FCSE TEACHER EDUCATION PROGRAM RESPONSES TO ISSUES REFLECTING CHANGES IN U.S. POPULATION DEMOGRAPHICS

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The changes in population demographics will impact new professionals entering into Family and Consumer Sciences Education (FCSE). FCSE teacher preparation programs need to be responsive to these current and approaching changes by adjusting curriculum and course offerings to better prepare education professionals for the students/clients they will regularly serve. The purpose of the study was to conduct a nationwide, exploratory study of FCSE teacher education programs to determine their responses to changes in U.S. population demographics and to make recommendations for future curriculum and programming needs. Recurring issues that FCSE must address include recruitment and retention of quality teachers and increasing diversity in the teacher population. All areas of education including FCSE need more male and ethnically diverse teachers.

In the 21st Century, the nation faces many changes in population demographics which will lead to changes in schools and communities. These changes will impact new professionals entering family and consumer sciences education (FCSE) classrooms. FCSE teacher education programs need to be responsive to the current and approaching changes and adjust curriculum and course offerings. Therefore, the purpose of this study was to conduct a nationwide, exploratory study of FCSE teacher education programs to determine their programming responses to the changes in U.S. population demographics and to make recommendations for future curriculum and programming needs.

Populations will continue to change in the 21st Century, especially in the area of racial and ethnic composition. Estimates indicate that half of the increase in the U.S. population is due to immigration (Clausell, 1998; Day, 1996). Hispanics and Asians are two of the fastest growing populations in the U.S. because of immigration and increased birth rates (Ruff, 1994). Predictions have been made that shortly after 2050, non-White Hispanics, Asians, and Black Americans will achieve majority status (Clausell, 1998; Day, 1996). However, these changes are occurring faster than predicted. In 2004, non-White Hispanics achieved the level of population growth predicted for 2050 (U. S. Census Bureau, 2004).

While the population is becoming more diverse, the teacher workforce population is moving in the opposite direction (*Teachers Shortage Areas*, 2006). In 2003, the National Commission on Teaching and America's Future Report (as cited in *Respond to Changing Demographics,* 2006) stated that individuals of African-American, Hispanic and Latino, Asian, and Native American descent make up 14% of K-12 teachers and 36% of students are from those

backgrounds. In urban school settings, the percentage of students of color nearly doubles. A report prepared by Recruiting New Teachers, Inc. revealed that in the nation's largest urban schools, 69% of students are students of color while only 35% of their teachers are of color *(The Urban Teacher Challenge: Teacher Demand and Supply in the Great City Schools*, 2000).

Another issue compounding the lack of diversity in the teaching pool is the existing teacher shortage. The National Teacher Recruitment Clearinghouse stated that the U.S. will need to add between 2.2 to 2.4 million teachers in the next ten years, with the greatest need in urban and rural communities, to adequately prepare for increased public school enrollment and retirements within the existing teacher pool. Enrollment in public schools is expected to increase by 4% between 2000 and 2008, according to the 1999-2000 National Center for Educational Statistics Schools and Staffing Survey (as cited in *Teacher Shortage Areas*, 2006). With more than 25% of current teachers at age 50 or older, there will be retirement gaps in schools, especially as the demand for smaller classrooms continues to increase. In states with the fastest growing populations, like California and Texas, there will be even higher demand for new teachers (*Teacher Shortage Areas*, 2006).

Methodology

FCSE Teacher Education Programs offered nationwide were sent a survey in the spring and fall of 2004 to be completed by the designated program administrator. Programs were identified through a nationally published directory of FCSE Teacher Education Programs. Seventy-two useable surveys were received. The survey consisted of yes and no response items, open-ended response items, and program demographics response items. The majority of the questions addressed multicultural education and the need for diversity in the teaching field. The items were developed based upon a literature review conducted prior to development of the survey. To ensure content validity, the survey was distributed to a small group of teacher educators during the development phase. Data from the survey were averaged and frequency responses were generated. Comments and written responses were compiled to determine related themes.

Results

Demographic totals for the reporting programs indicated that 3,362 students were enrolled in FCSE and related programs. Those students were further identified as, Caucasian/Non-Hispanic Whites, 2,628 (78.2%); Black/African American, 358 (10.6%); Hispanic/Latino, 246 (7.3%); Asian, 53 (1.6%); American Indian/Alaska Native 44 (1.3%); Pacific Islander, 14 (0.4%); and multiracial 19 (0.6%). There were 3,070 (91.3%) female students and only 292 (8.7%) male students.

In response to the items inquiring about multicultural education coursework in the FCSE curriculum, only 58% (n=42) of the responding FCSE programs required a multicultural education class and 24% (n=16) recommended a multicultural education class as an elective. Furthermore, 88% (n=29) of the programs had no immediate plans to implement an additional multicultural education requirement. Themes from the responses to open-ended questions indicated that in most of the responding programs multicultural education is integrated into courses across the teacher preparation curriculum and infused in the teacher preparation courses. Additionally, very few of the courses addressed diversity in relation to family composition. A limited number of courses addressed teaching practices for working with students that have limited English proficiency, minorities, and in general, multicultural students.

Programs were asked about their foreign language requirements, and only 35% (*n*=25) required some level of university coursework and 65% (*n*=46) did not. Comments indicated that some institutions relied only on the students taking a foreign language in high school as a part of the general admission requirements to a university. If this requirement was not fulfilled in high school, then it was to be fulfilled at the university. There also appeared to be a difference in the requirements of some programs if the student was seeking a Bachelor of Science degree, which generally required more hours in a foreign language, versus a Bachelor of Arts degree.

In response to items addressing various curricular focuses of methods courses, 91% (*n*=64) of the responding programs indicated that their methods courses addressed the best teaching practices for working with students who have limited English proficiency, 84% (*n*=59) addressed diversity with relation to family composition, and 91% (*n*=61) addressed diversity in relation to socioeconomic status.

The National Council for Accreditation of Teacher Education (NCATE) expects that accredited programs require field experiences and clinical components. In response to items inquiring about field experiences and observations, nearly all programs, 97% (*n*=70), reported having a field experience and/or clinical component. However, having a requirement that included observing within a setting considered to be diverse was slightly lower at 88% (*n*=63). In addition, only 76% (*n*=53) of the reporting programs were taking steps to place teacher candidates at schools exposing them to students from backgrounds different than their own during the student teaching or field experience portion of the teacher education program. When asked about steps taken to place student teachers in diverse populations to expose them to different backgrounds, comments included: students are not allowed to return to the schools which they attended; if the student comes from a rural area, they must do a practicum/student teaching in an urban school and vice versa; students conduct observations in a variety of school settings for exposure to diversity; student teachers are encouraged to teach in schools unfamiliar to them; and we attempt to place students in diverse field experience settings prior to and to some extent for student teaching.

Finally, respondents were asked whether or not their programs were addressing the need to diversify the teaching pool in FCSE. Just 50% (*n*=32) of the responding programs indicated they were working to diversify the FCSE teaching pool, and 76% (*n*=19) of the responding programs indicated they have no immediate plans to address this issue. Some examples of recruitment strategies to diversify the teaching pool included: articulation and recruitment efforts with the community colleges and high schools; presentations at local high schools, in lower division university courses, department open houses, recruitment fairs, and Saturday showcases; recruitment in nontraditional areas of the state, rural areas and with our cross-cultural and first-generation college graduate programs; minority teaching scholarships; and visitation to university four times a year by students from urban high schools with large minority populations.

Discussion and Recommendations

There is a need to continue to focus and in some cases increase multicultural education in FCSE teacher preparation programs. With only 58% of the programs having a required multicultural education class, the current multicultural focus is inadequate for the rapidly changing population demographics resulting in inadequately prepared professionals. Multicultural education training would increase teachers' knowledge and skills to enhance academic and social achievement for minority students. The improved training would also promote more positive interactions between teachers and parents of minority students. Education programs need to provide new teachers with detailed information of values,

behavioral norms, and experiences of minority students including Hispanics, African Americans, Asians, Muslim, and Native Americans. Student teachers should be given coursework to broaden their understanding and following completion, a practicum in a culturally diverse setting. Teachers need to increase their awareness of expectations, stereotypes and language barriers that affect their instructional practices and learning styles of students (Townsend, 2002).

