Notes from Editor

This issue of the *Journal of Family and Consumer Sciences Education* is a continuation of articles focused on the *National Standards for Teachers of Family and Consumer Sciences*. The guest editors are Wanda S. Fox, Patricia M. Erickson, and Daisy Stewart, who also served as the leadership team for the development of the *Standards*.

This is the third issue of the *Journal's* volume devoted to the publication of articles on the *National Standards for Teachers of Family and Consumer Sciences*. The articles in this issue have been peer reviewed and edited using the same requirements approved by the Editorial Board for all articles published in the *Journal of Family and Consumer Sciences Education.*

There were several family and consumer sciences educators who participated in this issue of the *Journal* as authors. To authors, the time and effort you devoted in the development of your manuscript to share your expertise are greatly valued and appreciated by the profession. The sharing of your expertise creates a potentially positive learning experience for those involved in teacher preparation.

To family and consumer sciences educators who served as peer-reviewers for this issue, appreciation is extended to you. Thank you for your commitment to the profession and for providing feedback on the manuscripts.

The *Standards* were developed as a benchmark for beginning family and consumer sciences teachers, therefore a primary audience consists of family and consumer sciences teacher educators who will potentially use the articles as a resource in preparing preservice teachers. Both novice and experienced family and consumer sciences teachers are also audiences. Therefore, this series of articles on the *Standards* should be informative and useful for both intended and unintended audiences.

Bettye P. Smith
Editor

Notes from Guest Editors

We are pleased to present the third of several issues of the *Journal of Family and Consumer Sciences Education* devoted to the *National Standards for Teachers of Family and Consumer Sciences*. The *Standards* provide a national model for what a beginning teacher in family and consumer sciences should know and be able to do. The *Standards* impact areas such as state-level family and consumer sciences teacher licensure, design and accreditation of teacher education programs, and assessment of teacher candidates.

The set of ten *Standards* that were developed delineate core content and professional practice for teachers of family and consumer sciences. The *Standards* are presented on page v, following these notes. Each of the *Standards* incorporates complex concepts integral to the teaching of family and consumer sciences. Since the *Standards* are utilized in a wide variety of teacher education programs, they are implemented differently depending on state and institutional contexts. This series of articles will include one or more articles on each of the ten *Standards*. With the complexity of the concepts in the *Standards*, the authors of articles often focused on a selected part of the *Standard* or used a specific perspective. All of the articles examine the research related to the *Standards* and apply it to family and consumer sciences education teacher preparation.

This issue includes four articles focusing on selected *Standards* related to professional practice. The articles examine four of the ten *Standards*: Curriculum Development, Instructional Strategies and Resources, Student and Program Assessment, and Student Organization Integration. Articles on other *Standards* are included in previous and future issues.

Bette Montgomery's article addresses Standard 3, Curriculum Development. In the opening section, she describes relationships between written and implemented curriculum and a teacher's role in developing these. She then examines two major perspectives of family and consumer sciences curriculum: (a) empirical-rational science-based and (b) critical science based. She concludes that the critical science perspective best addresses the perennial family, career, and community issues component of Standard 5, and explains several aspects of this perspective, including perennial problems, systems of action, and broad concepts. Specific strategies to develop, justify, and implement curriculum also are provided. The article's philosophical grounding and practical strategies will be useful in curriculum development and implementation.

In their article on Standard 6, Instructional Strategies and Resources, Andrea B. Mosenson and Julie M. Johnson emphasize the use of technology in preparing family and consumer sciences teachers. They provide information on technology integration in today's schools and how it impacts student achievement. Relationships of technology to critical thinking and to social, ethical, and legal issues are discussed. Integration of technology in teacher education programs is encouraged by providing a variety of resources. The content of this article will be useful to teacher educators and also to practicing teachers.

Margaret Torrie and Janis Van Buren examine the role of assessment literacy in their article on Standard 9, Student and Program Assessment. The focus of the article is on student assessment literacy. Looking at the assessment literacy of four national entities, they explored the needs of

the family and consumer sciences teacher candidates. They make the case for assessment literacy to include knowing how to assess, what to assess, and how to prepare students how to assess. They further developed the concepts of nurturing assessment literacy, discussed the purpose of an assessment literacy model, and examined assessment literacy competencies and standards from randomly selected states. The authors stressed the need for teachers to learn how to assess as a part of the teaching and learning process.

The fourth article in this issue, by Debra DeBates and Mary J. Pickard, focuses on Standard 10, Student Organization Integration. The authors describe and compare two models that could be used in teacher education programs to prepare teacher candidates to be FCCLA advisors. One model involves integrating FCCLA into existing courses, while in the other model a course dealing specifically with FCCLA is taught. Debates and Pickard also discuss distance education options for teaching about FCCLA and useful resources for teacher educators. They provide a thoughtful analysis of an important aspect of the teacher education curriculum.

All of the articles in the series were peer reviewed and edited using the requirements approved by the Editorial Board for all articles published in the *Journal of Family and Consumer Sciences Education.* It would not have been possible to publish this issue and subsequent issues of the *Journal* focusing on the *Standards* without the assistance of the reviewers, all of whom met the criteria of the *Journal of Family and Consumer Sciences Education* to serve in this important role. The reviewers for the entire series are listed on page iv. We sincerely appreciate their contributions to this series.

We also would like to thank Bettye Smith, editor of the *Journal*, for her support in providing these issues as a resource for the profession.

Wanda S. Fox
Daisy Stewart
Patricia M. Erickson
Guest Editors

Journal Reviewers

The following individuals served as reviewers for the manuscripts submitted for consideration for the series of articles focusing on the *National Standards for Teachers of Family and Consumer Sciences.* They worked with guest editors Wanda Fox, Daisy Stewart, and Patricia Erickson to complete masked reviews of all submitted manuscripts, using criteria approved by the Editorial Board of the *Journal of Family and Consumer Sciences Education*.

Sue Bailey
Tennessee Technological University

Katherine Brophy
University of Connecticut

Barbara A. Clauss
Indiana State University

Kathy C. Croxall
Southern Utah University

Merrilyn Cummings
New Mexico State University

Debra DeBates
South Dakota State University

Jane B. Dennis
Tarleton State University

Ruth Dohner
Ohio State University

Candace K. Fox
Mount Vernon Nazarene University

Helen Hall
University of Georgia

Jacquelyn W. Jensen
Eastern Kentucky University

Julie M. Johnson
University of Nebraska-Lincoln

Karen H. Jones
University of Georgia

Shirley R. Klein
Brigham Young University

Michelle Krehbiel
University of Vermont

Margaret Lichty
California State University Long Beach

Mary Lou Liprie
University of Delaware

Lori P. Matyjas
Connecticut Department of Education

Joan R. McFadden
Ball State University

Gail M. McMillon
Southeastern Louisiana University

Janis P. Meek
North Carolina Department of Public Instruction

Cheryl Mimbs
University of Kentucky

Bette Montgomery
Northern Illinois University

Christine M. Moore
Brigham Young University

Mary J. Pickard
East Carolina University

Marsha Rehm
Florida State University

Susan A. Reichelt
East Carolina University

Ellaline A. Roy-Macaulay
Morgan State University

Cecelia Thompson
University of Arkansas

Nancy E. Thompson
Ball State University

Carol R. Werhan
Minnesota State University, Mankato

Janice R. Wissman
Kansas State University

Sally Yahnke
Kansas State University

Karen W. Zimmerman
University of Wisconsin-Stout

National Standards for Teachers of Family and Consumer Sciences

National Association of Teacher Educators for Family and Consumer Sciences – Approved 12/04

The *National Standards for Teachers of Family and Consumer Sciences* provides an overarching model of excellence for what a beginning teacher in family and consumer sciences (FCS) should know and be able to do. The National Association of Teacher Educators for Family and Consumer Sciences led FCS educators and other stakeholders from across the country to develop the *Standards*. The two-year, highly participatory process yielded an integrated set of standards with a high degree of national consensus, while allowing for variations in state teacher preparation and licensure. These standards are unique to FCS teachers. In addition, the beginning FCS teacher has general education background and meets overall professional education standards. As presented, the first four standards focus on FCS content; the remaining six emphasize professional practice. In each of these two groups, the standards are arranged alphabetically. The FCS process areas of thinking, communication, leadership, and management are incorporated throughout. Across all ten standards, the beginning FCS teacher demonstrates knowledge, skills, and attitudes to enable student learning.

1. Career, Community, and Family Connections

Analyze family, community, and work interrelationships; investigate career paths; examine family and consumer sciences careers; and apply career decision making and transitioning processes.

2. Consumer Economics and Family Resources

Use resources responsibly to address the diverse needs and goals of individuals, families, and communities in family and consumer sciences areas such as resource management, consumer economics, financial literacy, living environments, and textiles and apparel.

3. Family and Human Development

Apply principles of human development, interpersonal relationships, and family to strengthen individuals and families across the lifespan in contexts such as parenting, care giving, and the workplace.

4. Nutrition, Food, and Wellness

Promote nutrition, food, and wellness practices that enhance individual and family well being across the lifespan and address related concerns in a global society.

5. Curriculum Development

Develop, justify, and implement curricula that address perennial and evolving family, career, and community issues; reflect the integrative nature of family and consumer sciences; and integrate core academic areas.

6. Instructional Strategies and Resources

Facilitate students' critical thinking and problem solving in family and consumer sciences through varied instructional strategies and technologies and through responsible management of resources in schools, communities, and the workplace.

7. Learning Environment

Create and implement a safe, supportive learning environment that shows sensitivity to diverse needs, values, and characteristics of students, families, and communities.

8. Professionalism

Engage in ethical professional practice based on the history and philosophy of family and consumer sciences and career and technical education through civic engagement, advocacy, and ongoing professional development.

9. Student and Program Assessment

Assess, evaluate, and improve student learning and programs in family and consumer sciences using appropriate criteria, standards, and processes.

10. Student Organization Integration

Integrate the Family, Career and Community Leaders of America student organization into the program to foster students' academic growth, application of family and consumer sciences content, leadership, service learning, and career development.

Curriculum Development: A Critical Science Perspective

Bette Montgomery
Northern Illinois University

Standard 5 of the National Standards for Teachers of Family and Consumer Sciences (National Association of Teacher Educators for Family and Consumer Sciences [NATEFACS], 2004) *focuses on the development, justification, and implementation of issue or problem-based curriculum. This paper (a) examines the meaning of curriculum; (b) examines family and consumer sciences curriculum from empirical-rational and critical science-based perspectives; and (c) identifies strategies to develop, justify, and implement family and consumer sciences curriculum.*

Curriculum development and implementation are important components of a teacher's responsibilities (Danielson, 1996). It is essential that family and consumer sciences (FCS) teachers are able to develop and implement issues-based curriculum in order to meet the needs of individuals, families, and communities today. This is further expressed in Standard 5 of the *National Standards for Teachers of Family and Consumer Sciences* which states that beginning teachers of family and consumer sciences should be able to "Develop, justify, and implement curricula that address perennial and evolving family, career, and community issues; reflect the integrative nature of family and consumer sciences; and integrate core academic areas" (National Association of Teacher Educators for Family and Consumer Sciences [NATEFACS], 2004).

The purpose of this paper is to examine the meaning of Standard 5, Curriculum Development, for family and consumer sciences teachers. More specifically this paper includes an overview of the meaning of curriculum and examination of FCS curriculum from empirical-rational and critical science-based perspectives. In addition, strategies to develop, justify, and implement FCS curriculum will be identified.

Meaning of Curriculum

Broadly, curriculum identifies "what should be taught" in the classroom. More specifically, as defined by Posner (2004), curriculum includes official and operational components. The official curriculum, known as the written curriculum, includes the content to be taught as well as provides the basis for lesson plans, student evaluation, and teacher accountability. The operational, or implemented, curriculum is the content that is actually taught to students, including the importance of what is taught and the learning outcomes for which students are ultimately held accountable. In relationship to Standard 5, it is expected that the teacher will be able to both write curriculum and implement curriculum.

What is actually implemented in the classroom, however, may or may not match the written curriculum. This can have positive consequences. For example, the written curriculum in a high school level family relationships course included the student learning outcome of "identify alternative parenting styles." However, when engaged in the lesson, students moved beyond identification of parenting styles but also engaged in perspective taking (a component of critical thinking) as they role played parent-child interactions from different parenting approaches. In the follow-up discussion, the teacher further emphasized the importance of perspective taking as related to parenting. Lastly, the teacher assigned a poster project upon

which the students were assessed regarding both the identification of parenting styles and their perspective taking ability. In this example, the curriculum that was ultimately implemented in the classroom helped students to exceed the goals of the written curriculum. Conversely, if the written and implemented curricula do not match, it can have negative consequences. For example, if the written curriculum includes parenting styles but students are not taught about this concept, they will have limited understanding of alternative parenting approaches. And, when tested with questions based on parenting styles, points would be deducted for their lack of understanding.

In addition, curriculum should be used with professional judgment. Curriculum which is outdated, inaccurate, hinders learning, or is harmful should not be taught. In addition, there should be room for flexibility to incorporate new knowledge, skills, or teaching and learning strategies. In any case, teachers need to make professional judgments about curriculum and should have the autonomy to do so (Richardson, 2003; White, 1992).

Ultimately, it is the written curriculum that provides the foundation for what happens in the classroom and communicates the focus of family and consumer sciences to other teachers, administrators, and parents. While curriculum development can be a complex undertaking, a written curriculum is important in order to (a) create quality FCS middle and high school programs and courses; (b) build connections among and within FCS subject areas and core academic areas; (c) be accountable to the school, district, and other teachers in FCS and other subject areas, with regard to what is (and is not) taught; (d) communicate to others, including students and parents, the subject matter and significance of FCS; and (e) assist FCS teachers in reflecting upon their teaching practices and beliefs.

To achieve the "develop, justify, and implement curricula" component of Standard 5, there should be a close match between the written and implemented curricula. To help attain this goal in middle and high school level family and consumer sciences education, questions need to be addressed such as:

1. What is the focus of family and consumer sciences education?
2. What is the view of the family upon which the curriculum is based?
3. What subject matter or content should be taught?
4. What is the focus of learning?
5. What is the role of the teacher and the student?

Responses to these questions should help determine the nature of the written curriculum that is developed and the curriculum that is implemented. Teachers should be able to address these questions in order to help provide justification to the family and consumer sciences curriculum. These questions, however, may be answered differently from alternative educational perspectives (Eisner, 1979; Grundy, 1987).

Educational Perspectives in Family and Consumer Sciences

Two educational perspectives in family and consumer sciences include the empirical-rational science-based perspective and the critical science-based perspective (Brown, 1978; Brown & Paolucci, 1979; Montgomery 2003, 2006). Historically, empirical-rational science provided the foundation for family and consumer sciences education. Many middle and high school level programs continue to be based in this perspective. However, family and consumer sciences education is moving toward a more critical science-based approach.

Empirical-Rational Science-Based Curriculum Perspective

In the empirical-rational science-based perspective of family and consumer sciences curriculum, the primary purpose of education is to prepare adolescents for their future roles within the family or a future career. Families are viewed as producers to meet the needs of the family by making items such as food and clothing. Subject matter is organized by pre-determined and separate subject areas such as food and nutrition or clothing and textiles. Although study of the subject matter may draw from multiple disciplines, including academic areas such as reading or math, greater emphasis is given to the family and consumer sciences subject matter content.

In the empirical-rational science-based perspective, emphasis is placed on hands-on activities in order to apply factual knowledge in the completion of a product (e.g., making a food or clothing product) or the completion of a goal (e.g., complete a research report on child abuse). Students are engaged in decision making or problem solving as a step-by-step process which may or may not include the examination of values related to the problem (Montgomery, 2003). Problems under study are those of a "how-to" nature. For example, the problem of how to ensure kitchen safety and sanitation is frequently taught by giving students the rules of how-to behave in the kitchen (e.g., carry knives with the point down, wash your hands with soap before food preparation, and don't run in the kitchen). While it is very important to apply safety and sanitation principles, the how-to-do-it remains the focus of the problem.

Family and consumer sciences teachers are viewed as knowledge experts and students are the recipients of teachers' expertise. Teachers are to be well-prepared in technical actions such as sewing, food preparation, and child care. Students are taught through teacher-as-expert activities such as lectures and demonstrations. A course textbook may serve as another expert source of information. Student-centered activities consist of labs related to the subject itself including clothing construction labs, foods labs, and child development labs. Students are primarily evaluated by paper and pencil tests, and their skill in making products. Although family-based issues may be included as a component of study in empirical-rational science-based family and consumer sciences curriculum, issues are not a central focus.

