Practical reasoning is necessary for solving routine and unexpected problems

A new content component is currently being introduced into the secondary home economics curriculum. This component, practical reasoning, is a thinking process necessary for solving the everyday routine and unexpected problems facing individuals and families: the “what should I/we do?” questions. Such what-to-do questions are practical problems facing all of us, repeatedly, throughout our lifetime. Every day of their lives, individuals must decide what to wear and eat, and how to act toward family members, friends, and strangers. Families make decisions with far-reaching consequences. They must decide if they should have children; how they should rear the children they have; how they should care for their elderly, and how they should relate to their neighbors and communities.

These practical, everyday problems are ill-structured ones. Unlike well-structured mathematical or science problems, the nature of practical problems may be unclear. Also, most individual and interpersonal family problems lack the criteria for evaluating the solution, as well as the procedure, for solving the problem. Consequently, practical problem solvers must generate the criteria and the procedure for solving the problem. Since no one knows a “correct answer” to these ill-structured problems, much dissonance is created.

Rationale for Practical Reasoning as a Home Economics Curriculum Component

The ability to make everyday practical decisions is often taken for granted. We assume that since everyone makes these decisions as a part of everyday life, everyone has the necessary problemsolving abilities. But, our informal observations suggest that even though individuals may have the rudiments of practical reasoning, they do not reason well to answer these everyday questions — especially the questions involving actions affecting the well-being of other people. The results of students’ decisions suggest that they sometimes decide what to believe and do impulsively because of peer pressure or because of tradition. Often decisions seem to be made without regard for the rational and moral principles and standards of the culture, and without considering the consequences of these actions on the well-being of others.

Through the more formal research process, Perkins found naive reasoners seemed to stop reasoning as soon as their reasons met their “makes sense to me” criteria. They reasoned in a superficial way, avoiding cognitive complexity and dissonance, and were ignorant of pitfalls of reasoning. Furthermore, Perkins found normal education at the high school, college, and graduate school levels has only a slight impact on everyday informal reasoning skills.

Recent developments in cognitive psychology further support the need to focus formally on enhancing the problemsolving abilities of students. Analysis of the cognitive components required for competent, intelligent problemsolving performance show two critical aspects: extensive, accessible knowledge and cognitive skills. Simon concludes that “there is no such thing as expertise without knowledge — extensive, accessible knowledge,” but Brown and Campione also conclude that “knowledge is necessary, but not sufficient, for performance. Individuals vary not only in what they know but in what they do with what they know.” For example, Feuerstein and his associates and Sternberg have identified cognitive processes which appear to influence intelligent problemsolving behavior. Too, Feuerstein and his associates have demonstrated that when adolescents have cognitive deficiencies, missing cognitive processes can be developed. Such discoveries have led to a new view of intelligence.
This new perspective conceptualizes intelligence as a set of thinking and learning skills that can be modified. This view differs from the concept of intelligence as a stable, fixed factor or factors.10

Since the profession of home economics is concerned with the practical problems of home and family,11 home economics education already provides the home economics knowledge base needed to resolve home and family problems: the knowledge needed to nurture human development, feed and nourish family members, manage economic and other family resources, meet clothing and textile needs, create living environments, and coordinate work and family responsibilities. In addition, some cognitive abilities associated with intelligent problemsolving are already an important home economics curriculum component. Goal setting, planning or means-ends reasoning, and decisionmaking are important concepts-skills of management, a long-standing unifying home economics concept and cognitive skill. The addition of practical reasoning as another unifying concept and skill will help students develop the additional cognitive structures and processes needed for resolving the practical problems facing individuals and families in everyday interpersonal living.12

What Is Practical Reasoning?

Although the basic concept of practical reasoning originated with Aristotle, “the precise nature of practical reasoning is still a contentious issue” among philosophers.13 Writings of philosopher-educators Brown14 and others15 appear to be describing the same phenomena, but terminology varies and each develops different dimensions more extensively and completely than others.

Function of Practical Reasoning. The function of practical reasoning is to solve everyday practical problems, i.e., the “what should I/we do?” or “what is best to do?” value questions.16 These are questions facing individuals and groups, such as families, organizations or governing bodies. Individuals have to decide what to do with drink bottles after they are finished with them, while families have to decide what to do about helping children decide what is best to do with drink bottles, and city or state governments have to decide what to do to control litter.

Structure of Practical Reasoning. Practical reasoning, in its simplest form, involves deciding what to do and believe as the result of considering two kinds of reasons: acceptable value standards (motivating reasons) and actions which will fulfill the value standard.17 In other words, practical reasoning is continuously judging — questioning, testing, evaluating, first, what is best to do and believe as facts and value standards are brought together for examination and deliberation; and, finally, what potential action or course of action should be selected.

