National Standards for Family and Consumer Sciences Reasoning for Action Standards and Process Questions

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PROCESS FRAMEWORK FOR THE NATIONAL STANDARDS FOR FAMILY AND CONSUMER SCIENCES EDUCATION

In the *National Standards for Family and Consumer Sciences Education*, process has been addressed in two ways. One is the Reasoning for Action standard, which is an overarching, process-oriented standard that delineates knowledge and skills for high-quality reasoning. The second is through questions related to thinking, communication, leadership, and management process areas that are provided for each content standard in the 16 Areas of Study. The purposes of this chapter are to provide background information on process in family and consumer sciences education, to give an overview of the Reasoning for Action standard, and to explain the structure of the process questions.

Process in Family and Consumer Sciences Education

In an educational context, process refers to skills, operations, and dispositions through which learners construct meaning and develop applications related to content (Costa & Liebmann, 1997). Process and content work in tandem. On one hand, process is a vehicle for obtaining, analyzing, and using content. On the other hand, content is a means for developing students' abilities for using and applying process. While both can be taught separately, they are most effectively learned when they are used together and linked to life situations or simulations that involve performance (Costa & Liebmann, 1997; Rubin, 1997)

The emphasis on process within the *Standards for Family and Consumer Sciences Education* is grounded in needs and issues of society and in developments in family and consumer sciences education. As with other areas of the *National Standards*, family and consumer sciences educators will use the Reasoning for Action standard and the process questions in various ways, depending on their overall approach to family and consumer sciences curriculum and the needs and issues of their local setting. For some, process will be a centerpiece of the curriculum, while others will apply process in more subtle, integrated ways. Regardless of the approach, the process aspects of the *Standards* complement and support student learning across all 16 Areas of Study. Likewise, all 16 Areas of Study can be used to develop students' capabilities related to process.

Needs and Issues of Society

Career and technical educators and other trend watchers predict that over their lifetimes, today's students will work in several career areas and hold a multitude of different jobs, many of which may not yet be invented. Given the certainty of future change, today's students are best served by education through which they develop abilities to identify problems, locate and synthesize information, and work with others to create solutions (Costa & Liebmann, 1997; Friedman, 2005). "These abilities not only can increase comprehension and retention but -- of even greater consequence -- can enhance intellectual capability as well as the capacity to use acquire knowledge constructively" (Rubin, 1997, p. 231).

The need for process in education was emphasized in the 1991 report of the Secretary's Commission on Achieving Necessary Skills (SCANS). The business and industry leaders from across the country who participated in this Commission determined that process-oriented foundations and competencies are "at least as important as technical expertise"¦ the competencies represent the attributes that today's high-performance employer seeks in tomorrow's employee" (U.S. Department of Labor, 1991, p. xvi). Since that time, unprecedented global events, worldwide expansion in technology and communication, and related social and cultural changes have reinforced the need for process-oriented knowledge and skills. This rapidly changing world context has accelerated the calls for education that will develop learners' capacities to analyze and use information; collaborate with others; and make reasoned, ethical decisions (e.g., Association for Career and Technical Education, 2006; National Center for Education and the Economy, 2006). The Reasoning for Action standard and the process questions of the *National Standards for Family and Consumer Sciences Education* address these needs.

Developments in Family and Consumer Sciences Education

The ground work for emphasizing process in family and consumer sciences education was established several years ago with the publication of *Home Economics: A Definition* (Brown & Paolucci, 1979). In this seminal document, Brown and Paolucci described the issues families face as "practical problems," or value-based questions about what actions individuals and families should take in addressing the concerns they face over time.

Central to the practical problems approach is that those who are impacted by the situation or "problem" use practical reasoning to determine a course of action. Situations that require practical reasoning have four distinct and interactive characteristics: they are value-related; there is a need to act; the circumstances are uncertain and changing; and two or more reasonable options or "alternative actions" can be identified with no clear-cut answer about the best action to take (Laster, 1998). In the practical reasoning process, participants examine and consciously form goals or valued ends, interpret contextual information, obtain and use technical information and skills, consider alternative actions and consequences, and decide what action to take (Brown & Paulucci, 1979). The Reasoning for Action standard (further introduced below) outlines the constituent tasks and expectations for high-quality reasoning.