In the late 1970s and early 1980s, Marjorie Brown and Beatrice Paolucci, as philosophical leaders, proposed critical science-based curriculum as an alternative perspective. Overall, it was perceived that as a foundation for curriculum, the empirical-rational science-based perspective did not fully address the needs of individuals, families, and society, and a change was needed within the profession. Since this time, critical science-based curriculum has taken a more central role in family and consumer sciences middle and high school level education.

Critical Science-Based Curriculum Perspective

In the critical science-based curriculum perspective, families are viewed more as consumers rather than producers of goods and services. Learning experiences focus on the integration of how-to skills and knowledge, as well as critical thinking and problem solving. Students examine their multiple life roles (e.g., as family members, workers, and citizens) and family, career, and community issues. Hands-on activities remain an important component of the learning process, but emphasis also is placed on the development of cognitive and social skills. This is further emphasized in the *National Standards for Family and Consumer Sciences Education* (for middle and high school students) as organizing processes (e.g., thinking, communication, leadership, and management) (National Association of State Administrators for

Family and Consumer Sciences [NASAFACS], 2008). Students may be evaluated by paper-and-pencil tests as well as performance or product assessments (which include evaluation of both the content and processes used). Rather than a knowledge expert, as in the empirical-rational science-based curriculum perspective, the teacher is viewed more as a facilitator who structures active learning experiences in which the students will engage.

The central focus of the critical science-based perspective is for individuals, families, and communities to think about the problems or issues of everyday life and to take action toward the improvement of those problems (Gentzler, 1999; McGregor, 2003). These problems or issues can be persistent in that they occur over and over again across generations, that is, they are perennial (Brown, 1978; Brown & Paolucci, 1979; Montgomery, 1999). Because of this focus, a critical science-based curriculum perspective best addresses the perennial family, career, and community issues component of Standard 5.

Table 1 compares the focus, view of the family, subject matter, focus of learning, and role of the teacher and student for the two perspectives.

Table 1
Alternative Family and Consumer Sciences Curriculum Perspectives

Perspective	Empirical-Rational Science-Based	Critical Science-Based
Focus	Students prepare for their future roles in a single context (e.g., the family or specific job/career).	Students examine current and future roles within multiple contexts (e.g., the family, work, and community settings,) and their interrelationship
View of the Family	Producers • Emphasis on technical or "how to" actions.	Consumers • Emphasis on multiple actions: technical, interpretive, reflective.
Subject Matter	Selected and organized by pre-determined subject areas: • Food Preparation and Nutrition • Clothing and Textiles • Family Relationships • Parenting/Child Development • Housing and Interior Design • Consumer Education	Selected based on perennial and evolving family, career, and community issues, such as: • What should be done about family and human development? • What should be done about food and wellness? • What should be done about consumerism and family resources?
Focus of Learning	Emphasis on: • Facts, how-to skills; narrow topics • Make product or complete goal • Decision making • Hands-on learning • Paper-and-pencil tests	Emphasis on: • Broad concepts • Apply processes • Problem solving, critical thinking • Active learning • Tests, performance, and product assessment
Role of the Teacher and Student	Teacher as expert; students are recipients of knowledge.	Teacher as facilitator, students and teachers as co-investigators.

Perennial problems. Although the word problem may create a negative image, perennial problems are not necessarily negative. According to Brown (1978), "'Problem' is used to mean a difficult question for thought or inquiry" (p. 14). For example, parenting is a problem which requires ongoing attention. Parenting may involve somewhat ordinary and everyday questions which need to be addressed, such as: (a) What should I feed my child? (b) Why should they eat those foods and not eat others? (c) What stories should I read to my child? and (d) When and why should I start reading to my child? However, some parenting problems may require more in-depth consideration, such as: (a) How can I best facilitate the development of my child until they become an adult? (b) How can I help my child achieve their career goals? and (c) What resources do I need in order to nurture, as well as financially support my child? Based on this definition of problem, parenting involves difficult questions that require thought and inquiry.

There can be instances, however, when the problem is not addressed and a gap results in meeting the needs of the individual and/or family. Evidence that family needs may not be met include, for example, a high degree of marital conflict, domestic violence, child abuse or neglect, family income at poverty levels, or family members who are malnourished. Gaps such as these indicate a need for further individual or family support, intervention, community resources, and/or preventive education.

Perennial problems are never fully resolved and may be responded to in different ways from generation to generation. For example, the problem of teenage pregnancy will never be fully resolved. In 1991, 39 of every 1,000 teens between the ages of 15 and 17 became pregnant. In 2003, 22 of every 1,000 teens were pregnant (Federal Interagency Forum on Child and Family Statistics, 2005). Although teenage pregnancy rates have declined, the problem is still significant. Different generations may pose different solutions to a perennial problem. Over the past century, solutions to teen pregnancy have included marriage, adoption, single-parenting, abortion, and/or education regarding pregnancy prevention. Even the meaning of what is a good parent has changed over the past century. In the idealized 1950s a good father was a breadwinner; a good mother was a stay-at-home mom and the primary caregiver. Today, a good parent (father or mother) may be viewed as a nurturer who shares parenting responsibilities. In any case, a recurring issue for the family is a perennial problem that is never answered once and for all time, and may be answered in different ways across generations.

Posing these perennial problems in the form of a question helps to take a more inquiry-based approach to both curriculum development and implementation. These questions are usually stated as "what should be done about" questions. Examples of perennial problems which may guide curriculum include: (a) What should be done about the family and human development? (b) What should be done about nutrition, food and wellness? and (c) What should be done about consumerism and family resources? In developing a written curriculum document, questions such as these guide teachers' decisions about "what should be taught" (Montgomery & Davis, 2004; Nebraska Department of Education, 1995).

As shown in Table 2, each question may be further broken down into sub-questions. For example, in thinking about the perennial problem of human development, sub-questions such as the following may be included: What should be the individual, family, and community's responsibilities regarding human development? What should be done to nurture human development across the lifespan? What should be done to insure that human development needs are met? What should be done about parenting?

Adolescents also need to understand perennial problems. As stated in the *National Standards for Family and Consumer Sciences Education*, middle and high school students

should be able to "analyze recurring [perennial] and evolving family, workplace, and community concerns" (Reasoning for Action, Standard 2, NASAFACS, 2008).

Although the term "evolving" is used in Standard 5 of the *National Standards for Teachers of Family and Consumer Sciences* and in the Reasoning for Action standard of the *National Standards for Family and Consumer Sciences Education* (for middle and high school students), the concept of evolving issues or concerns is not readily defined in family and consumer sciences literature. To extend Brown's (1978) thinking about perennial problems, it can be assumed that evolving problems or issues are much like perennial problems in that they require thought and inquiry, but are new in that they have not been readily addressed before. Examples of evolving issues in our society today include homeland security, genetic manipulation, and global warming. While these are examples of broad societal issues, they have direct implications for family, work, and community life. The nature of the perennial or evolving problem determines what actions are needed to help address the problem.

Table 2
Examples of Perennial Problems

<u>What should be done about the family and human development?</u> • What should be the individual, family, and community's responsibilities regarding human development? • What should be done to nurture human development across the lifespan? • What should be done to insure that human development needs are met? • What should be done about parenting?
<u>What should be done about nutrition, food, and wellness?</u> • What should be the individual, family, and community's roles regarding nutrition, food, and wellness? • What should be done to meet individual and family needs regarding nutrition both within the United States and globally? • What should be done to empower individuals and families in order to achieve health and well being? • What should be done to meet the nutritional needs of all family members?
<u>What should be done about consumerism and family resources?</u> • What should be the individual, family, and community's roles regarding consumerism? • What should be done about the responsible use of family resources? • What should be done about obtaining food, clothing, and shelter? • What should be done about developing and sustaining resources?

Adapted from: Montgomery & Davis, 2004; Nebraska Department of Education, 1995

Systems of action. To address both perennial and evolving problems, multiple forms of action may need to be taken by individuals, families, or communities. Although in-action may be a choice, without taking action a perennial or evolving problem will not be resolved on its own. There are at least three forms of action that may be needed: technical, interpretive, and reflective. They are viewed as a system because the actions are interrelated and all three types of action

may be required. Reasoning for action, including technical, interpretive, and reflective actions, is a central process for middle and high school level students (NASAFACS, 2008).

Technical actions are those which are considered to be how-to actions in which there is a pre-specified goal or the completion of a product. Once the goal is achieved or the product is finished the action is complete. Within the family, examples of technical actions include how to prepare nutritious food or balance the family budget. Employees or volunteers, within the workplace or community, might help families identify available community services, guide individuals in completing the forms to receive assistance, or provide direct financial assistance through fund-raising events. Technical actions are those which are most frequently emphasized in the empirical-rational science-based curriculum perspective

The second of the three forms of action, interpretive, are those which help to achieve shared beliefs or mutual understanding. These actions focus on engaging in deeper communication in which family members transmit culture and family traditions, or develop nurturing relationships. Examples of interpretive actions include, for example, a couple coming to an understanding about how they will share the responsibilities of their home and family, or parents coming to a shared set of values important to raising their children. Interpretive actions may also occur within the workplace, as a family services worker, for example, may facilitate a dialogue among parents about the meaning of culture in their own families. Community members may engage in interpretive actions by coming to a mutual agreement regarding the development and implementation of family-based policies.

Reflective actions, the third form, are the deeper questions which need to be examined regarding beliefs and assumptions about perennial and evolving problems. For example, a Caucasian couple, in preparing for the adoption of an African-American child, need to examine their own assumptions about African Americans and parenting a child of a race different from their own. Critical questions the parents need to ask themselves include: (a) What are our beliefs about African Americans? (b) Why do we hold these beliefs? (c) What will it be like to parent an African-American child? and (d) How will others perceive our family? A family services worker would also need to examine their own beliefs, or pose questions for others, such as: (a) What assumptions do I hold about families? (b) What do I believe families should look and act like? (c) Why do I believe this? (d) Is this belief held by everyone? and (e) If my beliefs are different should I change my perceptions? The community itself may need to also address critical questions. For example, in a local high school, it has become apparent there are racial tensions among students. Students, teachers, administrators, and others within the community need to examine critical questions, such as: (a) Why do these racial tensions exist? (b) What are the distorted beliefs about students of different races? and (c) Why do these distorted beliefs exist within the school? All three actions, technical, interpretive and reflective, need to be considered in addressing perennial and evolving problems.

Broad concepts. Rather than an emphasis on factual knowledge and skills, as in the empirical-rational science-based approach, broad concepts become the foundation of critical-science based curriculum. After consideration of the perennial or evolving problem, as well as the actions needed to help resolve the problem, broad concepts (in effect, the subject matter) are selected for study in the middle or high school level classroom. Broad concepts selected for study should be those which lead to enduring understanding. “Enduring refers to the big ideas, the important understandings, that we want students to ‘get inside of’ and retain after they’ve forgotten many of the details” (Wiggins & McTighe, 1998, p. 10). For example, when considering the perennial problem “what should be done about parenting?” broad concepts, such

as family, systems of action, care giving, communication, leadership, and human development, should be the focus of the curriculum. Examination of concepts such as these will help students understand more fully the meaning, responsibilities, and problems related to parenting. Wiggins and McTighe suggest emphasis should be placed on studying a few concepts in which students may delve deeply rather than on the coverage of many topics. Hauxwell and Schmidt (1999) further state that a focus on broad concepts helps to see the whole picture as well as make connections between sub-concepts. Broad concepts are not meant to be used only by teachers, rather these concepts should be a clear component of the written curriculum and explicitly used with students as part of the implemented curriculum.

Because curriculum is driven by perennial and evolving problems, the subject matter studied in family and consumer sciences becomes more integrated. This subject matter includes both family and consumer sciences subject areas as well as core academic areas (Daggett, 2003). For example, to examine problems related to parenting, students need to learn about concepts such as human development, selecting and preparing nutritious food, making appropriate clothing choices for children, creating a safe emotional and physical living environment, and maintaining/developing family resources. In addition, students integrate core academic areas such as math, language arts, or science. For instance, mathematics is used as family financial resources are examined, reading and comprehension are required to understand food labels, and biological sciences are incorporated when learning about fetal development during pregnancy. In contrast to the empirical-rational science-based curriculum perspective, the critical science-based approach does not maintain clear subject matter boundaries.

A critical science-based curriculum perspective best meets the intent of Standard 5. In this curriculum perspective, major emphasis is placed on perennial and evolving problems of individuals, families, and communities (as well as the actions needed to help move toward their resolution). In addition, the critical science-based perspective reflects the integrative nature of family and consumer sciences and core academic areas. Teachers with an understanding of this perspective should be able to develop, justify, and implement curricula from this approach as stated in Standard 5. Teachers may engage in several strategies to help facilitate this process.

Strategies to Develop, Justify, and Implement Curriculum

Through curriculum development and implementation, teachers engage in a decision making process (Burden & Bryd, 2007). There are several strategies that teachers may use to assist in making decisions as well as provide justification or support of their decisions. Strategies include:

1. *Examine the perennial or evolving problem.* Complete a gap analysis exercise as outlined in Table 3. Examine a perennial or evolving problem and identify the current state of affairs and the ideal state of affairs. From this information, identify the gap which exists between “what is” and “what should be” with regard to the problem (Johnson & Montgomery, 1997).

2. *Develop a curriculum rationale statement.* Write a statement which addresses questions such as: (a) What is the perennial or evolving problem? (b) What are the consequences for addressing or not addressing this problem? (c) Based on this problem, what are the concept(s) which are the focus of this program, course, or unit

of study? and (d) Why is it important for middle school and/or high school level adolescents to understand these concepts? (Kister, 1999).

3. *Develop key curriculum questions.* Key questions are broad questions which are developed to help establish an inquiry mode to education (Holcombe & Fedje, 1983). Examples of key questions related to parenting include: (a) What is parenting? (b) What assumptions do people hold about parenting? (c) In what ways might parenting differ across cultures, socio-economic levels, and generations? and (d) What are my beliefs about parenting and why do I hold these beliefs? Comer, Hittman, and Fedje (1997) also suggest technical, conceptual, and critical questions as a framework, as illustrated in Table 4.

4. *Identify broad concepts.* Use the criteria identified by Wiggins and McTighe (1998) to identify and further reflect on the concepts selected. Ask to what extent each concept: (a) Represents a big idea having enduring value beyond the classroom for individuals, the family, and society? (b) Resides at the heart of the discipline? (c) Addresses perennial or evolving issues? (d) Examines the systems of action? (e) Requires in-depth study or examination – something that can be delved into? and (f) Offers the potential for engaging students?

Strategies such as these can assist teachers in curriculum development.

Table 3
Gap Analysis

1. Create an initial list of questions related to the perennial or evolving problem. a. Identify questions based on a perennial or evolving problem. b. Generate a list of questions important to the problem. c. Group content, valued end, alternative means, and consequence questions in separate categories (i.e., practical reasoning process). Revise/add questions.
2. Develop initial thinking on the "current state of affairs" or "what is." a. Hypothesize potential answers to the questions based on your own thinking and experiences. b. Develop initial thinking on the "ideal state of affairs" or "what should be." c. Brainstorm possible statements for the ideal state of affairs which are free from bias and based on understanding human principles.
3. Investigate the problem and develop a chart and/or write a paper. a. Find resources to support or revise the current state of affairs. b. Find resources to support or revise the ideal state of affairs.

Adapted from: Johnson & Montgomery, 1997

Table 4
Framework for Questions

*Technical Questions***:** "Technical questions have absolute, concrete, and readily available answers" (Coomer, Hittman, & Fedje, 1997, p. 175). There are three types of technical questions: cause and effect, factual, and means-end. Examples include: • Cause and Effect: What is the effect of family income on meeting needs for clothing, shelter and food? • Factual: According to the U.S. Census Bureau, how many families live in poverty? • Means-End: What actions are needed in order to raise family income levels?
Conceptual Questions: "Conceptual questions focus on the language and meaning of various concepts" (Coomer, Hittman, & Fedje, 1997, p. 176). These questions help in the clarification of concepts, revealing the meanings that people hold, what they think or believe. Examples include: • What is the meaning of family for individuals, the family itself, or the community? • What are family traditions? What do these traditions symbolize? Are these meanings the same for all cultures? Different? • How is the meaning of family developed within one's own family? How are meanings of parenting developed? • How is the concept "household" similar or different from a family? Why do you believe this?
*Critical Questions***:** Critical questions help us to *analyze* and *evaluate* assumptions, meanings and beliefs. "The knowledge produced by critical questions helps us to critique meanings and beliefs in terms of their truth and rationality" (Coomer, Hittman, & Fedje, 1997, p. 177). Critical questions are often the kinds that cannot be answered once and for all. (There may not be one "right" answer.) Examples include: • What are your beliefs about families? Why do you believe this to be true? Where did these thoughts/beliefs come from? Would everyone hold these beliefs? • What are taken-for-granted assumptions regarding the family? • What actions taken by the family may be based on power/control? Is this an appropriate use of power? Does this use of power facilitate or hinder growth and development? • Where did these thoughts and beliefs about the family come from? How are they determined to be the truth? • Where did these thoughts and related feelings or beliefs come from? How are they determined to be right or the most appropriate among alternatives?