Diversity is broader than exposure to ethnic and racial differences. The National Council for Accreditation of Teacher Education (2006) Unit Standards identifies an acceptable standard of diversity includes exposure to diverse ethnic, racial, gender, and socioeconomic groups. Most FCSE teacher education programs are addressing the various diversity issues within specific methods courses, with 91% of the responding programs' courses addressing best teaching practices for students that have limited English proficiency, 84% addressing diversity with relation to family composition, and 91% addressing diversity in relation to socioeconomic status. Although some issues of diversity are being addressed, due to time constraints in methods courses, the level of intensity may not be adequate for fully covering the necessary aspects of multicultural education. Teacher candidates need to understand how diversity impacts their use and application of teaching strategies to meet the learning needs of all students. Therefore, a specific course requirement would enhance the content delivered in methods.

The focus for FCSE methods courses should be on achieving a differentiated classroom. Teachers need to receive special training to meet the needs of all learners, especially those of diverse cultures. Townsend (2002) indicated that teachers often reflected ethnocentric views of the majority culture causing them to not recognize their students' diverse belief systems. Unfortunately, some teachers tended to have preconceived stereotypes about minority students, which resulted in significantly lower expectations and different responses to these students. Minority students are repeatedly overrepresented in special education, because they are unfairly predetermined to have lower academic performance and more behavioral problems (Townsend, 2002).

Nearly all of the responding programs, 97%, reported having a field experience and clinical component as a requirement, but only 88% required that setting to be diverse. While most programs tried to place teacher candidates in a diverse field experience setting for exposure to diverse classrooms, more programs need to ensure that teacher candidates are prepared to address the varying student needs in the classroom through intense training beyond basic exposure to diversity.

Minority school students regularly face challenges in the classroom. There is a documented gap between what these students are taught at home and what they learn in school. Teachers often have little idea as to what their students' lives are like outside of the classroom and at home (Townsend, 2002). Although many states have eliminated the extended service expectations for FCSE teachers which allowed for more contacts with parents and exposure to home environments, teacher candidates need strategies to promote parent/home contacts and exposure to home environments.

Teachers with diverse backgrounds can work to bridge the gap of differences students have between home and school. Multiethnic teachers have more personal experiences that allow them to better relate to students in certain situations. These diverse teachers can become role models for students in poverty-stricken and ethnic communities. They can establish relationships with students to help guide them through school. The students can gain encouragement from seeing their teachers who have come from a background much like their own and succeeded. This can inspire students to take on leadership roles in the future. Diverse teachers can also help to prepare students to live and work in a diverse society (*Respond to Changing Demographics*, 2006).

More attention needs to be given to increasing diversity in the teaching pool, especially in the area of FCSE, which is a predominantly white female oriented profession. For FCSE programs to evolve and address the current needs of our students and society, the teaching pool needs to better reflect the changing population and the students we teach. The teaching pool is impacted by the lower number of minority students attending college. According to Futrell (1999), the reasons for many minority students not pursuing higher education include a lack academic preparation from the early grades until graduation, little school encouragement to succeed, and the increasing cost of higher education. The teaching shortage problem is confounded by public high schools having little information about the need for teachers and that there are few incentives for students to pursue a teaching degree. More recruitment strategies are required to engage these students (Futrell, 1999).

To increase the number of minority students in teacher education programs, attention can be given to this issue in various forms such as recruitment, advertising, alternative certification options, and scholarships. Futrell (1999) suggested some strategies to address this problem. First, the issue of preparing all students for post-secondary education needs to begin with the restructuring of teacher education programs to ensure only qualified and prepared teachers are being placed into classrooms. Public schools must implement a strong core curriculum, beginning at the elementary school level. Counselors and teachers can begin to work with students early and frequently about the expectations of post-secondary education. To recruit minority students into teacher education programs, Futrell (1999) suggested the development of marketing and recruitment campaigns, including information sessions, to attract more teacher candidates. Programs should set up an outreach program to inform high school juniors and seniors about the value of becoming a teacher. Universities can set up partnerships with school districts to identify minority students interested in teaching, which could lead to teacher educators and candidates establishing mentoring programs with high schools and community colleges. Programs should seek out opportunities to establish scholarships and other financial aid for minority students. Alternative approaches to teacher certification need to be established. Finally, federal, state, and local education agencies need to increase salaries and working conditions to make teaching better able to compete with other professions (Futrell, 1999).

Finally, only 21% of the nation's 3 million teachers are male. This number has fluctuated and declined over the last 40 years. In secondary schools, the number of male teachers is at 35%. The major dilemma for males entering the field is the view that teaching is for women. The low salaries that teachers, especially new teachers, receive in some areas of the country leads to less prestige in our society. The pay is often not enough to provide for a family. There are strategies to increase the number of males in the teaching profession. The first one is to increase teaching salaries. Those states with higher salaries tend to have more male teachers. Second, identify and recruit males who show an interest in high school. Current male teachers can serve as powerful role models, and by talking with their male high school students about teaching, they can inspire their students to pursue careers in teaching (*National Education Association Male Teacher Fact Sheet*, 2003). In addition to targeting males in their recruitment efforts, FCSE teacher educators must remember the importance of advocacy for better salaries for classroom teachers.

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EDUCATORS' AGREEMENT WITH TECHNOLOGY TENETS OF FINANCIAL EDUCATION IN GRADES K-4

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This paper describes a study measuring the agreement of K-4 educators with hypothetical tenets for technology use in financial education. The sample was drawn from three southern school districts. Data were collected using the Financial Literacy Topic Inventory (an instrument developed for the study). The research found that respondents were neutral toward the technology items. On average, respondents agreed with technology items less than items associated with generally accepted financial education areas. The authors argue that the results relate to patterns of technology availability and use and call for further research into the employment and methods of technology-based instruction for financial education in grades K-4.

The use of instructional technology represents an important issue in educating children about their personal finances (financial education). In a digital age, how and if teachers K-4 teachers employ instructional technology for financial education models an important aspect of children's financial management.

Technology offers benefits for users' financial management. As the material gap between the affluent and impoverished expands (US Department of Commerce Census Bureau, 2002), challenges occur in technology ownership and use (National Telecommunications and Information Administration (NTIA), 2004). Financial environments experience these challenges, in part, through the patterns of technology use in the management of personal wealth and related financial applications. For example, the *Check 21 Act* (H.R. 1474, 2003) expedites availability of monies deposited into bank accounts, but expands the financial gap in two ways. First, expedited availability allows account holders with Internet access to manage their funds outside of normal business hours. This situation allows decisions that prompt increased potential long-term investment growth or savings income. Second, check-dependent account holders who rely on collection timings (or "float") risk losing potential short-term credit. By facilitating the use of technology as a tool for acquiring, managing, and developing financial resources, K-4 teachers offer their students valuable knowledge and experience to enhancing financial management.

While fostering effective technology-based instruction represents a pedagogical "bug" of itself, the financial illiteracy of teens illustrates why these skills are needed. Popular surveys (American Express Corporation, n. d.; Americans for Consumer Education and Competition (ACEC), 2001; Jump$tart Coalition, 1997, 2006; Mandell, 2002, 2004) identify the poor understandings of income, money management, spending and credit, and savings and investment among American youth. According to the National Council on Economic Education's *Survey of the States* (2007), only one state requires coursework in financial education for elementary grades. Author (2006) points out that this situation results, in part, from the financial education's orphaning by the National Council of Teachers of Mathematics.

Nevertheless, personal finance represents a component of the economics discipline in social studies. In elementary grades, the study of various occupations presents a sound basis for teaching children about earnings. Spending and savings choices offer stepping stones to conversations about community interests. Money management offers an opportunity to prompt conversations about travel. Topics in personal finance lend themselves to conversations about critical issues in a capitalist society.

