shortage area so we can gain help with school expenses." Another wrote, "I personally feel that more scholarships and funding in FACS would increase students and professional interest." (p. 57).

Preservice FCS teachers in the study by Mimbs, Stewart, and Heath-Camp (1998) overwhelmingly indicated the top two values of "helping other people" and "family" as influential factors for why they chose to pursue teacher certification. In addition, 84% said their interest in FCS subject matter influenced their choice of FCS as their teaching discipline. One person in the study by Mimbs (1997) wrote "The main reason for choosing FCS teaching for me was my love for the curriculum" (p. 55). Yet many certified FCS teachers are not teaching, so more needs to be done not only to recruit more teachers but to retain those who are certified as well.

Teacher retention has long been recognized as a concern for the education system (San Nicolas, & Avilla, 1993; Gonzalez, 1995; Schnorr, 1995; Shen, 1997; Hope, 1999). In a recent study of FCS graduates, nearly one-third were not teaching although certified (Mimbs, Stewart, & Heath-Camp, 1998). A longitudinal study by Marso & Pigge (1996) revealed that only 29% of teachers remained in teaching after seven years. The Teacher Follow-up Survey indicated the attrition rate of 6.6% for teachers in public schools from 1993-94 to 1995-96 (Whitener et al, 1997). A longitudinal study by Cohen et al (1990) showed 46% of traditional teachers were still teaching after 5-6 years, compared to 85% of nontraditional teachers (those who made teaching a second career or who entered teaching later in their life). In examining opinions of the 46% who were teaching after 5 years, only 18% indicated they intended to stay in teaching.

The state of Missouri found that 45% of teachers who received their education degrees in 1994-95 in the state were not teaching four years later. In addition, about one-third of graduates who were certified did not go into the state's classrooms within 4 years of graduation. The average annual number of vacancies in FCS in Missouri for 1994-1999 exceeded the number of newly certified persons in FCS. The age of Missouri's teachers is mostly older. In the fall of 1998, about 50% of all teachers in Missouri were over 45 years of age (Missouri Department of Elementary and Secondary Education, 2000).

The Teacher Education Council for FCS in Missouri was given the directive from certification personnel to survey certified persons who were not teaching to provide the state with more accurate information on the supply of FCS teachers. It was assumed by some that a real shortage did not exist as certification records show a large number of available certified teachers in the state. It is hoped that information from this study will help in understanding the discrepancies in perception between those preparing teachers and those maintaining the certification records.

Method

Subjects

The subjects for this study were all certified FCS teachers who were listed as not currently teaching in Missouri. The names and addresses of these persons were obtained from the state certification files. A total of 449 addresses were used for a mail survey to those persons under age 61. Those who were 61 and older were not surveyed because it is expected that they are reaching retirement age and would likely not be planning to return to teaching.

Survey Procedures

Survey instruments developed by Mimbs, Stewart, & Heath-Camp (1998) and Serow (1994) were adapted for use in this study. The data for this survey was contained in three sections. The first section asked the subjects questions regarding personal, employment, and education demographics. The second section asked subjects to indicate why they were not currently teaching from a list of factors developed by the Teacher Education Council of FCS in the target state. The last section consisted of open-ended questions that asked subjects to elaborate on their reasons for not teaching, and their suggestions for recruitment and retention of FCS teachers. Surveys were coded to identify separately those who hold lifetime certificates in FCS and those with other types of FCS certificates. The other types of certificates were provisional at three different levels, and require re-certification at regular intervals to remain valid. Two mailings of the survey and one reminder postcard were sent. A total of 161 surveys were undeliverable and returned due to invalid addresses, which left 288 deliverable. A total of 188 useable surveys were received for a 65% return rate which included 107 respondents who were not teaching and 81 who were actually teaching. The 107 respondents who were not teaching included 68% (n = 71) with lifetime certificates and 32% (n= 36) with other types of FCS certificates.