Adapted from: Coomer, Hittman, & Fedje, 1997; Coomer & Hittman, 1982

With regard to the implementation of curriculum, teachers should select or develop instructional strategies which are consistent with the critical science-based perspective. One framework for doing this is to use the actions (i.e., technical, interpretive, and reflective) as an instructional framework. For instance, students understanding of technical actions can be supported through hands-on activities, such as labs with emphasis also placed on the processes used (e.g., communication, collaboration, and resource management). While students may love to do hands-on lab experiences, teachers are responsible for balancing this with other

instructional strategies to facilitate students' understanding of perennial and evolving problems, and the actions needed to help resolve them.

An understanding of interpretive actions can be achieved through concept-based instructional strategies, such as Taba's inductive reasoning model (i.e., list, group, and label ideas related to the concept) or Brunner's concept attainment model (i.e., compare and contrast "yes" and "no" examples of the concept) (Burden & Byrd, 2007). An understanding of reflective actions can be facilitated as students are engaged in problem solving processes, such as practical reasoning. In the practical reasoning process the goals, context, consequences, and alternative ways of solving the problem are examined, in order to form a judgment about "what to do" in relationship to the problem (Olson, 1999).

Summary

As stated in Standard 5, Curriculum Development, beginning family and consumer sciences teachers should be able to "Develop, justify, and implement curricula that address perennial and evolving family, career, and community issues; reflect the integrative nature of family and consumer sciences; and integrate core academic areas" (NATEFACS, 2004). There are different forms of curriculum (written and implemented) as well as alternative curriculum perspectives. Both the form of curriculum and the perspective upon which curriculum is based need to be considered in making curriculum decisions. Historically, family and consumer sciences curriculum has been based in an empirical-rational science-based curriculum perspective. Ongoing movement is being made toward a more critical science-based approach. The critical science perspective best supports Standard 5 with regard to developing, implementing, and justifying perennial and evolving problem-based curriculum. In addition, the critical science-based perspective supports the integrative nature of family and consumer sciences and the core academic areas. In order to develop, justify, and implement curriculum, teachers may engage in several strategies to facilitate this process. Instructional strategies should also support a problem-based curriculum approach. One framework for further assisting in this process is the systems of action (technical, interpretive, reflective), as these can be used to help further select or develop instructional strategies.

Curriculum development, justification, and implementation are important professional responsibilities of FCS teachers. It is through these components that we define and communicate the nature and significance of family and consumer sciences.

Suggested Resources

Critical Science

Johnson, J., & Fedje, C. (Eds.). (1999). *Family and consumer sciences curriculum: Toward a critical science approach*. (Family and Consumer Sciences Teacher Education Yearbook 19, Education and Technology Division, American Association of Family and Consumer Scientces). Peoria, IL: Glencoe/McGraw-Hill. (For information on availability, contact the Family and Consumer Sciences Education Association, http://www.cwu.edu/~fandcs/fcsea/)

Provides a foundation for the critical science-based perspective, examines core FCS concepts and curriculum transformation process.

McGregor, S. L. T. (2003). Critical science – A primer. *Kappa Omicron Nu Forum 15*(1). Retrieved November 20, 2007, from http://www.kon.org/archives/forum/forum_archives.html#f11a
Provides an overview of the critical science-based approach, as well as using critical science in the classroom.

Staaland, E., & Strom, S. (1996). *Family, food and society: A teacher's guide.* Madison, WI: Wisconsin Department of Public Instruction.
Excellent critical science-based curriculum example.

Thorsbaken, P., & Schield, B. (1999). Family systems of action. In J. Johnson & C. Fedje (Eds.), *Family and consumer sciences curriculum: Toward a critical science approach* (pp. 117-131). (Family and Consumer Sciences Teacher Education Yearbook 19, Education and Technology Division, American Association of Family and Consumer Sciences). Peoria, IL: Glencoe/McGraw-Hill. (For information on availability, contact the Family and Consumer Sciences Education Association, http://www.cwu.edu/~fandcs/fcsea/)
Examines the systems of action (technical, communicative, and reflective/critical) and incudes reflections of one teacher in applying these ideas to the classroom.

Vincenti, V., & Smith, F. (2004). Critical science: What it could offer all family and consumer sciences professionals. *Journal of Family and Consumer Sciences, 96*(1), 63-71.
Examines critical theory and critical science; attention given to dispositions of curriculum development.

Curriculum

Eisner, E. W. (1979). *The educational imagination: On the design and evaluation of school programs.* New York: Macmillan.
Examines alternative curriculum orientations.

Grundy, S. (1987). *Curriculum: Product or praxis?* New York: Falmer.
Discussion of curriculum as a product or process; examines curriculum from technical, interpretive, and critical perspectives.

Plihal, J., Laird, M., & Rehm, M. (1999). The meaning of curriculum: Alternative perspectives. In J. Johnson & C. Fedje (Eds.), *Family and consumer sciences curriculum: Toward a critical science approach* (pp. 2-22). (Family and Consumer Sciences Teacher Education Yearbook 19, Education and Technology Division, American Association of Family and Consumer Sciences). Peoria, IL: Glencoe/McGraw-Hill. (For information on availability, contact the Family and Consumer Sciences Education Association, http://www.cwu.edu/~fandcs/fcsea/)
Examines alternative meanings of curriculum in family and consumer sciences.

Posner, G. J. (2004). *Analyzing the curriculum*. New York: McGraw-Hill.
Examines alternative meanings of curriculum and theoretical approaches.

Staaland, E. (1987). *A guide to curriculum planning in home economics*. Madison, WI: Wisconsin Department of Public Instruction.
Excellent critical science-based curriculum example.

Perennial and Evolving Problems

Benton, R. (Writer/Director). (1984). *Places in the heart* [Motion picture]. United States: Tri Star.
A film set in the 1930s follows a Texas family through crises and getting back on their feet. The problems and issues the family encounters provide a foundation for discussing perennial and evolving problems.

D'Aluisio, F., & Menzel, P. (1996). *Women in the material world.* San Francisco: Sierra Club.
Although centered on women, this book provides narrative and photographs which illustrate perennial problems and family actions across cultures.

Montgomery, B. (1999). Continuing concerns of individuals and families. In J. Johnson & C. Fedje (Eds.), *Family and consumer sciences curriculum: Toward a critical science approach* (pp. 80-90). (Family and Consumer Sciences Teacher Education Yearbook 19, Education and Technology Division, American Association of Family and Consumer Sciences). Peoria, IL: Glencoe/McGraw-Hill. (For information on availability, contact the Family and Consumer Sciences Education Association, http://www.cwu.edu/~fandcs/fcsea/)
Examines perennial problems as opposed to technical problems.

Shaw, S. (Producer) (2002). *Frontier house* [Television series]. United States: Public Broadcasting Service. (Available from the Public Broadcasting Service, www.pbs.org)
A series which followed families taking part in a living history project, it provides a snapshot of alternative family actions. Teaching resources and other information for this series are available at: http://www.pbs.org/wnet/frontierhouse/resources/index.html

Teaching Methods

Burden, P. R., & Byrd, D. M. (2007). *Methods of effective teaching.* Boston: Pearson.
Includes both planning and implementing instruction. Provides a framework for thinking about teaching models consistent with the critical science-based curriculum perspective.

Gunter, M. A., Estes, T. H., & Schwab, J. (2007). *Instruction: A models approach*. Boston: Allyn & Bacon.
Focuses on teaching models that can be used to help implement a critical science-based perspective in the middle and high school level classroom.

Joyce, B., & Weil, M. (with Calhoun, E.) (2000). *Models of teaching.* Boston: Allyn & Bacon.
Focuses on in-depth teaching models or strategies which can be used to implement

Love, C., Nelson, B., Gloeckner, G., Malette, D., & Yahnke, S. (1994). *Teaching strategies to facilitate learning.* Ellensburg, WA: Home Economics Education Association. (Available from the Family and Consumer Sciences Education Association, http://www.cwu.edu/~fandcs/fcsea/)
Family and consumer sciences teaching examples to facilitate the understanding of perennial problems.

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Author

Bette Montgomery is an Associate Professor in the School of Family, Consumer, and Nutritional Sciences at Northern Illinois University in DeKalb, Illinois.

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Instructional Strategies and Resources: Exploring the Use of Technology

Andrea B. Mosenson
Queens College, City University of New York

Julie M. Johnson
University of Nebraska-Lincoln

Through a review of current literature on the use of technology in education, it was found that new teachers are not being adequately prepared to teach with technology. In order to help preservice family and consumer sciences teachers develop a "thinking with technology" perspective, two areas need to be addressed in teacher education programs: (a) technology integration should be modeled with content-specific examples and demonstrations, and (b) self-efficacy in using technology should be encouraged with positive examples. Numerous examples and resources are provided to illustrate how technology can be used in family and consumer sciences education programs to enhance preservice teachers' knowledge and abilities in using technology effectively. In particular, using technology to enhance students' critical thinking skills is discussed with promising examples.

Technology has impacted every facet of our life so profoundly that we couldn't imagine our lives without it. Computers, the Internet, digital cameras, MP3 players, cell phones, and personal digital assistants (PDAs) are just some of the technological advances we use everyday. And today's youth are even more technologically savvy about these technologies than youth of the past. In order to fully prepare today's youth to thrive in this digital world, educators must help students "use their native intelligence about technology in sophisticated, responsible ways that serve them well as they make their way in the Digital Age" (North Central Regional Educational Laboratory [NCREL], 2003, p. 2).

According to Standard 6 of the *National Standards for Teachers of Family and Consumer Sciences*, the beginning family and consumer sciences teacher will "facilitate students' critical thinking and problem solving in family and consumer sciences through varied instructional strategies and technologies and through responsible management of resources in schools, communities, and the workplace" (National Association of Teacher Educators for Family and Consumer Sciences [NATEFACS], 2004). This article will focus on the use and value of technology as an instructional strategy and resource in family and consumer sciences (FCS) education. The information in this article is based on a review of current literature on the use of technology in education and in FCS.

Use of Technology in Today's Schools

Access to technology has been one of the highest priorities in public education. Internet access was available to 35% of the schools in 1994, while today 99%, or virtually every school, has Internet access (Parsad & Jones, 2005). But *access* to technology is not enough today. Technology has become an integral component of our world and is transforming how people think, communicate, and manage their everyday lives. In order to prepare people for the new "Digital Age" they must learn how to use technology to its fullest potential.

More than 21 million individuals in the 12 to 17 age group (87%) use the Internet today, while 16 million (78%) use it at school. Most of these youth (86%) believe it helps them do better in school (Hitlin & Rainie, 2005). Children report they use technology for big projects at school and to complete their school assignments at home (United States Bureau of the Census, 2003).

Technology has changed our world and our near environments. Work settings and assignments have changed. Individuals must have technological skills as well as "an intellectual toolbox" that includes team building, critical thinking, problem solving, and accessing resources. Business and education leaders, however, have questioned whether students are able to compete internationally and whether students are able to think critically and engage in creative problem solving. Kay and Honey (2005) indicated that there are six literacy skills that are critical to a students' success in the workplace: (a) effective communication, (b) analysis and interpretation of data, (c) understanding computational models and simulations, (d) managing and prioritizing tasks, (e) problem solving, and (f) safety and security. Technology is a critical tool to help learners acquire these crucial skills.

This represents a major national investment in educational technology. In fact, as a nation, over $66 billion has been invested in school technology (Quality Education Data [QED], 2004). Schools have spent increasing proportions of their discretionary funds to acquire computer equipment, software, and related supplies and services (Pelavin Research Institute, 1997). At this level of investment, legislators and the public are now looking for returns on this investment. Has there been an increase in student achievement as a result of this investment?

Technology and Student Achievement

One of the important concerns in using technology in teaching and learning has been whether or not its use contributes positively to student achievement. The authors found no literature specifically related to the effects of using technology in family and consumer sciences on student achievement. The literature related to technology and student achievement in education, in general, was also limited. A number of meta-analyses, however, have been summarized by Waxman, Connell, and Gray (2002) in a report to the Institute of Education Sciences (IES) and funded by the United States Department of Education. These authors examined meta-analysis studies from 1975 through 2002. Overall, these analyses indicated educational technology has positive effects on student achievement. According to the Center for Applied Research in Educational Technology (Knezek, Christensen, Bell, & Bell, 2006), technology can improve student learning when it (a) supports curriculum objectives being assessed; (b) provides feedback about student performance to both the teacher and student; (c) allows for student collaboration, discussion, and reflection; (d) adjusts for diversity of learning styles and abilities of students; (e) extends curriculum content beyond the classroom; and (f) is supported by the school district and community.

In addition to examining the meta-analyses studies of others, Waxman, Connell, and Gray (2002) conducted a systematic search of the impact of technology on student outcomes. Their results indicated there was a "modest, positive effect of teaching and learning with technology on student outcomes" (p. 12). According to their findings, teaching and technology processes can directly or indirectly impact student outcomes. The analysis had several limitations, however, which are indicated below:

1. Having few quantitative research studies in peer reviewed journals is a serious problem in this research and in the field.

2. There were few randomized, experimental studies. Most were descriptive or exploratory and did not report specific findings.
3. The studies lack specificity resulting in difficulty in coding and analysis.
4. The findings are correlational and do not result in strong causal inferences.
5. Some of the studies were a decade old and technology has advanced greatly during this time frame.

The authors of this study recommend additional, continuous, high quality research on the impact of technology on student achievement (Waxman, Connell, & Gray, 2002).

Technology Standards

The National Council for Accreditation of Teacher Education (NCATE, 2006) provided recommendations for teacher education programs in preparing preservice teachers to use technology effectively in kindergarten through high school classrooms. In addition, the International Society for Technology in Education (ISTE, 2000) has developed two sets of technology standards, one for teachers and one for students. The ISTE *National Education Technology Standards (NETS)* for teachers focuses on understanding and integrating technology into the curriculum to maximize student learning. The ISTE NETS for students emphasizes that students' use technology safely and ethically to communicate and interact with others, to research topics and issues, to produce products that enhance learning, and to help them make informed decisions and solve real-life problems. While both sets of ISTE standards are interrelated, teachers should use the *NETS* for students as a guideline in planning hands-on, engaging, technology-based activities for the classroom.

Teacher education programs should be preparing preservice teachers to use technology by incorporating the ISTE *NETS* for teachers. All beginning teachers should be able to meet the following standards:

1. Demonstrate a sound understanding of technology operations and concepts.
2. Plan and design effective learning environments and experiences supported by technology.
3. Implement curriculum plans that include methods and strategies for applying technology to maximize student learning.
4. Apply technology to facilitate a variety of effective assessment and evaluation strategies.
5. Use technology to enhance their productivity and professional practice.
6. Understand the social, ethical, legal, and human issues surrounding the use of technology in PreK through 12 schools and apply that understanding in practice.

In order to assess preservice teachers on these standards, they must demonstrate their ability to use a variety of computer applications and advanced technologies throughout the teacher education program. A list of strategies and projects to be used in a family and consumer sciences teacher education program can be found in Appendix A. These projects should be assessed with appropriate rubrics to measure a preservice teacher's performance in using different technologies. Rubrics help identify the criteria and experiences necessary for a preservice teacher to meet (or exceed) the standards. Assessment is vital in teacher education programs to ensure that preservice teachers have mastered an acceptable level of competency in using and applying technology in creating units and lessons for the family and consumer sciences secondary classroom.

Technology Integration in Teacher Education Programs

Studies indicate that new teachers feel unprepared to teach with technology (National Center Education Statistics [NCES], 2000; United States Department of Education, 2000). Though preservice teachers are equipped with technical skills, they are not being adequately prepared to integrate technology into the curriculum in effective and meaningful ways (Doering, Hughes, & Huffman, 2003; Hughes, 2005). In recent years, there has been a shift in how preservice teachers learn about technology. Instead of taking technology courses that focus solely on technical skills, preservice teachers are learning how to use technology in content-based courses (Jacobsen, Clifford, & Friesen, 2002; Niess, 2001). They "need to be educated through models that emphasize learning *with* [italics added] technology, rather than learning *from* [italics added] technology" (Doering et al., p. 343). Hughes found that teachers who learned technology within a content-based framework were more likely to use technology in the K through 12 classroom. In addition, preservice teachers who are learning with technology are more engaged in the learning process and, therefore, able to construct their own knowledge from it. Technology becomes a cognitive tool for the learner to represent or express what they know. These tools facilitate cognitive processing where students are able to think more deeply about the subject matter they are learning and engage in knowledge construction rather than knowledge reproduction (Jonassen, 1994).