The practical problems approach is grounded in a critical science perspective of curriculum, with a focus on open-ended, "what should we do?" questions (Plihal, Laird, & Rehm, 1997; Montgomery, 1999). These learner-directed questions are in contrast to traditional approaches to education that emphasize steps or techniques used to reach predetermined goals. Instead, with a practical problems approach instruction begins with questions, emphasizing examination of valued ends and alternative means for accomplishing them, and focusing on the specific information and skills needed to identify and take the selected actions (Johnson & Fedje, 1999). This emphasis on questions led to the process questions that are included in the *National Standards* (described in further detail below).

Brown (1980) further delineated three **systems of action** that individuals and families use to address the practical problems they face: instrumental-technical, interpretive-communicative and critical-emancipatory. In the *National Standards for Family and Consumer Sciences Education* these systems are referred to as technical, interpretive, and reflective. These systems of action provide a framework for the process questions that are included in the *Standards.* Brief explanations are provided in the following paragraphs for each system of action. While these are explained individually, it is important to

note that the three types of action are not used separately or in isolation. Rather, they are collaborative, interrelated actions that in actual practice are used to support, strengthen, and enable one another. References used to develop the following explanations include American Home Economics Association (1989), Brown (1980, 1986), Brown & Paolucci (1979), Fox (1998), Hultgren & Wilcosz (1986), Indiana Department of Education (1997), Kowalczyk, Neels, & Sholl (1990), Laster (1997), Maryland State Department of Education (1989), Montgomery & Davis, (2004); Morgaine (1992), Nebraska Department of Education (1987), Oregon Department of Education (1990, 1996a, 1996b), Thorsbakken & Schield (1999), Wisconsin Department of Public Instruction (1997), Vincenti & Smith (2004), and Wogensen (1989).

- *Technical Action.* Technical action emphasizes knowledge, facts, and manipulative skills. Technical action includes activities such as preparing a specific food item, investigating characteristics of certain careers, describing developmental tasks of two-year-olds, or explaining the steps in a planning process. Lectures, informational texts, demonstrations, and structured laboratory activities typically build technical knowledge and skills. Technical action is essential for successful personal and family life and for all types of careers. There are certain things individuals and families simply need to know and be able to do. However, in a practical problems approach, technical action has a supportive rather than central role. Before technical action can be taken, decisions must be made about which knowledge and skills are needed, and efforts must be made to gain and consider perspectives broader than one's own. This is where interpretive and reflective actions come in, as means for selecting and implementing technical actions that will contribute to reaching valued ends. We therefore turn our attention to discussing the other two types of action.

- *Interpretive Action.* Interpretive action emphasizes interacting with other people through written and spoken words and other types of verbal and nonverbal communication. Interpretive action is used to develop mutual understanding; shared meanings; and interpretations of values, means, and goals. We are involved in interpretive actions when we share ideas and when we seek to understand how other people view issues and problems we are trying to address. Interpretive action also is important for anticipating the impacts various actions could have on ourselves and others. Class discussions and debates, case studies, role playing, interviews, and summary reports are examples of learning experiences that typically involve interpretive action.

- *Reflective Action.* Reflective action is a key component of the practical problems approach. Reflective actions feature critical examination of various alternatives, with a goal of selecting the "best" action to take in this situation and point in time. Reflective actions are used to answer questions such as, "what should be?" and "what should we do?" Reflective action relies on technical knowledge and skills. It also depends on interpretive actions through which we aim to understand our own and others' points of view. Reflective action seeks to examine and address root issues and causes of problems that individuals and families face, and to make choices that will be best for selves, others, and society. Classroom activities in which students make decisions and then justify their choices are examples of reflective action. Other learning experiences that can emphasize reflective action include goal-setting, personal applications, advocacy, service learning, and self-assessment.