Data Analysis

Primary analysis of the demographics and reasons given for not teaching were analyzed using descriptive statistics including frequency distributions and percentages. The open-ended questions were analyzed using QSR NUD*IST Vivo (NVIVO) software for qualitative analysis (Richards, 1999). This software examines respondent's text entries for themes or nodes and

similar responses. These were tabulated and recorded based on their frequency of appearance, summarized, and then compared to the list of given factors.

Findings

Personal demographics indicated that 35% of respondents were over 50 years of age. A total of 82% were married and 51% had children living in the home. Only 7% were non-Caucasian, while 41% live in the central region of the state. It was found that 17%, although listed as not teaching, were indeed teaching FCS. Another 23% were teaching other subjects but not FCS. A total of 67% of respondents said they had previously taught FCS and 56% indicated they would consider teaching again. Satisfaction with current career choice was very high with 53% very satisfied and 34% somewhat satisfied.

There were 21% who indicated they would retire from their current occupation in the next 3-5 years and another 14% within 6-10 years. Teaching FCS was the first career choice of 75% of respondents. A total of 52% indicated they taught after being full-time homemakers and/or parents and 45% also indicated they interrupted teaching to be a full-time homemaker and/or parent.

Reasons most often indicated for not currently teaching FCS were: "I am employed in another occupation", " The pay is too low in the teaching profession", "I have not been able to secure a teaching job in the geographical area in which I want to live", "There are too many extra responsibilities for FCS teachers", and "I am a full-time homemaker and/or parent" (See Table 1).

Those who indicated they were not teaching FCS at the secondary level were working in a wide variety of occupations. Several were teaching adult education. Others were teaching elementary grades, special education, English, science and other subjects. Still others were nutritionists, librarians, medical office workers, seamstresses, curriculum writers, or were working as counselors as well as several other occupations.

Those with a lifetime certificate (68% of respondents) more often made their career choice while in secondary school and are currently working in other occupations than those with other certificates. They indicated they were not able to find a teaching job in the area they wanted to live, the pay was too low for teachers, and there were too many extra responsibilities for family and consumer sciences teachers. Those with other FCS certifications (32% of respondents) were mostly younger and more of them made their career choice while in college than lifetime certificate holders.

Table 1
Reasons for Currently Not Teaching (n=107: Comparison of Lifetime Certificate Holders n=71 and Other FCS Certificates n=36)

Reasons Indicated for Currently Not Teaching	Lifetime Certificate Holders	Other FCSE Certification
I am employed in another occupation.	41	33
Other	17	10
I have not been able to secure a teaching job in the geographical area in which I want to live.	16	5
The pay is too low in the teaching profession.	13	12
I am a full-time homemaker and/or parent.	12	9

There are too many extra responsibilities for family and consumer sciences teachers.	11	9
I have allowed my certification to lapse. I have allowed my certification to lapse.	*	9
I do not feel I have the skills to teach today's youth.	8	4
I am self-employed.	8	3
I am attending graduate school.	5	7
I choose not to work outside the home for gainful employment.	5	3
I did not find teaching rewarding. I did not find teaching rewarding. I did not find teaching rewarding.	4	2
I have not been able to secure the type of position that I am most interested in teaching.	3	5
I do not feel prepared to teach.	3	4
I do volunteer work.	3	4

Responses to two of four open-ended questions asked on the survey are reported here with a summary of responses.

1. Have you previously taught FCS? If yes, why did you make the decision to leave?

Other occupations, and parenting or care for children were the most common themes generated from the open-ended comments of participants. Moves for husband, family, or to take a job, unavailability of teaching jobs in desired locations and graduate school or retraining followed as the next most frequent themes. Family issues, extra responsibilities, and problem student behavior were common in the comments of respondents. One respondent described it this way:

> I feel many teachers 'burn out' because they take the job home with them, so they don't have the recuperative time needed to be able to meet the demands of teaching in today's public schools. I feel that the public wants the teachers to do more and more but are not willing to pay them for the extra demand placed on them or give them more time to perform these duties.