Employment of constructivist computer instruction processes allow opportunities for conversation about social issues related to personal finance. Maxim (2006) describes constructivism as "a child-centered approach that focuses on knowledge construction, not knowledge reproduction…students interpret new objects and events by trying to alter or modify existing mental structures that had formed as a result of their previous life experiences." (pp. 31-33). Author (2005) describes how employment of the NTeQ model (Morrison, Lowther, & Demuelle, 1999) can stimulate conversations about relationships among human populations and corporate polluters; this model also represents a tool to foster conversations about topics in personal finance.

Nevertheless, user input represents a critical element of designing successful technological endeavors. Kvasny (2005) documented how policy-makers failed to seek user input when developing a community computer center, and this situation prompted community neglect of a technology project. Teacher input represents an important, but underutilized element of developing ideas for classroom technology instruction.

The following study was designed to interpret whether teachers and administrators for grades K-4 agree with use of technology as a financial education component with equal or more importance than the four established financial education areas (income, money management, saving and investments, spending and credit). The purpose of the research was to determine whether teachers and administrators for grades K-4 agreed that use of technology represents a financial education component with equal or more importance than the four established financial education areas (income, money management, savings and investments, spending and credit). This paper intends to begin a dialogue about the presence and nature of technology for financial education.

Literature

Technology relates to financial learning in at least two manners. First, ownership empowers users by facilitating access to previously unattainable information for financial decisions. Technology also represents a vehicle for creating and publicizing information espousing financial and societal ideas. In an environment where affluence relates to information control, technology ownership represents a vital element towards social empowerment. Within education systems, technology ownership also represents an empowering device, as administers

control both the distribution and implementation of technology.

This literature explores the nature of technology use for learning and the connections to financial education. It begins by interpreting the effectiveness of technology in learning before reviewing use of technology in economic and financial education, and teaching children about personal finances. Finally, it considers teachers' attitudes towards technology use and relationships of environments to these attitudes.

Technology for Learning

Research generally upholds the effectiveness of using technology to facilitate learning. Cotton's (1991) review of research found computers most effective as supplements to direct instruction. While she disclosed that computers prompted higher achievement, faster learning, and stronger retention, Cotton did not support or disprove effectiveness of computer-assisted instruction within social studies or economics curricula.

Subsequent literature suggests that effective instruction occurs when using technology to prompt higher-order thinking. For example, Hannafin, Hannafin, Land, and Oliver (1997) reported that constructivist processes fostered different patterns of emphases among various learning bases. They also observed that constructionist environments allowed students to create their own patterns of content understandings. Reeves' (1998) review of literature found that using computer tools such as spreadsheets, databases and communications could be used to prompt higher-level thinking. Effective technology use facilitates students' construction of content meanings.

Technology in Economic and Financial Education

As the emphasis in financial education involves middle school and high school (National Council on Economic Education, 2005), most of the literature concerning technology use with involves older children and young adults. The literature reviewed in this section reflects this pattern. Research concerning attitudes about technology in economic or financial education appears to be sparse. Hurd (1990) observed that increased computer use in British economics learning occurred over five years in the presence of the following conditions: college or professionally based teacher knowledge, computer lab access, and active learning environments.

At least one study indicates that constructivist processes have their allure in college settings. Stiff, McCollum, and Johnson (1992) compared student performance and attitudes in two sections of an undergraduate Mathematics of Finance course and concluded that constructivist approaches benefited mathematics instruction. Constructivist-based technology instruction apparently benefits business and economics learning environments

More recently, Greco and O'Connor (2000) reported on a higher-education institution's efforts to implement such software to increase students' use of technology to facilitate their computations, thus allowing focus on their conceptual understandings. Approximately three fourths of the students successfully demonstrated mastery of material on the first of four allowable attempts, with only a little more than 1% unable to do so after the maximum permitted efforts. A subsequent random survey of one ninth of the students indicated more than four fifths agreed that the software improved their comprehension of course content. Greco and O'Connor reported no analysis for statistical significance, yet provided evidence for benefits of computer-assisted instruction in college finance.

Technology potentially benefits the students' economic learning; however, in Stiff, et al. (1992), and Greco and O'Connor (2000) technology facilitated calculations that allowed students

more time to work with economic concepts. Considering the findings of literature about general technology-based instruction, financial educators should consider the benefits of constructivist processes in personal finance instructional technology use. Students develop and explore new theories of economic patterns through student-centered constructivist processes.

The preceding assertion challenges the thought patterns of most finance students. Chan and Shum (2003) determined that college-level finance students generally do not respond favorably to creative learning processes. By college, students' academic discipline arguably connects with their patterns of instructional and behavioral preferences. Effectively, young adults organize by specialized fields of study based on their thought processes and learn to differentiate each other based on their academic fields, or psychological processes in college. If such unresponsiveness results from "instructional conditioning" of K-12 settings, it is important to consider the patterns of instructional technology use in these contexts.

Children, Technology, and Economics Education

While Peracchio (1992) identifies technology as a valuable consumer education tool, technology potentially encourages poor financial habits as well. For example, Molnar (1995) observes that implementation of the Channel One programming prompted advertisements' academic presence, facilitating corporate influences on students' spending behaviors. Just as repetition offers positive educational effects, recurring pitches for brand loyalty and glamour products engender detrimental consumer impulses.

The lasting effect of these environments remains debatable; however, Monke (1998) argued that technology exposure reduces children's real life experiences. Because of increasing contact with television and other forms of electronic media, students lack the depth of real life experiences that serve as catalysts for constructivist technology learning. Financial educators could counter these challenges by planning field trips, guest speakers, and other experiences to provide children the understanding to stimulate the creativity for substantial learning. Employing computers as classroom tutors only exasperates children's limited content.

Technology also represents a vehicle to foster student awareness of costs associated with financial decisions. Barnhardt (1999) advocates using Internet content for discussing potential effects of technological change and of recycling issues. This idea parallels Morrison, et al.'s (1999) NTEQ instructional model, espousing students' research and discovery of academic content. By encouraging constructivist classroom environments, financial educators may prompt student to discover the consequences of their financial decisions. Technology offers opportunities to stimulate children's accountability for economic behaviors.

Environmental Factors and Teachers' Technology Use

Teachers' dispositions towards technology affect their patterns of computer use. Literature indicates that computer users may progress through a series of stages as they become more familiar with technology. For example, Evans-Andris (1995) describes three styles of computer use: avoidance, integration, and specialization. Absent appropriate knowledge and training, it would appear that teachers lack the style of computer use necessary for prompting technology-based constructivist learning. These styles parallel Taylor's (1980) three roles of the computer, as tutor, as tool, and as tutee. To employ the computer in these three roles, the user should possess increasing degrees of sophistication in hardware and software knowledge. For example, one would expect a teacher who employs an avoidance style to employ the computer as a tutor. In this role, the computer requires little user knowledge, except for simple keystrokes

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and/or mouse-clicks to initiate tutoring software. This combination of low skills and information dependency offers students limited content and prompts lower level thinking. Teachers who are able to integrate and customize instructional technology can utilize a variety of software and develop lessons that facilitate students' discovery of information and/or creation of new ideas.

Becker and Riel (2000) found that increases in teachers' exposure to professional activities increased the likelihood of their possessing and implementing constructivist philosophies in the classroom. Lokken, Cheek and Hastings (2003) found that high school family and consumer science teachers experienced positive attitudes towards technology after a technology related two-week summer workshop on six family and consumer science courses. However, their instrument measured only participants' comfort with technology skills and not pedagogical use. Less than one-fifth of teachers participating in Missouri's eMINTs program employed technology instruction using "student-centered, inquiry-based, technology-rich lessons" (Author, 2003, p.17). Most of the teachers who received the training did not implement the provided constructivist learning processes that used technology.