In what ways can teacher education programs help preservice teachers become more proficient at integrating technology into their curricula, which in turn, will promote student learning? First, let's define what is meant by "learning or thinking with technology." According to Ertmer, Conklin, and Lewandowski (2001), thinking with technology can be defined as "a state of mind when teachers use discriminating thinking to identify [and generate new examples of] activities using technology" (p. 351). It is not when a teacher uses technology to create a presentation, to prepare lesson plans or worksheets, or to record grades and student information. While these are other ways to use technology, they do not involve the students in the active learning process. The goal is to prepare future teachers who will use different technologies throughout the curriculum to help students expand their thinking and enhance their learning in the family and consumer sciences classroom.

Researchers' found two areas that must be addressed in a teacher education program if preservice teachers were to develop a "thinking with technology" perspective: (a) to emphasize the value of integrating technology in the classroom through relevant examples and demonstrations (Doering et al., 2003; Hughes, 2004, 2005) and (b) to build each candidate's self-efficacy in using technology as a cognitive tool (Ertmer et al., 2001). Hughes (2005) found that the more content-specific the examples were in using technology, the more likely teachers saw the value in it and used it in the classroom. She stated "the farther the example is from the teacher's content area, the lower the likelihood that the teacher would spend time developing other possibilities for the technology" (p. 296). After taking a methods course in which technology was infused into the curriculum and used by participants, a group of preservice teachers' changed their perceptions about using technology in the classroom from "a vehicle to deliver information" to a "mind tool with which students could learn" (Doering et al., p. 350).

In addition to building their skill level of technology, preservice teachers need to build their self-efficacy of teaching with technology. According to Bandura (1997), self-efficacy refers to one's beliefs about their ability to perform an action. A person can have knowledge and skill of technology, but without self-efficacy, they may never attempt to use technology. Ertmer et al. (2001) stated that teachers with higher levels of self-efficacy for using technology in the

classroom are more likely to spend time and effort, and persist longer on technology-related tasks than teachers with lower levels of self-efficacy. Researchers (Bandura; Schunk, 2000) described three areas that can influence an individual's self-efficacy: (a) personal experiences and mastery of the material, (b) observation of material modeled by others, and (c) positive social persuasion from peers and mentors. As these areas build up for an individual in using technology, fear and anxiety diminish and they feel more confident in their ability to integrate technology into the classroom. In other words, the more positive experiences a preservice teacher has using technology in their content area, the more value they see in it and the more confident they become in using technology in the classroom.

Another area of concern in developing a "thinking with technology" perspective for preservice teachers is their student teaching placement. The role of the cooperating teacher can either enhance or inhibit a preservice teacher's use of technology in the classroom. If a cooperating teacher does not regularly integrate technology into the curriculum, a preservice teacher's ability to work with technology during their student teaching experience will be limited (Doering et al., 2003).

In order to provide preservice teachers an opportunity to observe teachers using technology during their student teaching, case studies can be presented via video or CD-Rom (Ertmer et al., 2001; Hughes, Packard, & Pearson, 2000). This is particularly important for preservice teachers who are not placed with a cooperating teacher who regularly uses technology in the classroom. If preservice teachers are to develop a "thinking with technology" perspective, they need access to models of exemplary teachers teaching content with technology. Ertmer et al. found the use of electronic models a viable means for increasing preservice teachers' ideas and self-efficacy for technology integration.

Technology Trends Impacting Education

New technologies are emerging every year and are making a significant impact in higher education. In order to adequately prepare the future generation of family and consumer sciences teachers, educators must keep abreast of these new technologies and integrate them into their teacher education programs. While this might seem like an impossible task as new technological advances are developing at warp speed, this article will help sort out the technology trends and ways to use them in the college classroom. For examples, see Appendix A: Strategies to Enhance Intellectual and Process Skills in Preservice Teachers and Appendix B: Teaching and Management Tools.

According to *The Horizon Report,* a collaboration between the New Media Consortium and the Educause Learning Initiative (2006), two technologies will continue to expand and impact the higher education environment: social computing and personal broadcasting. Social computing is described as "the application of computer technology to facilitate collaboration and working in groups" (New Media Consortium and Educause Learning Initiative, 2006, p. 8). Unlike the widely used technology tools that promote asynchronous group work (like e-mail and computer management systems), social computing tools promote synchronous "virtual" meetings and the ability to share information and receive feedback in an online community. The use of blogs, wikis, instant messaging, and interactive video conferencing are some of the technological tools used for social computing. These tools allow for more knowledge generation and knowledge sharing in a collaborative learning environment. One example of using these tools could be to create an online network of family and consumer sciences educators where topics and resources are shared and discussed. This is particularly important since family and consumer

sciences (FCS) educators are spread out across the country. The use of social computing tools can help to promote more collaboration in constructing research projects and increasing the exchange of ideas in teaching practices. Other examples and resources for using these tools in FCS education are listed in Appendix A.

The second emerging technology trend described by *The Horizon Report* was personal broadcasting. It is described as "informally produced personal audio and video content … as a form of personal expression and as a means of information delivery" (New Media Consortium and Educause Learning Initiative, 2006, p. 11). The report mentions podcasting, webcasting, and video blogging (or vlogging) as the main types of personal broadcasting. With the widespread use of portable listening devices like MP3 players and iPods, podcasts are quickly making their way onto college campuses and into museums. They are audio recordings that can be downloaded from the Internet into a personal listening device and then played back anytime or anywhere.

Webcasts are video recordings which are streamed live to the Internet and made available to an intended audience. Institutions like Stanford and MIT are using webcasts to provide students a recording of class sessions for future review. And video blogging is a "form of blogging where the main content is in the form of video clips and text entries of annotations" (New Media Consortium and Educause Learning Initiative, 2006, p. 11). The potential of using personal broadcasting in education is in its infancy, but the possibilities are endless (see Appendix A for examples). Think about the following ideas to use in a family and consumer sciences education program with preservice teachers:

1. To record an interview with a family and consumer sciences teacher or expert as a podcast.
2. To shoot a digital video during fieldwork and then share it with others as a multimedia presentation or webcast.
3. To capture video clips of what goes on inside family and consumer sciences classrooms to add to an e-portfolio.

Using Technology to Enhance Critical Thinking

While critical thinking has been well defined in the literature, its meaning is not always clearly understood by educators. They may confuse *critical thinking* with *creative thinking*, *thinking at the analysis level*, or *higher level thinking*. Technology can enhance all types of student thinking and learning, but it is particularly useful when teachers want students to engage in critical thinking.

Paul and Elder (2006) indicated that "critical thinking is the art of analyzing and evaluating thinking with a view to improving it." A critical thinker:

1. raises vital questions and problems, formulating them clearly and precisely;
2. gathers and assesses relevant information, using abstract ideas to interpret it effectively;
3. comes to well-reasoned conclusions and solutions, testing them against relevant criteria and standards;
4. thinks open-mindedly within alternative systems of thought, recognizing and assessing, as need be, their assumptions, implications, and practical consequences; and
5. communicates effectively with others figuring out solutions to complex problems (Paul & Elder, p. 4).

Educators want to teach their students to think critically, to analyze their thinking, and to understand how to develop a rational basis for the beliefs they hold, as well as a way to examine their own beliefs, and test and evaluate them for their soundness.

According to a report from the 21st Century Literacy Summit (2002) the explosion of technology has afforded us the "unique opportunity to engage our citizens in economic and civic life" (p. 4). The exponential growth of knowledge combined with greater globalization and a high rate of change has required us to think critically about the information we are presented. We are bombarded by information from all types of media. Critical thinking skills are necessary skills for students because it causes them to examine the information and search for the truth. They can begin to pose critical questions, explore issues, and solve problems. These critical questions may include: Is the information we receive true? Does it apply to all cultures? What expertise is needed to resolve an issue? What criteria can be used to judge the expertise of the authors of new knowledge?

The following are examples of using technology to enhance critical thinking in students. While they were written for family and consumer sciences teachers to use in secondary classrooms, they can also be used in family and consumer sciences teacher education programs as good content-specific examples of "learning with technology."

Practical Reasoning, Research Projects, White Papers, Letters

Practical reasoning. Teachers can choose a variety of strategies to help students solve perennial problems and practice the skills involved in critical thinking. Practical reasoning is one process used to resolve complex, continuing concerns (Olson, 1999). Through the practical reasoning process, students explore questions related to (a) revealing the *context* of the situation, (b) determining the *valued ends* or goals of those affected by the issue, (c) identifying the possible *means* or alternatives to resolving the issue, (d) identifying the *consequences* of the valued end or means, and (e) coming to a reasoned *judgment*. Teachers might find examples of a family or community issue on the Internet and students could use the Internet to find answers to the questions they pose. For example, the teacher might share a news story on the crisis in Israel and Lebanon and the continuing violence and war in these countries. Then she might pose the question, "*What should be done to strengthen families?*" using this scenario or case study.

Research projects. Students might investigate a question or concern about families or communities. Examples could be: Should the legal drinking age be lowered? Should schools require community service? As part of the assignment, they would find at least two, but possibly more, conflicting views on the topic through an Internet search. Students could identify the specific conclusions of each author and examine the reasons each author gives for his/her view. Using a graphics program they might make a Venn diagram showing the opposing reasons and similarities or agreements between two authors. Again, as part of their research project assignment they might keep a list of words or phrases that the authors used that were ambiguous or evoked emotion. They could determine the strength of the evidence and the credibility of the authors. Who are they? Again, they may need to search the Internet for information about the author. A research report might be the final result with several assignments, as described, helping them move through the critical thinking process.

White papers or letters. A fun assignment for students is to develop two "white" papers or two letters that could be sent to the mayor, senators, or an influential person about an issue

they have investigated. They (or their team) write two different letters that come to two conflicting conclusions. Each letter must be convincing and sincere. Of course, the research for these letters comes from Internet searches for evidence to strengthen their argument. Students may even choose to send one, but the exercise is meant to flex their *mind muscles* with this critical thinking exercise.

Developing a Podcast or News Broadcast

Students could investigate a topic or issue; perhaps, the obesity issue. They might brainstorm the perspectives on this issue and the information that a variety of people might provide. Each student could investigate this issue after being assigned a role. For example, one person might be a fast food company president or representative, another might be a nutritionist, another might be a cattle rancher producing beef for consumption, another might be a medical doctor, another a consumer, and another might be a grocery store owner. After preparing, they might have some time on a panel that would be recorded for a podcast. The podcast might be shared on the school website or with parents on school night. Another idea is to have students give a five-minute news broadcast about obesity and the effects on our national economy. Several students might do the research and one would do the broadcast.

WebQuests – A Teaching Strategy Using Critical Thinking

One teaching strategy used to develop critical thinking is a WebQuest, originally developed by Bernie Dodge and Tom March. This teaching strategy is "an inquiry-oriented activity in which most or all of the information used by learners is drawn from the Web" (Dodge & March, 1997, p.1). The strategy is designed to help students examine multi-disciplinary, real world problems. These problems can include those on sensitive topics such as human rights, courage, and prejudice, or they can be on other everyday problems affecting families and communities. The WebQuest strategy lends itself well to the critical science orientation, one curricular approach for teaching family and consumer sciences in middle and high school classrooms (Johnson & Fedje, 1999). This approach is directed toward resolving recurring concerns of the family and community, such as multi-dimensional issues recurring generation after generation. Recurring concerns or practical perennial problems require examining multiple perspectives and making reasoned judgments about what ought to be done.

A WebQuest includes an introduction, a task, a process, resources, an evaluation, and a conclusion (Yoder, 1999). The introduction and task can bring real world problems into the classroom where students can create products or solutions and can help build critical and creative thinking skills. It may be an ethical issue, such as euthanasia and its potential impact on families and society, or it could be an everyday problem such as the effect of the rising cost of gasoline on families and the services and products they need for everyday life. They could also use their imagination on a "pretend trip" to a future time period when they already have families of their own and the problems they may encounter.

The process used in a WebQuest can vary. Generally, the teacher facilitates the students' work and they may identify a step-by step linear process or may include cooperative learning strategies. The teacher also identifies a number of relevant and acceptable resources that can be used by the students. This usually includes Internet sites, but can also include books, videotapes, field trips, people, and other useful resources. The websites and other resources may include inaccurate information, conflicting views, and incomplete data. This is particularly helpful to start a discussion about judging the value of the information.

It is important to have an evaluation section in the WebQuest to see if the student has mastered the learner outcomes. This section should include rubrics for the teacher and the student to evaluate the students' knowledge and skills. The rubrics should include criteria and appropriate descriptors.

The final section of the WebQuest is the conclusion which allows the students to review their learning and to reflect upon the process and result of their learning. This may also include time for the teacher to get additional feedback from the students.

Cooperative Learning

While cooperative learning does not have to be directed toward helping students think critically, it can be used as one component in a critical thinking exercise. As a team, students can identify a goal and the various perspectives related to a family or community issue. Armed with their specific goal, the team could investigate websites from the Internet to gather information about a topic. They could assign each other roles. For example:

Researcher(s): One or more persons would do the initial searches for information.

Credential's Checker: Once material is found on the topic, the credential's checker uses the Internet to check the credentials and background of the author and perhaps rates the information based on criteria the students set up to judge the credibility of the information.

Conflict Character: Another student may have the assigned task to look for areas of conflict in the information. This student might develop a list of conflicting ideas found and then search more specifically for information about the conflicting ideas.

Illustrator: Another student may be the illustrator and create a visual, using PowerPoint, a graphics program, or some other computer related program, to help the team share their learning in a visual way.

As you can see in all of these examples, the teacher becomes the facilitator of learning and not the *sage on the stage*. One teacher saw his role differently when he was asked about changing instruction to use more technology, "…students want to use technology to learn, they don't want teachers to use it to teach them" (Rice, Wilson, & Bagley, 2001, p. 222).

Social, Ethical, and Legal Issues Surrounding Technology

In the process of preparing tomorrow's family and consumer sciences teachers to effectively integrate technology into their curricula, care needs to be taken to also address issues related to the social, ethical, and legal uses of technology in the classroom. Many concerns have been raised by parents and educators regarding Internet safety and helping young people use technologies in a responsible manner (Berson, Berson, & Ralston, 1999; Hoj, 1998).

A major concern focuses on the reliability, credibility, and appropriateness of certain websites. This has more than 90% of school districts nationwide installing filtering software to their computer systems (National School Board Foundation, 2002). Unfortunately, filtering software is not 100% effective in protecting students from inappropriate and harmful material on the Internet. School districts have also instituted rules on how technology can be used safely in the classroom through Accepted Use Policies (AUPs). While AUPs and filtering software are helping to protect students and minimize misuse of technology in schools, it is the teacher who is ultimately responsible for maintaining safety within their classroom (Hicks, Sears, Gao, Goodman, & Manning, 2004). Cunningham (2002) stated that "teachers with no practical preparation or experience in social, ethical, and legal issues surrounding digital technologies

create another area of concern" (p. 31).

Teacher education programs need to ensure that preservice teachers are prepared to use technology, especially the Internet, in a safe and ethically responsible manner. This way, teachers can then "lead students on exciting, educationally enriching learning adventures" (Willard, 2002-03, p. 4) with the help of technology.

One study of beginning teachers who learned how to safely integrate technology into their lesson plans reported they were not fully aware of the social and ethical issues of using technology prior to taking the technology course in their program (Hicks et al., 2004). The teachers gained a clearer understanding of "their roles and responsibilities as a teacher in [the] 21st-century classroom" (p. 477). The researchers developed a WebQuest called "Ethics and Technology in the Classroom (ETC)" to help prepare beginning teachers to use technology safely at their schools. The purpose of the WebQuest was two-fold: (a) to show how to use technology as an instructional strategy, and (b) to expose beginning teachers to the ethical and social issues surrounding the use of technology in the classroom. The WebQuest can be used as a short-term or long-term project and is filled with excellent resources for teaching preservice teachers about the topic.

