Journal of Family and Consumer Sciences Education, Vol. 17, No. 2, Fall/Winter, 1999

AN ASSESSMENT OF HOUSING EDUCATION IN SECONDARY FAMILY AND CONSUMER SCIENCES PROGRAMS

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A survey of secondary Family and Consumer Sciences teachers examined their backgrounds, information needs, and comfort levels for teaching housing, interior design, and home equipment. The study compared concepts teachers emphasized in their teaching with concepts they felt would be important for students to know in 2010. The sample of 100 teachers indicated they had some course work in these content areas but relied mostly on their past experiences. Few teachers had attended update sessions in the past 10 years, but interest in in-service education was indicated. A comparison of what teachers emphasized with what they felt important revealed that with one exception teachers did not teach what they felt to be important for their students' futures. Teachers particularly need updating in energy conservation and home maintenance to get their comfort levels in line with the concepts they feel are most important. Stronger in-service and pre-service education are warranted.

Human shelter is a basic human need. Maslow, in his hierarchy of needs, included shelter among the physical needs at the very foundation of all human needs. He theorized that without satisfying the basic physical needs, other needs, including safety, socialization, self-esteem, and self-actualization, could not be fulfilled (Lindamood & Hanna, 1979). Marcus (1997) described the home as A... a place of self-expression, a vessel of memories, a refuge from the outside world, a cacoon where we can feel nurtured and let down our guard" (p. 2). Preparing adolescents to meet their present housing needs, explore housing-related careers, and gain insight into housing decisions as future homeowners and occupants should be integral parts of a comprehensive curriculum in secondary Family and Consumer Sciences. The extent to which such family housing concepts are taught, however, varies greatly among Family and Consumer Sciences programs across the nation.

As we evaluate secondary family housing education, it is found that little is known about the level of preparation of teachers for conveying housing, interior design, and home equipment subject matter at this level. In addition, few studies have investigated which housing topics are emphasized by secondary Family and Consumer Sciences teachers and which topics the teachers feel students should be knowledgeable about as future consumers.

Purposes of the Study

The first purpose of this study was to examine the educational backgrounds, the information needs, and the comfort levels of secondary Family and Consumer Sciences teachers related to family housing, interior design, and home equipment subject matter. Secondly, the study compared the concepts the teachers emphasized in their teaching in these areas with what

they felt would be important for students to know in the future. A third purpose of the study was to assess strategies and resources seen as most useful in structuring housing-related courses.

Review of Literature

Shelter is a necessity and an important consideration in fulfilling human needs (Jackson & Southers, 1993). Davis (1993) has described the home as the initial, continuing, and basic environment for human development. Konopka (1978) had a similar view of housing, stating that housing is a place where human beings find their physical, emotional, and spiritual needs met. Housing includes the whole way of life one considers desirable; it is also where culture is transmitted.

During the late 1800's and early 1900's housing and the physical environment were major problems confronting society (Klein, 1993). As a result, the study of laws, conditions, ideals, and principles concerned with man's immediate physical environment has been an essential part of Family and Consumer Sciences (previously known as Home Economics) since the development of the first curriculum at the Lake Placid Conferences in the early 1900's (Byrd, 1990; Horn, 1981; Klein, 1993). Byrd's (1990) review of literature related to Home Economics programs indicated that there was an early emphasis on family housing, and shelter was a basic part of the Home Economics knowledge base.

Over the years, new emerging themes have surfaced that have directly influenced housing and housing choices. Included among these are technology, environmental concerns, and housing affordability, as well as the needs of the aging population (Byrd, 1990). In the early 1990's, Byrd expressed a need for an update in the Family and Consumer Sciences knowledge base, including housing. This was seen as warranted because of changing education, business, and technological foci. Byrd felt it was imperative for teachers in Family and Consumer Sciences to continually analyze these changes and their impacts on courses and programs. Educating teachers about such issues, as well as encouraging their inclusion in Family and Consumer Sciences programs, are more important than ever as we enter the 21st Century. Byrd (1990) noted that an enhancement of the profession in the 21-century also demands a new paradigm for Family and Consumer Sciences in higher education. Courses of study at the university level need to include information about the ecology of the family in the physical environment. Kellett and Beard (1991) noted that in recent years the course requirements related to family housing in teacher education curricula have decreased.

A main concern Konopka (1978) voiced in relation to housing is its failure to meet the needs of one neglected group, the adolescent. Teens have a need for privacy and space of their own. Konopka has also noted that young people need to be made very aware of housing as a social phenomenon for which they share responsibility.

Housing decisions have major influences on the family's utilization of resources, and adolescents, as future consumers, need to understand the importance of housing decisions on individual and family well-being. When expenses for a home are too great in comparison to family income, the family's well-being is threatened (Jackson & Southers, 1993). This threat may include the loss of shelter and the intervention by social agencies. Effective educational programs can help prevent the need for such intervention (Davis, 1993).

Despite the fact that housing consumes a large part of a family's income and much of a family's work is directed toward meeting shelter needs and wants, housing-related courses are only taught four percent of the time in secondary classrooms. In the Family and Consumer Sciences classroom, little attention is given to housing decisions compared to other family topics

(Wooldridge, Sebelius, & Weber, 1991). Jackson and Southers (1993) have pointed out that housing decisions are a major task and concern of most adults, and the skills needed to make informed housing decisions should be implemented in secondary curriculum.

The types of family housing concepts taught in secondary Family and Consumer Sciences classrooms vary among teachers. Holt's (1988) Louisiana study asked teachers to indicate the amount of emphasis they placed on various housing concepts in their classrooms and how important they thought the concepts were for the students' futures. The results indicated teachers generally taught what they perceived as important, but some inconsistencies did exist. Holt noted that three of the housing concepts rated most important (home management, home repairs and maintenance, and household appliances and equipment) were not listed among the concepts emphasized most in the classroom. Interior design and decorating, on the other hand, were rated low in importance, but were emphasized the most.

Methodology

In this research, New Mexico secondary Family and Consumer Sciences teachers were surveyed to determine background characteristics; information needs related to housing, interior design, and home equipment; emphasis placed on these concepts in the classroom; and the perceived importance of these concepts for adolescents in the future. Specifically, the teachers were asked to project ahead to 2010.

Instrumentation

An instrument was developed to gather teacher and classroom information related to family housing, interior design, and home equipment subject matter in secondary Family and Consumer Sciences classes. The questions were divided into the following four sections: teacher information; information on courses where housing-related concepts were included; housing, interior design, and home equipment competencies; and educational resources.

The teacher information section requested information regarding the following: degree(s) earned; years teaching Family and Consumer Sciences; background experiences for teaching housing-related topics; courses or workshops on housing, interior design, or equipment completed in the past 10 years; feelings of adequacy and degrees of comfort associated with various housing-related topics; and desire for additional workshops or courses, including preferred topics.

The second section on classroom information assessed what is being offered in secondary schools in the areas of housing, interior design, and home equipment. Questions were asked concerning the specialized family housing courses taught and where housing-related concepts were integrated.

The competencies section made use of a rating scale to assess two variables as related to a list of 35 housing, interior design, and home equipment competencies. The variables were: a) how much emphasis was placed on each concept in the classroom and b) perceptions of how important each concept would be to the students in 2010. Respondents were asked to indicate their degree of emphasis (2 = I put emphasis on this in my class, 1 = I teach something about this, 0 = I do not teach this) and perception of level of importance to students (2 = Will be very important to know, 1 = Will be somewhat important, 0 = Will not be important). The *New Mexico Vocational Home Economics Competencies* (1991), along with a survey instrument developed by Holt (1988), were used in developing the competency statements and format.

The last section on educational resources explored resource selection and preferences. Respondents were asked questions concerning resource types most helpful to them and resources used to structure their courses.

After the instrument was constructed, it was reviewed by four educators whose comments and suggestions were incorporated. The final draft was printed in a booklet format with a cover letter on the first page.

Data Collection and Analysis

The population included all 256 New Mexico secondary Family and Consumer Sciences teachers employed during the 1996-97 school year. Each teacher was mailed an instrument and a self-addressed, stamped envelope for returning the completed instrument. A follow-up postcard was mailed approximately two weeks later to remind teachers to complete and return the survey. Of the 256 surveys distributed, 100 usable surveys were returned for a 39% return rate. Since some respondents only completed a portion of the questions, there are some inconsistencies in total numbers reported. Frequencies and percentages were computed on all coded data.

Findings

Of the 100 teachers who responded, 94 reported that they had a Bachelor's degree, and 32 indicated they had a Master's degree. The vast majority had their undergraduate degrees in Family and Consumer Sciences/Home Economics Education, and approximately one third of the Master's degrees were in Family and Consumer Sciences/Home Economics Education.

Fifty-three percent of the respondents had taught 10 years or less, 31% had taught 11-20 years, and 16% had taught more than 20 years. The largest number of respondents (72%) indicated that they obtained their backgrounds in the content areas of housing, interior design, and equipment from their own experiences. In addition, a majority of the respondents also indicated that each of the following were experiences that described their background preparations: had only one college course in housing, had only one college course in interior design, and took a home equipment course.

When the teachers were asked to indicate courses or workshops they had attended in the last 10 years related to housing, interior design, or home equipment, fewer than 10% of the respondents had participated in updating activities. Workshops and courses attended focused on home management, interior design, lighting, and/or housing for special needs.

When asked about the adequacy of their educational background to teach in the three areas, 61% indicated they had adequate background in housing, 58% in home equipment, and 52% in interior design. The remaining respondents did not feel they had adequate preparation to teach in each area.