The frustration and stress of teaching, lack of administrative support, and elimination of positions were also cited as reasons for leaving teaching (See Table 2). For many persons, it was a combination of factors and a timing of events, which caused the continued absence from the classroom. Two examples follow:

> I left to take a library position. My husband died and I left that job to take over two businesses. Two years ago I closed one business and went back to school to get elementary certification" and "I moved out of state…did not have certification…then decided to become a full-time homemaker.

Table 2
Summary of open-ended responses to "Why did you make the decision to leave FCS Teaching?"

Common Themes	Number of Responses
Caring for children / pregnancy	25
Other occupation	23
Move for family or job	17
Graduate school or retraining	14
Unavailability of teaching job in desired location	13
Problem student behavior	13
Extra responsibilities, too much time	10
Pay too low for teachers	10
Family issues	8
Retired or currently still teaching	8
Lack of administrative support for FCS	7
FCS position reduced or eliminated	7
Frustration and stress of teaching	7
Lack of preparation for teaching	2

Note. Some respondents made multiple comments and they were each coded separately.

2. What suggestions do you have for recruitment and retention of FCS teachers?

Improving the image of FCS profession and programs was a recurring theme for increasing retention and recruitment of FCS teachers. A total of 31 persons indicated a need for this. One person wrote, "Home economics is no longer a high profile class like it was when I was in high school. Students do not see home economics as a consumer-based class".

Closely connected to a need to improve the image of FCS was the need for more support from administrators, counselors, school boards, and others for the important subjects taught in FCS. Additionally respondents commented that FCS classrooms have become a dumping ground for special needs students. One respondent wrote, "My classes became a dumping ground for behavior problems. I felt like a probation officer, not a teacher" and another declared "Lack of support from administration. I disagree with a no retention, no detention, no suspension policy".

Getting needed support for student behavior problems and conditions in today's schools as well as a concern that new teachers are prepared for these conditions was often mentioned. One person's comment, which reflects the opinion of many others follows, "They need more intense classroom management techniques to better deal with the problems before they arrive". Reducing extra responsibilities for new teachers and particularly for FCS teachers was also a common theme described by respondents as a way to retain teachers
(See Table 3).

Table 3
Summary of Responses to "What suggestions do you have for recruitment and retention of family and consumer sciences teachers?"

Common Themes	Number of Responses
Improve the image of FCS profession or programs	31
Improve support from administration, counselors, school boards	23
Update or change FCS curriculum	22
Increase teacher salaries	21
Job availability including part-time	16
Provide more preservice and continuing education opportunities	16
Get help with student behavior problems	15
Reduce extra responsibilities for FCS teachers	11
Less club sponsorship for new teachers	3

Note. Some respondents made multiple comments and they were each coded separately.

Discussion

The findings of this study are similar to those of other studies with regard to gender, age, ethnicity, marital status, and parenthood of FCS teachers (Mimbs, Stewart, & Heath-Camp, 1998). Aging of the teaching force will continue to affect teacher supply in FCS. Of the 449 persons listed, 161 were not reachable because of invalid address data. However, with only 99 respondents indicating they might consider returning to teaching FCS, the demand for teacher will be hard to meet Additionally, 35% of respondents are over age 50 and 35% indicate retirement with-in 10 years. This will limit the likelihood of them changing careers back to teaching FCS. In addition, 53% had a high satisfaction with their current occupation (namely-not teaching FCS), which would make it more unlikely they would return to the classroom. It might also be assumed that those who did not respond to the survey at all (n=100) were not interested in teaching FCS. This state officially reported 77 open positions for the 2000-01 academic year with many more unreported. With only approximately 10-15 new graduates from the state's FCS teacher preparation institutions expected per year, the teacher supply dilemma will continue as one of high concern.