There are numerous websites, articles, and books available on the social, ethical, and legal issues of using technology in today's classroom. Safety concerns include access to inappropriate material, violation of personal privacy, and being the recipient of sexual predation, harassment, stalking, or scams. Issues concerning responsible use of the Internet include netiquette, plagiarism, copyright infringement, cyberbullying, computer security violations (such as hacking and spreading viruses), and dissemination of harmful or abusive material. A list of resources on this topic can be found in the Annotated Bibliography.

Conclusion

The current literature on the use of technology in education shows that great strides have been made to provide access to technology, but it is not being used to its fullest potential to help students think more critically and creatively. In order for this to happen, preservice teachers need to be adequately prepared in their education programs on how to integrate technology into the curriculum. As a result of reviewing current research, the authors recommend two areas that should be addressed at the post secondary level if preservice teachers are to develop a "thinking with technology" perspective: (a) demonstrate how to integrate technology through relevant examples that will transfer into the secondary classroom, and (b) build each candidate's self-efficacy in using technology. A list of strategies and project examples are included to help family and consumer sciences teacher educators enhance the intellectual and process skills of the preservice teachers in their programs (see Appendices A and B).

A key component of Standard 6 is that a beginning teacher will be able to "facilitate students' critical thinking and problem solving in family and consumer sciences" (NATEFACS, 2004). Several examples are provided of how technology can engage students in these important process skills, while at the same time enabling student learning in the family and consumer sciences (FCS) content areas, which relate to Standards 1 through 4 for beginning teachers. In fact, technology is an integral component within all ten Standards. Whether it is being used as a management tool, a strategy to teach the FCS content, or to engage teachers in professional practice, the use and application of technology can enhance a preservice teacher's knowledge and skills within all ten Standards. If the next generation of FCS teachers is expected to effectively use and integrate technology into their teaching, then FCS teacher educators must

provide them with more opportunities to acquire the technological skills necessary to succeed. And it all starts with just one click.

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Help Using Technology

Brooks, S. & Byles, B. (2000). *Technology tutorials found on the web.* Retrieved September 8, 2007, from http://www.internet4classrooms.com/on-line2.htm This website provides tutorials on how to use different software programs commonly used on computers. There are tutorials on all the Microsoft Office programs, multimedia presentation programs like HyperStudio, graphic programs like Inspiration, and webpage development programs like Dreamweaver.

CSC Holdings. (2006). *Power to learn: Teaching with technology*. Retrieved September 8, 2007, from http://www.powertolearn.com/articles/teaching_with_technology/index.shtml This website provides an array of information from articles on the newest technology, to educator blogs, to interactive games for students, to Internet safety.

Educause Learning Initiative. *7 things you should know about series.* Retrieved October 17, 2008, from http://www.educause.edu/7ThingsYouShouldKnowAboutSeries/7495 This resource provides the most current information on emerging technologies. Each brief in the series focuses on one technology tool or practice and describes it in detail with respect to teaching and learning.

Imperial College Department of Computing. (2006). *FOLDOC: Free on-line dictionary of computing.* Retrieved September 8, 2007, from http://foldoc.org
This is a dictionary of technology terms. The site is easy to use and provides definitions for over 14,000 terms.

Virginia Society for Technology in Education (VSTE) Journal. Retrieved October 17, 2008, from http://www.vste.org
The VSTE is a community of educators who are interested in supporting technology's role in education. While VSTE is Virginia's affiliate of the International Society of Technology in Education, its membership is open (and free) to anyone interested in educational technology.

Online Safety

*Be CyberSmart! curriculum***.** Retrieved September 8, 2007, from http://www.cybersmartcurriculum.org
The Be CyberSmart curriculum consists of Kindergarten through 8th grade standards-based lessons for teachers to introduce secure, responsible, and effective use of technology in the classroom. The curriculum is correlated to the *International Society of Technology in Education Standards* and supported by many educational organizations like the National Educational Association, American Federation of Teachers, and National School Board Association. The website also includes a list of good resources.

CSC Holdings. *Power to learn: Internet smarts.* Retrieved September 8, 2007, from http://www.powertolearn.com/internet_smarts/index.shtml
This website is Cablevision's education initiative to empower Kindergarten through 12th

grade learning in the tri-state area (Connecticut, New Jersey, and New York). Power to Learn created *Internet Smarts* which provides a wealth of information and resources on safe and ethical practices on the Internet. There are also interactive case studies with teacher guides related to a number of topics.

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Federal Trade Commission. *Kidz privacy.* Retrieved September 8, 2007, from http://www.ftc.gov/bcp/conline/edcams/kidzprivacy/index.html
The Federal Trade Commission explains the Children's Online Privacy Protection Act (COPPA) to kids, parents, educators, and businesses. The site provides tips, resources, and Public Service Announcements as MP3 files.

Get net wise. Retrieved September 8, 2007, from http://www.getnetwise.org
Get Net Wise is a coalition of private Internet corporations and public interest organizations that provide information and resources about online safety and protecting your computer.

Hicks, D., Gao, H., & Sears, P. (2004). *Ethics and technology in the classroom: A WebQuest for pre-service teachers.* Retrieved September 8, 2007, from http://www.soe.vt.edu/ethicstechnology_webquest/index.htm
This is a WebQuest for preservice teachers to learn about the social and ethical practices of using technology in today's classroom. There is a good list of resources included in the WebQuest.

National Cyber Security Alliance. *Stay safe online.* Retrieved September 8, 2007, from http://staysafeonline.org
The National Cyber Security Alliance is a public-private alliance of companies, associations, and government agencies that provide help for how to teach young people safe online practices.

Using Technology in Family and Consumer Sciences

Friesen, C. A., Chezem, J. C., & Beals, K. (2001). Using the electronic superhighway to "drive" your foods and nutrition educators. *Journal of Family and Consumer Sciences Education, 19*(2), 19-25.
This article provides a reliable source for nutrition websites on the Internet.

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Appendix A

Strategies to Enhance Intellectual and Process Skills in Preservice Teachers

Technology	**Intellectual and Process Skills**	**Content-based Examples & Resources**
Blogs (or Weblogs)	Communication Creative thinking Critical thinking Reflection	Preservice teachers reflect on their student teaching experience in an online journal called a blog. Other preservice teachers in the same cohort/group are encouraged to read each other's blogs and respond with appropriate comments. Resources with information about using & creating blogs: http://www.wtvi.com/teks/04_05_articles/educational_blogging.html http://www.ibritt.com/resources/wp_blogs.htm http://edublogs.org
Course Management System (CMS)	Communication Critical thinking Leadership	Preservice teachers discuss family and consumer sciences issues related to teaching through threaded online discussions. This strategy is a good way to keep preservice teachers connected when they are student teaching. CMSs include Blackboard, WebCT, Lotus Notes, and Moodle.
Concept Mapping	Creative thinking Critical thinking	Preservice teachers create a concept map of a unit plan and represent how the process skills fit into the unit. Concept mapping software that can be purchased includes Inspiration, Decision Explorer, SMART Ideas, and The Graphic Organizer. Resources with information about using and creating concept maps: http://www.education-world.com/a_tech/tech164.shtml http://www.columbia.k12.mo.us/she/cncptmap.html
Desktop Publishing	Communication Creative thinking	Working as a group, preservice teachers create a newsletter or brochure on a particular topic in family and consumer sciences to be sent to local elementary or secondary schools,

	Critical thinking	organizations, or local libraries. Resources with information to use desktop publishing to create projects: http://lessonplans.btskinner.com/dtp.html http://eduscapes.com/sessions/publishing/evaluating.htm
Digital Camera and/or Video	Communication Creative thinking Critical thinking Leadership	Working as a group, preservice teachers research a social issue and create a public service announcement (PSA) on it, e.g., teen pregnancy, homelessness, etc. Final product can be distributed to local schools and libraries. Ideas for creating digital videos and PSAs can be viewed at: http://edtech.guhsd.net/video.html http://teachersnetwork.org/teachnetnyc/nacionales/psa.htm
E-portfolio	Communication Creative thinking Critical thinking Leadership Problem solving Reflection	The e-portfolio is a culmination project where preservice teachers display, critique, and reflect on their work. It can include lesson plans, a unit plan, teaching philosophy, classroom management plan, student assessment plan, and other artifacts that document the preservice teachers' strengths and qualifications as a beginning teacher. Resources with information about using and creating e-portfolios: http://electronicportfolios.org http://members.shaw.ca/dbrear/dseportfolios.html http://eduscapes.com/tap/topics82.htm
E-mail	Communication Leadership	Preservice teachers can use e-mail to communicate with each other, their teachers, or other professionals in the field. They might e-mail a legislator about a child or family issue as part of an assignment.
Internet	Critical thinking	Preservice teachers can critique websites for credibility and reliability as a resource, create a topic Hotlist or Scavenger Hunt, or design a Virtual Field Trip. The following resources provide guidelines on how the Internet can be used in a variety of challenging ways: http://www.library.cornell.edu/olinuris/ref/research/webcrit.html http://school.discoveryeducation.com/schrockguide/edproj.html http://www.kn.pacbell.com/wired/fil/formats.html
Podcast	Communication Creative thinking	Working as a cooperative group, each member will listen to a different podcast on related family and consumer sciences or educational topics and discuss or teach the topic to their group. Guest speakers might be included in a podcast format.

		Resources with information about using and creating podcasts: http://learninginhand.com/podcasting/ http://recap.ltd.uk/articles/podguide.html http://www.ibritt.com/resources/dc_podcasting.htm http://www.wtvi.com/teks/05_06_articles/classroom-audio-podcasting.html
PowerPoint	Communication Creative thinking	As an introduction to each other, preservice teachers develop a PowerPoint presentation to create a story about themselves. These can include digital cameras to create pictures, clip art, animation, sound, and video clips. Resources to create presentations that are more engaging and active are: http://www1.umn.edu/ohr/teachlearn/tutorials/powerpoint/index.html http://www.actden.com/pp/index.htm
Spreadsheet	Critical thinking Problem solving	Spreadsheets can be used to count calories, track investments, create budgets, report survey results, etc. Resources with information about using and creating spreadsheets: http://www.internet4classrooms.com/on-line_excel.htm http://www.amphi.com/~psteffen/excel.html
WebQuest	Communication Creative thinking Critical thinking Reflection	Preservice teachers are given a task or problem to solve where they gather information from the Internet and other resources to complete the project. At the end, they reflect on what they have done. The WebQuest Portal is filled with lots of information about WebQuests, as well as good examples to use. http://webquest.org Other resources on creating and using WebQuests: http://www.eats.ecsd.net/curricular/webquest/create_webquest/ http://midgefrazel.net/lrnwebq.html
Website	Communication Creative thinking Critical thinking Leadership	Working as a group, preservice teachers create a website on a family and consumer sciences topic. Resources with information about using and creating websites: http://www.infotoday.com/MMschools/jan01/cybe0101.htm http://www.socialpsychology.org/articles/top99.htm
Wikis	Communication Creative	Different family and consumer sciences and educational concepts are actively explored by preservice teachers when

	thinking Critical thinking	they add links, summaries, explanations, questions, quotations, and images onto a wiki webpage. Each concept explored becomes a collaborative work of many authors. Resources with information about using and creating wikis: http://www.coe.ilstu.edu/etip/activities/usingwikis.shtml http://recap.ltd.uk/wiki/Main/Guide
Word Processing	Communication	Preservice teachers create a lesson plan with appropriate worksheets and other assignments. This is just one of many examples that can be used with word processors.

Appendix B

Teaching and Management Tools

Technology	**Management**
Data Base	Mailing lists, student records, behavior management records
E-mail	Communication with parents, students, administrators, other faculty, outside resources – provides a written record of communication
Internet	Finding resources for teaching
PowerPoint	Lecture
Spreadsheet	Inventory, grades, attendance, graphs
Website	Provide course information, assignments, and activities/events to students and parents
Word Processing	Lesson plans, letters, worksheets

Authors

Andrea B. Mosenson is an Assistant Professor of Family and Consumer Sciences Education in the Department of Family, Nutrition, and Exercise Sciences at Queens College, City University of New York, in Flushing, New York.

Julie M. Johnson is Chair and Professor in the Department of Child, Youth and Family Studies in the College of Education and Human Sciences at the University of Nebraska-Lincoln.

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Student and Program Assessment: Assessment Literacy, the Basis for Student Assessment

Margaret Cornell Torrie
Iowa State University

Janis Bennington Van Buren
Texas A&M University-Kingsville

Assessment is a crucial component of the teaching-learning process and national standards are creating the need for teachers who possess assessment literacy. Although possessing knowledge and skills for both student and program assessment are a requisite for effective teaching, the focus of this article is student assessment. Assessment literacy includes knowing how often to assess, what to assess, and how to prepare students to conduct the assessment. Therefore, family and consumer sciences teacher candidates need to exit their programs exhibiting assessment literacy. The first goal of this article is to examine selected assessment literacy expectations of four national entities. The other three goals are to review strategies for nurturing assessment literacy, propose an assessment literacy model, and examine supporting assessment competencies and standards from randomly selected states' Departments of Education. The need for assessment literacy was emphasized by Heritage (2007), who stated, "Teachers learn how to teach without learning much about how to assess" (p. 141).

Introduction

Teacher candidates' ability to assess student learning will have a profound impact on how well their students succeed. After reviewing a number of empirical studies, Black and Wiliam (1998) concluded that regularly conducted classroom assessment, when done using sound practices, had a positive outcome on student achievement and self-worth. They summarized their review by stating, "There is a body of firm evidence that formative assessment is an essential component of classroom work and that its development can raise standards of achievement" (p. 148).

Assessment for learning has been defined by Black, Harrison, Lee, Marshall, and Wiliam (2004) as "any assessment for which the first priority in its design and practice is to serve the purpose of promoting students' learning" (p. 10). According to Stiggins (2004) one-fourth to one-third of a teacher's time is used for assessment related-activities. Stiggins further noted that "teachers need to know and understand the principles of sound assessment" (p. 26). Further justification for teacher assessment literacy is that schools can use a combination of both state and local assessments to satisfy annual testing requirements of the No Child Left Behind Act (Olson, 2002).

During the 2005 National Association of Teacher Educators for Family and Consumer Sciences Teachers Education Conference, attendees created Expectation Statements for each of the ten *National Standards for Teachers of Family and Consumer Sciences* (National Association of Teacher Educators for Family and Consumer Sciences [NATEFACS], 2004). Recognizing the previously noted needs, four expectation statements were developed for Standard 9: Student and Program Assessment which states that beginning family and consumer sciences (FCS) teachers

should be able to "assess, evaluate, and improve student learning and programs in family and consumer sciences using appropriate criteria, standards, and processes" (NATEFACS). It is expected that pre-service teachers should be able to:

- Interpret criteria, standards, and processes used to evaluate student learning and programs in FCS.
- Integrate a variety of evaluation techniques (eg. authentic and performance assessments) to gather evidence regarding student learning and program performance.
- Justify decisions about teaching practices and program design based on data-driven evidence.
- Modify one's teaching practices based on personal reflection and evidence from a variety of other sources.

A cohesive teacher education program will prepare teacher candidates to meet Standard 9 through development of assessment literacy. In addition to content area and pedagogy courses, knowledge and skills in cognitive psychology, including critical thinking and reflective judgment, will contribute.

Assessment Expectations

Expectations for assessment literacy from several sources are examined in the following segment of this paper. Assessment standards from the National Council for Accreditation of Teacher Education (NCATE) and the Association of Teacher Educators' (ATE) *Background and Purpose Position Framework: ATE* (n.d.) were reviewed. The presence of assessment competencies in the American Association of Family and Consumer Sciences Certification Exam and Praxis I, II, and III were also examined.

Review of the *Professional Standards for the Accreditation of Schools, Colleges, and Departments of Education* published by NCATE (2006), revealed three competency levels described for each standard: unacceptable, acceptable, and target. One statement within Standard 1 which focuses on candidate knowledge, skills, and dispositions is related to assessment literacy in the preparation of teachers. To be considered at the acceptable level when assessing student learning, teacher candidates must "focus on student learning as shown in their assessment of student learning, use of assessments in instruction, and development of meaningful learning experiences for students based on their developmental levels and prior experience" (NCATE, p. 16). To attain the target level, teacher candidates must "accurately assess and analyze student learning, make appropriate adjustments to instruction, monitor student learning, and have a positive effect on learning for all students" (NCATE, p. 16). Assessment mechanisms teacher candidates are expected to use in data collection include case studies, work samples, and field and other experiences. Additionally they are expected to reflect on practice and act on feedback gained from the assessment process.

Because these standards are new Wise and Leibbrand (2000) asserted that states need to create meaningful professional development opportunities. King and Newmann (2000) and Heritage (2007) noted that if student achievement is to improve, in-service professional development is needed for teachers to enhance their knowledge, skills, and dispositions related to the standards.