The concepts teachers felt most comfortable and least comfortable teaching are presented in Table 1. The seven concepts respondents felt most comfortable teaching about were selecting and using small appliances, kitchens and storage space, arranging furniture, selecting and using major appliances, designing a floor plan, housing alternatives, and selecting a place to live. The seven areas in which the largest number of respondents indicated they felt least comfortable teaching were home maintenance and remodeling, lighting and accessories, history of housing, selection and evaluation of home structures, mortgages and leases, energy conservation, and furniture styles and selection.

Table 1

When asked if they would take additional courses or workshops related to housing, interior design, or home equipment, 69% said they would. The topics of most interest are found in Table 2. Heading the list were home maintenance, lighting and accessories, energy conservation, and furniture styles.

Table 2

At the secondary level, specialized courses appear to be small in number. A specialized interior design class was taught by 26 respondents, a specialized home planning course was taught by 12 of the respondents, and a specialized home equipment course was taught by only three respondents. Teachers also reported covering these three topics in comprehensive courses such as Modern Life Skills or Independent Living.

A major focus of the study was to determine the amount of emphasis that the Family and Consumer Sciences teachers put on 35 housing-related concepts in their classes. In addition, they were asked to indicate how important they thought knowledge of each concept would be to their students in 2010.

An analysis of the level of importance revealed that 60% or more of the respondents rated 14 of the 35 concepts as very important. These concepts are included in Table 3. In the left column, importance ratings for these 14 concepts are reported. The right column of Table 3 contains data regarding the current emphasis given by the respondents in their Family and Consumer Sciences classes to each of the 14 concepts.

The three concepts receiving the highest importance level ratings were home safety and sanitation; energy conservation in homes and impacts on community, nation, and the world; and factors to consider when buying or renting. In addition to the concepts in Table 3, another 15 of the concepts were rated as somewhat important by a majority of the respondents. Only two concepts were rated by 20% or more of the respondents as not important. Those were period home styles and future homes (21%) and housing in other cultures (25%).

The only concept that was emphasized by more than 50% of the respondents in their teaching was home safety and sanitation. This was also the concept receiving the highest ranking in importance for 2010. The only concept that 50 percent or more of the respondents said they "taught something about" was career opportunities in housing and interior design. This does not appear in Table 3, as it was not ranked as very important by 60% or more of the respondents. Concepts not taught at all by 50% or more of the respondents included period home styles and future homes; housing for special groups; housing and communities - economic and social impacts and trends; landscaping the home; home construction and remodeling; and furniture - styles, quality, and needs. None of these concepts are in Table 3, as they were also not seen as very important by 60% or more of the respondents.

Table 3

The teachers were asked to check off on a list the four resources they felt were most helpful to them when teaching housing, interior design, and home equipment. In Table 4 one finds the top eight resources the educators perceived as helpful. Videotapes, models, samples, and ideas for activities topped the list.

Table 4

The teachers were asked to indicate their four major ways of structuring the housing and interior design content in their courses from a given list of possible strategies. The data related to the six strategies most frequently reported are found in Table 5. Using the textbook as a guide clearly is the most frequently used strategy.

Table 5

Conclusions and Implications

The data from this study indicate that a majority of the secondary Family and Consumer Sciences teachers responding had a very minimal amount of university course work in housing, interior design, and home equipment. College curricula do not appear to provide depth in these areas for future teachers. Most of the respondents noted that what they learned through personal experiences best described their background preparation for teaching these topics, and many did not feel adequately prepared to teach in these areas. Attention needs to be given to this deficit in university Family and Consumer Sciences teacher education programs.

During the past 10 years, few of the respondents had participated in updated activities. This may have been due to few workshops or courses being offered in these areas or because the teachers felt their experiences and preparation had prepared them well enough for what they needed to teach.

More relevant and convenient preservice and inservice training appears warranted. If workshops or courses are to be offered to meet the perceived needs of teachers, the focus needs to be on home maintenance, lighting and accessories, energy conservation, furniture styles, mortgages and leases, and remodeling. These were the topics most frequently mentioned as ones in which the teachers wanted future training. It is noted that all six of these topics were among the seven concepts that teachers felt least comfortable teaching. Two of these concepts (energy conservation and home maintenance) were also among the top 14 topics teachers saw as most important for students to have an understanding of in 2010.

The number of teachers teaching specialized courses in housing, interior design, and home equipment is quite low, and reasons for a lack of courses may be many. Budget cuts have forced many departments to cut course offerings, and student interest may be low in that they may not perceive the importance of these topics for their futures. Teachers may also not feel comfortable teaching the topics.

Concepts emphasized by teachers in their secondary classes varied widely. The only topic emphasized by more than 50 percent of the teachers was home safety and sanitation. The concepts with the next most frequent emphases dealt with the impact of values, needs, and lifestyles on housing decisions and factors to consider where renting or buying. These were followed closely by kitchen design and workable floor plans. Since only two of these concepts (kitchen design and workable floor plans) fell among the seven on which teachers indicated most comfort in teaching, it appears that more education needs to be provided to teachers on the other topics.

The concepts teachers emphasized, however, were not always the ones they felt to be very important for the students to know in 2010. In contrast, Holt's (1988) survey found that teachers generally taught what they perceived as most important with the exception of home management, home repairs and maintenance, and household appliances and equipment.

In this research, home safety and sanitation was high on the list of both important concepts and emphasized concepts. While energy conservation, factors to consider in renting or buying, factors contributing to a healthy environment, advantages/disadvantages of renting and buying, and rental lease agreements and home sales contracts were rated as very important for students to know in 2010 by 76% or more of the respondents, 41% or less of the teachers reported putting emphasis on these concepts in their teaching. Lack of knowledge and comfort, limited revision of curricula, and lack of teaching materials may be reasons for lack of emphasis on these concepts. If these are important concepts for students in 2010, a shift needs to take

place in what is being taught. Teachers need assistance in making these curriculum changes. It is likely that the life experiences these teachers are depending on to provide their background for teaching have not provided the needed knowledge base in these areas.

As noted earlier, the area of family housing has seen many changes over the past years with new issues emerging that affect the well-being of families in relation to their housing. Without opportunities for teachers to receive information relevant to future housing problems and issues, they will go into the classroom unprepared to help adolescents face the challenges of their future housing situations. This is especially true of young teachers who have not yet experienced many of the housing issues first-hand.

Inservice and preservice training needs to focus on helping teachers find the resources and ideas they need to become knowledgeable and comfortable in teaching the concepts seen as most important for students in 2010. Teachers need creative ideas and strategies for incorporating these important concepts into all Family and Consumer Sciences classes. While textbooks are the major guide for structuring of courses at this time, teachers need assistance in using other resources such as the Internet and the *National Standards for Family and Consumer Sciences* (National Association of State Administrators of Family and Consumer Sciences, 1998) to focus their curricula. Universities need to look at potential distance education course offerings in housing, interior design, and equipment to meet the needs of these teachers. Secondary teachers should be encouraged to be innovative in their approaches to housing, interior design, and home equipment education. Field trips to appliance dealers, interior design studios, or model homes would expose students to current market trends and products. Inviting professionals to speak to classes will not only provide useful information, but may also interest students in various housing, interior design, and home equipment careers. For those schools with Internet access, web sites now allow students to compare community demographics; shop for homes, mortgages, and appliances; and design interiors, just to name a few opportunities.

In summary, secondary Family and Consumer Sciences educators are in need of updating and teaching ideas in family housing, interior design, and home equipment. Through expanded educational opportunities and new teaching resources, Family and Consumer Sciences teachers can feel up-to-date and comfortable in preparing our future consumers.

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Table 1
Comfort in Teaching Various Housing-related Concepts

Concepts	Comfort			
	Yes		No	
Top 7	N	%	N	%
Selecting and Using Small Appliances	80	88		
Kitchens and Storage Space	82	87		
Arranging Furniture	75	81		
Selecting/Using Major Appliances	72	78		
Designing a Floor Plan	68	74		
Housing Alternatives	67	73		
Selecting Place to Live	64	71		
Bottom 7				
Home Maintenance/Remodeling			53	58
Lighting and Accessories			49	54
History of Housing			44	48
Selection/Evaluation of Home Structures			44	48
Mortgages/Leases			43	48
Energy Conservation			43	47
Furniture Styles/Selection			41	45

Table 2

Topics Desired in Courses and Workshops

Topic	N and %
Home Maintenance	23
Lighting and Accessories	23
Energy Conservation	23
Furniture Styles	23
Mortgages/Leases	22
Remodeling	22
Selecting and Evaluating Structures	21
History of Housing	21
Furniture Arrangement	21
Wall and Floor Coverings	21

Table 3

Perceived Importance of Selected Concepts in 2010 and Current Emphasis Given Concepts

Importance for 2010						Concepts	Current Emphasis Given					
Very Important		Somewhat Important		Not Important			Put Emphasis on It		Teach Something About It		Do Not Teach	
N	%	N	%	N	%		N	%	N	%	N	%
71	82	16	18	0	0	Home Safety and Sanitation	53	60	24	27	11	13
71	81	14	16	3	3	Energy Conservation in Homes and Impacts on Communities, Nation, and World	20	23	42	49	24	28
70	80	15	17	2	3	Factors to Consider When Buying or Renting	35	41	26	30	25	29
67	76	20	23	1	1	Factors Contributing to a Healthy Home Environment	17	19	37	42	34	39
67	77	17	20	3	3	Advantages/Disadvantages of Renting and Buying	30	35	33	38	23	27
65	76	17	20	4	4	Rental Lease Agreements and Home Sales Contracts	22	25	28	32	37	43
64	74	17	20	5	6	Home Financing Alternatives and Types of Insurance	17	20	27	31	43	49
64	74	22	25	1	1	Family Values, Needs, and Lifestyle Impacts on Housing Decisions	37	42	35	40	16	18
62	70	22	25	4	5	Care, Repair, and Maintenance of Home and Its Equipment	19	22	36	41	32	37

