

Weaving Sustainability into Family and Consumer Sciences Education

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This position paper suggests that FCS policymakers weave a sustainability perspective into the National Standards for Teachers of Family and Consumer Sciences in response to the increasing government, business, and academic emphasis on sustainable development. Sustainability is clarified and defined, and perspectives on sustainability are discussed. The author offers two alternatives for integrating the sustainability concept into the National Standards for Teachers of Family and Consumer Sciences. The first alternative is to incorporate sustainable terminology into each of the first four content area standards. The second alternative is to develop a separate sustainability national standard. Suggestions are offered for ways that university faculty involved in FCS teacher education programs can implement sustainable development in the curriculum.

Treat the Earth well. It is not inherited from your parents; it is borrowed from your children.
–Kenyan proverb/Haida Indian saying.

The concept of environmental sustainability should be woven into contemporary family and consumer sciences (FCS) education because the future quality of family and work life depends on today's choices and actions, as they relate to our environment. Educated consumers are more likely to make thoughtful and purposeful decisions, thereby improving the choices available to future generations of consumers. In spite of the pervasiveness of sustainability issues in our everyday lives, many people do not understand the broad concept of environmental sustainability. To compound the murkiness of the topic, each discipline has its own interpretation of the term. Agriculture, architecture, biological sciences, business, engineering, social sciences, and other programs have implemented curricula dealing with sustainable practices as they relate to their specific field. These widely varying practices include growing organic food and fiber products; biomimicry or imitating nature; donating to charities and supporting social responsibility; reducing solid waste and pollution through recycling and reuse; streamlining manufacturing and life cycle assessment; and using fair trade and labor practices. Each of these practices represents a sub segment of environmental sustainability. In response to the increasing importance of environmental sustainability, FCS professionals should also develop a working concept of sustainability as it relates to our profession. University faculty of FCS teacher education programs are among the best conduits through which to disseminate sustainable education that directly affects individuals and families.

The focus of this paper is to clarify the concept of sustainability for university faculty of FCS teacher education programs; describe the major perspectives on sustainability; explain ways that the university faculty can promote environmental sustainability through the National Standards for Teachers of FCS; and suggest strategies to help university faculty prepare FCS teachers to foster environmentally sustainable activities for their students. The paper is intended to serve as a starting point for dialogue among FCS professionals. It is anticipated that there will be diverse reactions to the suggestions presented, but now is the time to begin the debate on the

merits of modifications or additions to existing FCS standards. Thus, the paper might be considered a proposed rough draft for the next version of the standards.

What is Sustainability?

In the author's recent college environmental sustainability course, university students were asked to poll their family and friends on their perceived definition of sustainability. Several people responded that sustainability referred to the widely publicized slogan, *Reduce, Reuse, and Recycle*. Others mentioned the following terms: resource conservation, ecology, organic, green, and save the planet. While these are important subcomponents of environmental sustainability or simply sustainability, most of these terms lack a comprehensive viewpoint and a proactive approach. I suggest that the Reduce, Reuse, and Recycle slogan might be more representative of sustainability if it began with *Rethink* or *Redesign* and it ended with *Regenerate* or *Renew*. The addition of rethink or redesign implies a forward-thinking perspective, where individuals create and support new products and processes that exemplify sustainability, rather than merely working within the confines of existing products and processes. The regenerate or renew component implies restoring resources to their original function, with a goal of improvement or creation of a surplus of resources. McDonough & Braungart (2002) suggest the inclusion of the term, regenerate, although the concept of renew may be more appropriate. Renew implies a brand new product, rather than just one that is redeveloped, which may be associated with the term, regenerate. For example, on an uncomplicated level, when we consider reduce, reuse, and recycle in terms of household solid waste, it implies that families should reduce consumption of products that must be disposed of in the trash, such as plastic containers that are not recyclable through municipal recycling programs. Instead, families should be encouraged to choose glass or even refillable containers, which exemplify the reuse concept and use fewer non-recyclable plastics. The recycle component encourages returning the unwanted glass or recyclable plastics to the local recycling facility. Using the same scenario, how might FCS professionals teach the concepts of rethink and renew?