Throughout the years, beginning in 1980, the ATE has developed an ATE Position Framework. The framework is based upon their mission statement, purposes, and corporate bylaws, and has come from the resolutions proposed by that committee. One of the components

of the mission is the development of quality programs that prepare teachers. An action item within the quality programs component is to "advocate for reliable, valid, and reasonable assessment requirements, instruments, and processes for pre-service and in-service teachers, as well as for p-12 students" (n.d., p. 4). In 1993 ATE passed a resolution that "…opposed the use of standardized exams as the sole or primary criteria for assessment of students at the p-12 and college levels" (*Background and purpose position framework: ATE,* n.d., p. 4). Additionally ATE supports the preparation of teachers in a strong and balanced manner that includes sound pedagogical practice throughout their professional lives. Therefore, if assessment is to be based on methods other than the use of standardized exams and teachers are to be grounded in sound pedagogical practice, teacher candidates need to be literate in assessment methods. Heritage (2007) noted that teacher educators have a crucial role to perform in equipping their students to integrate assessment into their classrooms.

Review of the two exams currently being used to assess family and consumer sciences teachers candidates' competencies for pedagogy and subject content revealed little or no inclusion of assessment literacy concepts. One of these exams is the American Association of Family and Consumer Sciences' (AAFCS) Certification Examination that was developed and validated in 2004. The Family and Consumer Sciences Composite Examination is comprised of questions related to Integration of Foundations and family and consumer sciences content. The only two assessment-related competencies included are the ability to assess leadership and teamwork skills that contribute to effectiveness in family, work, and community settings and to use multiple viewpoints and perspectives to appraise instructional content and activities. This 150-item exam allots 5% or approximately eight of its questions to the Integration of Foundations component of the test.

The second exam is the PRAXIS II Family and Consumer Sciences test that is designated for prospective teachers of family and consumer sciences who teach from middle though senior high school students. Approximately 23 of the 120 questions on the exam are devoted to FCS education concepts. One of the three conceptual areas within this concept category is planning, implementation, and evaluation. That category is divided among seven categories, the final of which is using appropriate assessment techniques such as observation and quality checklists in laboratory settings. A mathematical breakdown suggests that at most one or two questions related to assessment literacy would be included on the exam (*The Praxis series: Family and consumer sciences,0120,* 2005*).*

Murphy (2006) noted that standards for teacher certification are state specific and based upon each state's understanding of what is most important in education. Assessment standards for teachers of family and consumer sciences vary from state-to-state as do the attitudes of FCS teacher educators and in-service FCS teachers regarding assessment literacy of teacher candidates. Yahnke and Love (1997) found a discrepancy between these two groups regarding the importance of assessment literacy in the survey they conducted to examine the critical teaching competencies needed by beginning family and consumer sciences teachers. The teacher educators, over half of whom had been teaching pre-service FCS teacher education for 16 to 30 years, ranked the competency, "The teacher uses a variety of assessment tools and strategies to evaluate the continuous intellectual, social, and physical development of the learner" (Yahnke & Love, p. 52) significantly higher than the teachers' ranked it. It is possible that the in-service teachers ranked this competency lower because they did not feel literate in this area.

In one state the *Advancing Student Learning – Assessment Standard* stated, the FCS teacher "understands and uses a variety of assessment and evaluation strategies to assist learners

in their intellectual, social, and physical development" (*Standards for teachers of family and consumer sciences*, n.d., p. 7). Performance expectations for the teacher include refining the instructional process through use of varied methods of assessment and involving learners in self-assessment. The teacher is expected to know how to use varied methods to evaluate learner progress through use of data and to provide learners with methods for self-assessment. Methods to be used include but are not limited to tests, projects, observations, portfolios, and task evaluation. Dispositions include valuing appropriate assessment tools and methods and the importance of using self-assessment data in setting goals for lifelong learning.

Nurturing Assessment Literacy

The ability to assess one's self and others requires critical thinking and reflective judgment. King and Kitchener (1994) when stating the difference between critical thinking and reflective judgment noted that critical thinking focuses on inductive or deductive logic, while reflective judgment focuses on assumptions about knowledge that relate to a problematic situation. Perkins (1987) described critical thinking as better thinking. Using this description, Bruning, Schraw, and Ronning (1999) interpreted critical thinking to mean "… that learning to think critically will improve our ability to gather, interpret, evaluate, and select information for the purpose of making informed choices" (p. 201). It requires critical thinking to know how to assess, when to assess, and how to prepare students to be assessed. Teacher educators who responded to a study conducted by Yahnke and Love (1997) that examined critical thinking competencies needed by beginning family and consumer sciences teachers, ranked a teacher's ability to facilitate student development of critical thinking and problem solving higher than the teachers ranked this skill.

According to Angelo (1995) there is strong evidence that critical thinking skills do not result due to maturation and that it is challenging to teach and help university students develop these skills. Angelo emphasized that "…learners need regular practice in assessment to become self-monitoring and independent" (p. 6). Winn (2004) noted that teachers "… must instill in students a familiarity with – and even a love of – critical thinking" (p. 497).

Ennis (2000) defined critical thinking as "… reasonable and reflective thinking focused on deciding what to believe or do" (p. 1). Ideal critical thinkers were described as having a set of dispositions and abilities that can be applied as a set of goals when developing and assessing a critical thinking curriculum. Among the dispositions, Ennis stated that critical thinkers care about the truthfulness and rightness of their beliefs, honesty and clarity in the presentation of their positions, and the dignity and worth of each individual. Additionally, it was stated that critical thinkers have the ability to clarify, make decisions and derive conclusions based upon information, use suppositional thinking and integration, and "… do these things with dispatch, sensitivity, and rhetorical skill" (p. 2).

There are a variety of approaches that can be used to nurture critical thinking. Learning to think critically requires practice beyond preparing to take midterm and final exams. McKeachine, Pintrich, Lin, and Smith (1986) did a review of research literature on teaching and learning in the college classroom. Through their review they found three basic strategies that were used to stimulate students' critical thinking. These strategies were class discussion, a direct approach to problem solving, and verbally expressing metacognitive strategies. Angelo stated that "…when linked closely to instruction, classroom assessment can be a powerful means of developing critical thinking" (p. 7).

Bruning et al. (1999) described using either embedded or stand-alone programs for guiding students in developing critical-thinking skills. Improving thinking skills within a specific content area such as family and consumer sciences is an example of an embedded program, while independently developing thinking skills is the emphasis of a stand-alone program. They noted that teachers need to use a variety of classroom activities to help students learn to "… identify position or idea, analyze competing views, weight competing evidence, and gather information" (p. 207). Among the activities mentioned were class discussions, journaling, and thinking-aloud exercises allowing students to explain the skill as they perform it. Varied types of practice are required to create learners who automatically use critical thinking skills.

According to King (1992), the core of the intellectual process includes thinking, reasoning, and judging. King noted that "…learning to think reflectively occurs within the context of an intellectual community" (p. 7). Family and consumer sciences teacher educators recognized this when they ranked being a reflective learner and actively seeking out opportunities for professional growth as the most important competency for beginning FCS teachers among the eleven surveyed by Yahnke and Love (1997). Teacher candidates use judgment when assessing their students. Therefore, how does one learn to become a reflective thinker and to make reflective judgments and how do teacher educators facilitate this process that we have agreed is important? A review of the Reflective Judgment Model (RJM) developed by King and Kitchener during 25 years of research provided information about how people learn to make judgments related to controversial or ill-structured issues (King & Kitchener, 2004). They defined controversial problems as those "… about which 'reasonable people reasonably disagree'" (King & Kitchener, p. 5).

The RJM model describes the development of reflective thinking that occurs from late adolescence through adulthood. The seven stage model is divided among three categories that are pre-reflective thinking, quasi-reflective thinking, and reflective thinking. Throughout the stages the learners progress from believing that a single correct answer exits for all questions to using reason and evidence to support their thinking and the development of well thought-out positions. King and Kitchener (2004) noted that brain development occurring in late adolescence and early adulthood appeared to affect the manifestation of abstract and reflective thinking. When validating the developmental sequence of reflective judgment the data suggested that "… reflective thinking evolves slowly and steadily, even among those engaged in postsecondary education" (King & Kitchener, p. 14). King and Kitchener indicated that data from cross-sectional studies offered evidence that "development in reflective thinking is associated with participation in educational programs" (p. 15). Bruning et al. (1999) stated in order for students to become reflective thinkers they have to be engaged in classroom discourse that is authentic, respects their viewpoints, and has continuity, and there is a partnership between the teacher and students.

Bruning et al. (1999) and King and Kitchener (1994) recommended a variety of strategies for creating a classroom atmosphere that nurtures the development of reflective judgment. These recommendations included coaching, scaffolding, modeling, guided practice, encouragement, and feedback. Activities to enhance reflective judgment might include classroom discussions on controversial issues; having a debate defending either norm-referenced or criterion-referenced assessment with preparation to support either side; writing a journal to practice reflective thinking while at practicum sites, participating in student organizations, and student teaching; and gathering, assessing, evaluating, and making interpretive judgments on data such as pre- and

post-test scores on a family and consumer science unit that has been taught. As teacher candidates' learn to think, reflect, and self-assess they are developing assessment literacy skills.

Assessment Literacy

As noted in the Executive Summary of *Tech Tally: Approaches to Assessing Technological Literacy*, Gamire and Pearson (2006) stated that the ability to assess included three components. These components were knowledge about assessment, critical thinking and reflective judgment skills, and capabilities in the use of content knowledge to solve practical problems. The Executive Summary stated that an individual's level of literacy could be determined by whether or not their knowledge about assessment was limited or extensive, their critical thinking skills were poorly or highly developed, and their content capabilities were low or high. Pickard (2007) stated, "The intersection of the cognitive process dimensions and the knowledge dimensions can facilitate instructional planning and assessment" (p. 50). These components of assessment literacy reinforce the expectations for teacher candidates as stated in FCS Standard 9 for which beginning teachers should be able to assess, evaluate, and improve student learning.

Curtz (2007) suggested that in order to assess others, one needs the ability to self-assess or self-reflect. Curtz also noted that one value of teaching self-assessment is mutuality in providing an environment in which everyone is judged and everyone judges. According to Angelo (1995), learners need regular and guided practice to develop self-assessment skills. This practice needs to occur routinely during each semester through collecting data on students' learning. Crutz stated that at several universities in the state of Washington students write self-assessment and teacher-assessment narratives. The faculty did this as well, and during faculty-student conferences these assessments were discussed making this a mutual process thus enhancing the students' assessment skills. Other self-assessment strategies include small-group or whole-class discussions, reflection logs, weekly self-evaluations, and self-assessment checklists and inventories (Angelo; Curtz).

Guiding teacher candidates in developing critical thinking and reflective judgment skills along with self-assessment abilities helps prepare them to develop assessment literacy skills and to assess their own students. Where, when, and from whom do they obtain their knowledge about assessment after they have acquired content knowledge and critical thinking skills and how are they expected to use this knowledge? Because one of the two foci of Family and Consumer Sciences Teacher Education Standard 9 is student assessment, it is expected students have acquired assessment literacy from their family and consumer sciences teacher educators. What should they be taught and how is their assessment literacy being evaluated in regard to the expectation statements related to Standard 9? They are expected to integrate a variety of evaluation techniques to gather evidence regarding student learning and be able to interpret the data to determine the level of competency their students have attained and whether or not there is a need to change teaching practices.

Obtaining an answer to the question of what teacher candidates should be taught to be considered literate in assessment is complex because expectations vary from state-to-state. In an attempt to answer that question, thirteen states, which have a total of 73 family and consumer sciences education programs, were randomly selected and the states' competencies related to assessment literacy and self-assessment were examined. These states' Department of Education Web sites provided the source of information. One state did not have any assessment competencies listed for teacher licensure.

Knowledge and skill in using multiple methods for measuring student growth and understanding and the ability to identify strategies for providing students with accurate, timely, and relevant feedback to guide their learning were competency expectations for nine states. Four of these state Web sites noted specifically the need for teachers to be able to explain student performance to parents.

Six of the thirteen states expect teachers to exhibit competence in recognizing and interpreting various types of assessment information for curriculum and instructional planning and to guide their decisions. This included the ability to modify lesson plans and adapt instruction to ensure students' success in learning. Three other states expect teachers to be able to design appropriate assessment plans for students and involve students in their self-assessment.

Specifically including competencies that addressed diversity and the teachers' skill in modifying assessments for students with various needs and exceptionalities was noted for three states. Aspects of diversity included social, cultural, and physical.

Assessment literacy for two states included more technical aspects than simply using multiple types of assessment measures. They expect their teachers to be able to identify the measurement concepts, characteristics, and uses of norm-referenced, criterion-referenced, and performance- and product-referenced assessments. Additionally, teachers are expected to recognize central concepts in assessment such as reliability, validity, and bias. The concepts included in this array of states' assessment competencies relate to but expand those specified in the Family and Consumer Sciences Education Standard 9. No specific state rubrics for evaluating these competencies were discovered. The majority of states indicated the use of the PRAXIS examination to assess the competency of teacher candidates.

How teacher candidates' assessment literacy is being evaluated will vary according to their teacher educators and their teacher education programs. In 1996 Loyd listed a variety of assessment instruments that family and consumer sciences teachers need to have skill in using. These measures included conventional tests and product, performance, and process assessments. More recently White and Loyd (2000) stated that the national standards will require new forms of assessment that will enable teachers to measure what students know and are able to do as the result of the process-oriented curriculum. They recommended using assessment measures that included portfolio assessments, exhibits, demonstrations, authentic assessments, and performance testing. Kucera and Perkins (2000) recommended the use of scenario assessment "… to measure students' ability to apply knowledge and skills in real-life situations that address the learning standards" (p. 233). The scenarios allow students to use knowledge and cognitive process dimensions described by Pickard (2007) that are related to the revisions of Bloom's Taxonomy (Anderson & Krathwohl, 2001). These measures modeled by teacher educators also are appropriate for teacher candidates.

Another means for teacher candidates to determine their level of assessment literacy is through self-assessment. Eleven of the thirteen states whose standards were reviewed included a specific statement related to self-assessment. Both in-service and teacher candidates are expected to critically examine, evaluate, and regularly reflect on their teaching practices. They are to do this through obtaining feedback from peers, administrators, students, and parents. As the outcome of the self-assessments, they are to create and follow professional development plans for lifetime learning. In the National Board for Professional Teaching Standards (NBPTS, 2000) *Career and Technical Education Standards*, it was noted that reflection on teaching practices is a hallmark of accomplished teachers and one of their responsibilities as professionals.

Assessment is central to creating a student-centered and performance-based learning environment. Pickard (2007) emphasized this when she noted that teaching is more effective when standards are aligned with instruction, and assessment creates the need to focus on instruction. She stated that the revised Bloom's Taxonomy is a tool that can be used to align instruction and assessment. Pickard concluded that "…family and consumer sciences professionals should become familiar with the new model used for designing, teaching, and assessing education to determine its application for their work" (p. 45). Bobbitt and Youatt (2000) emphasized that "teacher education is an essential partner in fostering change related to standards at the pre-service, in-service, and graduate study levels" (p. 257).

Assessment and accountability have become an increasingly necessary component in the array of expectations for all educators. According to Vail (2000), "Our credibility in the educational community is tied to our ability to assess meaningful learning within family and consumer sciences education" (p. 276). This means that we must prepare teachers who have assessment literacy and the ability to demonstrate these competencies to their students and parents, administrators, and their communities.

Recommendations

Developing assessment literacy requires knowledge about the numerous facets of assessment coupled with critical thinking and reflective judgment skills and content knowledge. There is a need to know the level of assessment literacy exhibited by pre-service and in-service teachers. The following are recommendations to enhance and measure assessment competencies.

1. Require more course work in cognitive psychology. Falk (2002) noted that pre-service teachers need to know how people learn.
2. Require a course or specific standards in curriculum that relate to assessment literacy.
3. Provide practice in creating and/or adapting effective assessment instruments and strategies.
4. Examine and report assessment concepts that are taught in family and consumer sciences education programs as well as the method of delivery.
5. Develop an instrument for assessing family and consumer sciences education students' assessment literacy.
6. Develop a rubric to assess teacher candidates' attainment level of the expectation statements related to Standard 9.
7. Implement new opportunities for educators' professional development to enhance their assessment literacy skills.

Summary and Conclusions

As expectations for educational accountability have increased at local, state, and national levels the need for educators to be assessment literate has been magnified. In recognition of this need, FCS teacher educators created four expectation statements related to Standard 9, which focus on student and program assessment, to be used as guidelines in teacher education programs.