Importance for 2010						Concepts	Current Emphasis Given					
Very Important		Somewhat Important		Not Important			Put Emphasis on It		Teach Something About It		Do Not Teach	
N	%	N	%	N	%		N	%	N	%	N	%
56	65	26	30	4	5	Selecting Household Appliances	26	30	31	36	29	34
54	63	29	34	3	3	Life Situations and Relation to Housing Needs	30	34	39	45	18	21
52	60	31	36	4	4	Workable Floor Plans	32	37	31	36	24	27
52	60	31	36	4	4	Designing/Arranging Efficient Storage	26	30	33	38	28	32
52	60	32	37	3	3	Kitchen Design	35	40	33	38	19	22

Table 4

Resources Helpful for Teaching Housing, Interior Design and Home Equipment

Type of Resource	Those Who Find Helpful (N and %)
Videotapes	60
Models/Samples	51
Ideas for Activities	50
Speakers	36
Field Trip Locations	33
Reference Books	32
Transparencies	31
Computer Software	25

Table 5

Strategies Used to Structure Courses

Strategy	Those Who Use (N and %)
Use Textbook as a Guide	60
Teach What Thinks Is Important	43
Use the New Mexico Family and Consumer Sciences Competencies	40
Ask Students What They Want to Learn	36
Use a Curriculum Guide	35
Teach What Comfortable With	30

PROGRAM MISCONCEPTIONS: BREAKING THE PATTERNS OF THINKING

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The 21st Century will provide the impetus for close examination of public education. Those reviews may lead to drastic changes. Family and Consumer Sciences (FCS) is experiencing change more than many fields, as its underlying purpose and educational goals for students shift to accommodate emerging American family structures and functions. According to Montgomery (1994), "Home Economics, the foundational field of what is now widely called family and consumer [sciences] education and a discipline within vocational education, is now undergoing its own reexamination." "In Wisconsin," she continued, "this reexamination has resulted in an attempt to move family and consumer education toward use of an underlying critical science perspective" (p. 3). In the process of this reexamination, parents, teachers, students, guidance counselors, and administrators have developed misconceptions concerning the critical science perspective. This article will examine those misconceptions and explore strategies for overcoming them as critical science is incorporated into the FCS curriculum.

Development of Misconceptions

Although many of us are unaware of our misconceptions, they are a part of our thinking throughout our lives. They can surface at any time, with ideas ranging from concrete to abstract. For example, a misconception arising from a concrete idea is that children are often taught they cannot have dessert until all the other food on their plate is eaten. A misconception associated with a more abstract idea, such as learning, might be that middle school learners are not capable of higher level thinking. Unfortunately, some people may cling to these misconceptions, not considering the impact of their beliefs and practices on others. According to Paul (1987), "Our primary nature is spontaneous, egocentric, and strongly prone to irrational belief formation" (p. 130). Therefore, misconceptions in our thinking are inevitable.

Misconceptions develop for a number of reasons and in a number of ways. For example,

1. Once we have an idea in our minds, it is difficult to erase. Meyer (1993) warned us that people will go to great lengths to avoid changing the way they think. Individuals naturally want to hold onto their beliefs tightly, especially if they serve their interests, preserve their sense of comfort and security, and minimize inconsistencies in their lives (Paul, 1987). Furthermore, according to Flavell (as cited in Nickerson, Perkins, & Smith, 1985), when misconceptions ". . . produce the same satisfied feeling (or lack of feeling) as correct understandings do" (p. 295), those misconceptions are difficult to dispel. For example, a misconception associated with parenting is that holding babies causes them to be "spoiled." Clinging to this misconception promotes a feeling of security and comfort, knowing that this idea has been passed down from one generation to another over time.

2. Misconceptions are often held in our minds unconsciously, especially if those ideas are continually reinforced by family members, friends, teachers, and other significant individuals in our lives. Furthermore, these same patterns of thinking may be reinforced, without us realizing it, by dominant forces in our society such as mass media, popular culture, corporations, and government. For example, parents may be constantly bombarded with the idea that acquiring and using numerous and complex technological devices will result in happier, more intelligent family members. Hearing an idea over and over again can result in that idea remaining a part of our thinking over a lifetime (Paul, 1987).

One example of this retention of misconceptions surfaced in my students' journals. When assigned to question their families' and friends' perceptions of the FCS major, many preservice students reported that those asked retained the traditional view of the major, equating it with cooking, sewing, and other family living skills. Teachers, also, are subject to misconceptions, underscored by the educational and promotional materials they receive (posters, brochures, etc.) developed for use in the classroom. At first glance, these materials seem appropriate teaching aids, but in reality, many of them are thinly-disguised advertisements from businesses. Such materials are well-designed, attractive, and informational, often projecting subtle messages that we ought to be teaching about pork, eggs, laundry products, and house cleaning procedures. Receiving these materials over time can easily persuade teachers to believe these topics ought to be the focus of FCS curriculum.

3. Finally, the amount of traditional education received does not seem to make a difference in whether or not people consciously examine their thoughts and actions for misconceptions. Gardner (1991) indicated that as children proceed through school, misconceptions are not necessarily eliminated, or even addressed. Perkins (1986, 1991) and Brooks and Brooks (1993) agreed, claiming individuals often have only a superficial understanding of what has been taught in school. Perkins (1991) also maintained that individuals do not acquire what is called deep understanding or insight, which is dependent on " . . . thoughtful learning rich with connection-making". (p.6)

Unfortunately, many students leave school without ever making connections between ideas. This superficial understanding, without insight, often leads to misconceptions. Paul (1987) was even more forceful in his indication that students graduate from high school and college/university " . . . with a great deal of inert knowledge and even more activated ignorance" (p. 137). Students, he insisted, often do not know what they believe, leading to even more unconsciously held misconceptions. Despite Shor's (1992) and Brown's (1985) insistence that the outcome of education should "develop critical consciousness and empowerment rather than knowledge accumulation," (as cited in Montgomery, 1994, p. 15) with the teacher functioning as a facilitator and collaborator, Paul's claim that the misconceptions developed early in life are difficult to dispel suggested even traditional education does not encourage critical consciousness.

Misconceptions and the Critical Science Perspective

Over the past 20 years, the field of FCS has experienced dramatic change. The most extensive change has been a shift in the emphasis from an empirical, rational-based perspective

toward a critical science based perspective (Staaland, 1987). The previous view of FCS, which tended to focus on students gaining technical skills necessary to perform household tasks, is no longer appropriate for today's families and societies.

The shift has helped shape the FCS curriculum to address issues beyond technical skills to focusing on "helping students learn to think, reason, reflect, and take action through the study of recurring, practical problems" (Redick, 1998, p.1). This shift called for a transformation in views about teaching and learning, as well as in actual teaching practices. Most of the responsibility for the change will be taken by teachers, especially since they may find themselves struggling with contradictory demands and varying expectations from administrators, students, and parents. Since old ideas are often held unconsciously, and are difficult to dispel, teachers will most likely find themselves dealing with the dual responsibilities of both revitalizing the curriculum, and convincing others of the value of the new curriculum.

Essential to this educational change is the shift to the critical science perspective. In the critical science perspective, thought processes and students' personal meanings comprise the core of the curriculum. This view of knowledge and learning, which includes elements of constructivism, calls for teaching and learning situations enabling learners to construct their own understanding of ideas (Brooks & Brooks, 1993). Over time, new ideas are integrated with existing knowledge, which may or may not include: (a) erroneous information and (b) personal biases perceived as facts (Brooks & Brooks, 1993; Meyer, 1993; Wisconsin Department of Public Instruction, 1991).

Furthermore, as individuals grow and develop, new knowledge and experiences are examined and tested in light of old knowledge, and experiences and connections are made between ideas. Montgomery's (1994) interviews with FCS teachers netted responses indicative of reflection on curriculum, emphasizing their struggle to incorporate the critical science perspective in a field previously concerned with a technical approach to curriculum. One teacher summarized her attempts as follows:

> you're evaluating and going back to the beginning and making sure they understand the concepts before you can go on, so it's a spiral curriculum because it builds . . . it's important to me . . . because it goes back to my change in thought about teaching them all these isolated concepts versus now a connectiveness is always, always in my head, about being able to tie one concept into the next, and trying to build on it . . .. (p.56)

Sometimes these connections were successful (Pines & West, 1986), and provided opportunities for building powerful understanding (Meyer, 1993). However, the connections—or lack of them—can also lead to what Pines and West called "errors in understanding," or what have been referred to as misconceptions.

It is not unusual, for example, for students to equate the idea of "expert" with a person possessing a great deal of factual information. With this belief in mind, people were often led to believe that students must acquire facts first, and then think about them (Raths, Wassermann, Jonas, & Rothstein, 1986). Perkins' (1987) assertion that "knowing the facts is not enough" (p. 44), is especially true in FCS, since the field seeks to address and solve complex concerns of the family.

Even with a large body of knowledge, and memorized facts at their disposal, it would be unreasonable to expect FCS students to apply these facts to every family's situation. No two

families are alike, and differences among families will become even more pronounced as time goes on. One teacher summarized her attempts to overcome the reluctance of students and parents to accept her new approach to teaching and learning:

> It took me an entire year to deal with the negativism of this and get them to understand it was the process that was more important than just memorization of facts . . . where if it was a process of communicating, the group sharing, the interaction, the examination, the reflection of their own feelings, and beliefs and attitudes, it was a lot harder for them to recognize they actually learned something. (Montgomery, 1994, p. 68 - 69).