When practical reasoning is analyzed further, practical reasoning is far from simple. It is a complex, higher thinking process including creating, judging, dialoging, and deciding. Each of these dimensions is also complex and seem to occur alternately and continuously. When using such high level thinking abilities, individuals process information beyond superficially memorizing and recalling information. In addition, knowledge and positive attitudes toward reason are necessary for sound reasoning to take place when needed.

Knowledge for Practical Reasoning. When individuals or groups are faced with a what-to-do question or problem, practical reasoning begins. To solve the problem, practical reasoning requires gathering adequate and reliable information to form justifiable supporting reasons (premises) for decisions (judgements) to take a particular action. The information needed for making everyday decisions include: (1) Goals, value standards and needs of those involved and those who will be affected — self, friends, relatives, neighbors, community members, customers, clients, etc.; (2) contextual factors — personal and environmental factors in the situation affecting the outcome of the decision; (3) alternative actions or choices, and (4) probable consequences of actions or choices. This information forms the basis for reasons or premises on which judgements or decisions are based in everyday, informal reasoning.

For sound, justifiable decisions to be made the information must be reliable and adequate, not incomplete. Probable consequences of alternative actions chosen must indicate that the action selected is workable for the situation and morally acceptable; that is, actions will not affect anyone adversely and will prove the greatest benefit to all concerned. Because individuals may reason from different bases, depending upon their knowledge base and creative thinking ability, practical reasoning may result in many justifiable answers to practical problems or issues.

Besides home economics concepts, second-order thinking concepts are needed. These concepts are used to think about our value concepts, rules, and judgements;18 nature and vocabulary of practical reasoning;19 standards of reasoning,20 and logical and heuristic rules for solving problems.21

Complex High-Level Thinking Processes. In addition to this knowledge base, a good and practical problem solver needs high-level thinking process proficiencies. These thinking processes include specific creative thinking, critical thinking and decisionmaking.

Creative or imaginative thinking is necessary to construct all the reasonable alternatives, dimensions of the situation affecting one’s decision, and the consequences of alterna-
tive actions. Imagination is also necessary for dialogical thinking; that is, empathizing with and constructing the frame of reference of others and the many sides of issues. Creative thinking is necessary for conceptualizing all the knowledge needed to make a sound decision. Conceptualization involves organizing the extensive, unorganized information into usable concepts of contextual factors, alternatives, consequences, value standards and arguments (reasons) supporting the many sides of the issues.

Critical thinking is often equated with practical reasoning. As a central dimension in the practical reasoning process, critical thinking involves continuously and reflectively judging and assessing (1) information accuracy and reliability and (2) the acceptability of criteria and actions. Value analysis and moral reasoning are required for judging the acceptability of actions.

Finally, decisionmaking is a necessary higher level thinking dimension of practical reasoning. In practical reasoning, problemsolvers must choose among alternative actions, means, or choices by comparing alternatives and evaluating information about those alternatives in terms of criteria.

Cooperative Dialectical Processes. While knowledge and higher level thinking processes are necessary, they are not sufficient for sound practical reasoning. Knowledge and these thinking processes depend on dialogue and dialectical interaction with others and with ourselves. Such empathetic dialogue is needed to gain the extensive knowledge and the frame of reference of others which are so necessary for decisions that are based on a consideration for the well-being of self and others. Friends, family, departmental staff, community members, government agency staff and legislators must use this process to gather adequate information on which morally acceptable decisions can be made. Such morally acceptable decisions are most necessary today in our complex, interdependent world community.

Positive Attitudes Toward Reasoning. Finally, positive attitudes toward reason are also essential for practical reasoning. Obviously without the willingness to reason with others, sensitivity to morally hazardous actions and long-term consequences of actions on others, and the tendency to undertake practical reasoning, good practical reasoning would not occur. Such tendencies to notice and act compose another important dimension of practical reasoning which, presumably, can be learned and changed.

Summary
These interacting and overlapping practical reasoning dimensions comprise the necessary learnings for morally defensible decisions when solving practical home and family problems. Considering this practical reasoning model, a comprehensive curriculum component would include knowledge of home economics content and practical reasoning concepts, such as standards for rational and moral thinking; high level thinking skills; cooperative interaction skills, and positive attitudes toward reasoning and people.

While home economics educators have long expected good practical problem-solving, and even taught the problem-solving and decisionmaking process, they have not taught the concepts, skills and attitudes underlying responsible problem-solving and decisionmaking. By including these learnings in home economics curricula in varying combinations, home economics educators are beginning to make up for this lack.

Footnotes


3. Perkins, David N. “Post-primary education has little impact on informal reasoning” in Journal of Educational Psychology, in press.


15Coombs, op. cit., see Footnote 14.

16Brown and Paolucci, op. cit., see Footnote 11.

17Coombs, op. cit., see Footnote 13.

18Ibid.


20Coombs, op. cit., see Footnote 13. Also, Ennis, op. cit., see Footnote 14.


24Coombs, op. cit., see Footnote 14.


References


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