Making administrators aware of the shortage is important, however, even more important is the retention of certified teachers for the classroom. In a recent newsletter article, Mimbs, (2000) asked school administrators to consider certified teachers who are not teaching as a lost resource, and shared respondents concerns such as extra responsibilities, increase of special needs students, and lack of support from administrators. Getting the message out to administrators about how they can assist teachers, and provide mentoring and support can make change happen and increase retention of certified teachers of FCS.

It is hoped that a comprehensive effort at local and state levels to address FCS teacher supply needs, through cooperation with local and state colleges and universities and state certification boards, will have a direct impact on the recruitment and retention of FCS teachers. This would include an increased effort to create workable articulation agreements between high schools and community colleges with colleges and universities, to facilitate recruitment of transfer students (Collins, Kellett, Miller, & Fahm, 1993). More coordination across state lines

would also increase availability of teachers, if state-licensing barriers did not exist. New regulations in Missouri allow for educators who have certificates from other states to be eligible for initial teaching license in Missouri, as well as any persons holding a PhD degree without training in teacher education. Special assignment certificates are also being issued to allow districts to use non-educators for up to 5% of their teaching staff (Missouri Department of Elementary and Secondary Education, 2000). A trend in 5th-year or graduate level teacher preparation programs, although not quicker than traditional programs, may provide access to certification for those nontraditional persons who would like to teach (Mimbs & Stout, 1997).

Economic forces of supply and demand do not work in the area of public elementary and secondary education. Control of entry and control of funds is held by the states. State boards of education control criteria for licensing teachers and often wage scales. Some improvement is being made to address the control of states on training and retraining of teachers (Ancarrow, 1991). It is important when preparing new FCS teachers to encourage them to be aware of the possibility of career interruption due to balancing work and family responsibilities and positive steps they can take to better facilitate reentry into teaching. Stewart (1991) suggested that teacher educators and others teach preservice teachers and inservice teachers how to balance work and family roles so they may become role models for the youth they serve.

Maintaining professional involvement is critical. Several persons indicated they were not aware there was a teacher shortage or of the availability of jobs in their state. One person wrote, "I was delighted…shocked to receive your survey. I feel like I have been under a rock. I did not realize the shortage of teachers…I would love to get back into my field".

Many others indicated they would be willing to teach if they could work part-time and still meet their other family needs. Others simply felt the time commitment and extra responsibilities for teaching FCS did not compare to other occupational opportunities and financial rewards. The following comment from one respondent sums it up: " It took every moment of my life. I had six preps and my salary was low. I am now working (outside of teaching) half of the time I spent on teaching for 2 times the salary".

There was mixed reaction by the respondent when asked about the purposes of FCS. For instance, some persons wanted a return to 'cooking and sewing' and more support for those classroom activities. Others felt change had not happened despite the name change and new curriculum. Stereotypes are well established and continue. Simerly (1993) and Ley (1993) explained that the image of FCS cannot be changed without a consistent expression of a clear message of who and what we are. Each has his/her own opportunity to share who and what they are as professionals in FCS and the message is often incongruent (Ley, 1993) as represented by the comments of the respondents below:

I did not go into teaching because people spent a lot of time trying to give home economics a new name, instead of making it clear to long time teachers and administrators that there are very important parts of the program that are being neglected, I recently went back to teaching for a year and found FCS had not moved forward at all in the 20+ years I had been away.

Many respondents suggested a need for more experiences in the classroom prior to teaching. This included suggestions that universities provide more in-classroom experiences for preservice teachers and continuing education for practicing teachers. Beginning FCS teachers identified classroom control as the most important competency for surviving the first years of teaching (Nichols & Mundt, 1996). In the Cohen et all (1990) study, more and earlier classroom experiences were needed to aid in teacher retention. Providing new FCS teachers with strong

mentor teachers would assist them. It has long been recognized that induction of new teachers should include a mentoring component and that this can enhance teacher retention. However, finding qualified mentor teachers in vocational areas like FCS is difficult for small rural schools where there is only one teacher in that discipline (Camp, & Heath, 1988).