Students in the FCS programs must also put aside their previous conceptions of the field to make room for the new focus. One preservice student, reflecting on her high school experience with FCS courses, complained of the absence of relevant material. Among the class assignments, she indicated, was to plan a style show, something she didn't feel was important to her at that time in her life. In addition, the students were required to memorize vast amounts of facts and terms, something she and her classmates found boring, especially since there were no follow-up activities where those facts could be applied.

This same student, when asked about the work of the family, was able to name many of the concerns facing her family while she was growing up, including financial crises, overcoming gender bias in assigning household tasks, and communication with each other. The absence of productive communication, she claimed, contributed to the family's struggle to adapt to a changing financial situation, yet her FCS courses offered little to aid them in their time of need.

Had this student's FCS courses addressed various aspects of the work of the family, her family may have found itself better equipped to deal with the crises at hand. What was absent from the FCS classroom, in this student's case, is what Erwin, Moran, and McInnis (1996) defined as the new focus of FCS courses: "The focus of home economics should be on preparing students to implement critical thinking, to practice self-evaluation, and to stress goal setting, all of which affect students' home and career lives" (p. 22). Smith (1992 as cited in Erwin et al., p.18) concluded that "home economics teachers are more often closer to their students' home situations than other teachers."

Keeping this observation in mind, FCS teachers may be in a better position to assist students and their families when they face domestic crises. The observation of the preservice student, who noted a lack of relevant and substantial material in her high school FCS course, may not apply to all students with prior FCS experience; however, her observations highlight the failure of these courses to take into account the most essential skills and tools needed to facilitate healthy family function. According to guidance counselors interviewed for Erwin et al., (1996) study, the two dominant themes FCS courses should address were improved relationship skills and personal financial management and budgeting. Both these themes would have assisted this student and her family, yet her FCS courses focused on the accumulation of facts and skills.

Learning to use and process information will always be more valuable than the acquisition of mere facts. Therefore, when a person is confronted with these ideas about facts and application, connections begin to form between the notions of learning facts and applying facts. An error in understanding can occur if the subject decides the facts have to come before the application. In reality, as learners work with examples and apply information, they learn facts through the process of application.

Since human beings are not born with natural abilities to think in a rational way, those abilities need to be developed over time with "extensive and systematic practice" (Paul, 1987, p. 130). This practice can occur in the classroom and at home with the aid of parents and teachers. However, a shift in the role of parents and teachers is necessary to facilitate this change. Parents and teachers can no longer function as mere dispensers of knowledge. In this view, the goal was for individuals ". . . to take responsibility for their own learning, to be autonomous thinkers, to develop integrated understandings of concepts, and to pose – and seek to answer - important questions" (Brooks & Brooks, 1993, p. 13).

In their efforts to achieve this goal, teachers must also become more aware of how they answer their students' questions. Many teachers complain that their students only want to know the "right" answer, so they can write it down in their notes, and eventually, answer related test questions correctly. Teachers striving to develop autonomous thinkers will avoid giving the "right answer." Instead, they may ask another question in an effort to facilitate conceptual thinking.

For example, in a unit on money management in a Consumer Economics course, a student may ask, What percentage of a person's income should be spent on credit card debt? To encourage conceptual thinking, the teacher might ask, Why do people use credit cards? What are the advantages and disadvantages of credit cards? Whose interest is being served when credit cards are used? What consequences can occur when credit cards are over-extended? or What might happen if credit cards no longer existed? Such questions would demonstrate the role the teacher would play in the critical science approach.

Fox (1997) recognized the need for this type of questioning. She proposed that this technique would lead students to higher-level thinking, and for teachers, practice in facilitating discussion intended to instruct. In a discussion centering on work and the family, her classroom experience went as follows:

> Students were again asked to consider the case study to help the family make a decision about their future. The answers were starting to change. Issues raised included the happiness of the children, the cohesiveness of the family, and what effects a job change for mom would have on the family. They then started to discuss the increased use of resources if dad commuted, and the additional housing needed if he lived away. Would the added pollution created by the commute be ethical? Students discussed the research that shows volunteers are disappearing as more families become dual-worker households and lose valuable time in long commutes. What are the moral and ethical implications of dad commuting and mom changing jobs? What will happen to the local schools if all the families moved away? The students were considering the effects on society as a whole rather than just the benefits to one family (p. 38).

Misconceptions and FCS Programs

During the dramatic change in FCS, ample opportunities for misconceptions to form have arisen. As knowledge and experiences regarding the critical science perspective have been tested in the classroom, connections have been made with existing knowledge. As these connections are made, new understandings emerge, along with errors in understanding (or misconceptions). As more and more FCS teachers transform their thinking, they are faced with confronting misconceptions regarding the critical science perspective. One misconception that has arisen in

the minds of FCS professionals, other teachers, parents, administrators, and students, is the notion that FCS programs with a critical science perspective do not include "hands-on" or laboratory experiences.

This misconception may have emerged because, in the critical science approach, laboratory classes such as food preparation and clothing construction are used for a different purpose than in the traditional approach. In the latter approach, laboratory classes are often used as an opportunity for practicing and perfecting technical skills related to food preparation and clothing construction. The act of making a "perfect" food or clothing product in a traditional approach is perceived as an "end," with the emphasis on students acquiring technical skills.

This is not true of laboratory experiences in the critical science approach. In this view of teaching and learning, engaging in hands-on activities and learning technical skills is considered a means to an end. This view supports connecting everyday activities to broad concepts that are recurring concerns of today's families. For example, Johnson (1998) explained that in the critical science classroom, students might be engaged in making a project related to concepts such as family culture and family traditions. She indicated,

> The important learning in this case is not "how to make," but rather the importance of culture, communicating that culture to future generations, the effects of culture on our lives, and the differences and similarities among families and people. This is a very different focus than the learning of how to cook and sew (p. 93).

As the focus of the curriculum continues to ask the practical moral questions of "what do we do about a given situation?" new knowledge can be applied in almost any setting and subject area. In a textiles course, according to Fox (1997),

> . . . one could discuss the moral and ethical implications of sweat shops: "What should I do to ensure the clothing I purchase has been produced by workers in healthy working conditions?" If this question were asked of many college students, and consumers in general, the answer would probably be that is not the responsibility of the consumer. If our curriculum is to help students develop morally and ethically, we have a responsibility to help them change that view. (p. 40)

Fox (1997) also commented on the issue of food waste, and how a discussion of that topic could be integrated into a course on food preparation. "With statistics on the considerable amount of food waste generated by restaurants and private households," she suggested, " it could be possible to discuss the unmet food needs of the homeless" (p. 40). Questions a teacher could ask of students might include, Who is affected when food is wasted? Is it moral to throw away food? What resources has the family lost? What are the consequences for the family? The neighborhood? The town? The state? In light of these questions, Fox hoped students would eventually gravitate toward higher-level questions concerning what could be done to gather food that would otherwise be thrown out, leading to a discussion of social injustices leading to food waste. Her suggestions highlighted the possibilities in critical science laboratories. Both traditional and critical science approaches to FCS offer a variety of possible laboratory experiences; the only difference between the approaches would be the focus of the activities.

A common observation among preservice FCS students is the misconception that their chosen field of study is less significant than other subject areas. One student observed that her friends, family, and peers held the misconception that FCS was "not as important as math, science, English, and the other 'core' subjects." With her new understanding of the critical science perspective, however, she came to the conclusion that the skills taught are "more important than ever, in the day and age in which we live." The skills she refers to -- setting personal and group goals, learning to assess your standards and values, cooperation, and focusing on process instead of product -- are taught in food and clothing laboratories.

Breaking Patterns of Thinking

Old patterns of thinking, sometimes acting as blocks to thinking in new ways, may be difficult to break. A social and intellectual process, called "developing critical awareness," can help us examine misconceptions. This process consists of several elements. Among these is the conscious identification of fuzzy or unclear ideas. Individuals need to check ideas for accuracy, completeness, and validity. If there has been an error in understanding (or misconceiving), an idea must be clarified. Checking to see how others perceive ideas, situations, or conditions is another step in breaking patterns of thinking. Engaging in reflective and critical discourse can help to publicly test perceptions. This process must occur in the context of dialogue with others in order to discover, reconstruct, and ultimately transcend beliefs which are often internalized, both uncritically and unconsciously (Paul, 1987). This dialogue can take many forms, such as reading others' writing, talking and listening to colleagues, and writing to clarify and convey ideas to others.

It is unlikely that administrators, guidance counselors, other teachers, parents, and students will break the old patterns of thinking; it will likely be the new generation of FCS teachers themselves who will illuminate the new focus of the program, and establish their own credibility as professionals whose principal objective is to assist families and consumers in communicating, decision making, and managing their resources.

According to Pines and West (1986), when people attempted to make a major shift from one belief system to another, they tended to hold on to their existing set of beliefs *while* learning about a new set. Holding two sets of beliefs may give a sense of security, but the integration of ideas may also lead to the emergence of misconceptions. This is especially true if the person holds a superficial understanding of the new beliefs. Those who have taught or experienced FCS courses based on a technical, product-focused view may adhere to that framework while they are learning about the critical science approach.

To counteract compartmentalization, according to Pines and West (1986), learners must gain in-depth knowledge of the new set of beliefs and have ample opportunities to apply that knowledge in a real-life setting. Therefore, it is important for FCS preservice and inservice teachers to have sufficient opportunities to observe other teachers and to engage in serious dialogue with them about their views of education and FCS curriculum.