Sustainability has been defined by a number of experts and agencies. One definition explains that sustainability is the careful integration of all systems (economic, environmental, societal, and personal) to ensure a world in which the Earth and its people thrive and flourish (MIT Sloan Management Review, 2010). The Association for the Advancement of Sustainability in Higher Education (2010) defines sustainability as “encompassing human and ecological health, social justice, secure livelihoods, and a better world for all generations” (About AASHE, para. 2) Consumer studies researcher, Kurowska (2003) suggested that we might use the term, *responsible consumption* as a clearer substitute for the vague term, sustainability. One of the most commonly accepted definitions of sustainability is meeting the needs of today's consumers without compromising the needs of future generations (McDonough & Braungart, 2002; U.S. Environmental Protection Agency [EPA], 2010; United Nations, 1987).

According to the U.S. EPA, over time the government agency has shifted its focus from pollution control to pollution prevention, and now to sustainability. The EPA explained that social policymakers tend to view sustainability as a way to satisfy the basic economic, social, and security needs of all generations, while simultaneously ensuring that these needs do not undermine the quality of our natural resources and environment. The EPA suggested that businesses tend to view sustainability as a way to “increase long-term shareholder and social value, while decreasing industry's use of materials and reducing negative impacts on the environment” (“What is sustainability”, para. 4). In the paper, I recommend that university

faculty of FCS teacher education programs adopt a sustainability perspective intended to positively transform the ways individuals and families work and live. Our goal should be integrating environmental education into our FCS curricula. We should model and teach concepts that augment the earth's natural resources. If we merely teach that society must find ways to reduce the stress on the earth's resources, we are advocating that it is acceptable to be "less bad" (McDonough & Braungart, 2002). Instead, we must consider ways to promote and enhance the earth's resources, by preventing the negative consequences of our actions, and in fact, creating a surplus of resources for future generations. We should not settle for the government or business perspective of being *less bad*, i.e. merely reducing negative impacts; instead we want to make the earth a better place for future families. This concept has been an integral part of the scouting movement and we can learn a lesson from an organization in which many of us participated in our younger years. As generations of Girl Scouts have always been taught, "leave the campsite better than it was when you arrived."

Perspectives on Integrating Sustainable Education

Researchers approach sustainable development in higher education from several perspectives. While some sustainability researchers focus on ways to integrate sustainable activities into an existing curriculum at the content area level (Daries, et al. 2009; Davis, 2009; Miller & Kato, 2006), others have identified ways to redesign curricula so that sustainable development becomes a central component at the program of study level (Ulasewicz & Vouchilas, 2008). Still other researchers make the case that all university members, from the presidents down to the faculty and staff, must adopt sustainable behaviors (Sibbel, 2009; Wright, 2010). According to the Curriculum Greening of Higher Education model used in European and Latin American universities, sustainability should be integral on all three of these levels—subject matter, program of study, and institutional (Geli de Ciurana & Filho, 2006; Junyent & Geli de Ciurana, 2008). Regardless of the level at which sustainable education takes place, we have an obligation to prepare ourselves and our students to seriously consider the effects of our sustainable and non-sustainable actions. When given the tools to understand global issues as they relate to sustainability, future FCS professionals can better compete in a global economy (Miller & Kato, 2006).

Recent researchers in FCS have underscored the importance of integrating the concept of sustainability into the FCS subject matter and recommended that FCS educators consciously explore ways to include sustainable concepts and practices in their curriculum (Miller & Kato, 2006; Ulasewicz & Vouchilas, 2008). Research findings have supported the notion that class assignments requiring the use of sustainable materials or the design of sustainable methods resulted in improved comprehension of the value of sustainable behaviors and increased the likelihood that these students would adopt sustainable behaviors in the future. "Students who seek sustainable products in their school projects more often consider educating others on the importance of sustainability" (Ulasewicz & Vouchilas, 2008, p. 20).

While the easiest first step toward sustainable development or "curriculum greening" might be to implement specific classroom activities or assignments that require sustainable materials, it has been argued that incorporating sustainability requires more than adding activities and assignments to the present teaching programs (Geli de Ciurana & Filho, 2006). Researchers explained that it involves concerted efforts "to change the way future professionals think and work" (Geli de Ciurana & Filho, 2006, p. 82) at all levels—philosophically, socially, and politically. Likewise, researcher Collins (2003) concluded that the best way to encourage

consumers to engage in sustainable behaviors is to teach them to rethink consumption patterns, and to actively participate in community level activities.