A number of family and consumer sciences education curriculum initiatives reflect the practical problems approach, with an emphasis on integrating process and content. Descriptions of underlying frameworks and specific curriculum efforts are available in *Family and consumer sciences curriculum: Toward a critical science approach* (Johnson & Fedje, 1999) and in curriculum materials developed in various states (see reference section for further details). These curricula reflect a belief that process-oriented knowledge and skills are integral to family and consumer sciences education; that they can be learned; and therefore, they should be directly and purposefully taught. The processes also must be reinforced in context by studying and using them in conjunction with relevant content (Halpern, 1996; Laster, 1987; Perkins, 1995; Sternberg, 1996).

The needs and issues of society and the developments in family and consumer sciences that have been described in this section serve as a rationale for incorporating process in middle and high school family and consumer sciences education. The remainder of this chapter provides an overview of the process-oriented components of the *National Standards*. The Reasoning for Action standard is introduced first. The chapter concludes with an explanation of the framework used for the process questions and an explanation of each of the four process areas.

Reasoning for Action Standard

The Reasoning for Action standard is an overarching standard that links and in many ways defines family and consumer sciences education (Fox & Laster, 2000). This standard is grounded in beliefs that concepts and processes used for reasoning can be learned; that reasoning for action is a vehicle for the active use and functionality of all 16 Areas of Study (Rubin, 1997); and that the content and skills delineated in the Areas of Study provide a context in which Reasoning for Action can be developed and applied.

The comprehensive standard for Reasoning for Action states that the learner "Uses reasoning processes, individually and collectively, to take responsible action in families, workplaces, and communities." The five content standards and their corresponding competencies address evaluating reasoning, analyzing concerns, analyzing practical reasoning components, demonstrating practical reasoning, and demonstrating scientific inquiry and reasoning. These standards provide a foundation for instruction and student learning *about* reasoning and for *using* reasoning in applied contexts (Fox & Laster, 2000; Knorr & Manning, 1997).

Framework for Process Questions

During the initial development of the *National Standards*, a wide range of processes that students learn and use within their study of family and consumer sciences content were identified and discussed. After much deliberation, development panels grouped these into four overall process areas: Thinking, Communication, Leadership, and Management. In the *National Standards*, these four process areas are integrated through process questions, which are designed to draw out students' thinking and application of content. The questions included in the *National Standards* serve as models that teachers can use in developing questions for their specific students and instructional goals (Ashby, Conkin, & O'Connor, 2000; Coomer, Hittman, & Fedje, 1997). A total of 12 sample questions are given for every content standard, with three questions for each of the four process areas. The questions also are intended to help students consider the three systems of action that were described in the previous section. Thus, for each of the four process areas, one question focuses on technical action, a second on interpretive

action, and a third on reflective action. This four-by-three framework is illustrated in Figure 1. Brief explanations of the four process areas follow.

Process Questions Framework			
Process Areas	**Types of Action**		
	Technical Action	Interpretive Action	Reflective Action
Thinking Processes	*Questions that lead to technical actions about thinking processes*	*Questions that lead to interpretive actions about thinking processes*	*Questions that lead to reflective actions about thinking processes*
Communication Processes	*Questions that lead to technical actions about communication processes*	*Questions that lead to interpretive actions about communication processes*	*Questions that lead to reflective actions about communication processes*
Leadership Processes	*Questions that lead to technical actions about leadership processes*	*Questions that lead to interpretive actions about leadership processes*	*Questions that lead to reflective actions about leadership processes*
Management Processes	*Questions that lead to technical actions about management processes*	*Questions that lead to interpretive actions about management processes*	*Questions that lead to reflective actions about management processes*
Figure 1: Design matrix for process questions in the *National Standards for Family and Consumer Sciences Education*			

Thinking. Thinking processes encompass complex, multifaceted activities of the mind. The process area of Thinking in the *National Standards for Family and Consumer Sciences Education* emphasizes directed thinking, which is defined by Halpern (1996) as "the use of cognitive skills or strategies that increase the probability of a desirable outcome. It is purposeful, reasonable, and goal-directed . . . when the thinker is using skills that are thoughtful and effective for the particular context and type of thinking" (p. 5). Directed thinking relies on an extensive and accessible knowledge base, multiple cognitive skills, and disposition to think productively (Costa, 2001; Marzano, 1992; Way, 1987). These deliberate, skill-based characteristics of directed thinking can be contrasted to nondirected thinking, or routine patterns of information-processing that are sufficient for many day-to-day events. However, nondirected thinking also can lead to hasty, fuzzy, narrow, or sprawling thinking in situations when more focused attention is needed. Awareness and skills for directed thinking can help to counteract these limitations (Perkins, 1995).