NCATE and ATE assessment standards and expectations were reviewed. Teacher candidates were expected to have assessment skills utilizing case studies, work samples, and field experiences. Testing for teacher candidates ' assessment literacy is done primarily though Praxis II or the Family and Consumer Sciences Composite Examination; each of which contains few or no assessment related questions based on a review of each test's Table of Specifications.

Several authors including Bruning et al. (1999) suggested the importance of critical thinking and reflective thought in gathering, analyzing, and using data when assessing student learning. The seven-stage Reflective Judgment Model (King & Kitchener, 2004) described the development of reflective thinking that can lead learners, including pre-service teachers, to think, reflect, and self-assess, all competencies needed in developing assessment literacy. The three components needed for an assessment literacy model noted by Gamire and Pearson (2006) were knowledge about assessment, critical thinking and reflective judgment, and content knowledge in the field.

The review of selected state assessment standards illustrated variety in evaluation techniques pre-service teachers are expected to integrate as they gather evidence regarding student learning. Those listed included the ability to interpret criteria, standards, and procedures. Another central theme in the thirteen states' standards is self-assessment and the ability to think critically and reflectively as a basis for lifelong professional development.

The *National Standards for Family and Consumer Sciences Education* are symbols of priorities, legitimacy, authority, commitment, and hope (Vail, 2000). Teacher educators who provide the tools for pre-service teachers to develop and practice assessment literacy will set the stage for influencing their success as teachers, the success of their students, and the future impact of the family and consumer sciences teacher education discipline.

Annotated References

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Authors present theory and beliefs about cognition and strategies for fostering cognitive growth through problem solving and critical and reflective thinking. Discussions and applications of cognition in the classroom conclude the book.

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The authors explain how to write assessment plans that relate to the assessment process. A broad view of evaluation and assessment is presented along with a variety of current examples.

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Curtz explains the value of guiding students in the process of self-assessment and provides guidelines used at one university for doing so.

Davis, B. G. (1993). *Tools for teaching*. San Francisco, CA: Josey-Bass.

Davis provides classroom-tested strategies designed for improving teaching. Examples of formative techniques to assess student learning and self-assessment of one's own teaching are supplied.

Easton, L. B. (2007). Walking our talk about standards. *Phi Delta Kappan, 88,* 391-394.

Easton focuses on the use of rubrics co-developed with students, which help them analyze quality of work and themselves as learners while documenting mastery. Goal is to decrease testing as evidence of mastery.

Ennis, R. H. (2000). *A super-streamlined conception of critical thinking*. Retrieved February 23, 2007, from http://www.criticalthinking.net/SSConcCTApr3.html
A list of dispositions and abilities for critical thinkers is presented as an outline by the author. A Web site is presented where more elaboration can be found.

Elliott, D. E. (2005). *Teaching on target: Models, strategies and methods that work.* Thousand Oaks, CA: Corwin Press.
Author presents examples for student assessment and grading to include guidance in developing a personal philosophy, types of tests, traditional grading systems, authentic assessment, portfolio assessment grading with rubrics, and use of taxonomies to measure outcomes.

Family and Consumer Sciences Educators: Texas Tech University, Iowa State University, University of Wisconsin-Stout, United States Department of Agriculture Cooperative State Research, Education and Extension Service Higher Education Challenge Grant Program. (2001). *Assessment strategies for family and consumer sciences food and nutrition national standards.* Lubbock, TX: Texas Tech University Curriculum Center.
Authors provide examples of performance based assessments including checklists for evaluating scenarios and rubrics, action-based learning research projects, and objective test banks for comprehensive standards. The standards addressed are food production and services, food sciences, dietetics and nutrition, and nutrition and wellness.

Harmin, M. (1994). *Inspiring active learning.* Alexandria, VA: Association for Supervision and Curriculum Development.
Examples of strategies for putting more emphasis on learning and stimulating student thinking are presented. Methods to assess student progress are provided.

Heritage, M. (2007). Formative assessments: What do teachers need to know and do? *Phi Delta Kappan*, *89,* 140-145.
Heritage emphasizes the importance of formative assessment in the interaction between teaching and learning. The author includes its definition, elements, the four-basic knowledge categories, and the skills teachers need to implement this type of assessment.

Hitch, E. J., & Youatt, J. P. (2002). *Communicating family and consumer sciences: A guidebook for professionals*. South Holland, IL: Goodheart-Wilcox Co.
Authors discuss an array of topics measuring learner outcomes and program evaluation. Included is information on using the family and consumer sciences standards frameworks for program planning and action-oriented learning strategies to teach critical thinking.

Linn, R. L., Miller, M. D., & Gronlund, N. E. (2005). *Measurement and assessment in teaching* (9th ed.). Upper Saddle River, NJ: Pearson/Merrill Prentice Hall.
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Authors

Margaret Cornell Torrie is an Associate professor in the Departments of Human Development and Family Studies and in Curriculum and Instruction at Iowa State University in Ames, Iowa.

Janis Bennington Van Buren is Professor Emerita in the Department of Human Sciences at Texas A&M University-Kingsville in Kingsville, Texas.

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Student Organization Integration: Comparison of Two Models for Implementing FCCLA in Teacher Preparation

Debra DeBates
South Dakota State University

Mary J. Pickard
East Carolina University

Career and technical education is unique in that it provides opportunities for student leadership development, character education, community service, and hands-on career preparation via specific student organizations associated with the programs. These organizations are referred to collectively as career and technical student organizations. In family and consumer sciences, the student organization is Family, Career and Community Leaders of America (FCCLA). Many teacher candidates need an introduction to career and technical student organizations and can benefit from specific instruction to be effective advisors. This article presents two successful models to prepare family and consumer sciences teacher candidates to become successful FCCLA advisors: a specialized course or instruction integrated into existing pedagogy courses. Teacher candidates who have been members of FCCLA in high school can serve as peer teachers or as a resource for either model.

The *National Standards for Teachers of Family and Consumer Sciences* (National Association of Teacher Educators for Family and Consumer Sciences [NATEFACS], 2004) provides a model for what beginning teachers should know and be able to do. Standard 10 is titled Student Organization Integration, and it states that beginning teachers should "integrate the Family, Career and Community Leaders of America student organization into the program to foster students' academic growth, application of family and consumer sciences content, leadership, service learning, and career development" (NATEFACS).

Student organizations support and enhance classroom learning in many career and technical education programs (Brown, 2002). These organizations provide a wide array of opportunities for students including leadership development, service learning, character education, and career exploration. Family, Career and Community Leaders of America has been an integral part of family and consumer sciences education since 1945 (Reese, 2003).

The Smith-Hughes Act passed in 1917 laid the groundwork for the organization by providing funds for vocational education including the advising of student organizations (Association for Career and Technical Education [ACTE], 1999). By 1920, some high school home economics programs had formed student clubs. In 1943, a committee appointed by the American Home Economics Association (AHEA) in cooperation with the United States Department of Education and the Division of Vocational Education recommended that the clubs combine into a national organization (Blankenship & Moerchen, 1979).

The organization began as the Future Homemakers of America on June 11, 1945. By a vote of the members at the July 1999 national meeting, the organization changed its name to Family, Career and Community Leaders of America, Inc. (FCCLA), to designate more clearly

what FCCLA members represent and accomplish (Family, Career and Community Leaders of America [FCCLA], 2006).

FCCLA is the nonprofit national career and technical student organization for young men and women within family and consumer sciences education in public and private schools from grade 6 through grade 12 (Reese, 2003). The mission of FCCLA is:

> To promote personal growth and leadership development through family and consumer sciences education. Focusing on the multiple roles of family member, wage earner, and community leader, members develop skills for life through character development, creative and critical thinking, inter-personal communication, practical knowledge, and vocational preparation. (FCCLA, 2006, n.p.)

The mission statement clearly identifies the link to family and consumer sciences education.

Today's youth are seeking opportunities that link classroom learning to the real world. In the *State of Our Nation's Youth Survey 2005-2006* (Horatio Alger Association of Distinguished Americans, Inc., 2005), 95% of the responding students indicated that one way to improve their high schools would be to provide opportunities for more real-world learning experiences through service learning projects, internships, and other types of opportunities to make classroom learning more relevant. The integration of FCCLA projects and programs in the family and consumer sciences curriculum provides a link between family and consumer sciences content and real-world learning experiences in the school and community.

The National Research Center for Career and Technical Education conducted a national longitudinal study to explore the added value that results from participation in career and technical student organizations (CTSOs) by students. Among CTSO students, participation in extracurricular activities was positively associated with student's self-reported grades and educational aspirations (Alfeld et al., 2007).

The national study also concluded that the extent to which CTSO teachers/advisors provided skills related to the Secretary's Commission on Achieving Necessary Skills (SCANS, 1991) in their classrooms was a significant predictor of students' career self-efficacy, motivation, academic skills, and self-reported grades. Participation in competitive events in the CTSO such as Students Taking Action with Recognition (STAR) events positively affected grades, academic engagement, academic/job skills, and career self-efficacy (Alfeld et al., 2007). The research indicated that greater participation in CTSOs is better for students in a wide spectrum of academic areas and personal attributes. In today's educational climate of increased accountability and emphasis on strengthening the academic preparation of high school students, involvement in CTSOs provides students with a competitive advantage.

Models for Implementation and Assessment of the Standard

In discussions following the development of the *National Standards for Teachers of Family and Consumer Sciences* (NATEFACS, 2004), teacher educators had opportunities to share best practices and models for including the concept of FCCLA in teacher preparation programs. Two models emerged as the most common practices. This article presents these two approaches for preparing family and consumer sciences (FCS) teacher candidates to become effective advisors of FCCLA. The first model describes integrating FCCLA instruction into existing pedagogy courses in FCS. The second model describes offering a specialized course focused on developing FCS teacher candidates' experiences and understanding of FCCLA.

Model One: Integration of FCCLA into Existing Coursework

One model used successfully at South Dakota State University that teacher educators can follow to implement this Standard is the integration of FCCLA into existing university coursework. Since FCCLA is a co-curricular student organization, the national organization encourages and promotes the integration of FCCLA into the family and consumer sciences (FCS) curriculum at the middle and high school levels. This model provides a similar strategy for use in the preparation of FCS teacher candidates and future FCCLA advisors. The national FCCLA organization provides accountability matrices linking national content standards for FCS to national FCCLA programs and student experiences for the integration process. These matrices are available from the national organization in the resource *Essential Guide to FCCLA in the Classroom* described later in this article. Teacher educators can use these matrices to assist teacher candidates in connecting FCS content with the FCCLA programs.

Integrating FCCLA into the coursework of teacher preparation programs then serves as a model for CTSO integration into family and consumer sciences (FCS) classes taught at the middle and high school levels. This integration can be accomplished with a variety of strategies in existing university courses, as well as the opportunity to become involved with FCCLA Alumni and Associates at the collegiate level. FCS teacher candidates should be informed about FCCLA and the role of the FCCLA advisor as soon as possible in the FCS education program. Therefore, integration of FCCLA should be a part of early experience or practicum courses, as well as other pedagogy courses including the methods course and the student teaching experience.

There are several strategies that may be used within the integration model:

1. The state advisor and/or executive director as well as local chapter advisors could serve as guest lecturers or speakers in family and consumer sciences education pedagogy courses. As guest speakers, they can be asked to address the mission and purposes of FCCLA, the history of the organization, the structure and governance of FCCLA, and the role of the chapter advisor. They can also provide an overview of national, state, and local programs; the contributions of CTSOs to adolescent development; the development of leadership skills; and strategies used to integrate FCCLA into the family and consumer sciences curriculum.
2. Teacher candidates could be assigned to prepare an illustrated talk on one of the national FCCLA programs. The candidates would present their talks to their classmates, who evaluate the presentations using the FCCLA score sheet for the Illustrated Talk STAR event. The presentation should include links to appropriate family and consumer sciences content for each of the national programs. The *Teacher Educator's Guide to FCCLA* includes an assignment summary of this strategy on pages 35 and 36 (FCCLA, 2003).
3. Family and consumer sciences teacher candidates can also be assigned to attend and participate in local, district, and state FCCLA events. For example, they may attend a local FCCLA meeting or event and report on this as part of a practicum or methods course in family and consumer sciences. A sample of a report form that could be used or modified for use appears in Appendix A.
4. Teacher candidates in family and consumer sciences could evaluate FCCLA competitive events at all levels. They could help select chapter officers or state officer candidates, provide feedback to students on STAR events, or judge STAR events.

5. The national organization provides opportunities for new FCCLA advisors and university students to attend regional and national meetings with reduced registration fees and offers targeted professional development workshops to this audience. Teacher educators should promote these opportunities to teacher candidates and facilitate attendance arrangements.

In this model, teacher candidates are required to include strategies for integrating FCCLA programs into curriculum plans. This may include planning service learning activities or events linked to state and/or national FCCLA programs and to family and consumer sciences content. For example, curriculum plans in a parenting class that include developing posters on cyber safety could be linked to the national FCCLA STOP the Violence program (FCCLA, n.d.). The *Essential Guide to FCCLA in the Classroom* CD (FCCLA, 2005), available from the national organization, provides a Student Curriculum Planning Form to assist with this process. This resource also contains numerous other examples that teacher candidates could use as references in the curriculum development process.

Another effective integration opportunity is to link FCCLA with instruction in public relations. Today's family and consumer sciences teachers must be prepared to promote their programs at local, state, and national levels. One strategy is to ask teacher candidates to develop a plan to promote a national week or month that relates to the family and consumer sciences curriculum such as National Family Week or National Nutrition Month. A sample of this type of project appears in Appendix B. FCCLA public relations materials from the national organization are available as a resource.

By including FCCLA as an integrated component of the teacher education coursework, teacher candidates observe a model for integrating FCCLA in the family and consumer sciences curriculum in addition to developing knowledge and skills needed to serve as effective FCCLA advisors. This model guides students in the process of integration and strengthens their understanding of FCCLA as a co-curricular activity rather than an extracurricular activity.

Model Two: A Specialized Course

A model that has been highly successful at the University of Idaho to prepare teacher candidates to become FCCLA advisors is that of a specialized course. There is opportunity via the FCCLA course to see FCCLA in action, and candidates can become prepared to incorporate FCCLA into their planning processes when they are completing the family and consumer sciences pedagogy courses. A valued outcome from taking the specialized FCCLA course is that candidates acquire a thorough understanding of how the organization operates and are less intimidated by the prospect of implementing FCCLA. They also have the educational benefits of repeated exposure over time to the FCCLA concepts and have multiple opportunities to review and use the information provided in the stand-alone course.

Upon completing the FCCLA course, teacher candidates have the confidence and knowledge to incorporate FCCLA related learning experiences while doing their classroom internships, also referred to as student teaching experiences. Some have even introduced FCCLA into the family and consumer sciences program during their teaching internship, thus helping to establish a new chapter by sharing with the mentor teacher the current program resources that can be used to incorporate FCCLA into the program. Although best practice would have teacher interns mentored by teachers with successful FCCLA chapters, a sparse population base, student preferences, proximity, and limited placement sites may mean that some internship placements are not the ideal, but can still result in a high quality first-year teacher.

The FCCLA course can be delivered within a shortened time frame, clustered in the middle of a semester, or taught in a quarter. The timing could depend on when there are more opportunities to combine academic service learning with didactic instruction about FCCLA. Including attendance and participation at district and/or state meetings as course requirements provides the teacher candidates a direct experience and opportunities for academic service learning. The focus of the didactic FCCLA instruction may include the following:

1. The introduction provides an overview of the course, including the number of tests, assignments and grading policy, bibliography of reading materials, and introduction to the FCCLA Web site.
2. The basics of FCCLA are taught including the relationship of CTSOs and career and technical education (CTE), the history of CTE and FCCLA, leadership development, community service, and employability skills. This is essential knowledge for CTE teachers, especially when licensure does not require a CTE principles and philosophy course.
3. An important component is instruction for the advisor's role, including how to develop students' leadership skills, provide guidance, and facilitate students' communications with the school administration and other authorities.
4. The FCCLA programs and projects, including the national and state-only programs and projects, are taught by example. The teacher candidates have a first-hand opportunity to develop a chapter Program of Work as a cooperative learning assignment.
5. As the teacher candidates complete their assignments for the specialized course, they use the FCCLA resources including online, electronic, and print resources. They also understand making classroom management decisions about providing resource access to family and consumer sciences students for projects and competitions.
6. The teacher candidates develop their own leadership skills including using parliamentary procedure, and they experience both leadership and participation roles.
7. By attending district and state meetings and learning about the events at the national meeting, including competitive events, the candidates have a frame of reference for why students need direct instruction for dress, behavior, and etiquette guidelines. The candidates can also experience preparing student behavior contracts and can begin to understand the importance of securing parental permission and parental support for behavior guidelines among the student attendees.
8. Since most chapters must raise funds for operating expenses, the teacher candidates can acquire knowledge of record keeping and ideas for in class projects for fund raising and development of entrepreneurial skills.
9. Candidates also acquire important skills for chapter communication and business and public relations communication, both written and oral, by preparing press releases, developing chapter scrapbooks, and planning related communication activities.