Conclusions and Recommendations

It is vital that qualified FCS professionals be available for the classroom. This study determined that there are many reasons why persons holding certificates are not teaching, was helpful in confirming the need for FCS teachers in Missouri, and demonstrated the seriousness of the shortage. The results of this study indicate that those who prepare teachers cannot control some of the concerns and suggestions for increasing the supply or bringing these non-teaching persons back to the classroom. The need for higher salaries, more part-time positions, mentor teachers, more support in the classroom from administrators and others, and the conditions of schools today cannot be easily changed without cooperation from schools, administrators, state legislators, and others.

The more direct implications of this study for teacher educators include seeking more in-classroom experiences for pre-service teachers, and more in-service workshops and opportunities for practicing teachers for their professional development. Developing ways to teach new pre-service teachers to prepare for career interruption but keep current to ease transition back to teaching is important. To facilitate the balancing of work and family roles, programs might investigate alternative scheduling, streamlining of teacher education programs, and recruitment of second career persons into teaching.

Long term planning for solving the teacher shortage in FCS may involve a combination of new strategies. Further research should include a testing of models, and examination of effective retention, induction, and mentoring programs. The message to us is to recognize the need for updating the image portrayed by some practicing teachers, as well as provision for further professional development opportunities for updating practicing and returning teachers. A continued effort must be made to provide a clear consistent message to all stakeholders of the value of FCS programs to the youth and families they serve. This will enhance opportunities for significant change.

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THE TEACHING PROCESS: AN INTERACTION OF EXPERIENCE, THEORY, AND REFLECTION

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Teaching is a process, not a product and as such, it develops and changes over time. All teachers change with their experiences in and out of the classroom. However, not all teachers grow in their craft. Growth comes with their experiences and new theory and critical reflection upon both. As an illustration of this process, I would like to share some of my experiences and reflections and the theory that has guided them. To assist the reader in distinguishing among these interactive parts of the teaching process, the experiences are in standard print and the related theory is in *italics.* Critical reflections on the process are found at the conclusion of the article.

I was a secondary Family and Consumer Sciences teacher for sixteen years. During that time, I taught many different courses – personal development, parenting, life planning – but primarily I taught nutrition and fitness to approximately one hundred students per semester. My principal objective for these students was the acquisition of knowledge necessary for them to recognize and meet their nutritional needs. The students were presented with the most current nutritional information and were challenged with course content related to human nutrition, physiology, and food science. As I reflect upon my teaching practice in the first ten years of my career, I would describe myself as a very good technical teacher. I provided my students with the facts and information necessary for solving problems related to nutrition.

In technical education, the teacher is seen as the provider of knowledge. The student receives the "truth" from the experts ---- in this case, the teacher and the text. The teacher decides what information and facts are important for the students to know. Plans are then made to give that information to the student and provide ways for the students to use and remember it. The focus is on knowledge and skill, the "how to" actions (Wilkosz, 1983). Problem-solving when based on technical action, can be successful within the classroom. However, the assumption cannot be made that the students' lives are changed because of their gained knowledge. The meaning of concepts is comprised of knowledge, its relevance, the emotional response of the learner, and the context for use of that knowledge (Caine & Caine, 1991). Meaning is constructed by the students. Jensen (1998) cautions teachers to "never assume that because something is relevant to you, it's relevant to your students" (p. 92-93). Motivation and readiness are important factors to consider when looking at the long-term impact of technical education (Morgaine, 1992).

As I observed my classes, I began to see that some of the most important learnings were occurring in the laboratory as the students worked together to solve problems. I began to plan more experiences that required student collaboration. The students continued to receive an abundance of technical information; however, they were now processing this information in groups rather than as individuals. The student took more responsibility for their education by planning labs and helping all group members be successful.