The process area of Thinking incorporates two distinct but interdependent types of directed thinking: creative thinking and critical thinking (Paul & Elder, 2005). Creative thinking is the use of innovative, exploratory approaches to generate ideas. In creative thinking, unusual ideas are valued, and perspectives and explanations other than those which are immediately apparent are sought. At the same time, creative thinking is purposeful and goal-directed. It builds on previous knowledge to create imaginative, new interpretations that are relevant to the desired goal (Barell, 2003; Halpern, 1996).

Critical thinking is defined as reasonable reflective thinking that is focused on deciding what to believe or do (Ennis, 1987; Way & Nitzke, 1998). Critical thinking typically is used to analyze and evaluate multiple ideas in order to select the beliefs or actions that are best in a given situation, based on an established set of standards or norms. Critical thinking involves systematic, purposeful analysis of explanations and arguments in order to identify premises and conclusions; to distinguish among opinion, reasoned judgment, and fact; and to recognize underlying assumptions, biases, and values (Wisconsin, 1987). Thus, in contrast to creative thinking, which is intended to generate ideas, the focus of critical thinking is on examining and eventually narrowing the field.

Communication. Communication is the transmission or interchange of thoughts, feelings, opinions, and information between a sender and a receiver. People communicate through a variety of verbal and nonverbal channels including spoken and written language, facial expressions, gestures, tone of voice, and written signs and symbols. Communicative competence or effective communication can be defined as the clarity with which the sender conveys the message so that the receiver accurately understands the intended meaning.

Communication processes are important for building a sense of cohesiveness within groups, whether of friends, coworkers, or family members. They are a powerful cultural tool, a means for creating a sense of group identity through exchange of values, expectations, and ways of thinking and perceiving. Communication also is important for managing conflicts. Effective communication includes accepting rather than denying or avoiding differences, while trying to identify common ground. This is facilitated when individuals are able to express their own ideas and assert their own views effectively, while at the same time listening to and respecting the views of others.

The four major communication processes are speaking, listening, writing, and reading. Speaking and writing are ways to send messages. Their effectiveness is influenced by the sender's abilities to organize ideas and to use verbal or written language to express ideas clearly. Speaking also involves matching verbal messages with appropriate nonverbal creating and formatting various types of printed documents. Word usage, fluency, and structure are technical processes used in speaking and writing. Sensitivity to others, insight into individual differences, and ability to adjust communication to the audience are important interpretive features.

Listening and reading are processes for receiving messages. A key difference between these is that in most cases listeners, unlike readers, have an immediate opportunity to exchange messages with the speaker. For instance, effective listening includes appropriate eye contact, asking questions to clarify what the speaker is saying, and regularly sharing, through paraphrased feedback, an understanding of what the speaker has said. Thus, becoming an effective communicator not only involves learning how to send messages clearly, but also how to be an effective receiver of messages and how to provide productive feedback to the sender. (Ohio Department of Education, 1993)

Leadership. Leadership focuses on taking initiative for developing a vision of purpose and goals and then taking action to achieve that purpose and reach those goals. Leaders work with groups, including family groups, to clarify purposes and goals and to encourage other group members to commit and recommit themselves to accomplishing intended results. Leaders use many different actions and skills. They work with others in establishing a shared dream or goal, and in using that dream or goal to guide actions. They relate well to other group members in that they listen, empathize, and consider others' perspectives before taking action. Leaders tell, sell, participate, and delegate, using different strategies

at different times and with different group members in order to involve and encourage everyone toward achieving the shared vision (Fox & Habegger, 1999; Kouzes & Posner, 1995).