Unfortunately, school districts or colleges do not provide teachers with sufficient professional technology training (Ferenga & Joyce, 2001). Cuban (2002) describes three reasons that schools remain pedagogically short-circuited with regard to their technology implementation: slow acceptance of technology use, unaccommodating teaching contexts, and limited autonomy. Author (in press) explains that technology challenges represent a manifestation of traditional pedagogical patterns that conflict with students' social and cultural patterns. While teachers receive technology training, the nature of the training and conditions for the implementation content appear fit administrative needs, rather than student learning.

While it may be argued that school systems are inundated with modern instructional technology (National Council of Educational Statistics [NCES] 1998; Smerdon & Cronen, 2000), teachers are slow to employ this technology within traditional instruction processes because they either lack the knowledge and/or time to create/plan authentic constructivist learning for their classrooms. Cuban (2002) provides examples of how teachers have been historically slow to implement certain technology strategies. He also describes how patterns of teachers' technology acceptance relate to their methods of instructional employment. Providing schools with technology does not represent a self-sufficient educational goal. Teachers must possess the skills to use technology to fit their instruction needs, rather than in response to administrative concerns.

The purpose of this study was to compare grades K-4 teachers' and administrators' agreement with a technology component to financial education with the four established areas (income, money management, spending and credit, savings and investments) in an elementary (K-4) education curriculum. The literature indicates that teachers' technology acceptance relates to patterns of familiarity and use; however, conditions for training and implementation may shape professional attitudes.

Methodology

The study involved teachers and administrators from three school districts in the southern United States. One was an urban school system with approximately 4,640 elementary school teachers (National Council for Educational Statistics, 2002). The other two systems were located in rural counties bordering the urban school system. They employed approximately 160 and 375 elementary school teachers each.

Sample

The 2004 data collection process involved five elementary schools from the urban school system and two elementary schools from each of the other two systems. The primary author selected four elementary schools from the city school system and two elementary schools from each of the other two districts. By assigning the schools numbers and selecting the numbers through a blind process, a random process was employed to select schools. Because of the low response rate from one of the urban system's schools, additional data were collected from another school, selected through the same random process.

The sample consisted of 167 rural and 93 urban educators (total of 260), of which most (213) were teachers. The sample's ethnic composition involved 174 Whites, 63 African Americans, 12 members with other ethnic categories, and 11 of undisclosed ethnicities. There were 24 males, 228 females and eight respondents of undisclosed gender. Ninety percent of respondents' incomes ranged from $20,000 to $99,999. One percent had incomes less than $20,000 and nine percent had incomes of over $100,000.

Instrument

The primary author developed the Financial Literacy Topic Inventory (FLTI), which contained 34 potential financial education curriculum tenets for grades K-4. Each item involved a 5-level Likert style response, ranging from Strongly Disagree (1) to Strongly Agree (5). Of the 34 original items, 21 represent the four areas of financial literacy established by the Jump$tart Coalition. The items for Income, Money Management, Spending and Credit were taken verbatim from the Jump$tart Coalition's revised financial curriculum benchmarks for the end of Grade 4 (Jump$tart Coalition, 2001). The other 13 items represented two other areas (Character and Technology).

The technology items described employment of different software and computer applications in various aspects of financial comprehension and information gathering (e.g., Item 6, Computer spreadsheets such as Lotus and Excel may be used to keep track of money we get and use, and Item 26, E-mail may be used to tell companies what we like or dislike about their products.) The lead author submitted seven proposed items to three elementary education experts in a southern urban setting. All of the experts responded. One of the experts was a former elementary school teacher, now a professor at an southern urban university. Two were technology coordinators at local pubic elementary schools. Items were eliminated because they were redundant or were too complex for children in fourth grade. Two additional items were recommended for inclusion on the instrument. One, concerning the registration of warranty information, was added. The other, involving Internet use for acquisition and sale of collectables was excluded. Although the primary author considered collectables as forms of investment, he did not believe their conceptualization as developmentally appropriate for students completing fourth grade.

Pilot Surveys

The pilot study occurred during the fall of 2003 and assessed the reliability of the instrument and its subscales. The four selected schools contained a possible 93 respondents for each survey. The two pilot survey administrations provided 95 responses; 44 respondents (47.31%) for the first administration and 51 (54.83%) for the second. Table 1 provides the results of the pilot administrations, considering only those surveys where respondents completed all survey items.

Table 1
Financial Literacy Topic Inventory
Pilot Reliability Coefficients (α)

	Administration 1 (N = 24)	Administration 2 (N = 32)
Income*	.64	.58
Money Management*	.52	.73
Savings and Investments*	.75	.72
Spending and Credit*	.75	.69
Technology	.76	.88

*Adjusted for one inconsistent item

Administration of Instrument.
  The instrument was administered in twelve educational settings from January through April of 2004. During this period, 363 surveys were distributed, with 260 returned for a response rate of 71.60%. Table 2 provides the reliabilities associated with the full administration. Of the 260 surveys, only 194 contained responses to all survey items

Table 2
Financial Literacy Topic Inventory
Revised Reliability Coefficients (α)

	Full Administration (N = 194)
Income	.65
Money Management*	.73
Savings and Investments	.75
Spending and Credit*	.56
Character	.68
Technology	.75

* Highest alpha removing one item from the scale

Findings

  Data analysis occurred through three processes: descriptive statistics analysis, agreement rate patterns, and specific item responses. Because of the aforementioned subscale inter-reliability statistics, the primary author considered only three (income, money management, and savings and investment) of the established financial education areas.

Descriptive Statistics
  The descriptive statistics are associated with interpretations of technology and the three aforementioned components of financial education. Table 3 presents the statistics associated with this analysis.

Table 3
Descriptive Statistics
Technology and the Three Measured Financial Education Areas ($N = 194$)

	M	SD	Skewness
Technology	3.71	0.65	-0.39
Income	4.11	0.48	-0.07
Money Management	4.26	0.58	-0.56
Savings and Investment	4.15	0.49	-0.51

Where provided, comments from respondents indicated that financial learning represented an important pursuit; but instructional technology use represented a secondary consideration to academic basics, such as reading. For example, a respondent commented "Many of our students have little or no access to computers. However, financial knowledge information and training remains a critical need." Technology cannot be a priority if not prominent in the community or its schools. Similarly, other comments, "Our computers are old and have few users. I would do more if I had the equipment", "Computers are good tools, but teaching my kids how to read is a much higher priority. There are not enough hours in the day to take my children through my <u>one</u> computer", and "The extent of computer classroom use for students would increase if appropriate computer facilities increased", point to challenges seeing the importance of technology use when the schools or districts lacked the appropriate resources. Finally, a comment from a teacher having "Only one computer in my room, which may be used for writing IEP's " indicated a lack of autonomy for computer use. Where present, computers are assigned district or school preference for technology use in administrative capacities, such as records storage or administrative communication, rather than as learning tools.

<u>Agreement</u>
The next interpretation compared technology agreement rates with the three measured financial education components. Table 4 presents associated statistics.

Table 4
Agreement Rates
Technology and Three Measured Areas of Financial Education ($N = 194$)

	Strongly Agree or Agree	Neutral	Disagree or Strongly Disagree
Technology	69.60	25.80	4.60
Income	92.80	6.70	0.50
Money Management	89.70	9.80	0.50
Savings and Investment	90.70	9.30	0.00

<u>Interpretation of Agreement Rates</u>
The statistics present an additional dimension to those in Table 3. The larger neutrality of agreement with technology items may be attributed to unfamiliarity with either the nature of the technology tools or their use.
The final analysis compared the descriptive statistics and agreement rates associated with survey's technology items. Table 5 presents the associated statistics.