A challenging issue for university faculty of FCS teacher education programs is to demonstrate the ways in which they personally work toward the Rethink, Reduce, Reuse, Recycle, and Regenerate components of sustainability. First and foremost, university faculty members who are involved in teacher education programs are advised to demonstrate that they participate in available sustainable practices and that they support the university's sustainable policies. This may require restructuring some traditional face-to-face courses into online courses; uploading all class materials to online learning platforms such as *Desire 2 Learn* or *Blackboard*; eliminating hard copies of most or all course handouts, enlisting sustainability guest speakers; creating substantive educational units on sustainability; and following university recommendations in offices and classrooms. Researchers and sustainability organizations recommend that university employees practice sustainability in order to become effective leaders in the sustainability movement (Association for the Advancement of Sustainability in Higher Education, 2010; Junyent & Geli de Ciurana, 2008).

Behavioral challenges include training future teachers to become creators, purchasers, and advocates of sustainable products and processes. We should expect our university faculty to encourage students as consumers to place environmental issues near the forefront of their consumption decisions. Students should understand the need for personal engagement and action in matters related to sustainable development (Association for the Advancement of Sustainability in Higher Education, 2010). For example, university faculty of FCS teacher education programs should model and explain ways to reduce solid waste, such as purchasing products that are recyclable or packaged in recycled or biodegradable containers, or choosing plastics that are acceptable at the local recycling level. Students should also learn the benefits of buying from companies that have redesigned products, processes, and packaging to intentionally reduce waste.

The concept of upcycling (McDonough & Braungart, 2002) or adding value (Hawley, 2006) is part of the regenerative component of sustainability that should be included in FCS teacher education curricula. This process involves recycling a waste product into a functional product that has greater value than the original product. For example, when plastic soda bottles are recycled into polyester fiberfill for ski jackets or polyester carpet yarns, the recycled product has greater economic value than the original soda bottles. Educating future teachers about upcycling or adding value also encourages sustainable actions. Their increased knowledge and heightened awareness is likely to encourage them to apply sustainable practices to everyday living. Individuals and families can lend support for the regenerative component by purchasing others' regenerative designs.

Promoting Sustainability through National Standards for Teachers of FCS

Researchers make the case for promoting the concept of sustainable development in the field of consumer sciences (Collins, 2003; Kurowska, 2003; Sibbel, 2003). According to Sibbel (2003), consumer sciences has the capacity to research and interpret individual and social behaviour in ways which lead to innovative and effective controls to improve and sustain new standards for living. Teaching sustainability requires collecting new information and investing time in curriculum development. University faculty members of FCS teacher education programs are able to more effectively teach students to become change agents, thereby

influencing healthy environmental behaviors (Miller & Kato, 2006; Ulasewicz & Vouchilas, 2008).

Given the research recommendations that encourage inclusion of sustainability in FCS education, I propose two possible ways that this essential topic may be incorporated into the FCS standards. The first method is to include sustainability in each of the first four content area standards. The second alternative is to add an additional standard immediately following the Professionalism Standard (Standard 8).

Proposed Modified Standards (Alternative 1). The first alternative for the inclusion of sustainability is to include it within each of the first four FCS content area standards. Content area proficiency requires comprehensive learning—a deep understanding of all important topics in a particular subject area. By weaving the notion of sustainable development into each standard, teachers comprehend the intertwined link between sustainable activities and family and consumer sciences. Because FCS professionals focus on the reciprocal relationships between humans and their environments (American Association of Family and Consumer Sciences, 2010), and sustainability integrates these same concepts, then environmental sustainability seems a natural extension of the FCS content areas. Sustainable development requires implementation through concrete actions and activities and each content area offers opportunities for integrating sustainability into the curriculum. Each of the first four standards is listed below and a modified standard is proposed with the inserted words in italics. Suggested activities for teaching sustainability to future FCS teachers follow the set of revised standards and the second alternative.