Part of the work of the new generation of FCS teachers is to dispel some of these myths to all school personnel, as the skills taught in today's FCS courses are universal, requiring re-emphasizing in many courses and at many times during our lives. Dispelling today's misconceptions, and the many others that will emerge over time, involves a conscious effort on the part of FCS professionals. Questioning each others' ideas, and explaining the relationship between beliefs and practices, will contribute to the development of a curriculum that will reflect the needs of our changing culture. As the teachers in the field are drawn together for inservice

education, they must be encouraged to question and scrutinize taken-for-granted ideas in order to perceive situations differently, and look at ideas from a variety of perspectives.

When teachers rethink the guiding assumptions of their teaching practices and actions, transformation in teaching and learning can occur (Fedje, 1992). The need for FCS as general education for all students, according to Erwin et al., (1996) is apparent. As the focus of secondary courses in the field is redefined, acceptance and appreciation of the need will hopefully follow. Breaking the old patterns of thinking on all levels will facilitate this change. Stout, Couch, and Fowler (1998) described a session at a national conference for FCS, where a teacher serving on a discussion panel demonstrated her conviction that the previous conception of the field must be dispelled before the new view gains acceptance:

> We have a rich heritage. There was a time and place for the content that may take a bashing now. Why [should we] diminish the value of what was once a need of the community and society? I saw an article in the newspaper that said "This isn't the home economics that your mother took," and I thought, "Why would anyone expect it to be?" We do not study the same history . . . science . . . that our mothers studied . . . Knowledge of [our] history helps us keep things in perspective. (p.9)

Continuous dialogue among teachers, administrators, teacher educators, and preservice students must be encouraged and facilitated, as it may well prove to be the most valuable tool in advancing the new focus and function of FCS. As the field's teachers work with their students and students' families, they are working to accommodate the changing American family structure and function. This is the ultimate goal of the new FCS curriculum. In the words of one preservice student, "Perhaps as we turn out more responsible children, and statistics reflect better value choices, our profession will become more valued in the eyes of the public."

Change will be slow, and administrators' acceptance of the changes in the field's focus may be even slower, as their misconceptions of the critical science perspective will be as difficult to dispel as the public's and the students'. However, if FCS teachers continue to insist on the new curriculum, and continue to implement the changes, the misconceptions will fade. Once acceptance and recognition is gained, more diverse enrollment is likely to follow, and the skills taught in the course will be recognized as necessary and valuable for all students.

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INTERACTIVE TECHNOLOGY-BASED TELEVISION DELIVERY

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Family and Consumer Sciences adult educators are using a variety of modes to deliver their programs to adult learners. In Iowa, a distance education system has been established to facilitate adult education throughout the state. The Iowa Communications Network (ICN), using two-way, full-motion interactive fiber-optic telecommunications, provides this system. Therefore, it is critical for adult educators in Family and Consumer Sciences to recognize the need to use the ICN as an instructional tool. This study assesses the attitudes of adult educators and gathers indications of their knowledge and interest in distance education and the ICN, resulting in implications for inservice programming.

The education of adults is a diverse and complex process affecting many people from all walks of life (Verduin, Miller, & Greer, 1977). Diversity is present not only in the types of programs and courses, but also in the types of individuals who provide instruction for adult learners. Educators represent various educational backgrounds, training and experiences. Therefore, when adults teach adults, a re-examination of the educators' beliefs and values is needed--beliefs and values that are related to chosen mental models of past educational experiences. Although learners often perceive traditional instructional delivery methods as the preferred way to influence learning, these methods are rapidly being augmented as new technologies develop (Simonson, Smaldino, Ablright, & Zvacek, 2000).

In the development and implementation of educational programs, adult educators have a wide latitude from which to choose when selecting appropriate instructional delivery methods. Many methods are available and accessible. However, educators must first understand themselves and their own self-development prior to the selection of an instructional delivery method.

A review of literature shows that prior research studies conducted on how adult audiences should be taught and how they learn best have focused on a generalized population rather than within specific subject areas. Seitz (1988) recognizes that the greatest growth in adult learning has occurred in subject areas related to social life, recreation, and personal and family life. Olson (1996) suggests that adult education in the area of family life skills is critical because of social and economic changes in the country. Thus, the profession of Family and Consumer Sciences (FCS) has much to contribute to adult education in recognizing instructional delivery methods that encompass learning, work, and leisure. However, little is recognized in relation to how technology can be used to reach adult audiences interested in the above mentioned subject areas.

Distance education is one such approach involving technology. Iowa's approach to distance education is based on the belief that live, two-way interaction is fundamental to effective learning (Simonson, 1995). This interaction is made possible within the state by the

Iowa Communications Network (ICN). This fiber optic system provides live, two-way interaction that allows both the educator and the audience to interact simultaneously from multiple sites, regardless of the distance.

Perceptions of distance education continue to reinforce a different model where little interaction occurs between educators and learners. Some feel that the traditional values of education and increased use of technology are incompatible with one another (Simonson & Schlosser, 1995). Moreover, cited literature indicates that the ICN was available for use throughout the state before it was adequately supported.

Innovations are adopted at different rates. The completion of its diffusion process depends on the possession of what Rogers (1995) refers to as elements. These elements include the innovation, communication, time, and social systems. Keeping these elements in mind and recognizing the need for continuous growth of adult learners, adult educators in FCS continue to encounter technological innovations such as the ICN. However, the rate at which the ICN is diffused depends in part on the educators' willingness to incorporate its use as a means of instructional delivery.

At the present time, the use of fiber optic telecommunications has not been widely incorporated by adult educators in Iowa distance study programs for FCS subject areas, but the opportunity exists. For FCS programs, telecommunications has the potential to be a vital tool when planning course materials for distance study.

Research can be helpful to further opportunities for adult FCS educators who are both professionals and paraprofessionals in this newly defined form of distance education. This study explored issues related to ICN use by addressing the following major research questions:

- Are scales for knowledge, interest, and attitudes regarding distance education and the ICN inter-related?
- Do demographic characteristics influence scores on knowledge, interest, and attitude?
- Do knowledge, interest, and attitudes of professional FCS adult educators differ significantly from those of paraprofessional FCS adult educators?

Methodology

To accomplish the proposed objectives, the instrument was designed by the researchers using the organizational style and format from an instrument developed by Torrie (1993). The instrument was based on a Likert-type scale consisting of a knowledge and interest section, an attitude section, and a demographics section.

Items in section one were based on a scale from 1 to 5, with 1 representing "not having any knowledge" and 5 representing "knowing enough" about the given concept. Additionally, respondents were also asked to rate their level of interest in the same concepts. Items were again based on a scale from 1 to 5, with 1 representing "having no interest" and 5 representing "very interested." Items contained concepts about distance education, distance education in Iowa, the Iowa Communications Network and the ICN classroom.

Section two was also based on a 5-point Likert-type scale. Respondents were asked to rate their attitude about nontraditional vs. traditional education, face-to-face instruction vs. separation of the educator and learner, and possible implementation of distance education practices using the ICN as an instructional tool.

Section three recognized demographic characteristics such as the respondent's current position, age, gender, ethnicity, and educational background. Respondents were also asked about their experience with the Iowa Communications Network.

A sample of Iowa adult educators in Family and Consumer Sciences related occupations was used to obtain responses. The sample was purposively selected from the Iowa Cooperative Extension Service. Respondents represented four positions within the organization. However, for this study, the respondents were categorized either as professionals (county extension educator, extension field specialist for families, or extension field specialist for youth; n=84) or paraprofessionals (EFNEP program assistant; n=19). Out of 164 questionnaires mailed, 103 were returned and usable for a response rate of 62%.

The respondents were asked to record their responses directly onto the questionnaire. The responses were transferred from the questionnaires and stored in a computer data file. Analysis was done using SPSS version 4.0. Frequency counts, means, and standard deviations were calculated for each item. Cronbach's alpha was used to test the reliability of the scales. One-way ANOVA and t-tests were used to determine statistical differences among selected variables.

Results and Discussion

Demographic Characteristics

A sample of adult educators in Family and Consumer Sciences work related occupations was selected to obtain responses. Eighty-two percent of the respondents were professionals and 18% were paraprofessionals.

Years of experience in the current employment position ranged for respondents from first year to 16 years and over. The distribution revealed that 4 percent were first year, 19 percent were 1-3 years, 15 percent were 4-6 years, 14 percent were 7-9 years, 7 percent were 10-12 years, 10 percent were 13-15 years, and 31 percent were 16 or more years.

Ninety-four percent (98 respondents) were white female and 6% were white male. Less than 1% represented blacks, Hispanics, and Asians or Pacific Islanders. Respondent's ages were reported in five groups from under 30, to 60 and over. The highest percentage, 53% represented respondents 41-50 years of age. Reported educational background indicated that all respondents held at least a high school diploma. In addition, 66% held a graduate degree and 22% a bachelor's degree as their highest degree.

FCS specialty areas were indicated for those respondents holding at least a bachelor's degree. The highest percentage in a FCS specialty area was found in food and nutrition at 25%. Both of the specialty areas of child and family life development, and education represented 22% each. Over half of the respondents were 41-50 years of age and had earned a master's degree.