Table 5
Technology Items
Agreement Indicators for Each Item (*N* = 194)

	μ	*SD*	Skewness
Item 6. Computer spreadsheets such as Lotus and Excel may be used to keep track of money we get and use.	3.34	1.04	-0.09
Item 24 Through the Internet, we may use computers to purchase items and check credit card, bank, and investment accounts.	3.77	0.86	-0.81
Item 26 E-mail may be used to tell companies what we like or dislike about their products.	3.85	0.91	-0.86
Item 28 Through the Internet, we register warranty information on products purchased.	3.73	0.91	-0.53
Item 30: Businesses use programs like Power Point or I-movie to make advertisements and commercials.	3.58	0.95	-0.22
Item 34. Through the Internet, we may find information about products we buy, to ensure they're not harmful.	3.99	0.79	-0.69

Interpretations of Technology Items.

The statistics presented in Table 5 indicate, on average, that respondents possessed moderate to high neutrality with the items presented for each technology component item. Two of the items prompted statistics approaching skewed response distributions, indicating that respondents agreed or strongly agreed (more than disagreed or strongly disagreed) with these items. Items concerning commonly used tools, such as the Internet and email, prompted the highest means. Those concerning spreadsheet and presentation media prompted the lowest means.

Discussion

The respondents' mean agreement with technology items was less than the mean agreements of the three measured financial education components. This section explores the reasons for this finding. The discussion relates findings to education theory, to the sample characteristics, contextual relevancy, and then to technology familiarity.

General

Literature advocates constructivist models of computer-based instruction (Clark & Gorski, 2002; Hannafin, et al., 1997; Hay & Barab, 2001; Morrison, et al., 1999; Reeves, 1998). Teachers need supportive administrative and curricular environments to facilitate such process (Hackbarth, 2002; McDonald & Ingvarson, 1997). Unfortunately, teachers and policy-makers possess different priorities (Monke, 1998) that they must reconcile to fulfill instructional technology goals. This study finds that similar challenges affect technology use for financial education.

Sample Composition

Still, the context of the respondents represents an important consideration. Of the 194 respondents fully completed surveys, 128 (65.97%) identified themselves as being in rural settings. The digital divide represents a particularly challenging issue for rural communities

because these communities experience less access to technology than urban settings (US National Commission on Libraries and Information Science, 1999; Wiburg, 2003). Presuming rural inexperience and discomfort with technology tools, the abundance of rural educators participating in this study may have influenced lower agreements with technology items.

<u>Developmental Appropriateness</u>

It is possible that respondents considered the items as developmentally inappropriate for students in their classrooms. Although technology experts reviewed the items, the sample included educators having contacts with large numbers of children possessing various degrees of computer skill. Consistently with the writings of Evans-Andris (1995), the degree to which respondents agreed with technology items could have related to their interpretation students' technology skills, their patterns of instructional preference, and their perceptions of curricular consistency.

<u>Administrative Priorities</u>

Commenting respondents indicated that they possessed limited technology resources and employed them for administrative purposes. Cuban (2002) describes the administrative technology demands placed on classrooms, documenting how teachers mostly employ their computers for administrative processes, rather than student engagement. Patterns of administrative instructional technology control occur through the decisions about training opportunities and learning environments.

<u>Technology</u>

Respondents' expressed the most agreement with items concerning Internet use and Email, but their least agreement with the item concerning spreadsheet and other software applications. These patterns indicate that partiality may relate to training, experience and comfort with different software. It is possible that respondents did not experience these technology programs, lacked training for methods to use these programs, or were confused by items' syntax.

Nevertheless, lower agreement with Item 30 (Businesses use programs like Power Point or I-movie to make advertisements and commercials) also points to differentiation between businesses in-house and contracted marketing efforts. Research (McKenzie, 1971; McKinney, McKinney, Larkins Gilmore, & Ford, 1990) indicates that preservice and practicing elementary school teachers do not have the knowledge of economics to consider such professional patterns, thus this distinction is unlikely.

Conclusion and Recommendations

Respondents to this survey expressed neutrality towards items concerning technology use in financial education for grades K-4; their mean agreement was less than their agreement with generally accepted areas. Although these results support development of technology instruction within financial education, further studies should explore how the training of teachers in constructivist processes relates to the nature and conditions for such instruction tenets.

These findings are based on an instrument with only six technology items and a sample bias toward rural educators. Future studies must provide deeper interpretations of technology use in financial education by sampling other populations to fully comprehend attitudes toward this curriculum and instruction issue.

The financial education community should clarify the tenets for a technology use

component within financial education curricula. The study found educators valued a proposed technology financial education component. The largely rural sample may have prompted the moderate agreement with items. Future studies should examine patterns of technology use in financial education and influences of learning contexts.

Nevertheless, teachers need the professional development, time, and resources to develop the environments to affect this learning. Computers and other communication bases represent information tools that potentially empower users with social and information resources; however, unequal technology distribution, inadequate working conditions, and technology use limitations impair classroom teachers' effective computer-based instruction. Teachers need the training, access, and freedom to discover and utilize technology resources in their optimal manners. However, these processes require the conditions to develop and implement effective constructivist learning environments. Literature shows that this situation exists in general education. The results of this study indicate that financial education contexts are not different.

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PROGRAM EVALUATION OF READY, SET, TEACH!

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This exploratory study examined the effectiveness of an innovative Texas Family and Consumer Sciences high school course, Ready, Set, Teach!, in preparing future teachers for the educational field. Researchers sent surveys to Ready, Set, Teach! educators listed through professional development conferences and course codes. In addition to the survey, participants were also encouraged to provide input on strategies for the course's improvement. Data collected indicated a wide variety of educators' methods for teaching this course; many suggested the need for additional resource materials for the course and connections to other educators teaching the course.

The purpose of this paper is to report on an individual research project that was conducted during spring semester 2006 in collaboration with my undergraduate advisor. The focus was to conduct a program evaluation of the Ready, Set, Teach! (RST) curricula.

Ready, Set, Teach! is an innovative program developed for Texas Family and Consumer Sciences (FCS), and is a high school course designed to prepare 10th and 11th grade students for collegiate teacher preparation programs and an educational career in their content area. The goals of RST are to provide students with the knowledge of human and cognitive development, ethical educational practices, and effective instructional strategies, among others. Students are also placed with a cooperating teacher for a more stimulating experience of the classroom and to obtain the view of an educator. With the documented teacher shortage, especially in FCS, the RST program may be an important recruitment tool for FCS teaching and the profession because students have the opportunity for early exposure and exploration of the teaching profession.

In evaluating RST throughout the state of Texas, we established three specific goals. Our first was to determine the effectiveness of the curriculum by the RST educators. Additionally, we would use the information received in the surveys to provide suggestions for improved curriculum content and materials. These improved materials will serve as a tool for maintaining and improving standards in education, which will increase recruitment and retain educators in the field of education. Our final goal for evaluating RST was to seek the impact of the course on the exploration of the teaching profession and recruiting educators in the specific field of Family and Consumer Sciences (FCS). Because FCS educators teach this course, teachers were given the opportunity and encouraged to promote the FCS content area to students in RST.

Related Literature

Previous research found that not only is the field of education faltering in the recruitment of teachers (Recruiting New Teachers, 2000), but districts are also having trouble retaining teachers. Current statistics show that 20% of new teachers are withdrawing from the teaching field within three years and, in urban areas, 50% leaving within five years. Because of this struggle, high demand subjects and rapid growth areas are unable to staff the number of teachers necessary. For new teachers, unclear expectations and the unavailability of strong mentorship have been the cause of teacher withdrawal. A strong mentorship early in their careers appears to

be critical for new teachers to remain in the field. Twice as many new teachers stay in teaching with a strong support network (National Education Association, retrieved 2006).

Several strategies have been proposed to increase recruitment and retention, including the support of pre-collegiate programs like RST. These programs enroll middle school and high school students with an interest in education to develop their future career plans and explore various teaching opportunities. Students are also encouraged to serve as leaders for their peers and for younger children, research the field and educational programs, and prepare a portfolio demonstrating their growth. Additionally, recruitment programs encourage students to concentrate their electives on completing pre-collegiate program requirements and internships at local schools, and using colleges and universities as a path to teaching (Recruiting New Teachers, 2000). In Los Angeles Unified School District (LAUSD), 86% of teachers who completed the pre-collegiate teaching academy remained in the field (Rathi, 2005), showing that students completing these successful pre-collegiate recruitment programs are more likely to stay in the teaching field.