Leadership can be accomplished in various ways. The selected style depends on several factors: the situation; the roles, responsibilities, values, and goals of participants; the types of acceptable outcomes; and the speed with which action must be taken. A continuum of leadership styles ranges from authoritarian to shared or democratic to laissez-faire (Bennis & Townsend, 1995). Authoritarian leadership is a "command and control" style in which one individual takes charge and others take action as directed. This style is especially useful in situations that require fast action to keep people safe; where confidentiality or hierarchical authority structures exist and the leader has more information and/or responsibility than others in the group; and when tasks need to be accomplished in a predictable, efficient manner.

A laissez-fair leadership style is on the other end of the continuum from authoritarian. This style emphasizes individual perspectives, goals, and actions. It involves a loose organizational structure in which the leader serves as a role-model and facilitator, but individuals determine the specific actions they will take. This style is particularly applicable among groups of peers where interactions are based more on relationships and activities than on achieving particular goals.

A shared, participatory leadership style is a middle ground between authoritarian and laissez-fair. This style incorporates involvement, cooperation, and negotiation among all group members (Woyach, 1991). Everyone in the group is encouraged to take initiative, carry out actions, and assume responsibility for accomplishing goals. Shared leadership results in empowered, interdependent relationships among group members. Shared leadership is closely related to responsible citizenship in a democratic society. Being a responsible citizen requires taking action for the common good of the group. Responsible citizens are concerned about the well-being of all society members and take social action to meet those needs (Kister, Laurenson, & Boggs, 1994). Similarly, being a responsible family member requires taking action for the common good of the family as a whole, as well as, for the good of individuals. Leadership is enacted in families as members develop a common vision, relate and cooperate with each other, and assume shared responsibility for each other, their home, and their neighborhood (Kister, Laurenson, & Boggs, 1995).

Management. Management processes are used to carry out actions in order to meet individual and family needs and goals. Management processes range in complexity from problem solving to decision making to technical management. This three-part conceptualization of management processes parallels the three systems of action discussed above. The following brief explanation of these management processes highlights their interdependence and their relationship to the three systems of action described above.

Problem solving, the most complex management process, is closely related to reflective action, and relies heavily on the competencies outlined in the Reasoning for Action standard. Problem solving is used when direction and goals are being established or reconsidered. In this situation, management processes would include examination of values, perspectives, and concerns. Reasoning processes would be used to identify standards, examine alternative actions, consider consequences of various alternatives, and select acceptable alternatives. The focus in problem solving is on "what ought to be?" and "what could we do?"

Once acceptable alternatives are identified, management processes shift to decision making. In decision making, the acceptable options that were identified during problem solving are further examined and evaluated based on current preferences, resources, and needs and a specific option is chosen. In decision making, the "what should we do?" question is answered with a specific choice of action.

Technical management processes are used to implement a selected plan of action. Technical management focuses on "how". It is an action-oriented process used to select and implement strategies for reaching the established goal. It involves determining the specific objectives to be accomplished, planning the steps to take and resources to use, carrying out the plan in a suitable way, and evaluating the implementation process and the result.

The multiple layers of management processes described above are used simultaneously and interactively to address personal and family issues. In addition each of these incorporates the other process areas in varying ways. For instance, critical thinking processes such as assessing information accurately, judging the viability of alternatives, and making a decision, are integral to the process of management. Creative thinking, in which one imagines consequences, conceptualizes alternatives, and empathizes with others, also is important. Furthermore, when management processes are carried out in families and other groups, communication and leadership are needed as well. Thus, all four process areas are used in taking action to meet individual and family needs, and all will be integrated in process-based Family and Consumer Sciences Education (American Home Economics Association, 1989; Coomer, Hittman, & Fedje, 1997; Indiana Department of Education, 1997; Kister, Laurensen & Boggs, 1994, 1995; Recick, 1995; Rhode Island Department of Elementary and Secondary Education, 1997; Stone, 1993)).

In conclusion, the process components of the *National Standards* will be implemented in various ways depending on educators' overall approaches to curriculum and needs and issues of the local setting. In any case, process and content are tandem components of the curriculum, with each aspect supporting the other. The Reasoning for Action standard and the process-area questions provide a vehicle for students to take greater initiative and responsibility for their learning and to develop knowledge and skills for the rapidly changing environments they will experience throughout their lives.

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