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” (National Standards, 2004, p. 2).

Proposed career, community and family connections. Analyze family, community, work, and *environmental* interrelationships; investigate *sustainable* family and consumer sciences careers; and apply career decision making and transitioning processes.

The justification for this revision is that humans both affect and are affected by the sustainable environment. Thus, by including the word, *environmental* in the standard, it shows that a family is engaged in a relationship with the environment, as are the community and workplace. In addition, inserting the word, *sustainable*, in the careers phrase implies that we should consciously be promoting FCS-related careers that focus on the goal of ensuring a sustainable environment. Again, this brings sustainability to the forefront of FCS educators’ minds.

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” (National Standards, 2004, p. 2).

Proposed consumer economics and family resources. Practice responsible and sustainable use of resources to address the diverse needs and goals of individuals, families, and communities, including future generations, in family and consumer sciences areas such as resource management, consumer economics, financial literacy, living environments, and textiles and apparel.

The justification for the first addition is that we should strive for replenishment and augmentation of resources which is accomplished through sustainable practices, rather than

merely using them (up) responsibly. We want to avoid the “be less bad” mentality; instead, we want to embrace the notion of creating a surplus of resources and adding value to our outputs through sustainable practices. The justification for the second addition to the standard is that we should avoid compromising the needs and goals of future generations of consumers. By including the term, *future generations*, in the standard, it reminds FCS professionals that although our teaching should include concern for current individuals, families and communities, we should be mindful of those that come after us.

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” (National Standards, 2004, p. 2).

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

The justification for the first addition to this standard is to remind us of to be mindful of how our actions affect others, not just in our lifespan, but in the lifespan of future generations. The justification for the second addition is that global social responsibility is a subcomponent of sustainability and is one of the most relevant sustainability topics for family and human development. FCS professionals should emphasize during instruction that humanity exists in a single, global family. Actions that affect our brothers and sisters in other regions of the globe are still actions that affect our family.

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” (National Standards, 2004, p. 2).

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

The justification for the addition of the phrase, *and future generations*, is that we can teach using a broader perspective of well being. It reminds FCS professionals to consider individuals and families of the future in addition to those alive today.

As currently written, the FCS standards provide a strong foundation for promoting the well-being of individuals, families and communities. With the addition of an articulated sustainable and long-term perspective, the first four content area standards show the FCS profession’s progress toward sustainable development.

Proposed Additional Standard (Alternative 2). An alternative solution to weaving sustainability into the FCS teacher standards is to create a separate standard and place it immediately following Standard 8, Professionalism. Whereas sustainable development can easily be integrated into a specific content area, it can also become a standard of professional practice. Suggested wording is “Sustainable Development. Promote and demonstrate sustainable practices that meet the needs of today’s individuals, families, and communities, without compromising the needs of future generations consumers.”

The justification for offering a separate standard on sustainability is the need for us to educate future FCS professionals on the meaning of this complex environmental and social issue. This provides future FCS teachers with both a definition and a guide for implementation. It improves overall awareness of the relationship between humans (individuals, families, and

communities) and their global environment. Also, by creating an entirely new standard that separates the concept from the other standards, it becomes equal in importance to professionalism and the other “overarching standards of excellence” (National Standards, 2004, p. 1). In addition, by limiting the sustainability topic to one separate standard, it allows the content area standards to remain “concise and non redundant” (Fox, Stewart, & Erickson, 2008, p.7). Finally, by creating a separate sustainability standard, it allows for flexibility in teaching the complex subject. Rather than requiring distinct sustainability units in each content area, a more comprehensive approach to sustainability can be taught. By including a general standard on sustainability, it “focuses on teachers’ roles in enabling student learning, rather than on specified actions and abilities of the teachers” (Fox et al., 2008, p.7). Family and consumer sciences teachers are able to incorporate the most relevant sustainable concepts in their classroom within the subject areas that best fit their state’s needs.

University programs in FCS education may want to consider requiring all majors to complete a sustainability course as a graduation requirement. Where possible, the faculty may want to develop a sustainability course specific to FCS education majors. If adding a separate course on sustainability is not a feasible alternative, then they may allow the students to enroll in a course within the college or across campus, depending on the availability of sustainability courses. An alternative is to integrate sustainability issues into existing courses. The general principles of sustainability are similar, regardless of the content area, so courses outside the academic unit or college would still have relevance.