Pre-collegiate programs such as the Center for Educator Recruitment, Retention, and Advancement (CERRA) in South Carolina and LAUSD both promote the mission of recruiting and retaining teachers. CERRA begins at the junior high level with a focus on self-discovery, cooperative group work, service learning, goal-setting, career exploration, family involvement, and teaching-like experiences (Center for Educator Recruitment, Retention, & Advancement. 2004a). Then in high school, CERRA focuses on the impact of shortages in content areas, various areas of teaching, and instructional experiences with a content area teacher at the secondary level. Students are also given insight into teaching environments, evaluating school problems, and addressing critical issues relating to educational quality. This high school program connects with colleges and universities to provide college credit for completion of the program (Center for Educator Recruitment, Retention, & Advancement. 2004b). Additionally, LAUSD actually offers conditional teaching contracts to selected graduating seniors in the teaching career academies. Of the 1,800 students enrolled in the academies, 78 students received these contracts. The conditions guaranteed a contract in the district, to these top students who began college in the fall 2005 semester with a maintained 2.7 GPA. Students must receive their teaching credentials by July 2011. LAUSD is the first district in the United States to offer teaching contracts to high school students (Rathi, 2005).

Limitations of these programs included starting students too early and offering contracts to undeveloped students. Starting teaching programs at the junior high level could cause students to become bored with the content or feel pressured to stay in the field. Some early adolescent students are not mentally prepared to begin planning for their careers at such a young age; doing so could cause resentment to the field or increase "burnouts" before the student enters the field professionally. Additionally, an early contract may not be the sole contributor in bringing a student back to their home district.

Procedures

During an undergraduate evaluation and research course in family and consumer sciences education (FCSE) taught in the fall of 2005, the professor introduced the research process by initiating a collaborative program evaluation. The process began with the class reading background information on program evaluation and reviewing the RST curriculum. Grading procedures for project participation were then established collaboratively with the development of a scorecard based on participation of research studied and forming the survey. Then,

discussion of the curriculum and possible survey questions began. Each member created questions, and as a group we edited the list, categorized, and grouped the questions. Our final groupings of questions were general demographics, resources and teaching aides, curriculum, support of the program, learning strategies, program requirements and implementation, application of content, field experience, and program outcomes. By the time the draft of the survey had been completed, the course was over. However, because of my interest in program evaluation and curriculum development, I began an independent study to continue with the research. The outcome of my independent study is the focus of this paper.

My first duty with the independent study was to further edit the list of questions and categories. Once the survey had been limited to a reasonable number of questions, we then added general demographic questions asking about the program and school. The survey was sent out to twenty RST educators for review of content and construct validity. Eleven surveys with comments related to the content and survey construction were returned. Based upon those comments, the final draft of the survey was edited further and completed.

The survey questions were entered into *Select Survey*, software used for online surveys, provided by the university for use by faculty and students conducting research. The survey was sent out electronically to all 212 FCS teachers of RST throughout the state of Texas. The list of teachers and their email addresses was obtained from registration information at previous professional development meetings as well as from the Texas Education Agency (TEA) Public Education Information Management Systems (PEIMS), a program assigning the course codes to teachers for data recording purposes. Once the survey was sent electronically, 19 addresses were deemed undeliverable by email. The survey was mailed through United States Postal Services to these 19 individuals.

Results and Discussion

Of the 212 surveys sent electronically and by mail, 106 were returned with responses on their RST programs. It is important to note that the email announcement about the survey generated responses from 27 teachers who indicated that RST was not currently taught in their schools or districts. Therefore, the response rate was 57.30%. The first 14 items consisted of general demographic questions based on their school, themselves as a teacher, and the students. The RST programs enrollment ranged from 2 to 65 students with an average of 20.1 students per recorded class. The RST offering was more prevalent in larger districts (75%). One reason for this difference could be that the larger districts have more teachers to implement the program, whereas smaller districts may only have one teacher with limited time. Additionally, RST educators appeared to be very experienced in FCS, with an average years in the field of 18.8 years and a range of 0 to 38 years of experience. Identified student populations consisted of African American, American Indian, Asian, Caucasian, Hispanic, and Pakistani. The majority of students in RST were Caucasian and Hispanic at 46.89% and 41.29%, respectively. Two of every 25 students in RST were classified as having special needs, and 25.94% were considered "at-risk" students. (See Table 1)

Table 1
Distribution of Sample Demographics

	Range of Enrollment	% Average Enrollment
Ethnicity		
African American	0-35	9.60
American Indian	0-3	0.57
Asian	0-5	1.60
Caucasian	0-143	46.89
Hispanic	0-66	41.29
Pakistani	0-1	0.04
Classification		
Special Needs	0-18	8.66
At-Risk	0-65	25.94

This type of program may benefit to "at-risk" students because RST focuses them on establishing a career goal early and provides career-related preparation. This emphasis could provide the incentive to graduate and enter a teacher preparation program especially if the local program has articulation agreements in place with postsecondary institutions.

In focusing on the actual curriculum, teachers were asked how often they considered the student's philosophy of education when guiding the student to specific content areas or age groups. Most RST educators frequently or sometimes used the student's philosophy of education, while 28% of RST educators rarely or never considered the students' philosophy. This seems like a very high percentage when considering the program is trying to recruit students into the field of education. Emphasis on individual perspectives and philosophies may promote creativity and motivation. Teachers were also asked how accurately the curriculum portrays what teachers need to know and be able to do. Most educators (85%) felt the curriculum succeeds in this factor.

The next area was the support and known benefits of the program throughout the school and community. Among students, other teachers, administrators, parents, and the community, RST educators generally felt nearly everyone understood the benefits of the program and fully supported the program. Few teachers disagreed that others understood the benefits of RST and supported the program; over 90% felt most audiences supported RST. (See Table 2)

Table 2
Support and Know Benefits of RST by School and Community

	% RST Student	% Field Teachers	% Teachers and Administrators	% Parents and Community
Agree	96.40	95.24	96.43	91.67
Unsure	2.38	3.57	3.57	7.14
Disagree	1.19	1.19	0.0	1.19

Additionally, 76.2% of RST programs incorporated, or were working to incorporate articulation agreements with local community colleges and 4-year institutions. These are agreements made to transfer the students' earned high school credits to the collegiate level as credits in their undergraduate major.

Program requirements were the next area of focus in considering the success and identifying improvements for RST. Students (93.60%) were usually required to present their own lesson plans to the field-based classrooms, and occasionally to fellow RST students. (See Table 3)

Table 3
Presentation of Lesson Plans

Time Period	% Average Response
RST Class	
Weekly	3.80
Monthly	22.78
Once per Instructional Unit	27.85
Once per Semester	40.51
Never	5.06
Field-Based Class	
Weekly	24.05
Monthly	25.32
Once per Instructional Unit	22.78
Once per Semester	21.52
Never	6.33

In consideration of field experience, a variety of grade levels from preschool through high school and special education classes at all levels were available through certain RST programs, but a majority of RST programs utilized elementary classrooms: Preschool (60%); Kindergarten (99%); Grades 1-3 (97%); Grades 4-5 (84%); Grades 6-8 (62%); High School (44%); Special Education (4%). Additionally, sufficient time was devoted to the field-based classroom and providing students with hands on learning skills. Only 5% of RST educators had students visit the field-based classrooms less than one week in each month. The majority (37.5%) required students visit classrooms in the schools 11-15 days each month. (see Table 4)

Table 4
Monthly Field-Based Classroom Experience

Days in Field Classroom	% Average Time
3-5 Days (>1 week)	6.90
6-10 Days (>2 week)	30.60
11-15 Days (>3 week)	37.50
16-20 Days (>4 week)	25.0

Field experience is a critical component of RST for understanding the demands of the classroom. As a student completing all teaching requirements at the undergraduate level, I understand the importance of hands-on experience in the classroom. A student is unable to learn without doing and experiencing, and therefore, does not understand the operations of the classroom fully without the availability of everyday classroom interactions.