The change in my teaching from technical to technical/communicative came at the same time a new curriculum was introduced in Ohio (Kister, Laurensen, & Boggs, 1993). The

curriculum introduced four process competencies (leadership, relating to others, balancing work and family responsibilities, and problem solving) which were to be taught in all content areas. These were effectively accomplished with my new technical/communicative approach. The process skills were built on relationships and were most effectively developed in social interactions. My technical knowledge of Family and Consumer Sciences content was no longer sufficient for my needs as a teacher. I sought out interactive teaching strategies based on the social construction of learning. Cooperative learning and group inquiry were among those strategies which I investigated.

Communicative education is based on interpretive knowledge and is "concerned with meanings and interpersonal communication of meanings" (Thomas, 1998). It recognizes the role of the student in the learning process. The teacher and student share the responsibility of learning. Everyone in the classroom exchanges understandings and experiences. "Truth" comes out of this interaction (Redick, 1995). Everyone's experiences are valid and students are encouraged to listen to and respect the ideas of each person in the classroom. However, not all "opinions" are given equal credence. The students examine and question the ideas. As a result, students learn to give reasoned, logical arguments in order to gain respect for their ideas. Communication, empathy, and reasoning are emphasized in communicative teaching. Dialogue and mutual support are used as primary methods for communicative teaching (Morgaine, 1992).

Planning lessons with an emphasis on communicative education requires a teacher to create an atmosphere of trust so all students feel comfortable in sharing their ideas and experiences. The teacher must model the behavior that is required by encouraging students to express their ideas and responding to the ideas in a positive manner. Concerns about respect and confidentiality may also need to be addressed (Thompson, 2000).

In communicative education, the students are "active participants in considering the context of a specific problem affecting a family, the desired results, the alternatives available for problem resolution, and the potential consequences of various alternatives" (Copa & Mileham, 1998, p.40). The students may not be accustomed to taking this responsibility for their education or having the right to choose the direction in which it goes. The teacher will need to guide the students in this process by selecting relevant resources and carefully planning activities and discussion questions.

Communicative action in the classroom is cognitive reasoning. However, it is not critical thinking. "In order to be critical thinking in the strong sense, students must seek solutions to problems that require them to make value, moral, and ethical judgments" (Kowalczyk, Neels, & Sholl, 1990).

As I was beginning to gain confidence in my new role of technical/communicative teacher, I was introduced to a new concept, that of critical-emancipatory education. As I learned more about this concept, I could feel myself drawing a mental line and saying, "NO! I am not a political person. I am not a social activist. I barely have to time to teach the information students need to make good decisions. How could I add something else? No, I won't do it!"

However, my stubbornness lasted for only a short period of time. Questions about the role of the critical-emancipatory teacher piqued my natural curiosity and began running through my head. "What was this "new" kind of learning? Why were people excited about it? What was the response of the students? How is it done? What would it look like in my classroom?" By

the time I got to that last question, the mental line had been erased and I was willing to try the critical-emancipatory approach.

Critical/emancipatory teaching creates an atmosphere for two things to occur in the classroom. The first is a critical investigation of the assumptions that are made about daily lives and interactions (Shor, 1987). Students learn to examine the "usual" and "expected" in terms of morality and justice. This is done through questioning. Are everyone's rights protected? Is this action best for all concerned? What would happen if everyone chose this course of action? Whose interests are being served?

Following this critical look at an issue or concept, students are encouraged to take action. It is in this ability to act upon beliefs that students find freedom and empowerment. They take reasoned control of their lives, based upon ethical considerations of what is best for all concerned. Critical/emancipatory action is the "ability and willingness to have control over one's own life" (Wogensen, 1989).

I examined my plans and by combining some lessons and omitting others I created a three-week block of time at the end of the semester for my experiment in critical-emancipatory education. Next, I looked at my daily lesson plans for key places to "plug-in" critical thought by adding new dimensions to existing assignments. For example, a lab-planning assignment in the past might read: "Plan an after school snack that will cost no more than $2.00, provide 50% of your daily requirement of iron, contain no more than 4 grams of fat, and be prepared, eaten, and cleaned up in our 50 minute class period." In order to add the dimension of critical thought to that assignment, I would add considerations of food allergies, cultural/religious food taboos, environmental issues, or social issues such as needs of latch-key children. These additions forced the students to think beyond themselves and their own personal preferences. They had to consider the impact of their actions on others.