Comparison of Models

Both models provide opportunities for students to become involved in local, district, and state FCCLA events. In both models, assignments would include preparing for a selected STAR event, presenting it to the class, and using the scoring rubric from the national STAR events manual. This activity precedes participation at the district and state meetings. Another assignment in the specialized course could be development of a lesson plan in which high school

students are informed about the behavior, professional appearance, and parental permission requirements for their out-of-town travel to district, state, regional, or national meetings.

In both models, the teacher candidates observe and participate in a district meeting as part of their course requirement. They experience directly how a meeting operates when they serve as room hosts or STAR event evaluators. The opportunity to see the range of projects developed by the secondary FCCLA chapter members provides an understanding of secondary students' abilities and often motivates the college students to acquire a greater understanding of the organization. Through doing FCCLA programs and project assignments, candidates can immediately see how the high school students are using and applying the information. Another advantage for having the teacher candidates interact with the middle and high school students is to socialize them regarding the audience that will be in their classes. This is a valuable learning experience, especially when universities do not have many early field experience options.

As a part of the student teaching internship requirements in both models, candidates are assigned to participate in the state FCCLA convention. As student teachers, these individuals assume roles as family and consumer sciences teachers, including becoming room hosts or judges for STAR event competition and serving on leadership teams that interview FCCLA officer candidates. Where there are events that provide competition only at the state meetings, the teacher candidates might be assigned to prepare and facilitate the state-only competitions. An added benefit of attendance at the state convention is the opportunity for the teacher candidates to become acquainted with secondary teachers via facilitated networking with the FCCLA advisors. These advisors are excellent role models for teacher candidates. This networking also provides the college students an opportunity to identify possible teaching internship sites and mentor teachers. When the candidates are familiar with the secondary teachers and become somewhat conversant about the programs at the specific school sites, they are more knowledgeable about specific schools and teachers to consider when identifying their preferences for the internship placement. This may help facilitate their success as interns since the mentoring relationships occur between individuals who were previously acquainted, reducing the likelihood of personality conflicts that may occur during an internship (Brown, Kirpal, & Rauner, 2007). After attending the state meeting, the candidates have opportunities to reflect on their experiences and dialogue with the teacher educator and other class members.

The final exam for students in the specialized course is the standard FCCLA test for state FCCLA officer candidates. The course has equipped these candidates with background knowledge of the organization, procedural skills, enhanced experiences with STAR events, observations of how secondary students benefit from their FCCLA experiences, opportunities to observe middle and secondary students' involvement in district, state, and national programs, and the opportunity to view STAR events and chapter projects while serving as room hosts.

By participating in a specialized FCCLA course, rather than having FCCLA instruction incorporated into an already full methods or curriculum course, the teacher candidates acquire a working knowledge of FCCLA, rather than a more superficial understanding. In both models, however, the candidates use FCCLA curriculum resources and can provide guidance to secondary students preparing for STAR Event competition.

When the teacher candidates attend district and state meetings, they develop more confidence in their ability to provide the important learning experiences that FCCLA provides to family and consumer sciences students. The opportunity to meet FCCLA advisors who can later mentor them with their own chapter responsibilities is very helpful. The candidates have more confidence to be an FCCLA advisor because they have a greater depth of knowledge about

FCCLA. When FCCLA instruction is part of a course, rather than the course focus, the level of retained learning is often more shallow, especially if the knowledge from the integrated course is an initial exposure to FCCLA.

The primary advantages of having the specialized course are a greater depth and breadth of understanding of the organization, experiences using the resources to develop a co-curricular program, and increased self-confidence to be an FCCLA advisor. Another advantage of the specialized course is that college students who were active in FCCLA can become peer teachers or guest lecturers, even if they are not family and consumer sciences education majors. When candidates do have prior FCCLA knowledge and experience, they have the option to "test out" of a course at many colleges and universities. However, the authors' experience has been that all of the former FCCLA members who are family and consumer sciences majors choose to participate in the class. They are highly motivated to help their classmates understand the opportunities that membership in FCCLA provided for them and relish being able to share their leadership skills and experiences with the class members. Their enthusiasm becomes contagious and motivating to their classmates who might not otherwise embrace FCCLA as relevant to being a family and consumer sciences teacher.

Other career and technical education (CTE) teacher preparation programs (e.g., agricultural education, business education, marketing education, technology education) often require college course work in CTSO leadership and supervision. Because of the amount of information about the CTSO that may be completely new to a teacher candidate, the focused course is highly appropriate and greatly enhances confidence and skills. A candidate who graduated from the program in Idaho communicated the following:

> There are so many facets to FCCLA, which can be overwhelming to a teacher who has no prior experience with the program. I can't imagine even entertaining the idea of instituting FCCLA "cold turkey." The FCCLA introductory course was very helpful in giving me insight to the different aspects of FCCLA, such as: mission, purpose, STAR events, state-only events, parliamentary procedure, and how to get a chapter started including all of the legal and formal procedures that must be adhered to. Going to the state convention solidified what we learned (book knowledge) and gave me the opportunity to see FCCLA in action. It also allowed me to network with other FCCLA advisors/family and consumer sciences teachers, which was invaluable. I must admit, the first year I went as a STAR events judge, I was quite intimidated. However, it certainly gave me a rich understanding of the "inner workings" of STAR events. Going to state convention the second year reinforced learning and made me even more comfortable with the FCCLA program. I am in the process of starting a chapter at my first job site (B. Toevs, first-year teacher, personal communication, August 13, 2007).

Another University of Idaho family and consumer sciences graduate summed up her experiences by saying even though she was involved with FCCLA in high school, she felt that the course was valuable in that the course textbook (the FCCLA handbook) provided her with much needed materials, which she used to start FCCLA at her first job. It also gave her the opportunity to network with other advisors and become acquainted with the state FCCLA Program Manager (E. Black, personal communication, April 13, 2007).

Distance Education Options

The model for a specialized course in FCCLA has also been implemented as a distance education option. This distance education course, delivered via the WebCT course management

software, also requires attendance at the district and state meetings (University of Idaho, 2007). To facilitate the successful delivery of the online course, FCCLA gave permission for copyrighted program materials to be available online, when access is password protected and limited to the duration of the course. As distance education options continue to become a preferred method for acquiring teacher credentialing, other institutions may also make the decision to provide the CTSO course online.

Results of research in other education courses indicate that there is no significant difference in cost of instructional delivery, faculty time, or student achievement when face-to-face and online courses are compared (Johnson, Birkeland, & Peske, 2005; Milam, 2000; Peterson & Bond, 2004). In fact, faculty indicate that online students make a greater effort, have higher grades, and rank the quality of instruction for the distance delivered course higher than do students enrolled in the course taught via face-to-face delivery (Katz & Yablon, 2003). Researchers from Harvard University reviewed alternative certification outcomes and reported that students in online courses received at least equal if not higher scores than students in face-to-face delivered courses (Johnson, Aragon, Shaik, & Palma-Rivas, 2000; Johnson, Birkeland, & Peske).

Resources

FCCLA is structured with support for local advisors at both the state and national level. The national organization has numerous resources available to assist teacher educators in the implementation of this standard. The national office also sends a mailing of helpful information to all teacher educators in the fall semester of each academic year. Resources that are valuable to teacher educators are described below and all are available from the national organization on their Web site: http://www.fcclainc.org (FCCLA, 2008).

1. *Essential Guide to FCCLA in the Classroom (2005):* This comprehensive guide details how to explore, set up, plan, introduce, and evaluate co-curricular FCCLA. The CD contains worksheets, lesson plans, resources, and hyperlinks that can be personalized to meet the needs of an in-class chapter.
2. *Teacher Educator's Guide to FCCLA (2003):* This guide is designed to provide teacher educators with the information they need to prepare family and consumer sciences teacher candidates to serve as FCCLA advisors. It provides background information, ready-to-use lesson plans, a list of available resources, and strategies for effective chapter management.
3. *Guide for Middle Level FCCLA Chapters:* This guide is a quick and easy approach to integrating co-curricular FCCLA activities at the middle school level. Project ideas are designed for teachers of grades 4 through 8 by showing FCCLA's connections to educational goals and concepts, national programs, and other subject areas.
4. *FCCLA Chapter Handbook (2006):* This is a comprehensive guide to establishing and managing an FCCLA chapter.
5. *The Guide to Promoting FCCLA Brand...Promote…Fundraise (2007):* This resource is designed to enhance the image, awareness, and understanding of FCCLA. It includes an overview of the organization and national programs, strategies for working with the media to promote FCCLA, and suggestions for fundraising.

Summary

There is a clear link between the mission of FCCLA and the intent of family and consumer sciences education. FCCLA offers opportunities for family and consumer sciences (FCS) teachers to provide real-world experiences for middle and high school students through service learning, character education, leadership development, interpersonal violence prevention, and other national FCCLA programs. The real-world experiences provided by FCCLA extends learning beyond the classroom and assist students in recognizing the connection between classroom learning and application of the knowledge and skills gained through FCS education classes. If teacher candidates are to be prepared to serve as FCCLA advisors, FCCLA needs to be included in their university coursework. This article presented two models for including FCCLA in FCS teacher preparation programs. Based on their experiences, the authors compared the characteristics and benefits of these models.

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Appendix A
FCCLA Assignment
Participation in an FCCLA Event

Name _____
Total Points: 50 points
Name and location of FCCLA event attended: _____

After attending and participating in an FCCLA event, complete the following questions:

1. Describe the kinds of activities that students were involved in at the event. Discuss the benefits of each activity to the student. (10 points)

2. What role(s) did you observe the FCCLA advisor(s) playing at the event? What did you observe about the interaction between the students and their advisor? Give specific examples. (10 points)

3. Give evidence of students involved in leadership roles. What employability skills are students developing through these leadership roles? (5 points)

4. There are 3 types of activities involved in FCCLA. Give specific examples of the types you were able to observe at this event. (10 points)

    a. individual activities –

    b. cooperative activities –

    c. competitive activities –

5. What did you learn about FCCLA from attendance at this event? (10 points)

6. Other comments: (5 points)

Signature of FCCLA advisor at the event: _____

Developed by Debra DeBates

Appendix B
Public Relations Project

Concept: Public Relations
Task/Competency: Develop public relations strategies.
Relationship to Teacher Education Goals: Goal # 10 – The teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being.
Performance Objective/Description of the Project: Using the resources identified below and following the guidelines presented in class, develop a public relations strategy for promoting National Family Week that meets the standards/criteria established for this assignment.
References and Resources:

- National Family Week Web site: http://www.nationalfamilyweek.org
- The Family Legacy Project Web site: http://www.legacyproject.org/
- American Association of Family and Consumer Sciences (AAFCS) Web site (for the PR/Media toolkit): http://www.aafcs.org
- Alliance for Children and Families Web site: http://www.alliance1.org
- Chamberlain, V., & Cummings, M. (2003). *Creative instructional methods for family and consumer sciences and nutrition and wellness*. Peoria, IL: Glencoe-McGraw Hill.
- *FCCLA Public Relations Manual* - CD
- *Public Relations Guide* by Proctor and Gamble
- Handouts provided in class and National Family Week file of resources

Procedures:

1. Using the resources listed above and others, develop ideas for **10** different public relations strategies for promoting National Family Week. At least **5** of the strategies must be completed in final form (as they would be used by your class or FCCLA chapter. At least **1** of the activities planned must involve an intergenerational component.
2. Complete the public relations chart provided with this assignment sheet for each strategy. Follow the example provided. Use additional pages if necessary.
3. As you plan your activities, be sure that all of your classes as well as the FCCLA chapter are involved. Your class schedule for the semester is:
    - Child Development
    - Parenting
    - Healthy Lifestyles (a nutrition and wellness class)
    - Personal Finance
4. When you have completed all of your plans, write a press release about National Family Week including some or all of the activities in your plan.
5. Submit all items in a paper folder. Project is due _____.

Assessment: See attached scoring rubric.

Debra A. DeBates, South Dakota State University, Revised 2006. debra.debates@sdstate.edu.

National Family Week/Month Project Rubric

Name _____ Due Date: _____

Criteria	4 – Public Relations Pro	3 – Public Relations Upstart	2 – Public Relations Apprentice	1 – Public Relations Problems
Theme **x 1.5 = 6 pts.**	Theme chosen is easily identifiable and relates to families/family life; theme is brief and grabs the attention of the audience	Theme chosen is easy to identify but not clearly related to families/ family life; theme is brief and/or grabs the attention of the audience	Theme chosen is easy to identify but not clearly related to families/ family life; theme is lengthy, but attention getting	No theme or theme lacks a connection to families/ family life; theme is lengthy/cumbersome and fails to grab attention of audience
Strategies **x 17.5 = 70 pts.**	**Ten** different strategies are described that promote National Family Week/Month; chart is complete and provides a detailed description of each strategy; **five** strategies are provided in final format; work is professional in appearance, neat, attractive, and creative	**Ten** different strategies are described that promote National Family Week/Month; chart is complete but fails to provide a detailed description of each strategy; **four** strategies are provided in final format; work is professional in appearance, neat, and attractive, but lacks creativity	**Ten** different strategies are described that promote National Family Week/Month; chart is complete but fails to provide a detailed description of each strategy; **three** strategies are provided in final format; work lacks a professional appearance, is not neat or attractive, and lacks creativity	
Involvement of Students /Classes **x 2.5 = 10 pts.**	All FCS classes are identified in the assignment as well as the FCCLA chapter are involved in some way; the FCS program and/or FCCLA chapter is credited as the sponsor	All FCS classes are identified in the assignment as well as the FCCLA chapter are involved in some way; the FCS program and/or FCCLA chapter is NOT credited as the sponsor	Not all of FCS classes are identified in the assignment and/or the FCCLA chapter are involved in some way; the FCS program and/or FCCLA chapter is credited as the sponsor	Not all FCS classes are identified in the assignment and/or the FCCLA chapter are involved in some way; the FCS program and/or FCCLA chapter is NOT credited as the sponsor

Presentation/Format x 2.5 = 10 pts.	Professionally presented in folder or portfolio; no spelling or grammatical errors; references are cited, when appropriate, using APA format	Professionally presented in folder or portfolio; two to three spelling or grammatical errors; references are cited, when appropriate, using APA format	Professionally presented in folder or portfolio; two to three spelling or grammatical errors; references are cited, when appropriate, but do not use APA format	Professionally presented in folder or portfolio; four or more spelling or grammatical errors; references are NOT cited when appropriate
Time Line x 1 = 4 pts.	Time for completing strategies is realistic – strategies could be completed in time allowed; time for starting projects is specific and is included on chart	Time for completing strategies is realistic – strategies could be completed in time allowed; time for starting projects is not included on chart	Time for completing some of the strategies is unrealistic – strategies could be not completed in time allowed; time for starting projects is not included on chart	Time for completing most of the strategies is unrealistic – strategies could be not completed in time allowed; time for starting projects is not included on chart

TOTAL = 100 points

Celebrate Family and Consumer Sciences – Promote Your Program! Debra A. DeBates, South Dakota State University, Revised 2004; debra.debates@sdstate.edu

Public Relations/Promotion for National Family Week/Month

AUDIENCE (Audiences will vary. It's up to you to choose the most important group to reach for each activity.)	**MESSAGE** (What is it that you want people to know and remember about your program/project?)	**METHOD** (How will you inform or influence your audience? List the communication/ public relations techniques)	**INVOLVEMENT** (How can/will you involve your students/classes?)	**WHEN** (List time-line, place, date, and projected costs, if any)
School Board	Importance of communication skills in families: husband/wife, parent/child, siblings, etc. Strong family communication skills can both prevent and solve family problems	Skits–(topics and outline attached) Mugs promoting National Family Week presented to School Board	Members of Family Relations class will write and present the skits	*Plan/prepare skits in class during Sept. *Order mugs at the end of Sept. at cost of $5 each 12 mugs@$5=$60

Authors

Debra DeBates is an Associate Professor in the Department of Human Development at South Dakota State University in Brookings, South Dakota.

Mary J. Pickard is an Associate Professor in the Department of Child Development and Family Relations at East Carolina University in Greenville, North Carolina.

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