An additional consideration which could impact the expectations of new teachers, is that many RST programs did not provide the opportunity to attend professional meetings, conferences (84.15%), or teacher in-service experiences (75.61%). One possible reason for the

lack of professional development opportunities is the lack of financing available for travel. Most schools have travel limitations for their teachers and it would be impossible for them to support students. Two possible solutions for this issue would be to rely on local speakers/trainers to the classroom and to promote involvement in Family, Career, Community Leaders of America (FCCLA) or the state affiliated teacher preparation organization. In Texas, this group is the Texas Association of Future Teachers (TAFE). The majority of respondents indicated that they either strongly agreed (41%, n=31) or agreed (21%, n=16) that FCCLA was important for student participation. Fifty (60%) of the respondents for this item indicated that their students were members of FCCLA and 37 (49%) indicated that their students joined TAFE. Further, there was strong support (98.78%) for student interaction with other teachers various teaching strategies in lessons.

The respondents reported that 3,949 students have successfully completed the RST program, an average of 54 students per program. Of the students completing the program, 1,288 students (33%) were enrolled in a collegiate education program divided among Early Childhood Education, Elementary Education, Special Education, Family and Consumer Sciences, and Secondary Education. (see Table 5)

Table 5
Enrollment Rates at the Collegiate Level

Education Major	Range of Enrollment	% Average Enrollment
Early Childhood	0-100	52.42
Elementary	0-50	30.57
Family and Consumer Sciences	0-20	1.93
Other Secondary	0-90	13.16
Special Education	0-20	1.93

Furthermore, 218 students (6%) were currently employed in the teaching field. The RST program was only approved in 2001 as an innovative course offering; therefore, students may not have graduated from high school and completed a postsecondary education program.

Suggestions were made for the RST curriculum. One was to improve the course text, *Reaching to Teach*. Teachers commented that the text does not correspond appropriately with the curriculum guide and is difficult to understand. Additionally, teachers felt the text needs to be reorganized and must include more teaching strategies. In consideration of available resources, RST educators want more reading materials for students, suggestions for more projects and activities for the students, and suggestions for community connections. Teachers also would like to feel more connected to other RST educators to share ideas. RST would be an excellent topic for professional development conferences.

Summary and Future Recommendations

Results from the survey indicated that the RST program is successful. Several students have completed the program and enrolled in teacher preparation programs at the postsecondary level. However, some recommendations were directed toward the curriculum materials, including strengthening the connection between the curriculum guide and *Reaching to Teach*. The program, even with guidelines of minimum grade requirements, recommendation letters, and interviews, enrolls many "at-risk" students. This could help these students consider

postsecondary education. Overall, teachers and administrators support and see the full benefits of the course and promote it to those students interested in the field of education.

For future research, it would be wise to conduct a program evaluation of RST from the student perspective and to follow-up longitudinally with those who enter a teacher preparation program. Data could be collected at future intervals to follow students through college, into the workforce, and further to determine the success rate of RST in helping students complete college, enter the teaching field, and stay in a teaching career. From this survey, we also determined that electronic surveys were very cost effective. However, there were delivery issues such as spam blocker programs and firewalls at the local district that can render the electronic survey undeliverable.

A recommendation for researchers using electronic surveys is to run delivery tests of the survey system before actual distribution because of delays with servers. Had we run a test email with emails outside of the university system, we would have discovered that the emails were not being delivered as anticipated. Another consideration should be for several individuals to assist with the creation as done with this survey, which allows for various perspectives to be offered in developing the focus of the survey, i.e. what is the importance of the question in relation to the final outcome?

Future research studies could include comparing RST outcomes to other pre-collegiate teacher recruitment programs such as CERRA, and evaluating the successes of each. This might lead to the development of an even more efficient program in the recruitment of teachers. Additionally, the variances in collegiate and pre-collegiate programs and the differing expectations required of the actual field could be examined.

From this experience, I have learned about the research process including survey development, basic descriptive analysis of survey responses, and writing a manuscript. I have also learned that the education is having trouble retaining teachers, and pre-collegiate programs are the first step in helping a student become a future teacher. Finally, I have learned that delivery of an innovative course such as RST requires guidelines for the program, evaluation of the course, creation of a textbook, and development of additional resource materials.

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Family and Consumer Sciences Education
Dissertations and Theses, 1995 –2005

This information comes from the listing of dissertations and theses in the Family and Consumer Sciences Research Journal (FCSRJ), 1996-2006.

Type	Topic	Level of Student Research	Citation
Curriculum	Abstinence	Dissertation	Johnson, A. T. (2004). Student, parent, teacher and administration perceptions of an abstinence-based teenage pregnancy program implemented in rural Western Alabama Schools.
Curriculum	After School	Thesis	Einck, D.M.R. (2001). Connecting communities; An after school program guide. Iowa State University.
Curriculum	Character Education	Thesis	Drennan, A.C. (2002). A study of the effects that character education in schools has on students' behavior. Stephen F Austin State University.
Curriculum	Citizenship	Thesis	Ellenbarger, K.L. (1998). Ohio proficiency citizenship outcomes for middle school FCS students' participation in an integrated unit. The Ohio State University.
Curriculum	Clothing	Thesis	Johnson, L.M. (2002). A new way to organize a clothing class.
Curriculum	Clothing	Thesis	Hilleman, K.H. (1996). Perceptual learning of textiles and clothing in Iowa secondary school FCS classes. Iowa State University.
Curriculum	Clothing	Thesis	Allman, S. (1995). A study of clothing, textiles, and merchandising concepts at the secondary, community college, and university level. Florida State University.
Curriculum	Curriculum Orientation	Thesis	Brozovsky, S.L. (1996). Beginning the journey of change: Readiness experiences of Nebraska FCS teachers. University of Nebraska-Lincoln.
Curriculum	Curriculum Orientation	Thesis	Lichty, M.E. (1996). Obstacles and supporting factors involved in teacher change. University of Nebraska-Lincoln.
Curriculum	Distance Education	Dissertation	Bigilaki, L.N. (1996). FCS secondary school teachers' orientation toward distance education technology for curricular delivery. Iowa State University.
Curriculum	FCCLA	Thesis	Miller, M. (2005). Sample events: Idaho students taking action with recognitions in FCCLA. University of Idaho.
Curriculum	Language arts	Dissertation	Wasike, G.N. (1995). Integration of language arts skill development into secondary school FCS curricular: A causal model for predicting teacher practices. Iowa State University.
Curriculum	Parenting	Thesis	Trost, B.C. (1996). Teacher's evaluation of AThe Parenting Curriculum: A family and consumer sciences and language arts partnership@. Iowa State University.
Curriculum	Parenting	Thesis	Knapp, B. (1997). Parenting education in secondary FCS: Changes in student knowledge and beliefs. University of Nebraska-Lincoln.
Curriculum	Parenting	Thesis	Sasso, T.K. (1998). High school students' perceptions of knowledge, attitude and future decisions regarding parenting: students' evaluations of The Parenting Curriculum@. Iowa State University.
Curriculum	Paternity	Thesis	Strasser, M.J. (1999). Communication including technological forms to enhance a cross age paternity curriculum. Iowa State University.
Curriculum	Personal Finance	Thesis	Davies, C.C. (1999). Personal finance education in Utah high schools. Utah State University.
Curriculum	National standards	Dissertation	Reichelt, S.A. (2001). FCS Education national curriculum standards. Implementation plans for reform. Iowa State University.
Curriculum	National Standards	Thesis	Chen, J. (2002). Factors that impact FACS teachers= early adapters of 1998 FCS National Standards and their classroom assessment practices. Iowa State University.