Strategies for Teaching Sustainability

The following section contains suggested teaching activities for incorporating sustainable development in the National Standards for FCS Teachers. Classroom strategies for enhancing knowledge, skills, and attitudes have been gleaned from a literature review, the standards and competencies for teaching FCS (National Association of State Administrators of Family and Consumer Sciences, 2008) and the author’s own expertise with sustainability. These are presented in the context of specific learning activities that can be incorporated into FCS teacher education curriculum. The list is not exhaustive, but is compiled to provide a basis for professional educators to begin to formulate their own creative ideas for teaching sustainable development to future FCS teachers. These may be used in existing FCS education classes or they may be the basis for new course development at the university level.

Standard 1. Career, community and family connections.

- Explore the special niche of sustainable careers in FCS, such as designing with sustainable or recycled materials, importing from sustainable companies, developing and marketing organic or sustainable products and services, and entrepreneurship of businesses that sell sustainable or recycled products;
- Identify resources and a framework for organizing and implementing sustainable community services or events, such as recycling programs, clothing drives, community gardens, residential energy saving programs; and
- Demonstrate the steps and processes for individuals to become community change agents who advocate sustainable activities.

Standard 2. Consumer economics and family resources.

- Explore the characteristics of green or socially responsible companies that supply needed products to individuals and families;
- Explore the issue of greenwashing (green claims and marketing) in relation to household products (TerraChoice, 2007);
- Research the EPA Energy Star program as well as energy conservation in the home (U.S. EPA, 2010);
- Compare sustainable lighting alternatives with non-sustainable lighting via a cost/benefit analysis;
- Investigate recycling and solid waste disposal options for household products; and
- Investigate via student-initiated research the integration of sustainability in any FCS topic: proper clothing disposal (Morgan & Birtwistle, 2009), organic and renewable fibers, household textile recycling (such as carpeting), and clothing design using sustainable materials (Ulasewicz & Vouchilas, 2008).

Standard 3. Family and human development.

- Brainstorm ideas for disseminating sustainable information to individuals, families and communities, with and without government support;
- Assess available educational units created by the EPA for use by pre K-12 teachers (U.S. EPA, 2010);
- Develop sustainability educational units geared toward preschool-aged children and encourage them to become change agents for environmental sustainability (Daries, et al, 2009; Davis, 2009);
- Develop teaching modules on sustainability for FCS classrooms in both middle schools and high schools;
- Investigate and explain the relationships between humans and a sustainable environment; and
- Research and explain the interrelationship between sustainability and social responsibility at local and global levels.

Standard 4. Nutrition, food, and wellness.

- Demonstrate the steps and processes for creating a community garden (Roubanis & Landis, 2007);
- Create a poster presentation that explores composting;
- Evaluate the legal requirements for organic food and interpret the information so it is useful to families;
- Compare the costs and benefits to families of organically grown food with food that was not grown using organic processes; and Compare the costs and benefits of locally grown food with food that was transported from a significant distance.

Conclusion

The U.S. government enforces large-scale environmental controls and it strives to educate the public regarding sustainable practices that are environmentally, economically, and socially sound. Business and industry are increasingly adopting appropriate sustainable practices that are financially feasible and socially responsible. Many academic disciplines outside of FCS and specific subject matter areas within FCS have already developed sustainability curricula.

Given the pervasive trend of sustainability at the government, business, and academic levels, disseminating information about the FCS perspective on sustainability should be central to the role of the FCS education professionals. Our responsibility is to explain the individual and social benefits of sustainable practices and provide a foundation on which individuals and families can begin to convert their non-sustainable behaviors to those that benefit the people and planet, and promote prosperity. One way to do this is to add the concept of sustainability to the first four standards of the National Standards for Teachers of Family and Consumer Sciences. The other option is to include a separate sustainability standard. The third and perhaps the best option is to revise the existing standards *and* include a sustainability standard. Now is the time to have a discussion on how we might improve the National Standards for Teachers of FCS.

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