Table 1.
Respondents' Demographic Characteristics

Characteristics	N	Percent
Position		
Professional	84	82
Paraprofessional	19	18
Years of Experience		
1st year	4	4
1-3 years	20	19
4-6 years	16	15

7-9 years	14	14
10-12 years	7	7
13-15 years	10	10
16 and over	32	31
Gender		
Female	97	94
Male	6	6
Age		
Under 30	2	2
31-40 years	22	21
41-50 years	54	52
51-60 years	23	22
60 and over	2	2
Ethnicity		
White, not Hispanic	98	95
Black, not Hispanic	1	1
Hispanic	1	1
Asian or Pacific Islander	1	1
Educational Background		
HS Diploma	8	8
Associate Degree	3	3
Bachelor's Degree	23	22
Master's Degree	66	64
Doctorate Degree	2	2
FCS Specialty		
Education	23	28
Food and Nutrition	26	32
Child Development	5	6
Family Life & Human Development	17	21
Family Resource Management	11	13

Knowledge, Interest, and Attitude

Respondents were asked to rate their level of knowledge and interest for concepts related to distance education, distance education in Iowa, the ICN, and the ICN classroom. Scales were computed to determine the degree of knowledge, interest, and attitudes for the total group. Cronbach's alpha reliability coefficients were calculated for each scale. The alpha reliability coefficients were .97 for the knowledge scale, .97 for the interest scale, and .76 for the attitudes scale. Then, a second analysis compared scores for the paraprofessionals with the professionals.

Statistics showed that as a whole, the group had "little" to "some" knowledge (mean=2.5) regarding concepts related to distance education and the ICN. In comparing the two groups, the professionals knew "little" to "something" (mean=2.6), although the paraprofessional's knowledge ranged from "not knowing anything" to "knowing little" (mean=1.7).

As a whole, respondent's interest level ranged from having "some" interest to being "quite" interested (mean=3.1) in knowing about concepts related to distance education and the ICN. The professionals were more interested (mean=3.2) than the paraprofessionals (mean=2.9).

For the attitudinal section, respondents indicated their level of agreement with 20 opinion statements regarding distance education and the ICN. The responses ranged from "disagree" (mean=1.71) to "strongly agree" (mean=4.6). When comparing the two groups, both the professionals and the paraprofessionals indicated that they "agree" (mean=3.8) with the statements.

To examine the interrelationship of the scales for knowledge, interest, and attitudes, Pearson product-moment correlations were computed. The knowledge about distance education scale and the interest in knowing about distance education scale used the same 35 items. Nevertheless, the correlation coefficient indicated only a small positive relationship between the two scales (r=.278). No relationship (r=-.025) was found between knowledge and attitude. A moderate positive relationship (r=.390) was found between interest and attitude.

Demographic Characteristics by Knowledge, Interest, and Attitude

T-tests (at the .05 level) were used to identify whether there was a significant difference in knowledge, interest, and attitudes of professional and paraprofessionals with varied educational backgrounds. A t-test was also used to identify differences between groups who had either experienced the ICN as a learner or had experienced the ICN in both roles, as an educator and a learner.

Among the respondents who had earned a bachelor's degree or less and those who had earned a master's degree or more, results showed a significant difference ($p<.05$) between the two groups in terms of knowledge. However, no significant differences existed in terms of interest ($p>.05$) and in terms of attitudes ($p>.05$).

Table 2.
T-test Results of Knowledge, Interest, and Attitudes by Educational Background.

Characteristics	N	M	SD	t-value	Probability
Knowledge					
Bachelor's and under	34	2.08	.59	-4.42	.00
Master's and over	69	2.65	.63		
Interest					
Bachelor's and under	34	3.00	.89	-1.74	.08
Master's and over	69	3.30	.62		
Attitude					
Bachelor's and under	34	3.80	.43	.84	.40
Master's and over	69	3.70	.36		

Among the respondents who had experienced the ICN as a learner and those who had experienced the ICN as both an educator and a learner, results showed a significant difference ($p<.05$) between groups in terms of knowledge. There was no difference between the groups in terms of interest ($p>.05$) and attitudes ($p>.05$).

Table 3.
T-test Results of Knowledge, Interest, and Attitudes by ICN Experience.

Characteristics	N	M	SD	t-value	Probability
Knowledge					
As a learner	41	2.32	.52	-4.17	.00

Educator and learner	50	2.81	.58		
Interest					
As a learner	41	3.32	.68	.56	.57
Educator and learner	50	3.23	.70		
Attitude					
As a learner	41	3.84	.38	1.01	.31
Educator and learner	50	3.80	.41		

One-way ANOVA and Scheffe post hoc tests (at the .05 level) were used to identify whether there were significant differences between age groups of under 40, 41-50 years, and 51 years and over. The same procedure was used to identify whether there were significant differences between professionals in specialized areas of Family and Consumer Sciences.

Results showed no significant difference (F=.73, p=.49) between those under 40, 41-50, and 51 years and over in terms of knowledge. In terms of interest, results showed no significant difference (F=1.03, p=.36) between the three groups. No significant difference (F=.21, p=.81) existed between the three groups in terms of attitude.

Table 4.
ANOVA Results of Knowledge, Interest, and Attitudes by Age.

Characteristics	N	M	SD	F-Ratio	Probability
Knowledge					
Under 40 (A)	24	2.50	.51	.73	.49
41-50 years (B)	54	2.52	.69		
51 & over (C)	25	2.32	.75		
Interest					
Under 40	24	3.20	.68	1.03	.36
41-50 years	54	3.20	.66		
51 & over	25	2.90	.91		
Attitude					
Under 40	24	3.79	.43	.21	.81
41-50 years	54	3.78	.34		
51 & over	25	3.73	.48		

In terms of knowledge, results showed a significant difference (F=7.58, p=.001) between those respondents specializing in Family & Consumer Sciences Education, Food & Nutrition, and Child Development & Family Resources. Scheffe analysis showed no difference between Family & Consumer Sciences Education and Child Development & Family Resources, however, results showed a difference between Family & Consumer Sciences Education and Food & Nutrition, and a difference between Food & Nutrition and Child Development & Family Resources. Results showed no significant difference (F=.93, p=.40) between the three groups in terms of interest and no difference between the groups in terms of attitude.

Table 5.
ANOVA Results of Knowledge, Interest, and Attitudes by FCS Specialty.

Characteristics	N	M	SD	F-Ratio	Prob.	Scheffe
Knowledge						
FCS Education (E)	23	2.8	.54	7.58	.00	E>F
Food & Nutrition (F)	26	2.1	.76			C>F
Child Development & Human Resources (C)	33	2.6	.56			
Interest						
FCS Education	23	3.4	.64	.93	.40	Not performed
Food & Nutrition	26	3.1	.94			
Child Development & Human Resources	33	3.3	.57			
Attitude						
FCS Education	23	3.8	.39	.19	.83	Not performed
Food & Nutrition	26	3.8	.45			
Child Development & Human Resources	33	3.8	.32			

Summary and Conclusions

Adult education has relied upon distance education methods for delivering family and consumer sciences content for many years. The ICN two-way full-motion interactive fiber-optic telecommunications tool is a recent innovation in distance education delivery. This study examined Iowa FCS adult educators' knowledge, interest and attitudes related to distance education and the ICN. A questionnaire was developed for the specific needs of this study. Reliability analysis indicated that the scales were internally consistent with alpha coefficients above .75. Correlation coefficients indicated that the scales were operating independently. Therefore, the answer to the first research question, "Are scales for knowledge, interest, and attitudes regarding distance education and the ICN inter-related?" is no.

Demographic characteristics of respondents included age, educational background, experience using ICN, and FCS specialty. Answers to the second research question, "Do demographic characteristics influence scores on knowledge, interest, and attitude?" indicated that adult educators holding a graduate degree had significantly higher knowledge scores than adult educators with only a high school or bachelor's degree. In addition, those who had experienced the ICN only as a learner had significantly lower knowledge scores than those who had used the ICN in both roles of educator and learner. Finally, for professional adult educators who indicated a FCS specialty area, those indicating food and nutrition scored significantly lower in knowledge of distance education than either FCS education or child development and human resources.

For the last research question, "Do knowledge, interest, and attitudes of professional FCS adult educators differ significantly from those of paraprofessional FCS adult educators?", no significant differences were found. Examination of mean scale scores showed that professional educators had slightly higher scores on knowledge and interest, and similar scores on attitude.

Implications can be drawn when planning inservice workshops for FCS adult educators. First, inservice providers should allow attendees with limited ICN experience to have additional ICN experiences to increase their knowledge and interest. In addition, attendees with prior

knowledge and experience with the ICN need opportunities to enhance their proficiency using the system.

Distance education seems like a *bandwagon* with new *riders* getting on everyday. It is critical for adult educators in Family and Consumer Sciences to recognize the need to use emerging distance education technologies as an instructional tool.

Although several adult educators in Family and Consumer Sciences have already begun to use the ICN as an instructional tool, results of this study will help other educators in addressing concerns related to whether to accept or deny its use. In order to use the ICN as an effective instructional tool, agencies and organizations that provide learning opportunities for adults, need to continue to explore the ways to deliver instruction through this technology.

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TEACHER RECRUITMENT: TURNING THE TIDE

Rosalie Davey Travers
Queens College of the City University of New York

Family and consumer sciences school programs provide some of the earliest and richest opportunities for children to learn about the importance of families and maintaining healthy lifestyles. Unfortunately, research data document a real and perilous shortage of family and consumer sciences teachers across the nation. Without an increasing supply of teachers, many vital programs may be weakened and some may be eliminated.

This article describes the efforts of one college department to "turn the tide" and increase enrollment in the family and consumer sciences teacher education program. The non-traditional, inexpensive approaches resulted in surprising rewards.