Curriculum	Occupational	Thesis	Walker, D.P. (1996). Occupational foods curriculum. Utah State University.
Curriculum	Occupational	Thesis	Pasricha, A. (2005). Revision of FCS 488 course, developing occupational programs in FCS, at California State University at Long Beach, Iowa State University.
Curriculum	Reform	Thesis	Odhiambo, S.M. (1997). Barriers to change encountered by FCS teachers in a curriculum reform effort. Iowa State University.
Curriculum	Technology	Thesis	Topper, L. (2000). ICN Handbook for FCS teachers. Iowa State University.
Curriculum	Technology	Dissertation	Bailey, D. (2001). Emancipatory learning: An exploratory study of critical reflection in Internet family studies students. Michigan State University.
Adolescent Learner	At-Risk	Thesis	Eckhout, N.E. (1997). A resource book for teachers in FCS in Utah regarding identification and education of at-risk students. Utah State University.
Adolescent Learner	Attitudes	Thesis	Alexander, K. (1997). Analysis of empathy and conflict resolution behavior of high school work and family life students. Ohio State University.
Adolescent Learners	Empathy Service Learning	Thesis	Warner, C.S. (1997). The empathy level and service learning experiences of students enrolled in secondary work and family life courses and selected factors. Ohio State University.
Adolescent Learners	Middle school students	Thesis	Carmalt, J.H. (2003). Objectification and middle school students' quality of experience. University of Utah.
Assessment	Accountability	Dissertation	Werth, P.G. (1999). Vocational education accountability in Virginia: Analysis of vocational completers' employment status earnings and job satisfaction. Virginia Polytechnic Institute and State University.
Assessment	Clothing	Thesis	Woll, J. (2001). IMMEX as an instructional assessment tool for high school clothing class. California State University - Northridge.
Assessment	Parent Involvement	Thesis	Linder, A.L. (1999). Parent involvement as a predicator of student academic achievement. Louisiana Tech University.
Assessment	Problem Solving	Thesis	Hsiao, L.S. (1995). The development of models of problem solving instrument for FCS education. Ohio State University.
Assessment	Problem Solving (nutrition)	Thesis	Kulkarni, U. (1995). The development of nutritional practical problem solving tailored response tests for adolescents using a practical reasoning framework. Ohio State University.
Image	Guidance Counselor	Thesis	Erwin, W.K. (1995). High school guidance counselors' perceptions of secondary home economics programs: Directions for the future. University of Tennessee.
Image	Importance of FCS	Dissertation	Good. M.A. (2000). Secondary school FCS teachers perceived importance of FCS.
Instruction	Cooperative Learning	Thesis	Whaley, C.D. (1995). An analysis of factors related to the level of use of cooperative learning in Ohio middle level home economics classrooms. Ohio State University.
Instruction	Effectiveness	Thesis	Anderson, T.P. (1998). The effectiveness of instruction on student nutrition knowledge and food choices. University of Southern Mississippi.
Instruction	Problem Based	Thesis	Ward, J.C. (1998). Teaching strategies for FCS: Student achievement in problem based learning versus lecture-based instruction. Appalachian State University.
Instruction	Television	Thesis	Dillon-Stewart, J. (1995). New Mexico home economics teachers' incorporation of television into the classroom. New Mexico State University.
International	Korea	Dissertation	Ryu, S. (1998). Curriculum orientations and professional teaching practices reported by Korean secondary home economics teachers and teacher educators. Ohio State University.

International	Korea	Dissertation	Chae, J. (1995). Assessment of Korean secondary home economics curriculum with implications for change. Ohio State University
International	Taiwan	Dissertation	Hsu, M. (1995). Teaching home economics through literature in Taiwan: Perspective of home economics teachers. Iowa State University
International	Zimbabwe	Dissertation	Mberengwa, L.R. (1999). Curriculum change in home economics education at Gweru Teachers College, Zimbabwe, 1975-1995. University of Nebraska-Lincoln.
Profession	Career choice	Dissertation	Bretz, M.K. (1995). Career choice decision: Differences between FCS Education and elementary education majors. Iowa State University.
Profession	Communicator	Thesis	Dodor, B.A. (2002). Computer-mediated communicator among FCS teachers. Iowa State University.
Profession	Enrollment	Thesis	Robinson, C.M. (1995). An investigation of reasons for declining enrollment in college FCS education programs in North Carolina. Western Carolina University.
Profession	Gatekeepers	Dissertation	Webber, S.K. (1998). Gatekeepers of secondary FCS/Home economics program. Texas Tech University.
Profession	History	Thesis	Navratil, B.K. (1996). Lives of home economics teachers in Nebraska, 1935-45. University of Nebraska-Lincoln.
Profession	Image	Dissertation	Good, M.A. (2000). Secondary school FCS Teachers perceived importance of FCS. Iowa State University.
Profession	Job satisfaction	Dissertation	Smith, B. (1995). Job satisfaction of home economics teachers in Ohio. Ohio State University.
Profession	Name Change	Dissertation	Munya, S.C. (2001). FCS teachers' attitudes and perceptions of the impact of the name change on FCS education in Iowa. Iowa State University.
Profession	Non-FCS prepared teachers	Thesis	Moser, G. (2002). Factors affecting the rate of out of the field teaching in Iowa=s middle-school FCS programs. Iowa State University
Profession	Organizational Management	Thesis	Koubel, S.D. (2001). A survey of FCS education association members: Organization affiliation and perceived professional development. Texas Tech University.
Profession	Professional Development	Dissertation	Jones, E. (1999). Professional development: South Carolina's FCS secondary school experiences, facilitators, and opportunities. Iowa State University.
Profession	Socialization	Dissertation	Lichty, M. (1999). The socialization process for new college faculty in FCS education. Virginia Polytechnic Institute and State University.
Profession	Teacher Attitude	Dissertation	Williams, B. (2000). FCS teachers'= attitude toward & stages of adoption of information. Texas Tech University.
Teachers= Attitudes	Learning Disabled	Thesis	Lanee, R.L. (1995). Vocational FCS teachers' attitudes toward learning disabled students in the secondary classroom. Ohio State University.
Teacher Attitudes	Sexual Harassment	Dissertation	Stone, M.S. (2001). Teachers' attitudes toward sexual harassment and perceptions of student peer sexual harassment. Texas Tech University.
Teacher Preparation	Inclusion	Thesis	Cummings, A. (2003). New Mexico. FCS teachers and inclusion: Their formal and informal preparation challenges in the classroom, their need for assistance and in service training. New Mexico State University.
Teacher Preparation	Inclusion	Dissertation	Harding, K.M. (1999). A qualitative study of the knowledge or practical understanding, attitudes, and behaviors of FCS teachers involved with inclusion. Florida State University.
Teacher Preparation	Mentoring practices	Dissertation	Waters, C. L. (2005). Mentoring practices of cooperating teachers to prepare student teachers for meeting selected Iowa teaching standards: The student teacher=s perspective. Iowa State University.
Teacher Preparation	Portfolio Assessment	Dissertation	Neill, L.A. (1996). Development of a portfolio prototype for assessment of home economics preservice teachers in Texas. Texas Tech University.
Teacher Preparation	Recruitment	Thesis	Elliott, C.X.C. (1999). Work and home satisfaction of Texas home economics teachers: Implications for student recruitment. Texas Women=s University.

Teacher Preparation	Student Teaching	Thesis	Baughman, L.J. (1998). One student teacher=s experience: Action research through reflective thought. Iowa State University.
Teacher Preparation	Technology	Thesis	Werhan, C.R. (1999). Influence of computer training on professional and classroom use of computers by Indiana FCS teachers. Indiana State University.
Teacher Preparation	Technology	Dissertation	Croxall, K.C. (2002). FCS preservice teachers' computer technology preparation. Utah State University
Teacher Preparation	Values	Thesis	Bowen, G. (2003). Value patterns of undergraduate FCS Education majors. Florida State University.

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