Critical reasoning involves considerations of the moral/ethical implications of our actions. Decisions are based on moral and ethical judgments (Redick, 1995). Because adolescents are involved in the developmental tasks of creating self-identity and personal independence, their focus is upon themselves. Looking at the ethical implications of their actions upon others changes the focus of their decision making from themselves as central, to themselves as part of society. Critical/ethical thought may not be easy for adolescents. Teachers will need to lead them carefully through the process (Kurfiss, 1994).

In addition to the changes in lab assignments, I added critical questions to tests and daily work (primarily as process questions that had to be answered and given to me as an exit slip before the student left the classroom.) For example, a lesson which featured food preparation techniques was followed by questions dealing with food waste and scarcity. These questions focused on the role of power and privilege in food distribution and raised ethical considerations of justice. For example, students were asked to notice the amount of food scraps or garbage generated by their lab experience, or they were asked what they did with the food that they did not like. The students were then asked to draw an inference. What does our lack of respect for food say about our society? Would our attitude towards food be different if we had less? What is our ethical responsibility towards those who do have less?

Most relationships involve an element of power. Many of our traditions, institutions, and practices are designed to maintain the status quo. Those in our society who have power and influence want to continue the traditions and practices which support their position. Critical theory "aligns itself with marginalized, less powerful persons with the goal of transforming schools to be democratic" (McClelland, 1997, p. 165). The role of the critical-emancipatory teacher is to help students recognize these power relationships and to consider the rights of the less powerful. The teacher is a facilitator who encourages students to consider all viewpoints, raises questions which challenge students to think, and brings the discussion to closure (Kowalczyk, Neels, & Sholl, 1990). The students may then be motivated to act in such a manner as to insure that the voices of the less powerful are heard.

With the ground work for ethical action laid throughout the semester, the final project for the class was presented. The class brain-stormed a list of all the topics/concepts that had been studied by the class during the semester and a list of persons within the community who possibly did not have the nutritional information or resources to meet their own nutritional needs. Following the creations of these lists, my question was, "What is our responsibility?"

Each of my four classes agreed that we had an ethical responsibility to reach out to those in the community who were less privileged. (These are my words. The students' response was more like, "We ought to do something! What can we do?")

The classes were then divided into small groups. Each group selected a target population and made a tentative plan as to what could be done. The class as a whole then selected one of the projects to work on as a large group. Each of the four classes selected a different target population. One class selected their peers at the high school. They planned a week of nutrition education activities that included setting up computers in the cafeteria and analyzing students' lunches for nutritive content. Following the analysis, the students discussed with their peers the consequences of continuing to eat in that manner and suggested ways of changing their diet to make improvements.

A second class was concerned with the number of young children who are responsible for making their own nutrition choices. They decided to concentrate on after-school snacks that were nutritious, inexpensive, and easy to make. With the cooperation of teachers at the near-by elementary school, the class went to the school and taught a "nutritious snack" lesson, complete with a mini lab for the elementary school children.

Our community has a large mental health facility and there are many former patients living within the city limits. Because some of these former patients lack budgeting skills and have limited income, The Gathering Place, a facility which provides support and assistance, serves dinner the last week of the month for those whose money did not stretch to the final days. The third class decided to assist with this project by planning, preparing, serving, and sharing meals at The Gathering Place. Some class members felt that information on budgeting would have been more useful; however, the staff at The Gathering Place discouraged this idea. The majority of students wanted to focus on planning and preparing the meals, so I helped and encouraged the students to work in that direction.