The future and health of any profession rest in its efforts to recruit vibrant members, in its ability to replace retiring members with "new blood". At the present time, there is a shortage of teachers in all subject areas and future forecasts are for an increasing need for teachers. Hall and Miller (1989) predicted a serious shortage of family and consumer sciences (FACS) educators ten years ago. Others continued to document future needs (Burge & Stewart, 1991; Miller & Meszaros, 1996), and the reality of a perilous shortage to meet the demands (Miller & Meszaros, 1996; Rehm & Jackson, 1995). Developing strategies for meeting the teacher shortage is critical because middle and high school FACS programs provide some of the earliest and best opportunities for children to learn about the importance of families and maintaining healthy lifestyles. Students engage in learning activities that empower them to become competent, caring, responsible members of a constantly changing society (Home and Career Skills, 1986, p.1), gaining skills and knowledge "to effect the optimal well-being of families and individuals" (Strategic Plan: 1995-2000).

Although there seems to be little debate about the extant shortage, the challenge is to find the lode of prospective candidates for meeting the FACS teacher shortage. The traditional route has been to focus on high school student populations. Miller and Tulloch (1999) identified a spectrum of teacher recruitment strategies, activities and resources for attracting high school students. They also cited several studies (Dewalk-Link & Lester, 1985; South Carolina Center for Teacher Recruitment, 1995) that identified the strong influences quality high school programs and teachers have on individuals deciding to major in and become FACS teachers. Lee (1998a) interviewed middle school students taking Exploring Life Skills classes. She reported that a majority of them held positive perceptions about FACS, although a small percentage planned to consider FACS teaching as a career for a variety of reasons. As educators address some of the reasons given for not pursuing a teaching career in FACS, middle school students may become a potential population for recruitment.

The pressing problem is developing initiatives that increase the number of teacher educators within a relatively short period of time. Adopting recruitment strategies that target middle and high school students may provide a long-term solution, but the supply may not be available for anywhere from four to eight years. Due to some idiosyncratic factors, the most notable being the perception that FACS is not a core "academic subject", our profession may not

have the luxury of waiting that long without endangering the continuity of FACS secondary programs. For example, in states where FACS programs are not mandated, school district administrators unable to replace retiring teachers may eliminate the program or reduce course offerings. School administrators in states with mandated programs may opt for a variance from the mandate, fill positions with uncertified teachers, or allot portions of the program to other subject areas, such as health.

The teacher shortage crisis is a serious concern for colleges. The Family, Nutrition, and Exercise Sciences Department (FNES) at Queens College of the City University of New York (CUNY) has been grappling with the situation of low enrollment in its teacher education program for a number of years. Numerous and desperate calls from a number of school districts looking for graduates to fill positions is a frequent occurrence, and accelerated the need to find solutions. In the past, efforts to increase enrollment focused on the traditional route, attracting middle and high school students. A number of approaches were used including giving presentations at career days, inviting guidance counselors to a breakfast meeting at the college, and networking with family and consumer sciences teachers and professional organizations. Moreover, a recruitment letter was sent to incoming freshmen introducing them to the department and advising them of the areas of specialization offered. The results were not very encouraging. In the fall of 1997 there were four teacher education majors.

A serendipitous meeting of the author with a former student brought a new perspective to recruitment efforts. While chatting, the alumnus mentioned she had been working as a dietitian but was ready for a career change. She was disappointed with the discrepancy between her expectations and the reality of working in the field of dietetics. Teaching seemed like an option because she enjoyed the experience of working one-on-one with patients about to be discharged after a hospital stay. When I mentioned the great need for FACS teachers, she was quite excited and mentioned that she knew others contemplating career changes that might be interested. She was advised of the Special Admissions Program at Queens College of CUNY for students who want to enroll in a master's program in education but lack undergraduate preparation in education and/or some FACS course work. At a subsequent meeting, her transcripts were evaluated, she applied to the Special Admissions Program and began working toward meeting teacher certification requirements.

That meeting led to a new perspective on recruitment strategies. While middle and high school student populations remain important for the future supply of teacher educators, focus was shifted to thinking about populations that could be certified in a relatively short period of time. Alumni, and other individuals with FACS degrees, searching for second careers were attractive candidates to recruit because their degrees in some FACS area meant they may not need very many courses to fulfill the subject matter portion for teacher certification. The FNES department also reached out to two additional populations, teaching assistants and departmental majors with undeclared areas of specialization enrolled in the integrative FACS course (FNES 106-An Introduction to Family and Consumer Sciences).

Alumni And Other Individuals With Degrees

Alumni, and other individuals with FACS degrees, provide an excellent population for recruitment for a number of reasons. Colleges are beginning to value individuals with work experience who probably have honed their communication skills. Graduates usually are mature individuals with a better knowledge of their goals and expectations about employment, and many may have completed a number of the courses needed for meeting the subject matter requirement

for teacher certification. In the FNES department at Queens College of CUNY, for example, in addition to the specialization courses needed for graduation, all students complete a core curriculum, and some core courses, e.g., consumer studies and family relations, are applicable for the teacher education specialization.

Alumni newsletters provide an inexpensive recruitment tool. After the meeting with the alumnae, an announcement was placed in the department's alumni newsletter about the many teaching opportunities available, and noted that further information about teacher certification was available by contacting the department's teacher educator. The results were astonishing; more than 50 individuals responded!! Some calls were from alumni with teaching credentials who had never taught for a variety of reasons, and who subsequently enrolled in the methods course as a refresher before applying for teaching positions. Other calls were from the alumni's colleagues and coworkers, individuals with FACS degrees. The respondents represented a diverse group including school lunch managers, dietitians employed at a variety of sites including hospitals, nursing homes, and WIC programs, and textiles designers and fashion consultants. Some responses were from friends of the alumni who were working in other areas such as elementary education. After preliminary telephone conversations, interested parties met one-on-one with the teacher educator, had their transcript(s) evaluated and discussed options for achieving teacher certification, as well as their goals and motivation(s) for wanting to enter the profession. Those with few or no FACS credits were advised to register for a second bachelor's degree and begin working on completing the 36 FACS credits and the 18 education credits needed for provisional certification. Individuals with a bachelor=s degree in some area of FACS were referred to the Special Admissions Program offered at Queens College of CUNY and designed for individuals with a bachelor's degree but lacking undergraduate education course work.

Special Admissions Program

The secondary education department of Queens College of CUNY in conjunction with various academic departments offers a Special Admissions Program. The program was designed for students wanting to earn a master's degree in education but lacking undergraduate preparation in education. Candidates must meet the general matriculation requirements of the college, hold a bachelor's degree with a major or its equivalent in an academic field, and meet the minimum grade point average set by the department. In New York State, provisional teacher certification requires 36 subject matter credit hours in FACS. All department alumni meet that criterion although departmental specialization course work requirements are concentrated in one area and may not cover the broad range needed for teaching. For example, dietetics majors usually lack course work in textiles, clothing and interior design; textile and clothing majors lack courses in foods and nutrition. Students in the Special Admission Program are required to make up any deficiencies. Transcripts also are checked for course currency requirements in some areas such as nutrition and consumer education.

One of the benefits of the Special Admissions Program is that when alumni complete the education course work and any FACS course deficiencies, they can apply for provisional certification and begin teaching before they have completed all the requirements for the master's degree. As a consequence of this flexibility, some alumni are presently employed as teachers while finishing the requirements for the master's degree.

Teacher Assistants

Teacher assistants was another population targeted. It is a desirable population for a number of reasons. First and foremost, teaching assistants have classroom experience working on a daily basis with teachers and students. They know the job description and have a realistic picture of what it is like to be in a classroom with diverse students who can present some challenging scenarios. Secondly, in all likelihood they probably have completed some college credits because of state requirements. State education departments set employment standards for teaching assistants. For example, New York State requires they complete six-college credits by the end of their first year of employment although individual school districts may have more rigorous requirements and/or provide incentives for continuing education. The New York City Board of Education has a Career Training Program that provides tuition reimbursement for up to 18 credits per year (up to six credits each Fall, Spring, or summer semester) at 20 participating colleges. Moreover, if an individual takes at least five credits, they are entitled to two and a half hours of released time per week during the Fall and Spring semesters (Career Training Program Questions and Answers Leaflet). Thus, teacher assistants are viable candidates for recruitment because they are cognizant of the traits, qualities, and skills needed for teaching, aware of the rewards of working with children, have some college credits, and may be entitled to some financial and employment support while completing a degree.

The FNES department reached out to New York City teaching assistants, known as paraprofessionals in New York City. Queens College of CUNY is one of the colleges participating in New York City's tuition reimbursement program. The paraprofessionals' union representative was contacted with a request to speak about the FACS program at the union orientation meeting. The presentation included the mission of FACS education, an overview of some of the exciting courses taught by FACS teachers, and New York State FACS teacher education requirements. There was time for questions, and leaflets were distributed, listing the required courses for the area of specialization and the name and phone number of the teacher educator contact. More than a dozen individuals contacted the department and some of those have started working toward teacher certification.

The Integrative FACS Course

Another population considered for teacher education recruitment resided within the FACS department. This potential group of applicants, "majors" who have not declared their area of specialization, was discovered when the author, the department=s teacher educator, was assigned to teach the "Introduction to Family and Consumer Sciences" integrative core course. The course, an introduction to the profession, examines FACS' history, mission, and philosophy, and explores its integrative nature. One activity involves inviting individuals from diverse FACS fields to speak about the joys and the sorrows, the requirements and the responsibilities, of their careers. This is done, in part, to broaden students' understanding of the depth and breath of the field (as opposed to viewing it only from their area of specialization), and to increase their vision of employment options within areas of specialization. All departmental majors are required to take the course, ideally in their freshmen year, though because of myriad constraints and situations the class is a blend of students with different class standings. Some of the students in the class have not identified an area of specialization; they may be freshmen or transfer students with associate degrees in liberal arts eager to explore the many FACS options, or individuals not quite decided. The class offers a wonderful opportunity to highlight the invaluable role FACS education plays in society as well as the need for FACS teachers.

For the segment on education, the author assumed the role of an outside speaker and spoke about the rewards of teaching, the many job opportunities available, the range for starting salary, and potential vertical career moves to positions such as principals and superintendents. During the same presentation, students from the methods and materials for teaching FACS course and the student teacher seminar were invited. They shared their reasons for choosing teaching as a profession and described their experiences and interactions with children and FACS teachers in the schools where they did their observations or where some were student teaching. Recent teacher education graduates also were invited and spoke about life in a secondary classroom.

Students speaking to students, answering their questions, and talking about their experiences is a powerful recruitment tool. Almost without exception, the student teachers' enthusiasm and love for what they were doing became apparent to class members. This recruitment technique resulted in quite a number of undecided FACS majors coming in to talk about the teacher education major. Student comments on the assigned Speaker Evaluation Form included: "Wow, I didn't realize teaching could be fun"; "What they're doing in their classes sounds so much better than what we did in my home economics class . . . I wish we learned how to plan menus and evaluate diets, study child psychology and work with children in pre-K programs". Without fail, they indicated that the students and recent graduates made teaching sound like a gratifying career. They expressed surprise about the variety of FACS courses taught in middle and high schools, and were unaware of the potential for moving into administrative positions.

Results and Implications

Increases in enrollment in the teacher education major from the targeted groups, alumni, and other individuals with degrees, teacher assistants, and FACS majors, who have not declared their area of specialization, are very encouraging. In 1997 there were four students enrolled in the teacher education program. Two years later there are 27 individuals taking courses and working toward certification. Eight individuals received provisional certification and are presently teaching.

The results of the recruiting efforts of one college suggest that the tide may be turning and the shortage of teachers can be alleviated. Continuing to seek out unorthodox methods and populations to meet a serious situation may prove to be one avenue for meeting short and long-term goals of increasing the numbers of FACS teachers. The results also appear to emphasize that members of the FACS profession are on target with recently published literature about recruiting suggestions and ideas. Recruitment strategies similar to those undertaken by the Queens College of CUNY FNES department in 1997 have subsequently be suggested by others (Lee, 1998a, 1998b; Miller & Tulloch, 1999; Mimbs, Stewart, & Heath-Camp, 1998).

Recruiting currently employed individuals such as teaching assistants and alumni, however, brings the challenge of reconceptualizing how a department delivers its programs. As Lee (1998a) noted, individuals employed full time need convenient class scheduling to meet their time needs such as classes offered late afternoons or evenings, weekends and in the summer. Colleges should explore initiating distance learning programs or offering courses at satellite sites especially in states where few (and sometimes no) FACS teacher education programs are offered or where colleges with programs are not centrally located for easy access.

The FNES department tried to meet the needs of full-time working students or those who have to travel great distances to the college by allowing them to take individual courses at

different colleges to meet some of the FACS requirements. Some FACS courses may rarely be offered at convenient hours and times of the year for a variety of reasons. Students were encouraged to take them at a local community or senior college. For example, students could take textiles, clothing construction and interior design courses at either a community or senior college offering degrees in fashion design and merchandising.

Another issue that emerged from working with non-traditional students was the enormous amount of time needed for counseling, advising and assisting them through the process. Individuals who have not taken courses in a number of years need extra reassurance. The rewards can be enormous, however, because the students are serious, do high quality work and bring a plethora of personal experiences that enrich their education.

In summary, the tide appears to be turning for the author's college, and with continuing efforts at long-term recruitment strategies, there will be a supply of teachers to meet the goals and challenges outlined by the American Association of Family and Consumer Sciences in the millennium.

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CREATING FUTURES – A SHARING CELEBRATION BY TEACHERS FOR TEACHERS

Susan Reynolds
Broken Arrow High School

Each year the Family and Consumer Sciences Programs Committee of the National Association Teachers of Family and Consumer Sciences (NATFACS) works toward the improvement of programs in secondary and postsecondary schools by sponsoring the Curriculum Showcase at the national convention of the Association for Career and Technical Education. The call for presenters was issued to all members of NATFACS and extended to members of related organizations. Participants are requested to focus on a variety of issues and topics including:

1. Relating programs to priority family issues, diverse populations, School-to-Work strategies;
2. Developing leadership through integration of FHA/HERO activities;
3. Increasing accountability for the development of basic skills, thinking skills, and personal qualities in students;
4. Increasing accountability for teaching students to use resources, work with others, acquire and use information, understand systems and use technology;

The December 12, 1998 showcase "Creating Futures–A Sharing Celebration" included diverse topics and displays spanning secondary, postsecondary, and higher education programs from across the nation. A description of each entry follows.

Sun – Friend or Foe

A variety of technological tools were used to describe the lasting impact of the sun's harm to the skin. Project materials spanned preschool through high school. A video, a web site, and brochures and flyers were public relations tools developed to relate this information to the public.

Sarah Raikes
Campbellsville High School
1910 Wooley Road
Campbellsville, KY 42718

HETAC's Pathways to Success

The Home Economics Teachers Association of California was successful in sponsoring legislation that establishes an incentive grant program for home economics careers and technology programs in California and reinstated the HECT Unit in the California Department of Education.

Judith Malody
Home Economics Teachers Association of California
2766 Persimmon Place
Riverside CA 92576

Entrepreneurship in the Family

Students utilizing computer software including bookkeeping and desktop publishing programs and digital camera to create brochures, business cards, and mailing lists to market a line of seasoning mixes developed by the food science class.

Susan Faseler
Hurley R-1, Box 248
Hurley, MO 65675

Indiana: Implementing the National Family and Consumer Science Education Standards

National FACS Standards have connected with Indiana's FACS courses. Newly developed state course titles and descriptions, with corresponding course competencies and content standards are cross-walked with math and language arts proficiencies.

Wanda S. Fox
Purdue University
1442 Liberal Arts & Education Bldg.
West Lafayette, IN 47907-1442

Career Connection

Examples of student work illustrate the National Program through FHA/HERO Career Connections. Special focus includes projects exploring career opportunities and assessment tools.

Carol Schramer
East High School
500 Tomcat Lane
Aurora, IL 60505

Don't Hide Your Pride!!! Create Futures with FCS

NATFACS Public Information Committee's Showcase of public relations ideas to market the profession.

Marilyn Swierk, CFCS, CFLE
P.O. Box 813
North Kingston, RI 02852

Service Learning in a Nutshell

The Who, What, Why, When, and How to integrate service-learning are included in this user friendly guide based on a national award winning program. Connection to School-to-Career educational partnerships, funding sources, resources, and reproducible masters will help to begin or enhance an existing program.

Marilyn Swierk, CFCS, CFLE
P.O. Box 813

North Kingston, RI 02852

Life Skills for Little Ones

Reinforce students' Family and Consumer Sciences skill and workforce readiness by having them teach life skills to young children–themes, art, music, games, patterns, and resources to enhance a program's visibility.

Marilyn Swierk, CFCS, CFLE
P.O. Box 813
North Kingston, RI 02852

Promote the Profession with Fun!!!

Wear T-shirts, sweats, buttons, and tote bags to showcase our profession. Come see "All I Ever Need to Know I Learned in Family and Consumer Sciences," "The Top Ten Reasons Why You Need the FACS of Life," and more!!!

Marilyn Swierk, CFCS, CFLE
P.O. Box 813
North Kingston, RI 02852

Early Childhood Initiative: Focusing on Brain Development

Early brain development and its specific implications for Family and Consumer Sciences is showcased in an activity/resource manual. Other materials and activities available for professionals to become involved in include the unprecedented "I Am Your Child" Public Engagement Campaign for Early Childhood.

Marilyn Swierk, CFCS, CFLE
P.O. Box 813
North Kingston, RI 02852

Jazz Up Your Family and Consumer Sciences Classroom

Discover how you can jazz up your Family and Consumer Sciences program. Linda Tukey, Family and Consumer Sciences teacher and 1997 Milken Family Foundation National Educator shows creative and innovative strategies that integrate academic learning and real life situations and problems.

Linda Tukey
81 Old Fairgrounds Road
Reinsfield, ME 04355

Shadowing and Internships for Teachers

This showcase illustrates how shadowing and internships have prepared Kathy Gifford to inform her students. Businesses have appreciated the opportunity to share their thoughts and concerns. These activities have been a positive public relations opportunity.

Kathy Gifford

610 6th Avenue
Keamy, NE 68847

Celebration of Children's Literature: Enhancing Your Curriculum

Children's books are used in the classroom to introduce or supplement middle school and high school Family and Consumer Sciences classroom. Areas included are: Problem Solving, Communication, Friendship, Cooperation, Anger and Conflict Resolution, Tolerance, Career Planning, and Critical Issues. Also included is information on a course titled "Child Life and Literature." This is fully integrated Family and Consumer Science and Language Arts curriculum that is team taught on the high school level.

Ann Ashby
Work & Family Studies Teacher
321 Sheridan
Winchester, VA 22182

Emily Jane O'Connor
Work & Family Studies Teacher
8810 Higdon Drvie
Vienna, VA 22182

New Curriculum Resources from Missouri

This session highlights Family and Consumer Sciences curriculum resources recently developed in Missouri. These include teacher resource guides for high school semester courses in Child Development and Food Science which utilize practical problem-solving/critical thinking strategies and performance along with performance indicators and assessments for occupational child care programs.

Debbie Pohl
Missouri DEPT of Education
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