The fourth class chose to plan and prepare meals for residents of a homeless shelter. At the request of the staff, the students brought the food to the shelter, assisted the residents in serving it, and joined them for dinner. Several of the students told me later that they were very uncomfortable eating at the shelter because they discovered that it was difficult to distinguish among staff members and the homeless. They had a stereotypical image of the homeless as

elderly, dirty, and poorly dressed. The residents of the shelter did not conform to this image. They were generally younger, cleaner, and better dressed than my students had anticipated and were similar in appearance to the shelter's staff members. The discomfort felt by the students when their assumptions did not match the reality of the shelter led to interesting class discussions of assumptions that we have about the homeless. The students developed empathy for the residents of the shelter when the students recognized the ways in which the homeless were, in many ways similar to themselves, their families, and their friends.

When students are placed into new situations, there is potential for great growth. However, teachers cannot assume that students will learn all that was intended without careful guidance on the part of the teacher. Questions for class discussions must be thoughtfully prepared. Students can be guided through and exploration of their prejudices and mind sets, into an awareness of reality as seen from another perspective. They must be encouraged to reflect upon the differences between their ideals and the reality of their everyday life (Morgaine, 1992).

Critical Reflections

As the students worked on their projects, I was aware of the high level of enthusiasm and motivation. It was not, however, until the final examination and course evaluation that I became aware of the full extent of the impact of the projects upon the students. One of my concerns about spending an extended period of time on the projects was the amount of class time that would be "lost." When I compared the final examinations of these four classes to previous classes (which had been taught with an emphases on content), I found very little difference in the scores. Less time had been spent on technical instruction. However, students were highly motivated by their projects so, when additional information was needed, they sought it out. The technical information learned in class was used for problem solving, so it became more meaningful to the students and consequently was better remembered.

The second revelation of the effectiveness of this new style of teaching came when I reviewed the students' evaluations of the course. Not all of the students in the four classes liked the projects or learned by doing them. Working on a project within the community did not fit their concept of the role of a student. They felt that they should be "in the classroom, learning about nutrition and food preparation. Community service was the job of adults." However, the vast majority of students did like the time spent on the projects and found it to be rewarding. I had hoped that students would achieve a sense of accomplishment. What they reported to me went far beyond that. Their evaluations spoke of the development of self-confidence, leadership, empathy, and caring. Some of the students became permanent volunteers at the homeless shelter and The Gathering Place. Two of the high school seniors decided to major in education as a result of their experiences in the school. Students who evaluated their peers' lunches made an appointment with the food service manager to discuss their concerns about the nutritional value of meals eaten at school. The students had learned to look for areas of need and to do something to help. They no longer said, "I'm just a kid. What can I do? Who would listen?" They discovered that they had the power to make a difference. They were emancipated to take action.

As their teacher, I felt emancipated, also. I had discovered the power and effectiveness of teaching for critical action. I no longer had to be the "expert." The students shared the responsibility for and the rewards of their education. The students were highly motivated and created an experience far more meaningful than any technical or communicative classroom

experience devised by the teacher. Teaching for ethical action is not easy. A great deal of time, organization, management, and effort must go into teaching from a critical/emancipatory perspective. However, I consider the benefits to the students (and the teacher) worth the effort.

Effective curriculum often blends the technical, communicative, and critical approaches to teaching and learning. The technical aspect helps students develop skills and provides the factual information which forms the knowledge base for higher level thinking. Communicative action allows students to work together to create meaning out of their experiences. The valued result is students who are able to use learned thinking skills to solve problems and make decisions (Kowalczyk, Neels, & Sholl, 1990). Emancipatory education helps give the students the ability and willingness to have control over their own lives (Wogensen, 1989). Each is an important part of the task that the teacher has of preparing students for their futures.

There are "elements of morality that are needed each day in our families, schools, and communities as we live and work together: compassionate caring, sound objective judging, and courageous responsible acting in the interests of those around us" (Laster, 1997, p. ix). Critical reflection on my experiences as a teacher and the educational theory which guided those experiences allowed me to grow as a teacher and to incorporate those elements of morality into the experiences of the students in my classroom.

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